

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 172/TT/2020**

**Coram:**

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

**Date of Order: 15.09.2021**

**In the matter of:**

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 of **Asset-I** : Conversion of Fixed Line Reactors (FLR) to Switchable Line Reactors (SLR) - (a) at Madurai end of Madurai-Karaikudi line, (b) at Madurai end of Madurai-Trichy line, (c) at Salem end of Salem-Hosur II line, (d) at Udumulpet end of Udumulpet-Salem II line, (e) at Thiruvalam end on both circuits of Nellore-Thiruvalam & II, (f) at Trichy end of Trichy-Nagapattinam-I line, (g) at Trichy end of Trichy-Nagapattinam-II line, (h) at Sriperumbadur end of Sriperumbadur-Chittoor line, (i) at Sriperumbadur end of Sriperumbadur-SV Chatram line; **Asset-II** : Conversion of 63 MVAR Fixed Line Reactor at Kochi end on both circuits of Kochi Trinulveli I & II into Switchable Line Reactor and **Asset-III:** (i) Hyderabad end for Gajwel-Hyderabad II, (ii) Nellore end for Nellore-Thiruvalem I & II, (iii) Gooty end for Kurnool-Gooty line under "Conversion of fixed line Reactors to Switchable Line Reactors" in Southern Region.

**And in the matter of:**

Power Grid Corporation of India Limited,  
"Saudamini", Plot No. 2,  
Sector 29, Gurgaon – 122001.

**.... Petitioner**

**Vs.**

- 1 Karnataka Power Transmission Corporation Limited,  
Kaveri Bhavan, Bangalore – 560009.
2. Transmission Corporation of Andhra Pradesh Limited,  
Vidyut Soudha, Hyderabad – 500082.



3. Kerala State Electricity Board,  
Vaidyuthi Bhavanam,  
Pattom, Thiruvananthapuram - 695004.
4. Tamil Nadu Generation and Distribution Corporation Limited,  
(Formerly Tamil Nadu Electricity Board -TNEB),  
NPKRR Maaligai, 800, Anna Salai, Chennai - 600002.
5. Electricity Department,  
Government of Pondicherry, Pondicherry - 605001.
6. Eastern Power Distribution Company of Andhra Pradesh Limited,  
P&T Colony, Seethmmadhara,  
Vishakhapatnam, Andhra Pradesh.
7. Southern Power Distribution Company of Andhra Pradesh Limited,  
Srinivasasa Kalyana Mandapam Backside,  
Tiruchanoor Road, Kesavayana Gunta, Tirupati - 517501,  
Chittoor District, Andhra Pradesh.
8. Central Power Distribution Company of Andhra Pradesh Limited,  
Corporate office, Mint Compound,  
Hyderabad - 500063, Telangana.
9. Northern Power Distribution Company of Andhra Pradesh Limited,  
Opp. NIT Petrol Pump, Chaitanyapuri, Kazipet,  
Warangal - 506004, Telangana.
10. Bangalore Electricity Supply Company Limited,  
Corporate office, K.R. Circle,  
Bangalore - 560001, Karnataka.
11. Gulbarga Electricity Supply Company Limited,  
Station Main Road, Gulbarga, Karnataka.
12. Hubli Electricity Supply Company Limited,  
Navanagar, PB Road, Hubli, Karnataka.
13. MESCOM Corporate Office,  
Paradigm Plaza, AB Shetty Circle,  
Mangalore - 575001, Karnataka.
14. Chamundeswari Electricity Supply Corporation Limited,  
927, LJ Avenue, Ground Floor, New Kantharaj Urs Road,  
Saraswatipuram, Mysore - 570009, Karnataka.
15. Electricity Department,  
Government of Goa,  
Vidhyut 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 - 600002.

...Respondent(s)

**For Petitioner** : Shri S.S. Raju, PGCIL  
Shri A.K. Verma, PGCIL  
Shri D.K. Biswal, PGCIL  
Shri Ved Prakash Rastogi, PGCIL

**For Respondents** : Shri B. Vinodh Kanna, Advocate, TANGEDCO  
Ms. R. Ramalakshmi, TANGEDCO  
Shri. R Srinivasan, TANGEDCO

### **ORDER**

The instant petition has been filed by Power Grid Corporation of India Limited, a deemed transmission licensee, for truing up of transmission tariff for the period from the date of commercial operation to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and determination of transmission tariff for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following transmission assets under “Conversion of Fixed Line Reactors to Switchable Line Reactors” in Southern Region (hereinafter referred to as “the transmission project”).

**Asset-I:** Conversion of Fixed Line Reactors (FLR) to Switchable Line Reactors (SLR) -

(a) at Madurai end of Madurai-Karaikudi line;

(b) at Madurai end of Madurai-Trichy line;



- (c) at Salem end of Salem-Hosur II line;
- (d) at Udumulpet end of Udumulpet-Salem II line;
- (e) at Thiruvalem end on both circuits of Nellore-Thiruvalem & II;
- (f) at Trichy end of Trichy-Nagapattinam-I line;
- (g) at Trichy end of Trichy-Nagapattinam-II line;
- (h) at Sriperumbadur end of Sriperumbadur-Chitoor line;
- (i) at Sriperumbadur end of Sriperumbadur-SV Chatram line;

**Asset-II:** Conversion of 63 MVAR FLR at both circuits of Kochi Tirunelveli I & II lines into SLR; and

**Asset-III:** Conversion of FLR to SLR at (i) Hyderabad end for Gajwel-Hyderabad II; (ii) Nellore end for Nellore-Thiruvalem I & II; and (iii) Gooty end for Kurnool-Gooty line.

2. The Petitioner has made the following prayers in the instant petition:

- 1) *Approve the trued-up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 10.2 and 11.0 above.*
- 2) *Approve the Completion Cost and additional capitalization incurred during 2014-19, also allow the projected additional capitalization during 2019-24.*
- 3) *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 as per para 10.2 and 11.0 above for respective block.*
- 4) *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.*
- 5) *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.*



6) 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.

7) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 11.6 above.

8) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.

9) 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 Hon'ble 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 (IA) and expenditure sanction for implementation of the transmission project was accorded by the competent authority of the Petitioner Company on 28.2.2017 (communicated vide Memorandum Ref.: C/CP/PA 1617-03-0T-IA-018 dated 7.3.2017) at an estimated cost of ₹2275 lakh, including an IDC of ₹108 lakh based on August 2016 price level.

(b) The scope of work under the transmission project is as under:

Sr. No.	Transmission Line	Reactor (MVAR)		Remarks
		Sending End	Receiving End	
1	Gazwel-Hyderabad II	-	50	Line reactor at Hyderabad end to be made switchable
2	Nellore-Tiruvellam I & II	50	50	Line Reactor at both ends to be made switchable
3	Sriperumbadur-Chittoor	50	-	Line Reactor at Sriperumbadur end to be made switchable
4	Udumalpet-Salem II	63	-	Line Reactor at Udumalpet end to be made switchable
5	Madurai-Karaikudi	63	-	Line Reactor at Madurai



				end to be made switchable
6	Sriperumbadur-SV Chatram	50	-	Line Reactor at Sriperumbadur end to be made switchable
7	Kochi-Tirunelveli – I & II	63	63	Line Reactor at Kochi end to be made Switchable Line Reactor at Tirunelveli end to be retained as FLR.
8	Madurai-Trichy	50	-	Line Reactor at Madurai end to be made switchable
9	Trichy-Nagapattinam I	50	-	Line Reactor at Trichy end to be made switchable
10	Trichy-Nagapattinam II	63	-	Line Reactor at Trichy end to be made switchable
11	Salem-Hosur II	50	-	Reactor at Salem end to be made switchable
12	Malakaram-Hyderabad II (Up to LILO point)	-	50	Reactor at Hyderabad to be made switchable
13	Kurnool-Gooty	-	50	Reactor at Gooty end to be made switchable

Name of Assets (covered under scope of work of the transmission project)	COD
<b>Asset-I:</b> Conversion of FLR to SLR – (a) at Madurai end of Madurai-Karaikudi line; (b) at Madurai end of Madurai-Trichy line; (c) at Salem end of Salem-Hosur II line; (d) at Udumulpet end of Udumulpet-Salem II line; (e) at Thiruvalam end on both circuits of Nellore-Thiruvalam I & II; (f) at Trichy end of Trichy-Nagapattinam-I line; (g) at Trichy end of Trichy-Nagapattinam-II line; (h) at Sriperumbadur end of Sriperumbadur-Chittoor line; (i) at Sriperumbadur end of Sriperumbadur-SV Chatram line;	26.2.2018
<b>Asset-II:</b> Conversion of 63 MVAR FLR at both circuits of Kochi Tirunelveli I & II into SLR	25.6.2018
<b>Asset-III(a):</b> Conversion of FLR to SLR at – (i) Hyderabad end for Gajwel-Hyderabad II; (ii) Nellore end for Nellore-Thiruvalam I & II; and	24.5.2018



(iii) Gooty end for Kurnool-Gooty line	
<b>Asset-III(b):</b> Conversion of FLR to SLR at Hyderabad end for Malakaram-Hyderabad II (up to LILO point)	*

*\*Deleted from the scope of work due to unavailability of adequate electrical clearance and was discussed and agreed in the 42<sup>nd</sup> SCM on Power System Planning in SR held on 27.4.2018.*

(c) The entire scope of work as per the I.A. has been completed and is covered in the instant petition.

(d) As per IA dated 28.2.2017, the transmission assets were scheduled to be put into commercial operation within 18 months from the date of IA. Accordingly, the Scheduled Commercial Operation Date (SCOD) was 27.8.2018. The details regarding nomenclature of transmission assets, their SCOD, Commercial Date of Operation (COD) and time over-run are as follows:

Assets Nomenclature as per affidavit dated 28.6.2019 in Petition No. 174/TT/2018	Assets nomenclature in the instant petition	SCOD	COD	Time over-run
Asset – I	Asset – I	27.8.2018	26.2.2018	-
Asset – II	Asset – II		25.6.2018	-
Asset – III(a)	Asset – III		24.5.2018	-

(e) The transmission tariff in respect of Asset-I, Asset-II and Asset-III(a) was approved by the Commission, from their respective COD to 31.3.2019, vide order dated 28.6.2019 in Petition No. 174/TT/2018.

(f) The Annual Fixed Charges (AFC) approved by the Commission vide order dated 28.6.2019 in Petition No. 174/TT/2018 and the trued-up tariff claimed by the Petitioner in respect of the transmission assets for 2014-19 tariff period are as follows:

Particulars	(₹ in lakh)			
	Asset – I		Asset – II	Asset – III
	2017-18 (Pro rata for 34 days)	2018-19	2018-19 (Pro rata for 280 days)	2018-19 (Pro rata for 312 days)
AFC approved vide order dated 28.6.2019 in Petition No. 174/TT/2018.	77.28	876.30	136.56	285.44



AFC claimed by the Petitioner based on trueing up in the instant petition.	76.64	874.55	136.14	300.08
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4. The Respondents are distribution licensees, power departments and transmission licensees, who are procuring transmission services from the Petitioner, mainly beneficiaries of the Southern Region.

5. The Petitioner has served the petition on the Respondents and notice of this application has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. Tamil Nadu Generation and Distribution Company (TANGEDCO) i.e. Respondent No. 4 has filed its reply vide affidavit dated 31.1.2021 and has raised issues of IEDC, Additional Capital Expenditure (ACE) and security expenses. In response, the Petitioner has filed rejoinder dated 17.5.2021. Vide ROP for hearing dated 8.6.2021, the Commission directed the Petitioner to file documents as pointed out by TANGEDCO such as trial operation certificates, RLDC certificate and CMD certificate. However, we note that documents such as trial operation certificate, RLDC certificate and CMD certificate have already been furnished by the Petitioner in the main petition.

6. The hearing in this matter was held on 8.6.2021 through video conference and order was reserved.

7. Having heard the representatives of the Petitioner, learned counsel for TANGEDCO and perused the material on record, we proceed to dispose of the





petition.

8. This order is issued considering the submissions made by the Petitioner in the petition vide affidavits dated 30.10.2019 and 29.9.2020, reply of TANGEDCO vide affidavit dated 31.1.2021 and rejoinder of the Petitioner vide affidavit dated 17.5.2021.

### **Truing up of Annual Fixed Charges for 2014-19 Tariff Period**

9. The details of the trued-up transmission charges claimed by the Petitioner in respect of the transmission assets are as follows:

(₹ in lakh)

Particulars	Asset – I		Asset – II	Asset – III
	2017-18 (Pro rata for 34 days)	2018-19	2018-19 (Pro rata for 280 days)	2018-19 (Pro rata for 312 days)
Depreciation	3.77	47.83	7.92	16.72
Interest on Loan	3.86	47.36	8.13	16.85
Return on Equity	4.22	53.69	8.90	18.76
Interest on working capital	3.41	38.57	5.77	12.79
O & M Expenses	61.38	687.10	105.42	234.93
<b>Total</b>	<b>76.64</b>	<b>874.55</b>	<b>136.14</b>	<b>300.08</b>

10. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission assets are as follows:

(₹ in lakh)

Particulars	Asset – I		Asset – II	Asset - III
	2018-19 (Pro rata for 34 days)	2018-19	2018-19 (Pro rata for 280 days)	2018-19 (Pro rata for 312 days)
O&M Expenses	55.44	57.26	11.45	22.91
Maintenance Spares	99.79	103.07	20.61	41.23
Receivables	138.46	145.76	29.58	58.51
<b>Total</b>	<b>293.69</b>	<b>306.09</b>	<b>61.64</b>	<b>122.65</b>
Rate of Interest (%)	12.60	12.60	12.20	12.20
<b>Interest on Working Capital</b>	<b>3.41</b>	<b>38.57</b>	<b>5.77</b>	<b>12.79</b>



## Capital Cost

11. The Commission vide order dated 28.6.2019 in Petition No. 174/TT/2018 approved the following capital cost as on COD and ACE upto 31.3.2019:

(₹ in lakh)

Assets	Approved Cost (FR)	Capital Cost as on COD	ACE		Total Capital Cost as on 31.3 2019
			2017-18	2018-19	
Asset – I	1295.45	754.16	40.00	263.14	1057.30
Asset – II	306.02	157.02	0.00	89.38	246.40
Asset – III	464.06	236.49	0.00	68.13	304.62
<b>Total</b>	<b>2065.53</b>	<b>1147.67</b>	<b>40.00</b>	<b>420.65</b>	<b>1608.32</b>

12. The details of FR approved capital cost, capital cost as on COD, ACE incurred up to 31.3.2019 as claimed by the Petitioner in respect of the transmission assets are as follows:

(₹ in lakh)

Assets	Approved Cost (FR)	Capital Cost as on COD	ACE		Total Capital Cost as on 31.3 2019
			2017-18	2018-19	
Asset – I	1295.45	762.77	40.00	214.83	1017.60
Asset – II	306.02	172.07	0.00	49.90	221.97
Asset – III	464.06	324.99	0.00	97.37	422.36
<b>Total</b>	<b>2065.53</b>	<b>1259.83</b>	<b>40.00</b>	<b>362.10</b>	<b>1661.93</b>

## Cost Over-run

13. The Petitioner has claimed capital cost of ₹762.77 lakh, ₹172.07 lakh, and ₹324.99 lakh for Asset-I, Asset-II, and Asset-III as on COD.

14. The total completion cost including ACE in respect of the transmission assets is ₹1661.93 lakh and the approved FR cost is ₹2065.53 lakh. Hence, the completion cost in respect of the transmission assets is within the approved FR cost and, therefore, there is no cost over-run with regard to the transmission assets.



### Time Over-run

15. As per IA dated 28.2.2017, the transmission assets were scheduled to be put into commercial operation in 18 months from the date of IA. Accordingly, SCOD of the transmission assets was 27.8.2018 against which Asset-I, Asset-II and Asset-III were put into commercial operation on 26.2.2018, 25.6.2018 and 24.5.2018 respectively. Thus, there is no time over-run with regard to the transmission assets.

### Interest During Construction (IDC) and Incidental Expenditure During Construction (IEDC)

16. The Petitioner has claimed IDC for the transmission assets and has submitted Auditor's Certificate dated 30.7.2019 in support of the same. The Petitioner has submitted computation of IDC along with year-wise details of the IDC discharged.

17. The allowable IDC has been worked out considering the information submitted by the Petitioner in respect of the transmission assets separately on cash basis. The loan details submitted in Form-9C for 2014-19 tariff period and IDC computation sheet have been considered for the purpose of IDC calculation on cash and accrued basis. The un-discharged IDC as on COD has been considered as ACE during the year in which it has been discharged.

18. Accordingly, based on the information furnished by the Petitioner, IDC considered is summarized as follows:

(₹ in lakh)

Assets	IDC as per Auditor's Certificate	IDC Admissible	IDC disallowed due to computational difference	IDC Discharged as on COD	IDC Undischarged as on COD	IDC Discharged During	
						2018-19	2019-20
	A	B	C=A-B	D	E=B-D	F	G
Asset-I	8.61	8.51	0.10	0.00	8.51	8.51	-
Asset-II	3.33	3.33	0.00	0.58	2.75	2.75	-
Asset-III(a)	6.57	6.57	0.00	0.00	6.57	6.57	-

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19. The Petitioner has claimed IEDC of ₹84.38 lakh, ₹28.49 lakh and ₹44.21 lakh for Asset-I, Asset-II and Asset-III respectively and has submitted the Auditor's certificate in support of the same.

20. TANGEDCO has submitted that the Petitioner has claimed IEDC on the project as a whole. TANGEDCO has further submitted that the Commission vide order dated 28.6.2019 in Petition No. 174/TT/2018 had allowed the claim of IEDC restricting the same to each transmission asset. TANGEDCO has submitted that the Commission should restrict the claim of the Petitioner to each transmission asset. TANGEDCO has further submitted that the Petitioner has not even submitted Form-12A and that the Petitioner may be directed to furnish the same.

21. In response, the Petitioner has submitted that the Commission had disallowed IEDC of ₹11.72 lakh for Asset-II and ₹15.28 lakh for Asset-III in order dated 28.6.2019 in Petition No. 174/TT/2018. Total IEDC claimed in respect of all the transmission assets is within the estimated approved IEDC as per FR and well within benchmark of 10.75% of hard cost as on 31.3.2019. The Petitioner has prayed that IEDC claimed may be approved considering the project as a whole as it was considered in FR of the transmission project. The Petitioner has further submitted that Form-12A has already been submitted vide affidavit dated 29.9.2020. The Petitioner has submitted that entire IEDC has been discharged as on COD in respect of the transmission assets.

22. We have considered the submissions of the Petitioner and TANGEDCO. It is observed that all the transmission assets have been put to commercial operation during 2014-19 period. As regards restricting IEDC on basis of capital cost of



individual assets, the Commission (on basis of APTEL's judgement dated 2.12.2019 in Appeal No. 95 of 2018 and Appeal No. 140 of 2018) vide order dated 4.2.2020 in Petition No. 1/TT/2019, had observed as follows:

*"24. The Appellate Tribunal for Electricity (APTEL), vide its judgment dated 2nd December 2019 in Appeal Nos. 95 of 2018 and 140 of 2018 on the issue of "IEDC to be considered in tariff" has held that IEDC should be computed only on actual basis after due prudence check based on the data submitted by the Appellant in accordance with the Tariff Regulations. Further, vide para 7.12 of the judgment, ATE has, inter alia, observed that ".....without prejudice to the contention that hard costs should not be considered, even if hard cost is to be seen then, at least IEDC including contingencies should be applied".*

*25. As per the APTEL judgment, computation of IEDC of the Project is to be made on actual basis after applying due prudence. The Petitioner files tariff petitions for individual assets and Commission decides tariff for these assets, which are subsequently combined when all the assets of the Project are brought under commercial operation. Thus, prudence can only be applied with reference to the combined IEDC as per FR Cost /RCE on completion of the Project. The present petition is a true up (2009-14) petition, and as mentioned in para 23, all the assets of the Project have been commissioned and their tariff determined on individual basis. As a part of prudence exercise, the IEDC allowed as per respective tariff orders for all the assets of the Project has been compared with the IEDC (including contingencies) for the Project as per RCE. We observe that the IEDC allowed for the Project, except that for the eight assets of the present petition, is Rs 7424.85 lakh which is well within the IEDC limit of Rs 13959.00 lakh as per RCE. The actual IEDC (as claimed) against the eight assets of the present petition is Rs 2604.12 lakh. After disallowing an amount of ₹4.50 lakh, ₹3.13 lakh and ₹33.03 lakh, in case of Asset-3, Asset-7 and Asset 8 respectively due to time over run, ₹2563.56 lakh is being allowed as IEDC.*

*26. We reiterate that Commission has applied prudence in the above manner in the present case as all the assets of the Project have been commissioned. For asset- wise tariff determination, Commission intends to continue with the existing practice of IEDC and prudence shall be applied on IEDC, once the Project is fully commissioned."*

23. The same is applicable to the instant case also. It is noted that the Commission vide order dated 28.6.2019 in Petition No. 174/TT/2018 in paragraph 36 had restricted IEDC to ₹84.38 lakh, ₹16.77 lakh and ₹28.93 lakh in respect of Asset-I, Asset-II and Asset-III respectively. The total IEDC claimed by the Petitioner in respect of all the three transmission assets in the instant petition is amounting to ₹157.08 lakh. Accordingly, IEDC claimed for the transmission assets is within the estimated IEDC for the transmission project as a whole as indicated in Revised Cost Estimate.



Accordingly, IEDC of ₹84.38 lakh, ₹28.49 lakh and ₹44.21 lakh has been allowed for Asset-I, Asset-II and Asset-III respectively.

### **Initial Spares**

24. The Petitioner has claimed the following Initial Spares in respect of the transmission assets and has prayed to allow the Initial Spares as per the actuals:

<b>Assets</b>	<b>Particulars</b>	<b>Plant &amp; Machinery Cost up to cut-off date (excluding IDC and IEDC) (₹ in lakh)</b>	<b>Initial Spares Claimed (₹ in lakh)</b>	<b>Ceiling Limit (%)</b>
Asset-I	Sub-station (Brown Field)	964.31	45.80	6.00
Asset-II	Sub-station (Brown Field)	207.98	0.00	6.00
Asset-III	Sub-station (Brown Field)	372.56	12.21	6.00
<b>Total</b>	<b>Sub-station (Brown Field)</b>	<b>1544.85</b>	<b>58.01</b>	

25. We have considered the submissions of the Petitioner. The details of commercial operation date of the transmission assets covered in the instant petition and their cut-off dates are as follows:

<b>Assets</b>	<b>COD</b>	<b>Cut-off Date</b>
Asset – I	26.2.2018	31.3.2021
Asset – II	25.6.2018	31.3.2021
Asset – III	24.5.2018	31.3.2021

26. The capital cost upto cut-off date has been considered for computation of Initial Spares. The Petitioner's claim for Initial Spares in respect of the transmission assets is within the norms specified under Regulation 13 of 2014 Tariff Regulations and the same is accordingly allowed as follows:



Asset Name	Capital Cost/P&M cost considered as on cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per 2014 Tariff Regulations (in %)	Initial Spares allowable as per 2014 Tariff Regulations (₹ in lakh)	Initial Spares allowed (₹ in lakh)
Asset-I	964.31	45.80	6.00	58.63	45.80
Asset-II	207.98	0.00	6.00	13.28	0.00
Asset-III	372.56	12.21	6.00	23.00	12.21

### **Capital Cost allowed as on COD**

27. Accordingly, capital cost allowed as on COD is as follows:

Assets	Capital Cost as on COD as per Auditor's Certificate	Less: IDC as on COD due to		Capital Cost as on COD (on cash basis)
		IDC Disallowed	Undischarged IDC	
Asset-I	762.77	0.10	8.51	754.16
Asset-II	172.07	-	2.74	169.33
Asset-III	324.99	-	6.57	318.42

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

28. The Petitioner has claimed the following ACE in respect of the transmission assets covered in the instant petition and submitted the Auditor's Certificate in support of its claim:

Assets	ACE (₹ in lakh)	
	2017-18	2018-19
Asset – I	40.00	214.83
Asset – II	0.00	49.90
Asset – III	0.00	97.37

29. The Petitioner has submitted that ACE in 2014-19 period has been claimed under Regulation 14(1)(i) (un-discharged liabilities) and under Regulation 14(1)(ii) (works deferred for execution) of the 2014 Tariff Regulations and is within the cut-off date. The Petitioner has submitted Auditor's Certificate in support of the same.

30. We have considered the submissions made by the Petitioner. The un-



discharged IDC as on COD has been allowed as ACE during the year of discharge. ACE claimed by the Petitioner has been allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations which pertain to un-discharged liabilities recognized to be payable at a future date and liabilities toward works deferred for execution. Accordingly, ACE allowed for 2014-19 period is as follows:

(₹ in lakh)

Particulars	ACE Claimed			
	Asset – I		Asset – II	Asset – III
	2017-18	2018-19	2018-19	2018-19
Balance and retention payments for liabilities	40.00	196.45	15.47	86.11
Works deferred for execution	0.00	18.38	34.43	11.26
IDC Discharge after COD	0.00	8.51	2.75	6.57
<b>Total</b>	<b>40.00</b>	<b>223.34</b>	<b>52.65</b>	<b>103.94</b>

\*The Petitioner has submitted that accrued IDC to be discharged after COD is not included in ACE claimed as per Auditor's Certificate. We have considered the submission of the Petitioner accordingly.

31. The capital cost allowed as on 31.3.2019 after including ACE in respect of the transmission assets is as follows:

(₹ in lakh)

Assets	Particulars	Capital cost as on COD on cash basis	ACE		Total Capital cost including ACE as on 31.3.2019
			2017-18	2018-19	
Asset-I	Allowed vide order dated 28.6.2019 in Petition No. 174/TT/2018	754.16	40.00	263.14	1057.30
	Claimed by the Petitioner in the instant petition	754.16	40.00	223.44	1017.60
	Allowed after truing up in this order	754.16	40.00	223.34	1017.50
Asset-II	Allowed vide order dated 28.6.2019 in Petition No. 174/TT/2018	157.02	0.00	89.38	246.40
	Claimed by the Petitioner in the instant petition	169.32	0.00	52.65	221.97
	Allowed after truing up in this order	169.32	0.00	52.65	221.97





Asset-III	Allowed vide order dated 28.6.2019 in Petition No. 174/TT/2018	236.49	0.00	68.13	304.62
	Claimed by the Petitioner in the instant petition	318.42	0.00	103.94	422.36
	Allowed after truing up in this order	318.42	0.00	103.94	422.36

### **Debt-Equity Ratio**

32. The Petitioner has claimed debt-equity ratio of 70:30 as on COD and for ACE post-COD. Debt-equity ratio of 70:30 has been considered for capital cost as on COD and ACE during 2014-19 tariff period as provided under Regulation 19 of the 2014 Tariff Regulations. The details of debt-equity ratio in respect of the transmission assets as on COD and 31.3.2019 are as follows:

<b>Asset - 1</b>	<b>Amount as on COD (₹ in lakh)</b>	<b>(%)</b>	<b>Amount as on 31.3.2019 (₹ in lakh)</b>	<b>(%)</b>
Debt	527.92	70.00	712.26	70.00
Equity	226.24	30.00	305.24	30.00
<b>Total</b>	<b>754.16</b>	<b>100.00</b>	<b>1017.50</b>	<b>100.00</b>
<b>Asset - 2</b>	<b>Amount as on COD (₹ in lakh)</b>	<b>(%)</b>	<b>Amount as on 31.3.2019 (₹ in lakh)</b>	<b>(%)</b>
Debt	118.53	70.00	155.39	70.00
Equity	50.79	30.00	66.58	30.00
<b>Total</b>	<b>169.32</b>	<b>100.00</b>	<b>221.97</b>	<b>100.00</b>
<b>Asset - 3</b>	<b>Amount as on COD (₹ in lakh)</b>	<b>(%)</b>	<b>Amount as on 31.3.2019 (₹ in lakh)</b>	<b>(%)</b>
Debt	222.90	70.00	295.66	70.00
Equity	95.52	30.00	126.70	30.00
<b>Total</b>	<b>318.42</b>	<b>100.00</b>	<b>422.36</b>	<b>100.00</b>

### **Depreciation**

33. The depreciation has been allowed as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. Depreciation has been allowed considering capital expenditure as on COD and approved ACE during 2014-19 tariff period. The Gross Block during 2014-19 tariff period has been depreciated at



Weighted Average Rate of Depreciation (WAROD) and working of WAROD is given at Annexure-I. WAROD has been worked out after taking into account the depreciation rates of the transmission assets as prescribed in the 2014 Tariff Regulations and depreciation allowed during 2014-19 tariff period is as follows:

(₹ in lakh)

Particulars	Asset – I		Asset – II	Asset - III
	2017-18 (Pro-rata for 34 days)	2018-19	2018-19 (Pro-rata for 280 days)	2018-19 (Pro-rata for 312 days)
Opening Gross Block	754.16	794.16	169.32	318.42
ACE	40.00	223.34	52.65	103.94
Closing Gross Block	794.16	1017.50	221.97	422.36
Average Gross Block	774.16	905.83	195.65	370.39
Weighted average rate of Depreciation (WAROD) (%)	5.28	5.28	5.28	5.28
Lapsed useful life of the Asset-at the beginning of the year (Year)	0	0	0	0
Balance useful life of the Asset-at the beginning of the year (Year)	25	25	25	25
Aggregated Depreciable Value	696.74	811.44	176.08	333.35
<b>Combined Depreciation during the year</b>	<b>3.81</b>	<b>47.83</b>	<b>7.92</b>	<b>16.72</b>
Remaining Aggregated Depreciable Value	692.94	763.61	168.16	316.63

34. The details of depreciation allowed in respect of the transmission assets vide order dated 28.6.2019 in Petition No. 174/TT/2018, as claimed by the Petitioner in the instant petition and trued up in the instant order is as follows:

(₹ in lakh)

Particulars	Asset – I		Asset – II	Asset - III
	2017-18 (Pro-rata for 34 days)	2018-19	2018-19 (Pro-rata for 280 days)	2018-19 (Pro-rata for 312 days)
Allowed vide order dated 28.6.2019 in Petition No. 174/TT/2018	3.81	48.88	8.17	12.21
Claimed by the Petitioner in the instant petition	3.77	47.83	7.92	16.72
Approved after true-up in this order	3.81	47.83	7.92	16.72



### Interest on Loan (IoL)

35. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. Accordingly, IoL is calculated based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of IoL allowed are as follows:

(₹ in lakh)

Particulars	Asset – I		Asset – II	Asset - III
	2017-18 (Pro rata for 34 days)	2018-19	2018-19 (Pro rata for 280 days)	2018-19 (Pro rata for 312 days)
Gross Normative Loan	527.92	555.92	118.53	222.90
Cumulative Repayments up to Previous Year	0.00	3.81	0.00	0.00
Net Loan-Opening	527.92	552.11	118.53	222.90
Addition due to ACE	28.00	156.34	36.86	72.76
Repayment during the year	3.81	47.83	7.92	16.72
Net Loan-Closing	552.11	660.62	147.47	278.94
Average Loan	540.02	606.37	133.00	250.92
Weighted Average Rate of Interest on Loan (%)	7.743	7.810	7.969	7.855
Interest on Loan	41.81	47.36	10.60	19.71
<b>Pro rata Interest on Loan</b>	<b>3.89</b>	<b>47.36</b>	<b>8.13</b>	<b>16.85</b>

36. The details of IoL approved vide order dated 28.6.2019 in Petition No. 174/TT/2018, claimed by the Petitioner in the instant petition and trued up in this order is as follows:

(₹ in lakh)

Particulars	Asset – I		Asset – II	Asset – III
	2017-18 (Pro-rata for 34 days)	2018-19	2018-19 (Pro-rata for 280 days)	2018-19 (Pro-rata for 312 days)
Allowed vide order dated 28.6.2019 in Petition No. 174/TT/2018	3.94	48.44	8.36	12.20
Claimed by the Petitioner in the instant petition	3.86	47.36	8.13	16.85
Approved after true-up in this order	3.89	47.36	8.13	16.85



### Return on Equity (RoE)

37. The Petitioner has claimed RoE in respect of the transmission assets in terms of Regulation 24 and Regulation 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at MAT rates and has claimed the following effective tax rates for 2014-19 tariff period:

Year	Claimed effective tax (in %)	Grossed up RoE [(Base Rate)/(1-t)] (in %)
2014-15	21.018	19.625
2015-16	21.382	19.716
2016-17	21.338	19.705
2017-18	21.337	19.704
2018-19	21.549	19.758

38. The Commission vide order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate for the Petitioner based on the notified MAT rates and the same is as follows:

Year	Notified MAT rates (inclusive of surcharge & cess)	Effective tax (in %)
2014-15	20.961	20.961
2015-16	21.342	21.342
2016-17	21.342	21.342
2017-18	21.342	21.342
2018-19	21.549	21.549

39. The MAT rates as allowed vide order dated 27.4.2020 in Petition No. 274/TT/2019 are considered for the purpose of grossing up of the rate of RoE for truing up of the tariff of 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations, which is as follows :

Year	MAT Rate (%)	Grossed up RoE [(Base Rate)/(1-t)](%)
2014-15	20.961	19.610
2015-16	21.342	19.705
2016-17	21.342	19.705
2017-18	21.342	19.705
2018-19	21.549	19.758



40. Accordingly, RoE allowed in respect of the transmission assets is as follows:

(₹ in lakh)

Particulars	Asset – I		Asset – II	Asset - III
	2017-18 (Pro-rata for 34 days)	2018-19	2018-19 (Pro-rata for 280 days)	2018-19 (Pro-rata for 312 days)
Opening Equity	226.24	238.24	50.79	95.52
Addition due to ACE	12.00	67.00	15.79	31.18
Closing Equity	238.24	305.24	66.58	126.70
Average Equity	232.24	271.74	58.69	111.11
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500
Tax Rate applicable (%)	21.342	21.549	21.549	21.549
Rate of Return on Equity (Pre-tax) (%)	19.705	19.758	19.758	19.758
Return on Equity (Pre-tax)	45.76	53.69	11.59	21.95
<b>Pro rata Return on Equity</b>	<b>4.26</b>	<b>53.69</b>	<b>8.89</b>	<b>18.77</b>

41. The details of RoE allowed vide order dated 28.6.2019 in Petition No. 174/TT/2018, as claimed by the Petitioner in the instant petition and trued up in the instant order are as follows:

(₹ in lakh)

Particulars	Asset – I		Asset – II	Asset - III
	2017-18 (Pro-rata for 34 days)	2018-19	2018-19 (Pro-rata for 280 days)	2018-19 (Pro-rata for 312 days)
Allowed vide order dated 28.6.2019 in Petition No. 174/TT/2018	4.13	53.28	8.83	13.61
Claimed by the Petitioner in the instant petition	4.22	53.69	8.90	18.76
Approved after true-up in this order	4.26	53.69	8.89	18.77

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

42. The details of O&M Expenses claimed by the Petitioner in respect of the transmission assets and allowed under Regulation 29(4)(a) of the 2014 Tariff Regulations for the purpose of tariff are as follows:



(₹ in lakh)

<b>Asset – I</b>		
<b>Particulars</b>	<b>2017-18 (Pro-rata for 34 days)</b>	<b>2018-19</b>
<b>Sub-station Bays</b>		
Salem: 400 kV Line Reactor Bay for Hosur-2	1	1
Udumalpet: 400 kV Line Reactor Bay for Salem-2	1	1
Sriperumbudur: Line Reactor Bay for Chittoor	1	1
Sriperumbudur: Line Reactor Bay for SV Cattarm	1	1
Thiruvallur: Line Reactor Bay for Nellore-I&II	2	2
Trichy: Line Reactor Bay for Nagapattinam- I&II	2	2
Madurai: Line Reactor Bay for Trichy	1	1
Madurai: Line Reactor Bay for Karaikudi	1	1
<b>Norm (₹ lakh/bay)</b>		
400 kV	66.51	68.71
<b>Total Sub-station O&amp;M Expenses</b>	<b>665.10</b>	<b>687.10</b>
<b>Total O&amp;M Expenses</b>	<b>665.10</b>	<b>687.10</b>

(₹ in lakh)

<b>Asset – II</b>	
<b>Particulars</b>	<b>2018-19 (Pro-rata for 280 days)</b>
<b>Sub-station Bays</b>	
Tirunelveli: Bays for Tirunelveli-I &II	2
<b>Norm (₹ lakh/bay)</b>	
400 kV	68.71
<b>Total Sub-station O&amp;M Expenses</b>	<b>137.42</b>
<b>Total O&amp;M Expenses</b>	<b>137.42</b>

(₹ in lakh)

<b>Asset – III</b>	
<b>Particulars</b>	<b>2018-19 (Pro-rata for 312 days)</b>
<b>Sub-station Bays</b>	
Nellore: Bay for Nellore Thiruvallur-I	1
Nellore: Bay for Thiruvallur-II	1
Hyderabad: Bay for Hyd-Gajwel S/C	1
Gooty: Bay for Kurnool Gooty LR	1
<b>Norm (₹ lakh/bay)</b>	
400 kV	68.71
<b>Total Sub-station O&amp;M Expenses</b>	<b>274.84</b>
<b>Total O&amp;M Expenses</b>	<b>274.84</b>

43. We have considered the submissions of the Petitioner. O&M Expenses allowed in respect of the transmission assets are as follows:



(₹ in lakh)

<b>Asset – I</b>		
<b>Particulars</b>	<b>2017-18 (Pro-rata for 34days)</b>	<b>2018-19</b>
<b>Sub-station Bays</b>		
Salem:400 kV Line Reactor Bay for Hosur-2	1	1
Udumalpet: 400 kV Line Reactor Bay for Salem-2	1	1
Sriperumbudur: Line Reactor Bay for Chittor	1	1
Sriperumbudur: Line Reactor Bay for SV Cattarm	1	1
Thiruvalem: Line Reactor Bay for Nellore-I&II	2	2
Trichy: Line Reactor Bay for Nagapattinam- I&II	2	2
Madurai: Line Rector Bay for Trichy	1	1
Madurai: Line Reactor Bay for Karaikudi	1	1
<b>Norm (₹ lakh/bay)</b>		
400 kV	66.51	68.71
<b>Total Sub-station O&amp;M Expenses</b>	<b>665.10</b>	<b>687.10</b>
<b>Total O&amp;M Expenses</b>	<b>665.10</b>	<b>687.10</b>

(₹ in lakh)

<b>Asset – II</b>	
<b>Particulars</b>	<b>2018-19 (Pro-rata for 280 days)</b>
<b>Sub-station Bays</b>	
Tirunelveli:Bays for Tirunelveli-I &II	2
<b>Norm (₹ lakh/bay)</b>	
400 kV	68.71
<b>Total Sub-station O&amp;M Expenses</b>	<b>137.42</b>
<b>Total O&amp;M Expenses</b>	<b>137.42</b>

(₹ in lakh)

<b>Asset – III</b>	
<b>Particulars</b>	<b>2018-19 (Pro-rata for 312 days)</b>
<b>Sub-station Bays</b>	
Nellore: Bay for Nellore Triuvalam-I	1
Nellore: Bay for Thiruvalem-II	1
Hyderabad: Bay for Hyd-Gajwel S/C	1
Gooty: Bay for Kurnool Gooty LR	1
<b>Norm (₹ lakh/bay)</b>	
400 kV	68.71
<b>Total Sub-station O&amp;M Expenses</b>	<b>274.84</b>
<b>Total O&amp;M Expenses</b>	<b>274.84</b>

44. The details of O&M Expenses approved vide order dated 28.6.2019 in Petition No. 174/TT/2018, O&M Expenses claimed by the Petitioner in the instant petition and trued-up O&M Expenses allowed in the instant order are as follows:



Particulars	Asset – I		Asset – II	Asset - III
	2017-18 (Pro-rata for 34 days)	2018-19	2018-19 (Pro-rata for 280 days)	2018-19 (Pro-rata for 312 days)
Allowed vide order dated 28.6.2019 in Petition No. 174/TT/2018	61.95	687.10	105.42	234.93
Claimed by the Petitioner in the instant petition	61.38	687.10	105.42	234.96
Approved after true-up in this order	61.95	687.10	105.42	234.93

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

45. The Petitioner has claimed IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations as follows:

**i. Maintenance Spares:**

Maintenance spares have been worked out based on 15% of Operation and Maintenance Expenses.

**ii. O & M Expenses:**

O&M Expenses have been considered for one month of the allowed O&M Expenses.

**iii. Receivables:**

The receivables have been worked out on the basis of 2 months of annual transmission charges as worked out above.

**iv. Rate of Interest on Working Capital:**

Rate of interest on working capital is considered on normative basis in accordance with Clause (3) of Regulation 28 of the 2014 Tariff Regulations.

46. The trued up IWC allowed in respect of the transmission assets is as follows:

Particulars	Asset – I		Asset – II	Asset - III
	2017-18 (Pro-rata for 34 days)	2018-19	2018-19 (Pro-rata for 280 days)	2018-19 (Pro-rata for 312 days)
O&M Expenses (O&M expenses for One month)	55.43	57.26	11.45	22.90

(₹ in lakh)





Maintenance Spares (15% of O&M expenses)	99.77	103.07	20.61	41.23
Receivables (Equivalent to Two months of annual fixed cost / annual transmission charges)	138.42	145.76	29.58	58.50
<b>Total</b>	<b>293.61</b>	<b>306.08</b>	<b>61.64</b>	<b>122.63</b>
Rate of Interest on working capital (%)	12.60	12.60	12.20	12.20
<b>Interest of working Capital</b>	<b>37.00</b>	<b>38.57</b>	<b>7.52</b>	<b>14.96</b>
<b>Pro-rata interest on working capital</b>	<b>3.45</b>	<b>38.57</b>	<b>5.77</b>	<b>12.79</b>

47. The details of the IWC approved vide order dated 28.6.2019 in Petition No. 174/TT/2018, IWC claimed by the Petitioner in the instant petition and trued up IWC allowed in the instant order is as follows:

Particulars	Asset – I		Asset – II	Asset - III
	2017-18 (Pro-rata for 34 days)	2018-19	2018-19 (Pro-rata for 280 days)	2018-19 (Pro-rata for 312 days)
Allowed vide order dated 28.6.2019 in Petition No. 174/TT/2018	3.44	38.60	5.78	12.49
Claimed by the Petitioner in the instant petition	3.45	38.57	5.77	12.79
Approved after true-up in this order	3.45	38.57	5.77	12.79

#### **Approved Annual Fixed Charges for 2014-19 Tariff Period**

48. The trued up Annual Fixed Charges (AFC) allowed in respect of the transmission assets for 2014-19 tariff period are as follows:

Particulars	Asset – I		Asset – II	Asset - III
	2017-18 (Pro-rata for 34 days)	2018-19	2018-19 (Pro-rata for 280 days)	2018-19 (Pro-rata for 312 days)
Depreciation	3.81	47.83	7.92	16.72
Interest on Loan	3.89	47.36	8.13	16.85
Return on Equity	4.26	53.69	8.89	18.77
Int. on Working Capital	3.45	38.57	5.77	12.79
Op. and Maintenance	61.95	687.10	105.42	234.93
<b>Total</b>	<b>77.37</b>	<b>874.54</b>	<b>136.14</b>	<b>300.05</b>

(₹ in lakh)



49. Accordingly, AFC approved vide order dated 26.8.2019 in Petition No. 174/TT/2018, trued up AFC claimed by the Petitioner in the instant petition and trued up AFC allowed in the instant order are as follows:

Particulars	Asset – I		Asset – II	Asset - III
	2017-18 (Pro-rata for 34 days)	2018-19	2018-19 (Pro-rata for 280 days)	2018-19 (Pro-rata for 312 days)
Allowed vide order dated 26.8.2019 in Petition No. 174/TT/2018	77.28	876.30	136.56	285.44
Claimed by the Petitioner in the instant petition	76.64	874.55	136.14	300.08
Approved after true-up in this order	77.37	874.54	136.14	300.05

(₹ in lakh)

#### **Determination of Annual Fixed Charges for 2019-24 Tariff Period**

50. The Petitioner has submitted the tariff forms combining the transmission assets into a single asset. Accordingly, as per proviso (i) of Regulation 8(1) of the 2019 Tariff Regulations, single tariff for the Combined Asset has been worked out for 2019-24 tariff period.

51. The Petitioner has claimed the following transmission charges in respect of the Combined Asset for 2019-24 tariff period:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	89.29	90.84	90.84	90.84	90.84
Interest on Loan	84.27	78.75	71.54	64.32	57.09
Return on Equity	95.29	96.94	96.94	96.94	96.94
Interest on Working Capital	26.46	27.25	27.95	28.69	29.42
O&M Expenses	514.40	532.48	551.20	570.56	590.56
<b>Total</b>	<b>809.71</b>	<b>826.26</b>	<b>838.47</b>	<b>851.35</b>	<b>864.85</b>

52. The Petitioner has claimed the following IWC in respect of the Combined Asset for 2019-24 tariff period:



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	42.87	44.37	45.93	47.55	49.21
Maintenance Spares	77.16	79.87	82.68	85.58	88.58
Receivables	99.55	101.87	103.37	104.96	106.33
<b>Total</b>	<b>219.58</b>	<b>226.11</b>	<b>231.98</b>	<b>238.09</b>	<b>244.12</b>
Rate of Interest	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>26.46</b>	<b>27.25</b>	<b>27.95</b>	<b>28.69</b>	<b>29.42</b>

### **Effective Date of Commercial Operation (E-COD)**

53. The Petitioner has claimed E-COD of the Combined Asset as 5.4.2018. Based on the trued-up admitted capital cost and actual COD of all the transmission assets, E-COD has been worked out as follows:

<b>Computation of E-COD</b>					
Asset	Actual COD	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Weight of the cost (%)	Number of Days from last COD	Weighted Days
Asset – 1	26.2.2018	1017.50	61.23	119	72.86
Asset – 2	25.6.2018	221.97	13.36	0	0
Asset – 3	24.5.2018	422.36	25.42	32	8.13
<b>Total</b>		<b>1661.83.</b>	<b>100.00</b>		<b>80.99</b>
<b>E-COD (Latest COD – Total Weighted Days) 5.4.2018</b>					

54. E-COD is used to determine the lapsed life of the project as a whole, which works out as zero (0) year as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).

### **Weighted Average Life (WAL)**

55. Regulation 33 of the 2019 Tariff Regulations has been considered for determination of WAL. The Combined Asset may have multiple elements such as land, building, transmission line, sub-station and PLCC and each element may have different span of life. Therefore, the concept of WAL has been used as the useful life of the transmission project as a whole.



56. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as stipulated in the 2019 Tariff Regulations. The element-wise life as defined in the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of the Combined Asset has been worked out as 25 years as follows:

<b>Admitted Capital Cost as on 31.3.2019</b>				
<b>Particulars</b>	<b>Combined Asset Cost (in lakh) (1)</b>	<b>Life in Years (2)</b>	<b>Weighted Cost (3) = (1) x (2)</b>	<b>Weighted Average Life of Asset (in years) (4) = (3)/ (1)</b>
Sub-Station Equipment	1661.83	25.00	41545.75	25.00
<b>Total</b>	<b>1661.83</b>		<b>41545.75</b>	

57. WAL as on 1.4.2019 as determined above is applicable prospectively i.e. for 2019-24 tariff period and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed, E-COD of the assets is 5.4.2018 and the lapsed life of the project as a whole, works out as zero (0) year as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 25 years.

### **Capital Cost**

58. Regulation 19 of the 2019 Tariff Regulations provides as follows:

**“19 Capital Cost:** (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 Asset-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.



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 Asset-forming part of the project, but not in use, as declared in the tariff petition;
- (b) De-capitalised Asset-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 asset.

- (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.”

59. The Petitioner has claimed the capital cost of individual assets which has been added to arrive at the capital cost claimed during 2019-24 period in respect of the Combined Asset as per the following details:

(₹ in lakh)

Assets	FR Apportioned Approved Capital Cost	Capital Cost claimed as on 31.3.2019	ACE	Estimated Completion Cost as on 31.3.2024
			2019-20	
Asset-I	1295.45	1017.60	39.70	1057.30
Asset-II	306.02	221.97	17.83	239.80



Asset-III	464.06	422.36	0.98	423.34
<b>Total</b>	<b>2065.53</b>	<b>1661.93</b>	<b>58.51</b>	<b>1720.44</b>

60. Against the overall apportioned approved capital cost (as per FR) of ₹2065.53 lakh, the estimated completion cost is ₹1720.44 lakh. The individual capital cost of each transmission asset is also within the respective FR apportioned capital cost. Therefore, there is no cost over-run in respect of the Combined Asset.

61. The capital cost has been dealt in line with Regulation 19(3) of the 2019 Tariff Regulations. The element-wise capital cost (i.e. land, building, transmission line, sub-station and PLCC) as admitted by the Commission as on 31.3.2019 for the transmission assets are clubbed together and the capital cost has been considered as capital cost for Combined Asset as on 1.4.2019 as per the following details:

(₹ in lakh)				
Elements	Asset-I	Asset-II	Asset-III	Capital cost for combined assets as on 31.3.2019
Sub-Station Equipment	1017.50	221.97	422.36	1661.83
<b>Total</b>	<b>1017.50</b>	<b>221.97</b>	<b>422.36</b>	<b>1661.83</b>

62. The trued-up capital cost of ₹1661.83 lakh in respect of the Combined Asset is considered as admitted capital cost as on 31.3.2019 for working out tariff for 2019-24 tariff period.

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

63. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provide as follows:

***“24. Additional Capitalization within the original scope and up to 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 ACE 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*
- (d) The replacement of such asset or equipment has otherwise been allowed by the Commission.”*





64. The Petitioner has claimed projected ACE for 2019-24 tariff period on account of un-discharged liability towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date and unexecuted works within the cuff-off date. The details of the projected ACE in respect of the Combined Asset are as follows:

Assets	(₹ in lakh)
	ACE (as per Auditor's Certificate) 2019-20
Asset – I	39.70
Asset – II	17.83
Asset – III	0.98
<b>Total</b>	<b>58.51</b>

65. In response, TANGEDCO has submitted that the Petitioner has failed to provide any justification in support of its claim for ACE for the year 2019-20. TANGEDCO has further submitted that the Petitioner has failed to disclose the actual amount withheld by it on account of balance and retention payments, the details of contractors and reasons for such withholding of payment. Mere mentioning of the amount or filing of Auditor's Certificate does not entitle the Petitioner to the claim and the Petitioner is required to prove the claim made by it as per Regulation 24(2) of the 2019 Tariff Regulations. Hence, the claim for ACE may be disallowed.

66. In response, the Petitioner has submitted that ACE approved by the Commission were based on projections and while projecting ACE, the contracts are not closed and liabilities are not settled. However, in the instant petition, ACE has been claimed on account of actual payments made to the contractors based on the invoices received from them. The Petitioner has submitted that ACE incurred by it after closing of the contract may be higher or lower than the projected ACE. The



Petitioner has submitted that ACE claimed in respect of the Combined Asset is within the cut-off date and the same is as per the original scope of work. ACE claimed in 2019-24 period is on account of un-discharged liability towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date and work to be executed within the cut-off date. ACE for the year 2019-20 in respect of the Combined Asset has been claimed under Regulation 24(1)(a) (Un-discharged liabilities) and Regulation 24(1)(b) (Unexecuted works) of the 2019 Tariff Regulations. The details of underlying reasons for ACE in respect of the Combined Asset have been provided in Form 7 of the instant petition.

67. We have considered the submissions of the Petitioner and TANGEDCO. ACE claimed on account of balance and retention payments and deferred works is allowed under Regulation 24(1)(a) and (b) of the 2019 Tariff Regulations. ACE allowed in respect of the Combined Asset is as follows:

FR Capital Cost	Capital Cost as on 1.4.2019	Admitted ACE		Capital Cost as on 31.3.2024
		2019-20		
2065.53	1661.83	58.51		1720.34

#### **Capital Cost for 2019-24 Tariff Period**

68. Capital cost of the Combined Asset considered for 2019-24 tariff period is as follows:

Capital Cost as on 1.4.2019	Admitted ACE		Capital Cost as on 31.3.2024
	2019-20		
1661.83	58.51		1720.34



## **Debt-Equity Ratio**

69. Regulations 18 of the 2019 Tariff Regulations provides as follows:

**“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.*

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

(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.”

70. The details of the debt-equity considered for the purpose of computation of tariff for 2019-24 tariff period in respect of the Combined Asset is as follows:

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(%)	Total Capital Cost as on 31.3.2024 (₹ in lakh)	(%)
Debt	1163.31	70.00	1204.27	70.00
Equity	498.52	30.00	516.07	30.00
<b>Total</b>	<b>1661.83</b>	<b>100.00</b>	<b>1720.34</b>	<b>100.00</b>

### **Depreciation**

71. Regulations 33 of the 2019 Tariff Regulations provide as follows:

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

*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 of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the Asset-for part of the year, depreciation shall be charged on pro rata basis.”

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

*Provided that 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 Asset-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 asset.*

*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 thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services.”*

72. We have considered the submissions of the Petitioner. WAROD has been worked out and placed as Annexure-II after taking into account the depreciation rates as specified in the 2019 Tariff Regulations. Depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated



depreciation up to 31.3.2019. Depreciation allowed in respect of the Combined Asset is as follows:

(₹ in lakh)

<b>Combined Asset</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Opening Gross Block	1661.83	1720.34	1720.34	1720.34	1720.34
Addition during the year 2019-24 due to projected ACE	58.51	0.00	0.00	0.00	0.00
Closing Gross Block	1720.34	1720.34	1720.34	1720.34	1720.34
Average Gross Block	1691.09	1720.34	1720.34	1720.34	1720.34
Weighted average rate of Depreciation (WAROD) (%)	5.28	5.28	5.28	5.28	5.28
Lapsed useful life at the beginning of the year (Year)	0	1	2	3	4
Balance useful life at the beginning of the year (Year)	25	24	23	22	21
Aggregated Depreciable Value	1445.70	1382.74	1291.91	1201.07	1110.24
<b>Combined Depreciation during the year</b>	<b>89.29</b>	<b>90.83</b>	<b>90.83</b>	<b>90.83</b>	<b>90.83</b>
Aggregate Cumulative Depreciation at the end of the year	165.57	256.40	347.23	438.07	528.90
Remaining Aggregate Depreciable Value at the end of the year	1356.41	1291.91	1201.07	1110.24	1019.40

### **Interest on Loan (IoL)**

73. Regulation 32 of the 2019 Tariff Regulations provides as follows:

**“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 asset, 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 up to 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”.

74. The weighted average rate of interest of IoL has been considered on the basis of the rates 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 the 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. In view of above, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed is as follows:

(₹ in lakh)					
<b>Combined Asset</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Gross Normative Loan	1163.31	1204.27	1204.27	1204.27	1204.27
Cumulative Repayments up to Previous Year	76.28	165.57	256.40	347.23	438.07
Net Loan-Opening	1087.03	1038.70	947.87	857.03	766.20
Addition due to ACE	40.96	0.00	0.00	0.00	0.00
Repayment during the year	89.29	90.83	90.83	90.83	90.83
Net Loan-Closing	1038.70	947.87	857.03	766.20	675.37
Average Loan	1062.87	993.28	902.45	811.62	720.78
Weighted Average Rate of Interest on Loan (%)	7.928	7.927	7.926	7.925	7.920
<b>Interest on Loan</b>	<b>84.26</b>	<b>78.74</b>	<b>71.53</b>	<b>64.32</b>	<b>57.09</b>



## **Return on Equity (RoE)**

75. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provide as follows:

**“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.*

**Illustration-**

*(i) In case of a generating company or a transmission licensee paying Minimum Alternate Tax (MAT) @ 21.55% including surcharge and cess:*

$$\text{Rate of return on equity} = 15.50 / (1 - 0.2155) = 19.758\%$$

*(ii) In case of a generating company or a transmission licensee paying normal corporate tax including surcharge and cess:*

- (a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;*
- (b) Estimated Advance Tax for the year on above is Rs 240 crore;*
- (c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore / Rs 1000 Crore = 24%;*
- (d) Rate of return on equity = 15.50 / (1 - 0.24) = 20.395%.*

*(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.”*

76. The Petitioner has submitted that MAT rate is applicable to the Petitioner's Company. 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. RoE allowed in respect of the Combined Asset under Regulation 30 of the 2019 Tariff Regulations is as follows:

(₹ in lakh)

<b>Combined Asset</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Opening Equity	498.52	516.07	516.07	516.07	516.07
Addition due to ACE	17.55	0.00	0.00	0.00	0.00
Closing Equity	516.07	516.07	516.07	516.07	516.07
Average Equity	507.30	516.07	516.07	516.07	516.07
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
Tax Rate applicable (%)	17.47	17.47	17.47	17.47	17.47
Rate of Return on Equity (Pre-tax)	18.78	18.78	18.78	18.78	18.78
<b>Return on Equity (Pre-tax)</b>	<b>95.28</b>	<b>96.93</b>	<b>96.93</b>	<b>96.93</b>	<b>96.93</b>

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

77. Regulation 35(3)(a) and Regulation 35(4) of the 2019 Tariff Regulations provide as follows:

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

<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<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



<i>Double Circuit (Bundled conductor with four or more sub-conductors)</i>	1.322	1.368	1.416	1.466	1.517
<i>Double Circuit (Twin &amp; Triple Conductor)</i>	0.881	0.912	0.944	0.977	1.011
<i>Double Circuit (Single Conductor)</i>	0.377	0.391	0.404	0.419	0.433
<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.”

78. O&M Expenses claimed by the Petitioner and as allowed in respect of the Combined Asset are as follows:

(₹ in lakh)					
Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Sub-station Bays</b>					
Salem: 400 kV Line Reactor Bay for Hosur-2	1	1	1	1	1
Udumalpet: 400 KV Line Reactor Bay for Salem-2	1	1	1	1	1
Sriperumbudur: Line Reactor Bay for Chittoor	1	1	1	1	1
Sriperumbudur: Line Reactor Bay for SV Cattarm	1	1	1	1	1
Thiruvallur: Line Reactor Bay for Nellore-I&II	2	2	2	2	2
Trichy: Line Reactor Bay for Nagapattinam-I&II	2	2	2	2	2
Madurai: Line Reactor Bay for Trichy	1	1	1	1	1



Madurai: Line Reactor Bay for Karaikudi	1	1	1	1	1
Nellore: Bay for Nellore Triuvalam-I	1	1	1	1	1
Nellore: Bay for Thiruvalam-II	1	1	1	1	1
Hyderabad: Bay for Hyd-Gajwel S/C	1	1	1	1	1
Gooty: Bay for Kurnool Gooty LR	1	1	1	1	1
Tirunelveli: Bays for Tirunelveli-I &II	2	2	2	2	2
<b>Norm (₹ lakh/bay)</b>					
400 kV Substation	32.15	33.28	34.45	35.66	36.91
<b>Total Sub-station O&amp;M Expenses</b>	<b>514.40</b>	<b>532.48</b>	<b>551.20</b>	<b>570.56</b>	<b>590.56</b>
<b>Total O&amp;M Expenses</b>	<b>514.40</b>	<b>532.48</b>	<b>551.20</b>	<b>570.56</b>	<b>590.56</b>

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

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

**“34. Interest on Working Capital:** (1) *The working capital shall cover:*

.....

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

(i) *Receivables equivalent to 45 days of annual 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. Definition** - In these regulations, unless the context otherwise requires: -

(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;”

80. The Petitioner has submitted that it has computed IWC 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 IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20 and 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and 10.50% (SBI 1year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-24. The components of the working capital and interest allowed thereon in respect of the Combined Asset are as follows:

(₹ in lakh)					
<b>Combined Asset</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
O&M Expenses (O&M expenses for One month)	42.87	44.37	45.93	47.55	49.21
Maintenance Spares (15% of O&M expenses)	77.16	79.87	82.68	85.58	88.58
Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	99.55	101.64	102.92	104.50	105.86
<b>Total</b>	<b>219.58</b>	<b>225.88</b>	<b>231.53</b>	<b>237.63</b>	<b>243.66</b>
Rate of Interest (%)	12.05	11.25	10.50	10.50	10.50
<b>Interest of working capital</b>	<b>26.46</b>	<b>25.41</b>	<b>24.31</b>	<b>24.95</b>	<b>25.58</b>

**Annual Fixed Charges for 2019-24 Tariff Period**

81. The transmission charges allowed in respect of the Combined Asset for 2019-24 tariff period are as follows:



<b>Combined Asset</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	89.29	90.83	90.83	90.83	90.83
Interest on Loan	84.26	78.74	71.53	64.32	57.09
Return on Equity	95.28	96.93	96.93	96.93	96.93
Interest on Working Capital	26.46	25.41	24.31	24.95	25.58
O&M Expenses	514.40	532.48	551.20	570.56	590.56
<b>Total</b>	<b>809.69</b>	<b>824.39</b>	<b>834.80</b>	<b>847.59</b>	<b>861.00</b>

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

82. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 70(1) of the 2019 Tariff Regulations.

83. 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 and RLDC Fees and Charges**

84. 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.

### **Goods and Services Tax**

85. 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 Government/Statutory



Authorities, the same may be allowed to be recovered from the beneficiaries.

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

### **Security Expenses**

87. The Petitioner has submitted that security expenses in respect of the transmission assets/ Combined Asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC.

88. TANGEDCO has submitted that as per Regulation 35(3)(c) of the 2019 Tariff Regulations, the Petitioner must submit the assessment of the security requirements and estimated security expenses for 2019-24 tariff period. In response, the Petitioner has reiterated the submissions made by it in its petition.

89. We have considered the submissions of the Petitioner and TANGEDCO. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The said petition has already been disposed of by the Commission vide order dated 3.8.2021. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.





### **Capital Spares**

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

### **Sharing of Transmission Charges**

91. With effect from 1.11.2020, the 2010 Sharing Regulations has been repealed and sharing of transmission charges is governed by the provisions of the 2020 Sharing Regulations. Accordingly, the liabilities of DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and shall be recovered from the concerned DICs through Bill 2 under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of transmission charges for subsequent period shall be recovered in terms of provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

92. To summarise,

(a) The tried-up AFC allowed in respect of the transmission assets for 2014-19 tariff period are as follows:

Particulars	Asset – I		Asset – II	Asset - III
	2017-18 (Pro-rata for 34 days)	2018-19	2018-19 (Pro-rata for 280 days)	2018-19 (Pro-rata for 312 days)
AFC	77.37	874.54	136.14	300.05

(b) The AFC allowed in respect of the Combined Asset for 2019-24 tariff period in the instant order are as follows:

Asset	2019-20	2020-21	2021-22	2022-23	2023-24
Combined Asset	809.69	824.39	834.80	847.59	861.00



93. Annexure-I and Annexure-II given hereinafter shall form part of the order.

94. This order disposes of Petition No. 172/TT/2020 in terms of the above discussions and findings.

**sd/-**  
**(P.K. Singh)**  
**Member**

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

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



## Asset - I

## Annexure – I

2014-19 Capital Expenditure as on COD	Admitted Capital Cost as on COD (₹ in lakh)	ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations	
		2017-18	2018-19			2017-18 (₹ in lakh)	2018-19 (₹ in lakh)
Sub Station	754.16	40.00	223.34	1017.50	5.28	40.88	47.83
<b>TOTAL</b>	<b>754.16</b>	<b>40.00</b>	<b>223.34</b>	<b>1017.50</b>		<b>40.88</b>	<b>47.83</b>
<b>Average Gross Block (₹ in lakh)</b>						<b>774.16</b>	<b>905.83</b>
<b>Weighted Average Rate of Depreciation (%)</b>						<b>5.28</b>	<b>5.28</b>



2014-19	Admitted Capital Cost as on COD (₹ in lakh)	ACE (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations
Capital Expenditure as on COD		2018-19			2018-19 (₹ in lakh)
Sub Station	169.32	52.65	221.97	5.28	10.33
<b>TOTAL</b>	<b>163.19</b>	<b>52.65</b>	<b>215.84</b>		<b>10.33</b>
<b>Average Gross Block (₹ in lakh)</b>					<b>195.65</b>
<b>Weighted Average Rate of Depreciation (%)</b>					<b>5.28</b>



2014-19	Admitted Capital Cost as on COD (₹ in lakh)	ACE (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations
Capital Expenditure as on COD		2018-19			2018-19 (₹ in lakh)
Sub Station	318.42	103.94	422.36	5.28	19.56
<b>TOTAL</b>	<b>318.42</b>	<b>103.94</b>	<b>422.36</b>		<b>19.56</b>
<b>Average Gross Block (₹ in lakh)</b>					<b>370.39</b>
<b>Weighted Average Rate of Depreciation (%)</b>					<b>5.28</b>



Combined Assets									
2019-24	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
Capital Expenditure as on 1.4.2019		2019-20			2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Sub Station	1661.83	58.51	1720.34	5.28	89.29	90.83	90.83	90.83	90.83
<b>TOTAL</b>	<b>1661.83</b>	<b>58.51</b>	<b>1720.34</b>		<b>89.29</b>	<b>90.83</b>	<b>90.83</b>	<b>90.83</b>	<b>90.83</b>
			<b>Average Gross Block (₹ in lakh)</b>		<b>1691.09</b>	<b>1720.34</b>	<b>1720.34</b>	<b>1720.34</b>	<b>1720.34</b>
			<b>Weighted Average Rate of Depreciation (%)</b>		<b>5.28</b>	<b>5.28</b>	<b>5.28</b>	<b>5.28</b>	<b>5.28</b>

