CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Petition No. 81/TT/2020

Coram:

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

Date of Order: 13.09.2021

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and revision of transmission tariff of the 2001-04, 2004-09 and 2009-14 tariff periods and truing up of transmission tariff of the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for the **Combined Asset** comprising of **Asset-I**: 400 kV Ramagundam-Hyderabad D/C Transmission Line, **Asset-II**: 400 kV S/C Hyderbad-Kurnool-Gooty Transmission Line, **Asset-II**: 400 kV Khammam-Nagarjunasagar Transmission Line along with associated bays and equipment and **Asset-IV**: 400 kV S/C Gooty-Neelmangla Transmission Line associated with Ramagundam Stage-III Transmission System in Southern Region.

And in the matter of:

Power Grid Corporation of India Limited, "SAUDAMINI", Plot No-2, Sector-29, Gurgaon-122001 (Haryana).

.....Petitioner

Versus

- 1. Karnataka Power Transmission Corporation Limited, Kaveri Bhavan, Banglore-560009.
- 2. Transmission Corporation of Andhra Pradesh Limited, Vidyut Soudha, Hyderabad-500082.
- 3. Kerala State Electricity Board, Vaidyuthi Bhavanam, Pattom, Thiruvananthapuram-695004.
- Tamil Nadu Generation and Distribution Corporation Limited, (Formerly Tamil Nadu Electricity Board-TNEB), NPKRR Maaligai, 800, Anna Salai, Chennai-600002.

- 5. Electricity Department, Govt. of Pondicherry, Pondicherry-605001.
- Eastern Power Distribution Company of Andhra Pradesh Limited, P&T Colony, Seethmmadhara, Vishakhapatnam, Andhra Pradesh.
- Southern Power Distribution Company of Andhra Pradesh Limited, Srinivasasa Kalyana Mandapam Backside, Tiruchanoor Road, Kesavayana Gunta, Chittoor District, Tirupati-517501 (Andhra Pradesh).
- Southern Power Distribution Company of Telangana Limited, 6-1-50, Corporate Office, Mint Compound, Hyderabad-500063 (Telangana).
- Northern Power Distribution Company of Telangana Limited, H. No. 2-5-3 1/2, Vidyut Bhawan, Corporate Office, Nakkal Gupta, Hanamkonda, Warangal-506001 (Telangana).
- Bangalore Electricity Supply Company Limited, Corporate Office, K.R. Circle, Bangalore-560001 (Karnataka).
- Gulbarga Electricity Supply Company Limited, Station Main Road, Gulburga, Karnataka.
- 12. Hubli Electricity Supply Company Limited, Navanagar, PB Road, Hubli, Karnataka.
- 13. MESCOM Corporate Office, Paradigm Plaza, AB Shetty Circle Mangalore-575001 (Karnataka).
- Chamundeswari Electricity Supply Corporation Limited, # 927, L J Avenue, Ground Floor, New Kantharaj URS Road, Saraswatipuram, Mysore-570009 (Karnataka).
- 15. Electricity Department, Government of Goa, Vidyuti Bhawan, Panaji, Goa-403001.
- Transmission Corporation of Telangana Limited, Vidhyut Sudha, Khairatabad, Hyderabad-500082.



 Tamil Nadu Transmission Corporation, NPKRR Maaligai, 800, Anna Salai, Chennai-60000

.....Respondent(s)

For Petitioner : Shri S.S. Raju, PGCIL Shri B. Dash, PGCIL Shri A. K. Verma, PGCIL Shri Ved Prakash Rastogi, PGCIL

For Respondents : None

<u>ORDER</u>

The Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee, has filed the instant petition for revision of transmission tariff of the 2001-04, 2004-09 and 2009-14 tariff periods; truing up of transmission tariff for the period from 1.4.2014 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 for 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, 2014 (hereinafter referred to as "the 2014 Tariff Regulations"); and for 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 forming part of the Combined Asset associated with Ramagundam Stage-III Transmission System in Southern Region (hereinafter referred to as "the transmission system"):

<u>Asset-I</u>: 400 kV Ramagundam-Hyderabad D/C Transmission Line;
 <u>Asset-II</u>: 400 kV S/C Hyderbad-Kurnool-Gooty Transmission Line;
 <u>Asset-III</u>: 400 kV Khammam-Nagarjunasagar Transmission Line along with associated bays and equipment; and
 <u>Asset-IV</u>: 400 kV S/C Gooty-Neelmangla Transmission Line.

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

- *"1) Approve the revised Transmission Tariff for 2001-04, 2004-09 and 2009-14 block as per para 8 above.*
- 2) 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 9 and 10 above.
- 3) A. 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 9 and 10 above for respective block.

B. Further it is submitted that deferred tax liability before 01.04.2009 shall be recoverable from the beneficiaries or long term customers / DIC as the case may be, as and when the same is materialized as per regulation 49 of 2014 and regulation 67 of 2019 tariff regulation. The petitioner may be allow to recover the deferred tax liability materialised directly without making any application before the commission as provided in the regulation.

- 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 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 10.5 above.

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

8) 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"

3. Backdrop of the case

a) The administrative approval and expenditure sanction for the transmission system was accorded by the Central Government in Ministry of Power vide letter dated 29/30.8.2001 at an estimated cost of ₹39012.00 lakh, including IDC of ₹4204.00 lakh (based on 4th Quarter, 2000 price level).

b) The scope of work covered under the transmission system is as follows:

Transmission Line:

- i. Ramagundam-Hyderabad 400 kV D/C transmission line-200 kms;
- ii. Hyderabad-Kurnool-Gooty 400 kV S/C transmission line-300 kms;
- iii. Gooty-Nelamangala 400 kV S/C transmission line with 50 MVAR line reactor at Nelamangala end-250 kms; and
- iv. Khammam-Nagarjunasagar 400 kV S/C transmission line-150 kms.

Sub-stations:

- i. Extension of Hyderabad 400/220 kV sub-station;
- ii. Extension of Kurnool 400/220 kV sub-station;
- iii. Extension of Gooty 400/220 kV sub-station;
- iv. Extension of Nelamangala 400/220 kV sub-station (KEB);
- v. Extension of Khammam 400/220 kV sub-station; and
- vi. Extension of Nagarjunasagar 400/220 kV sub-station.

Capacitors - 375 MVAR

c) The dates of commercial operation (COD) of Asset-I, Asset-II, Asset-III and Asset-IV were 1.11.2004, 1.3.2005, 1.3.2004 and 1.5.2005 respectively.

d) The provisional transmission tariff of Asset-I was allowed vide order dated 21.12.2005 in Petition No. 41/2005 and the provisional transmission tariff of Asset-II and Asset-IV was allowed vide order dated 13.2.2006 in Petition No. 107/2005 for the period from their respective COD to 31.3.2009.

e) The transmission tariff of Asset-I and Asset-II was allowed vide order dated 22.11.2006 in Petition No. 21/2006 and transmission tariff of Asset-IV was allowed vide order dated 15.3.2007 in Petition No. 130/2006 for the period from their respective COD to 31.3.2009.

f) The transmission tariff of Asset-III for the period from 1.3.2004 to 31.3.2004 was allowed vide order dated 18.8.2005 in Petition No. 188/2004 and for the period from 1.4.2004 to 31.3.2009, it was allowed after considering Additional Capital Expenditure (ACE) incurred during 2003-04 vide order dated 5.5.2006 in Petition No. 128/2005.

g) The transmission tariff of the transmission assets for the 2004-09 tariff period was revised vide order dated 3.2.2009 in Petition No. 113/2008 after considering ACE incurred during 2004-05, 2005-06, 2006-07 and 2007-08. The transmission assets were combined together in accordance with the procedure decided by the Commission in letter reference no. C-7/189(204)/2009-CERC dated 23.10.2009 and the notional COD of the Combined Asset was considered as 1.5.5005.

h) The transmission tariff of the Combined Asset for the period from
1.4.2009 to 31.3.2014 was allowed vide order dated 5.5.2011 in Petition No.
193/2010 which was subsequently trued-up with tariff for the 2014-19 tariff
period allowed vide order dated 30.12.2015 in Petition No. 488/TT/2014.

i) The entire scope of work as per the administrative approval dated29/30.8.2001 of Ministry of Power is covered in the instant petition.

j) The Petitioner has sought revision of transmission tariff allowed for the 2001-04 and 2004-09 tariff periods on account of change in Interest on Loan (IoL) and Interest on Working Capital (IWC) to the extent of revision in IoL and in Maintenance Spares in terms of the judgments of the Appellate Tribunal for Electricity (APTEL) dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and 13.6.2007 in Appeal No. 139 of 2006 and batch matters; consequential revision of transmission tariff allowed for the 2009-14 tariff period; truing up of tariff of the 2014-19 tariff period and determination of transmission tariff of the 2019-24 tariff period for the Combined Asset.

k) The APTEL in judgment dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters pertaining to generating stations of NTPC had considered 4 (four) issues. The issues considered by APTEL and its decisions are as follows:

SI. No.	Issue	APTEL's decision/direction			
1		Challenge to the validity of Regulations framed by the Commission falls outside the purview of APTEL			
2	Computation of IoL	In view of the order of APTEL dated			

SI. No.	Issue	APTEL's decision/direction
		14.11.2016 in Appeal Nos. 94 and 96 of 2005 and order dated 24.1.2007 passed in Appeal Nos. 81 to 87, 89 to 93 of 2005, computation of loan has to be based on loan repayment on normative basis. The Commission is required to recalculate the loan outstanding as on 31.3.2004 based on loan repayment on normative basis
3(a)	O&M Expenses: Inadequate provision of employee costs as part of O&M Expenses due to variation in salary and wages	Commission's view upheld
3(b)	O&M Expenses: Non- inclusion of incentives and ex-gratia payment to employees	Commission's view upheld
4	Cost of spares for calculation of working capital	Commission's view upheld

I) The APTEL in judgment dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters pertaining to generating stations of NTPC had considered 9 (nine) issues. The issues considered and the decisions of The APTEL are as follows:

SI.	Issue	APTEL's decision/direction
<u>No.</u> I	Computation of outstanding loan at the beginning of the tariff period i.e. 1.4.2004	The Commission is required to recalculate the loan outstanding as on 31.3.2004 based on loan repayment on normative basis
II	Consequence of refinance of loan	The Commission to consider the issue afresh
111	Treating depreciation available as deemed repayment of loan	The Commission to make a fresh computation of outstanding loan
IV	Admissibility of depreciation up to 90%	The Commission to consider the issue afresh
V	Cost of Maintenance Spares	The Commission to consider the issue afresh
VI	Impact of de-capitalisation of the assets on cumulative repayment of loan	The cumulative repayment of the loan proportionate to the assets de-capitalized required to be reduced. The Commission to act accordingly
VII	Non-consideration of normative transit loss for coal import	The Commission to consider afresh the transit losses for coal imported from coal mines other than the dedicated ones
VIII	Foreign Exchange Rate	FERV has been kept as pass through to

	Variation (FERV)		ensure that any liability or gain, if any,
			arising on account of any variation in
			foreign exchange rates is passed on to
			the beneficiary as held in order dated
			4.10.2006 in Appeal Nos.135 to 140 of
			2005. The Commission to act accordingly
IX	Computation of	loL in	Net loan closing at the end of a year is
	Singrauli Station		reflected as net loan opening on the first
			day of the next year. The Commission
			shall re-compute the interest accordingly

m) The Commission and certain interested parties preferred Civil Appeals against the APTEL's judgments before the Hon'ble Supreme Court in 2007. The Appeals were admitted and initially stay was granted by the Hon'ble Supreme Court. Subsequently, on an assurance by NTPC that the issues under Appeal would not be pressed for implementation during the pendency of the Appeals, the stay was vacated by the Hon'ble Supreme Court.

n) Based on the APTEL's judgments dated 22.1.2007 and 13.6.2007, the Petitioner had sought re-determination of tariff of its transmission assets for the 2001-04 and 2004-09 tariff periods vide Petition No. 121/2007. The Commission after taking into consideration the pendency of Appeals before the Hon'ble Supreme Court adjourned the said petition *sine die* and directed that the same be revived after the disposal of Civil Appeals by the Hon'ble Supreme Court.

o) The Hon'ble Supreme Court vide its judgment dated 10.4.2018, dismissed the said Civil Appeals filed against the APTEL's said judgments.
 Thus, the judgments of APTEL have attained finality.

p) Consequent to the Hon'ble Supreme Court's order dated 10.4.2018 in NTPC matters, Petition No. 121/2007 was listed for hearing on 8.1.2019. The Commission vide order dated 18.1.2019 in Petition No. 121/2007, directed the Petitioner to submit its claim separately for the assets at the time of filing of truing up petition for the 2014-19 tariff period.

q) The instant petition was heard on 18.5.2021 and in view of the APTEL's judgments dated 22.1.2007 and 13.6.2007 and the order of Hon'ble

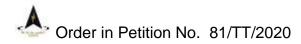
Supreme Court dated 10.4.2018, tariff is being revised. Period-wise transmission tariff is being re-worked based on the Tariff Regulations applicable for the respective tariff periods and suitable assumptions have been made at certain places and applied, which are indicated.

4. The Respondents are distribution licensees, power departments and transmission licensees which are procuring transmission services from the Petitioner, mainly beneficiaries of Southern Region.

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has 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. None of the Respondents have filed their reply in the matter.

Re: Interest on Loan

6. The APTEL while dealing with the issue of computation of IoL, in judgment dated 22.1.2007 observed that IoL for the period from 1.4.1998 to 31.3.2001 shall be computed only on normative loan repayment as per judgment dated 14.11.2006 in Appeal Nos. 94 and 96 of 2005. APTEL vide judgment dated 14.11.2006 had set aside the Commission's methodology of computation of Ioan on the actual repayment basis or normative repayment whichever is higher and held that the Commission is required to adopt normative debt repayment methodology for working out IoL liability for the period from 1.4.1998 to 31.3.2001. In view of the above, the interest allowed for the 2001-04 and 2004-09 tariff periods is revised on the basis of the normative debt repayment methodology.



Re: Additional Capital Expenditure

7. The APTEL vide judgment dated 13.6.2007 in Appeal No. 139 of 2006 and others held that ACE after COD should also be considered for computation of maintenance spares. In view of the above, the maintenance spares to be considered for computation of working capital for the 2001-04 and 2004-09 periods are also required to be revised taking into consideration ACE after the date of commercial operation.

Re: Depreciation

8. As regards depreciation, the APTEL in judgment dated 13.6.2007 in Appeal No. 139 of 2006 observed that depreciation is an expense and it cannot be deployed for deemed repayment of loan and accordingly directed the Commission to compute the outstanding loan afresh. In view of the above directions of the APTEL, the outstanding loan allowed for the transmission assets for 2001-04 and 2004-09 tariff periods is revised in the instant order.

9. The revision of transmission tariff allowed for the 2001-04 and 2004-09 tariff periods necessitates the revision of transmission tariff allowed for the 2009-14 tariff period, which is also being done in the present order. The implementation of the directions of the APTEL vide judgments dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters was kept pending in case of the Petitioner was kept awaiting the outcome of the Civil Appeals filed before the Hon'ble Supreme Court. Taking into consideration the facts of the case and keeping in view the interest of the consumers, we are of the view that the beneficiaries should not be burdened with the carrying cost for the difference in the tariff allowed earlier and allowed in the instant order for the 2001-

04, 2004-09 and 2009-14 tariff periods. Therefore, we direct that the Petitioner will neither claim nor pay any carrying cost from or to the beneficiaries for the difference, if any, in the tariff allowed earlier and the tariff being allowed in the instant order. Further, the said difference in tariff shall be recovered/ paid over a period of six months from the date of issue of this order.

10. The hearing in this matter was held on 18.5.2021 through video conference and the order was reserved.

11. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 23.12.2019 and the Petitioner's affidavit dated 23.9.2020 filed in compliance of technical validation letter.

12. Having heard the representatives of the Petitioner and after perusal of the materials on record, we proceed to dispose of the petition.

Revision of Transmission Charges allowed for the 2001-04, 2004-09 and 2009-14 Tariff Periods

2001-04 Period

13. Assets-I, II and IV achieved COD during the 2004-09 period and, therefore, tariff of only Asset-III is revised for the 2001-04 period that had achieved COD on 1.3.2004 in 2001-04 period. The Commission vide order dated 18.8.2005 in Petition No. 188/2004 had allowed the transmission charges for Asset-III for the period from 1.3.2004 to 31.3.2004 which are as follows:

	(₹ in lakh)
Particulars	Asset-III
	2003-04 (Pro-rata for 1 month)
Depreciation	10.44
Return on Equity	10.26
O&M Expenses	9.94
Advance against Depreciation	0.00
Interest on Loan	12.21
Interest on Working Capital	1.15
Total	43.99

14. The Petitioner has claimed the revised transmission charges for Asset-III for

the 2001-04 tariff period in the instant petition as follows:

	(₹ in lakh)
Particulars	Asset-III
	2003-04 (Pro-rata for 1 month)
Depreciation	10.44
Return on Equity	10.26
O&M Expenses	9.94
Advance against Depreciation	0.00
Interest on Loan	12.21
Interest on Working Capital	1.15
Total	44.00

15. We have considered the submissions of the Petitioner. The transmission tariff

is allowed for Asset-III on the basis of the following:

a) Admitted capital cost as on COD (1.3.2004) of ₹ 4586.99 lakh;

b) ACE of ₹156.12 lakh during 2003-04 period as allowed vide order dated 5.5.2006 in Petition No. 128/2005;

c) Weighted Average Rate of Interest on actual loan and Weighted Average Rate of Depreciation (WAROD) adopted from order dated 18.8.2005 in Petition No. 188/2004; and

d) Rate of IWC and O&M Expenses as per order dated 18.8.2005 in Petition No. 188/2004.

16. In view of the above, the revised transmission charges allowed for Asset-III for the 2001-04 tariff period are as follows:

(₹ in lakh)

Particulars	Asset-III
	2003-04 (Pro-rata for 1 month)
Depreciation	10.44
Return on Equity	10.26
O&M Expenses	9.94
Advance against Depreciation	0.00
Interest on Loan	12.21
Interest on Working Capital	1.15
Total	44.00

17. The Annual Fixed Charges (AFC) for Asset-III allowed for the 2001-04 tariff period vide order dated 18.8.2005 in Petition No. 188/2004, the revised AFC claimed in the instant petition and the revised AFC approved in the instant order is as follows:

	(₹ in lakh)
Particulars	Asset-III
	2003-04 (Pro-rata for 1 month)
Allowed vide order dated 18.8.2005 in Petition No. 188/2004	44.00
Claimed by the Petitioner in the instant petition	44.00
Approved in the instant order	44.00

2004-09 Period

18. The transmission charges of Asset-I, Asset-II, Asset-III and Asset-IV for the period from their respective COD to 31.3.2009 was allowed by the Commission vide order dated 22.11.2006, 5.5.2006 and 15.3.2007 in Petition No. 21/2006, Petition No. 128/2005 and Petition No.130/2006 respectively.

19. Further, the transmission charges of the transmission assets for the 2004-09 tariff period was revised vide order dated 3.2.2009 in Petition No. 113/2008 after considering ACE incurred during 2004-05, 2005-06, 2006-07 and 2007-08 and the same are as follows:

(₹ in lakh)

Particulars	Asset-I				
	2004-05	2005-06	2006-07	2007-08	2008-09
	(Pro-rata for				
	5 months)				
Depreciation	101.65	245.73	245.73	245.73	245.73
Return on Equity	109.79	266.38	266.38	266.38	266.38
O&M Expenses	61.50	153.49	159.86	165.90	172.87
Advance against Depreciation	0.00	0.00	54.76	79.93	108.35
Interest on Loan	126.63	298.04	285.53	271.39	256.25
Interest on Working Capital	11.46	27.89	29.37	30.35	31.42
Total	411.03	991.53	1041.64	1059.67	1081.00

(₹ in lakh)

Particulars	Asset-II				•
	2004-05 (Pro-rata for 1 month)	2005-06	2006-07	2007-08	2008-09
Depreciation	18.13	226.32	235.85	236.59	236.59
Return on Equity	21.09	265.47	278.96	280.10	280.10
O&M Expenses	15.25	190.32	198.11	205.75	214.24
Advance against Depreciation	0.00	0.00	26.56	50.86	84.48
Interest on Loan	25.04	303.37	301.14	288.32	273.17
Interest on Working Capital	2.21	27.22	28.75	29.72	30.83
Total	81.72	1012.69	1069.37	1091.34	1119.42

					(₹ in lakh)
Particulars	Asset-III				
	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	126.91	126.98	126.98	126.98	126.98
Return on Equity	129.71	129.79	129.79	129.79	129.79
O&M Expenses	89.06	92.62	96.41	100.13	104.26
Advance against Depreciation	0.00	0.00	0.00	5.24	23.19
Interest on Loan	138.93	133.99	128.46	122.27	115.77
Interest on Working Capital	14.00	14.30	14.61	15.02	15.67
Total	498.61	497.70	496.26	499.44	515.67

(₹ in lakh)

Particulars	Asset-IV					
	2005-06	2006-07	2007-08	2008-09		
	(Pro-rata for 11 months)					
Depreciation	169.39	193.15	195.70	196.18		
Return on Equity	200.23	230.07	234.02	234.80		
O&M Expenses	109.04	123.85	128.57	133.93		
Advance against Depreciation	0.00	0.00	0.00	21.06		
Interest on Loan	226.63	246.83	240.07	230.17		
Interest on Working Capital	19.50	22.12	22.68	23.49		
Total	724.79	816.02	821.03	839.62		

20. The Petitioner has claimed the revised transmission charges in respect of the transmission assets for the 2004-09 tariff period in this petition as follows:

					(₹ in lakh)	
Particulars	Asset-I					
	2004-05 (Pro-rata for 5 months)	2005-06	2006-07	2007-08	2008-09	
Depreciation	101.65	245.73	245.73	245.73	245.73	
Return on Equity	109.79	266.38	266.38	266.38	266.38	
O&M Expenses	61.50	153.49	159.86	165.90	172.87	
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00	
Interest on Loan	127.49	307.03	299.07	284.26	268.40	
Interest on Working Capital	11.51	28.53	29.17	29.73	30.33	
Total	411.94	1001.16	1000.22	992.00	983.70	

(₹ in lakh)

Particulars	Asset-II					
	2004-05	2005-06	2006-07	2007-08	2008-09	
	(Pro-rata for					
	1 month)					
Depreciation	18.13	226.32	235.85	236.59	236.59	
Return on Equity	21.09	265.47	278.96	280.10	280.10	
O&M Expenses	15.25	190.32	198.11	205.75	214.24	
Advance against	0.00	0.00	0.00	0.00	0.00	
Depreciation						
Interest on Loan	25.07	309.72	312.54	299.18	282.91	
Interest on Working Capital	2.21	28.09	29.65	30.29	30.87	
Total	81.76	1019.93	1055.11	1051.91	1044.71	

(₹ in lakh)

Particulars	Asset-III				
	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	126.91	126.98	126.98	126.98	126.98
Return on Equity	129.71	129.79	129.79	129.79	129.79
O&M Expenses	89.06	92.62	96.41	100.13	104.26
Advance against	0.00	0.00	0.00	0.00	0.00
Depreciation					
Interest on Loan	141.29	141.02	137.60	130.97	124.01
Interest on Working Capital	14.48	14.89	15.26	15.60	15.96
Total	501.45	505.30	506.04	503.47	501.00

(₹	in	lakh)

Particulars	Asset-IV					
	2005-06	2006-07	2007-08	2008-09		
	(Pro-rata for 1month)					
Depreciation	169.39	193.15	195.70	196.18		
Return on Equity	200.23	230.07	234.02	234.80		
O&M Expenses	109.04	123.85	128.57	133.93		
Advance against	0.00	0.00	0.00	0.00		
Depreciation						
Interest on Loan	230.32	255.08	248.61	238.09		
Interest on Working Capital	19.76	22.82	23.52	24.02		
Total	728.74	824.97	830.42	827.02		

21. We have considered the submissions of the Petitioner. The transmission tariff is allowed for the transmission assets on the basis of the following:

Admitted capital cost as on 1.11.2004 of ₹9172.10 lakh for Asset-I, as on 1.3.2005 of ₹8048.20 for Asset-II, as on 1.3.2004 of ₹4654.59 lakh for Asset-III and as on 1.5.2005 of ₹6587.75 lakh for Asset-IV;

b) ACE of ₹138.07 lakh during 2004-05 for Asset-I, ACE of ₹587.59 lakh and ₹54.55 lakh during 2005-06 and 2006-07 respectively for Asset-II, ACE of ₹4.23 lakh during 2004-05 for Asset-III and ACE of ₹151.02 lakh and ₹37.07 lakh during 2006-07 and 2007-08 respectively for Asset-IV as approved vide order dated 3.2.2009 in Petition No. 113/2008;

c) Weighted Average Rate of Interest on actual loan and WAROD adopted from order dated 3.2.2009 in Petition No. 113/2008; and

d) Rate of IWC and O&M Expenses as per order dated 3.2.2009 in
 Petition No. 113/2008.

22. In view of the above, the revised transmission charges approved for the transmission assets for the 2004-09 tariff period are as follows:

(₹ in lakh)

Particulars	Asset-I				
	2004-05 (Pro-rata for 5 months)	2005-06	2006-07	2007-08	2008-09
Depreciation	101.65	245.73	245.73	245.73	245.73
Return on Equity	109.79	266.38	266.38	266.38	266.38
O&M Expenses	61.50	153.49	159.86	165.90	172.87
Advance against	0.00	0.00	0.00	0.00	0.00

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Depreciation					
Interest on Loan	127.49	307.03	299.04	284.15	268.21
Interest on Working Capital	11.51	28.20	28.82	29.35	29.93
Total	411.94	1000.84	999.84	991.52	983.12

(₹ in lakh)

Particulars	Asset-II					
	2004-05	2005-06	2006-07	2007-08	2008-09	
	(Pro-rata for					
	1 month)					
Depreciation	18.13	226.32	235.85	236.59	236.59	
Return on Equity	21.09	265.47	278.96	280.10	280.10	
O&M Expenses	15.25	190.32	198.11	205.75	214.24	
Advance against	0.00	0.00	0.00	0.00	0.00	
Depreciation						
Interest on Loan	25.07	309.72	312.37	298.69	282.12	
Interest on Working Capital	2.21	27.63	29.16	29.76	30.31	
Total	81.76	1019.46	1054.45	1050.89	1043.36	

(₹ in lakh)

Particulars	Asset-III				
	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	126.91	126.98	126.98	126.98	126.98
Return on Equity	129.71	129.79	129.79	129.79	129.79
O&M Expenses	89.06	92.62	96.41	100.13	104.26
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	141.29	141.03	137.60	130.98	124.02
Interest on Working Capital	14.22	14.61	14.97	15.29	15.63
Total	501.19	505.03	505.75	503.16	500.68

(₹ in lakh)

Particulars		Asset – IV					
	2005-06 (Pro-rata for 11 months)	2006-07	2007-08	2008-09			
Depreciation	169.39	193.15	195.70	196.18			
Return on Equity	200.23	230.07	234.02	234.80			
O&M Expenses	109.04	123.85	128.57	133.93			
Advance against Depreciation	0.00	0.00	0.00	0.00			
Interest on Loan	230.32	254.98	248.41	237.89			
Interest on Working Capital	19.76	22.79	23.48	23.98			
Total	728.74	824.83	830.18	826.78			

23. AFC for the transmission assets allowed for the 2004-09 tariff period vide order dated 3.2.2009 in Petition No. 113/2008, the revised AFC claimed in the instant petition and AFC approved in the instant order are as follows:

(₹ in lakh)

Particulars	Asset-I				
	2004-05 (Pro-rata for 5 months)	2005-06	2006-07	2007-08	2008-09
Allowed vide order dated 3.2.2009 in Petition No. 113/2008	411.03	991.53	1041.64	1059.67	1081.00
Claimed by the Petitioner in the instant petition	411.94	1001.16	1000.22	992.00	983.70
Approved in the instant order	411.94	1000.84	999.84	991.52	983.12

(₹ in lakh)

Particulars	Asset-II				
	2004-05 (Pro-rata for 1 month)	2005-06	2006-07	2007-08	2008-09
Allowed vide order dated 3.2.2009 in Petition No. 113/2008	81.72	1012.69	1069.37	1091.34	1119.42
Claimed by the Petitioner in the instant petition	81.76	1019.93	1055.11	1051.91	1044.71
Approved in the instant order	81.76	1019.46	1054.45	1050.89	1043.36

(₹ in lakh)

Particulars	Asset-III				/
	2004-05	2005-06	2006-07	2007-08	2008-09
Allowed vide order dated 3.2.2009 in Petition No. 113/2008	498.61	497.70	496.26	499.44	515.67
Claimed by the Petitioner in the instant petition	501.45	505.30	506.04	503.47	501.00
Approved in the instant order	501.19	505.03	505.75	503.16	500.68

(₹ in lakh)

Particulars	Asset-IV				
	2005-06 (Pro-rata for 11 months)	2006-07	2007-08	2008-09	
Allowed vide order dated 3.2.2009 in Petition No. 113/2008	724.79	816.02	821.03	839.62	
Claimed by the Petitioner in the instant petition	728.74	824.97	830.42	827.02	
Approved in the instant order	728.74	824.83	830.18	826.78	

2009-14 Tariff Period

24. The Commission vide order dated 5.5.2011 in Petition No. 193/2010 had allowed the tariff for the Combined Asset for the 2009-14 tariff period which was trued-up vide order dated 30.12.2015 in Petition No. 488/TT/2014 as follows:

				(1	₹ in lakh)
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1578.63	1578.63	1578.63	1578.63	1581.83
Return on Equity	1215.22	1259.78	1260.99	1260.99	1279.75
O&M Expenses	904.86	956.34	1011.34	1069.25	1130.17
Interest on Loan	552.28	407.94	360.13	345.12	273.06
Interest on Working Capital	115.00	115.49	117.27	119.86	121.86
Total	4365.99	4318.18	4328.36	4373.84	4386.67

25. The Petitioner has claimed the revised transmission charges for the Combined Asset for the 2009-14 tariff period in this petition as follows:

					(₹ in lakh)
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1578.63	1578.63	1578.63	1578.63	1581.83
Return on Equity	1215.22	1259.78	1260.99	1260.99	1279.75
O&M Expenses	904.86	956.34	1011.34	1069.25	1130.17
Interest on Loan	578.24	428.89	380.51	366.87	292.40
Interest on Working Capital	115.54	115.94	117.70	120.32	122.27
Total	4392.49	4339.58	4349.18	4396.06	4406.42

26. We have considered the submissions of the Petitioner. The revised transmission tariff is approved for the Combined Asset on the basis of the following:

a) Admitted capital cost as on 1.4.2009 of ₹29838.35 lakh for the Combined Asset;

b) ACE of ₹121.16 lakh during 2013-14; and

c) Weighted Average Rate of Interest on actual loan and WAROD adopted from order dated 30.12.2015 in Petition No. 488/TT/2014.

27. In view of the above, the revised transmission charges approved for the Combined Asset for the 2009-14 tariff period are as follows:

					(₹ in lakh)
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1578.63	1578.63	1578.63	1578.63	1581.83
Interest on Loan	577.37	428.19	379.84	366.15	291.76
Return on equity	1215.22	1259.78	1260.99	1260.99	1279.75
Interest on Working Capital	115.53	115.92	117.69	120.30	122.26
O&M Expenses	904.86	956.34	1011.34	1069.25	1130.17
Total	4391.60	4338.86	4348.48	4395.32	4405.76

28. AFC allowed for the 2009-14 tariff period vide order dated 30.12.2015 in Petition No. 488/TT/2014, the revised AFC claimed in the instant petition and AFC approved in the instant order are as follows:

				(₹	f in Lakh)
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Allowed vide order dated 30.12.2015 in Petition No. 488/TT/2014	4365.99	4318.18	4328.36	4373.84	4386.67
Claimed by the Petitioner in the instant petition	4392.49	4339.58	4349.18	4396.06	4406.42
Approved in the instant order	4391.60	4338.86	4348.48	4395.32	4405.76

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

29. The details of the trued-up transmission charges claimed by the Petitioner in

respect of the Combined Asset are as follows:

					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1585.34	1585.79	1585.92	1585.92	422.82
Interest on Loan	263.57	245.28	265.96	246.89	267.11
Return on equity	1284.62	1291.01	1290.51	1290.51	1293.98
O&M Expenses	1032.69	1067.47	1102.97	1139.36	1177.27
Interest on Working Capital	129.18	130.84	133.26	134.83	110.70
Total	4295.40	4320.39	4378.62	4397.51	3271.88

30. The details of the trued-up IWC claimed by the Petitioner in respect of the

Combined Asset are as follows:

					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
WC for O&M Expenses	86.06	88.96	91.91	94.95	98.11
(O&M Expenses for 1 Month)					
WC for Maintenance Spares	154.90	160.12	165.45	170.90	176.59
(15% of O&M)					
WC for Receivables	715.90	720.07	729.77	732.92	545.31
(Equivalent to 2 months of					

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annual transmission charges)					
Total Working Capital	956.86	969.15	987.13	998.77	820.01
Rate of Interest on Working	13.50	13.50	13.50	13.50	13.50
Capital (in %)					
Interest on Working Capital	129.18	130.84	133.26	134.83	110.70

Capital Cost

31. The capital cost of the Combined Asset has been calculated in accordance with Regulations 9(3) and 9(6) of the 2014 Tariff Regulations. The Commission vide order dated 30.12.2015 in Petition No. 488/TT/2014 had allowed capital cost as on 1.4.2014 of ₹29959.51 lakh including projected ACE of ₹41.07 lakh for determination of transmission tariff of the 2014-19 tariff period.

Additional Capital Expenditure

32. The Commission vide order dated 30.12.2015 in Petition No. 488/TT/2014 had allowed ACE of ₹41.07 lakh during the 2014-19 tariff period for the Combined Asset against which the Petitioner vide Auditor's Certificate has claimed ACE of ₹17.00 lakh as follows:

	(₹ in lakh)
ACE during 2014-15	ACE during 2015-16
11.86	5.14

33. The Petitioner has submitted that ACE during 2014-15 has been claimed under Regulations 14(3)(vii) and 14(3)(ix) of the 2014 Tariff Regulations.

34. We have considered the submissions of the Petitioner. Actual ACE of ₹11.86 lakh and ₹5.14 lakhs towards tower strengthening works of the transmission system are allowed under Regulations 14(3)(vii) and 14(3)(ix) of the 2014 Tariff Regulations.

35. The capital cost considered for truing up of tariff for the 2014-19 tariff period is as follows:

		(₹ in lakh)
Capital Cost	ACE	Capital Cost
(as on 1.4.2014)	(2014-19)	(as in 31.3.2019)
29959.51	17.00	29976.51

Debt-Equity Ratio

36. The debt-equity ratio has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations. As per Regulation 19(3) of the 2014 Tariff Regulations, the debt-equity ratio allowed by the Commission for determination of transmission tariff for the period ending on 31.3.2014 shall be considered. Accordingly, the details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 for the Combined Asset is as follows:

Funding	Capital cost as on 1.4.2014 (₹ in lakh)	(in %)	Total cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	23415.47	78.16	23427.37	78.15
Equity	6544.04	21.84	6549.14	21.85
Total	29959.51	100.00	29976.51	100.00

Depreciation

37. 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 1.4.2014 and approved ACE during the 2014-19 tariff period. The Gross Block during the 2014-19 tariff period has been depreciated at WAROD. WAROD at Annexure-I has been worked out after taking into account the depreciation rates of assets as prescribed in the 2014 Tariff Regulations and trued-up depreciation allowed is as follows:

					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	29959.51	29971.37	29976.51	29976.51	29976.51
Additional Capitalisation	11.86	5.14	0.00	0.00	0.00
Closing Gross Block	29971.37	29976.51	29976.51	29976.51	29976.51
Average Gross Block	29965.44	29973.94	29976.51	29976.51	29976.51

Weighted average Rate of Depreciation (%)	5.29	5.29	5.29	5.29	1.41
Balance useful life (at the beginning of the year)	26	25	24	23	22
Aggregate Depreciable Value	26968.90	26976.55	26978.86	26978.86	26978.86
Depreciation during the	1585.34	1585.79	1585.92	1585.92	422.81
year					
Cumulative Depreciation	12919.44	14505.23	16091.15	17677.07	18099.88
Remaining Depreciable Value	14049.46	12471.32	10887.71	9301.79	8878.98

38. The details of depreciation allowed vide order dated 30.12.2015 in Petition No. 488/TT/2014, depreciation claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

				(*	₹ in lakn)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated	1586.11	1587.19	1587.19	1587.19	402.58
30.12.2015 in Petition No.					
488/TT/2014					
Claimed by the Petitioner in the	1585.34	1585.79	1585.92	1585.92	422.82
instant petition					
Approved after true-up in this	1585.34	1585.79	1585.92	1585.92	422.81
order					

Interest on Loan

39. The Petitioner has claimed weighted average rate of IoL based on actual interest rates for each year during the 2014-19 period. The Petitioner has prayed to consider the floating rate of interest applicable during the 2014-19 period, if any, during the truing-up of tariff.

40. We have considered the submissions of the Petitioner and, accordingly, IoL has been calculated based on the actual interest rate submitted by the Petitioner in accordance with Regulation 26 of the 2014 Tariff Regulations. The trued-up IoL allowed in respect of the Combined Asset is as follows:

					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	23415.47	23423.77	23427.37	23427.37	23427.37
Cumulative Repayments up to Previous Year	10949.06	12534.40	14120.19	15706.11	17292.03
Net Loan-Opening	12466.41	10889.37	9307.18	7721.26	6135.34
Addition due to ACE	8.30	3.60	0.00	0.00	0.00
Repayment during the year	1585.34	1585.79	1585.92	1585.92	422.81
Net Loan-Closing	10889.37	9307.18	7721.26	6135.34	5712.53
Average Loan	11677.89	10098.28	8514.22	6928.30	5923.93
Weighted Average Rate of Interest on Loan (%)	2.251	2.422	3.113	3.549	4.487
Interest on Loan	262.91	244.57	265.05	245.86	265.79

41. The details of IoL allowed vide order dated 30.12.2015 in Petition No. 488/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated	228.57	189.97	152.17	115.56	93.76
30.12.2015 in Petition No. 488/TT/2014					
Claimed by the Petitioner	263.57	245.28	265.96	246.89	267.11
in the instant petition					
Approved after true-upin this order	262.91	244.57	265.05	245.86	265.79

Return on Equity (RoE)

42. The Petitioner has claimed RoE for the Combined Asset in terms of Regulations 24 and 25 of the 2014 Tarff Regulations. The Petitioner has submitted that it is liable to pay income tax at Minimum Alternate Tax (MAT) rates and has claimed the effective tax rates for the 2014-19 tariff period as follows:

Year	Claimed effective tax rate (in %)	Grossed up RoE [(Base Rate)/(1-t)] (in %)
2014-15	21.018	19.624
2015-16	21.382	19.716
2016-17	21.338	19.705
2017-18	21.337	19.704
2018-19	21.549	19.758

43. We have considered the submissions of the Petitioner. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates and the same are given 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

44. The MAT rates considered in order dated 27.4.2020 for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations is considered in the instant case which is as follows:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Base rate of RoE (in %)	Grossed up RoE [(Base Rate)/(1-t)] (in %)
2014-15	20.961	15.50	19.610
2015-16	21.342	15.50	19.705
2016-17	21.342	15.50	19.705
2017-18	21.342	15.50	19.705
2018-19	21.549	15.50	19.758

45. RoE is trued up on the basis of the MAT rate applicable in the respective years and is allowed for the Combined Asset as follows:

					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	6544.04	6547.60	6549.14	6549.14	6549.14
Addition due to ACE	3.56	1.54	0.00	0.00	0.00
Closing Equity	6547.60	6549.14	6549.14	6549.14	6549.14
Average Equity	6545.82	6548.37	6549.14	6549.14	6549.14
Return on Equity (Base Rate)	15.500	15.500	15.500	15.500	15.500
(in %)					
Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
Applicable ROE Rate (in %)	19.610	19.705	19.705	19.705	19.758
Return on Equity for the year	1283.64	1290.36	1290.51	1290.51	1293.98

46. The details of RoE allowed vide order dated 30.12.2015 in Petition No. 488/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 30.12.2015 in Petition No. 488/TT/2014	1284.52	1285.73	1285.73	1285.73	1285.73
Claimed by the Petitioner in the instant petition	1284.62	1291.01	1290.51	1290.51	1293.98
Approved after true-up in this order	1283.64	1290.36	1290.51	1290.51	1293.98

Operation & Maintenance Expenses (O&M Expenses)

47. The total O&M Expenses as claimed by the Petitioner are as per the norms specified under the 2014 Tariff Regulations and the allowable O&M Expenses are as follows:

					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station Bays (Number)					
400 kV: Ramagundam-III and	2	2	2	2	2
IV bays at Hyderabad					
400 kV: Kurnool bay at Gooty	1	1	1	1	1
400 kV: Nagarjunasagar-bay	1	1	1	1	1
at Khammam					
400 kV: Khammam-Bay at	1	1	1	1	1
Nagarjunasagar					
400 kV: Kurnool bay at	1	1	1	1	1
Hyderabad					
400 kV: Neelmangala Bay at	1	1	1	1	1
Gooty					
400 kV: Hyderabad- Bay at	1	1	1	1	1
Kurnool					
400 kV:Gooty-Bay at Kurnool	1	1	1	1	1
400 kV: Kurnool Bay at	1	1	1	1	1
Kurnool					
Norm (₹ lakh/bay)					
400 kV	60.30	62.30	64.37	66.51	68.71
Total sub-station O&M	603.00	623.00	643.70	665.10	687.10
Expenses (₹ in lakh)					
AC Lines (kms)					
400 kV Ramagundam-	201.250	201.250	201.250	201.250	201.250
Hyderabad III Double Circuit					
Line (Twin/ Triple Conductor)					

400 kV Hyderabad-Kurnool-	310.690	310.690	310.690	310.690	310.690
Gooty 400 kV Single Circuit					
Line (Twin/ Triple Conductor)					
400 kV Gooty-Neelamangala	256.130	256.130	256.130	256.130	256.130
Single Circuit Line					
(Twin/ Triple Conductor)					
400 kV Khamam-	144.580	144.580	144.580	144.580	144.580
Nagarjunasagar Single Circuit					
Line (Twin/ Triple Conductor)					
Norm (₹ lakh/km)					
Double Circuit	0.707	0.731	0.755	0.780	0.806
(Twin/ Triple Conductor)					
Single Circuit	0.404	0.418	0.432	0.446	0.461
(Twin/ Triple Conductor)					
Total Transmission Line	429.69	444.48	459.27	474.26	490.16
Total O&M Expenses	1032.69	1067.47	1102.97	1139.36	1177.26

48. The details of O&M Expenses allowed vide order dated 30.12.2015 in Petition No. 488/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 30.12.2015 in Petition No. 488/TT/2014	1032.69	1067.48	1102.97	1139.36	1177.26
Claimed by the Petitioner in the instant petition	1032.69	1067.48	1102.97	1139.36	1177.27
Approved after true-up in this order	1032.69	1067.47	1102.97	1139.36	1177.26

Interest on Working Capital

49. IWC has been worked out as per the methodology provided in Regulation 28

of the 2014 Tariff Regulations and the trued-up IWC allowed for the transmission

assets for the 2014-19 tariff period are as follows:

				(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
WC for O&M Expenses	86.06	88.96	91.91	94.95	98.11
(O&M Expenses for 1 Month)					
WC for Maintenance Spares	154.90	160.12	165.45	170.90	176.59
(15% of O&M)					
WC for Receivables	715.62	719.83	729.61	732.74	545.09
(Equivalent to 2 months of					
annual transmission charges)					
Total Working Capital	956.58	968.91	986.97	998.59	819.78
Rate of Interest on Working	13.50	13.50	13.50	13.50	13.50

Capital (in %)					
Interest on Working Capital	129.14	130.80	133.24	134.81	110.67

50. The details of IWC allowed vide order dated 30.12.2015 in Petition No. 488/TT/2014, claimed by the Petitioner in the instant petition and trued-up IWC in the instant order are as follows:

					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated	128.38	129.47	130.56	131.73	106.05
30.12.2015 in Petition No.					
488/TT/2014					
As claimed by the Petitioner in	129.18	130.84	133.26	134.83	110.70
the instant petition					
Approved after true-up in this	129.14	130.80	133.24	134.81	110.67
order					

Approved Annual Fixed Charges for the 2014-19 Tariff Period

51. The trued-up AFC approved for the Combined Asset for the 2014-19 tariff period are as follows:

					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017–18	2018-19
Depreciation	1585.34	1585.79	1585.92	1585.92	422.81
Interest on Loan	262.91	244.57	265.05	245.86	265.79
Return on Equity	1283.64	1290.36	1290.51	1290.51	1293.98
O&M Expenses	1032.69	1067.48	1102.97	1139.36	1177.26
Interest on Working Capital	129.14	130.80	133.24	134.81	110.67
Total	4293.71	4318.99	4377.69	4396.46	3270.51

52. The details of the Annual Transmission Charges allowed vide order dated 30.12.2015 in Petition No. 488/TT/2014, claimed in the instant petition and trued-up in the instant order are as follows:

					(₹ in lakh)
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 30.12.2015 in Petition No. 488/TT/2014	4260.27	4259.84	4258.62	4259.57	3065.38
Claimed by the Petitioner in the instant petition	4295.40	4320.39	4378.62	4397.51	3271.88
Approved after true-up in this order	4293.71	4318.99	4377.69	4396.46	3270.51

Determination of Annual Fixed Charges for the 2019-24 Tariff Period

53. The Petitioner has claimed the transmission charges for the 2019-24 tariff period as follows:

					(₹ in iakn)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	422.81	422.82	422.81	422.82	422.81
Interest on Loan	261.97	242.63	385.79	350.71	315.66
Return on equity	1230.06	1230.06	1230.06	1230.06	1230.06
O&M Expenses	862.66	893.01	923.95	956.22	989.78
Interest on Working Capital	66.39	67.54	71.05	71.93	72.74
Total	2843.89	2856.06	3033.66	3031.74	3031.05

54. The details of IWC claimed by the Petitioner for the 2019-24 tariff period are as follows:

					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
WC for O&M Expenses	71.89	74.42	77.00	79.69	82.48
(O&M Expenses for 1 Month)					
WC for Maintenance Spares	129.40	133.95	138.59	143.43	148.47
(15% of O&M)					
WC for Receivables	349.66	352.12	374.01	373.78	372.67
(Equivalent to 2 months of					
annual transmission charges)					
Total Working Capital	550.95	560.49	589.60	596.90	603.62
Rate of Interest on Working	12.05	12.05	12.05	12.05	12.05
Capital (in %)					
Interest on Working Capital	66.39	67.54	71.05	71.93	72.74

Capital Cost

55. 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;

(35 !... |...|.)

(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 up to 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;

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) The 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."

56. The Petitioner has claimed the capital cost of ₹29976.51 lakh as on 31.3.2019 for the Combined Asset. The same has been worked out by the Commission as on 31.3.2019 and considered as the opening capital cost as on 1.4.2019 for the purpose of determination of transmission tariff in accordance with Regulation 19 of the 2019 Tariff Regulations. The Petitioner has not projected any ACE during the 2019-24 tariff period for the Combined Asset. Accordingly, the capital cost considered for the 2019-24 tariff period is as follows:

		(₹ in lakh)
Total Capital Cost (as on 1.4.2019)	ACE (2019-24)	Total Capital Cost (as on 31.3.2024)
(as 011 1.4.2019)	(2019-24)	(as on s1.3.2024)
29976.51	0.00	29976.51

Debt-Equity Ratio

57. Regulation 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.

(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."

58. The debt-equity ratio considered for the purpose of computation of tariff for

the 2019-24 tariff period is as follows:

Funding	Capital cost as on 1.4.2019 (₹ in lakh)	(in %)	Total cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	23427.37	78.15	23427.37	78.15
Equity	6549.14	21.85	6549.14	21.85
Total	29976.51	100.00	29976.51	100.00

Depreciation

59. Regulation 33 of the 2019 Tariff Regulations provides 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 asset 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 asset 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 up to 31.3.2019 from the gross depreciable value of the asset.

(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 asset 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."

60. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. WAROD at Annexure-II has been worked out after taking into account the depreciation rates specified in the 2019 Tariff Regulations. The Combined Asset has already completed 12 years of life as on 31.3.2018, the remaining depreciable value of ₹9301.79 lakh has been spread across the balance useful life of 22 years in accordance with Regulation 33(5) of the 2019 Tariff Regulations. The depreciation allowed for the Combined Asset for the 2019-24 tariff period is as follows:

					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	29976.51	29976.51	29976.51	29976.51	29976.51
Addition during 2019-24 due to projected ACE	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	29976.51	29976.51	29976.51	29976.51	29976.51
Average Gross Block	29976.51	29976.51	29976.51	29976.51	29976.51
Balance useful life at the	21.00	20.00	19.00	18.00	17.00

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beginning of the year (Year)					
Aggregate Depreciable Value	26978.86	26978.86	26978.86	26978.86	26978.86
Rate of Depreciation (in %)	1.41	1.41	1.41	1.41	1.41
Depreciation during the	422.81	422.81	422.81	422.81	422.81
year					
Cumulative Depreciation at	18522.69	18945.50	19368.31	19791.12	20213.92
the end of the year					
Remaining Depreciable	8456.17	8033.36	7610.55	7187.74	6764.94
Value at the end of the year					

Interest on Loan

61. 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.

(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."

62. The weighted average rate of IoL has been considered on the basis of rates prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rates 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. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for the Combined Asset for the 2019-24 tariff period is as follows:

					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	23427.37	23427.37	23427.37	23427.37	23427.37
Cumulative Repayments up to Previous Year	17714.84	18137.65	18560.46	18983.27	19406.08
Net Loan-Opening	5712.53	5289.72	4866.91	4444.10	4021.30
Addition due to ACE	0.00	0.00	0.00	0.00	0.00
Repayment during the year	422.81	422.81	422.81	422.81	422.81
Net Loan-Closing	5289.72	4866.91	4444.10	4021.30	3598.49
Average Loan	5501.12	5078.32	4655.51	4232.70	3809.89
Weighted Average Rate	4.737	4.750	8.235	8.229	8.222
of Interest on Loan (in %)					
Interest on Loan	260.59	241.24	383.38	348.30	313.26

Return on Equity

63. Regulations 30 and 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 runof 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 by1.00% 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), dahta 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 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:

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

Where "t" is the effective tax rate in accordance with clause (1) of this Regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating



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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:

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."

64. The Petitioner has submitted that MAT rate is applicable to the Petitioner's

company. Accordingly, 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 for the Combined

Asset for the 2019-24 tariff period is as follows:

				(₹	in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	6549.14	6549.14	6549.14	6549.14	6549.14
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	6549.14	6549.14	6549.14	6549.14	6549.14
Average Equity	6549.14	6549.14	6549.14	6549.14	6549.14
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.470	17.470	17.470	17.470	17.470
Rate of Return on Equity (in %)	18.780	18.780	18.780	18.780	18.780
Return on Equity	1230.06	1230.06	1230.06	1230.06	1230.06

Operation & Maintenance Expenses

65. The O&M Expenses claimed by the Petitioner for the various elements included in the Combined Asset for the 2019-24 tariff period are as follows:

Particulars 2019-20 2020-21 2021-22 2022-23 2023-24 Sub-station Bays (Number) 400 kV: Ramagundam-III and 2 2 2 2 2 IV bays at Hyderabad 400 kV: Kurnool bay at Gooty 1 1 1 1 1 400 kV: Nagarjunasagar - bay 1 1 1 1 1 at Khammam 400 kV: Khammam-Bay 1 1 1 1 1 at Nagarjunasagar 400 kV: 1 1 Kurnool bav 1 1 1 at Hvderabad 400 kV: Neelmangala Bay at 1 1 1 1 1 Gootv 400 kV: Hyderabad- Bay at 1 1 1 1 1 Kurnool 400 kV:Gooty-Bay at Kurnool 1 1 1 1 1 400 kV: Kurnool Bay 1 1 1 1 1 at Kurnool Norm (₹ lakh/bay) 36.91 400 kV 32.15 33.28 34.45 35.66 Total sub-station O&M 321.50 332.80 344.50 356.60 369.10 Expenses (₹ in lakh) AC Lines (Kms) Ramagundam-400 kV 201.250 201.250 201.250 201.250 201.250 Hyderabad III Double Circuit Line (Twin/ Triple Conductor) 400 kV Hyderabad-Kurnool-310.690 310.690 310.690 310.690 310.690 Gooty 400 kV Single Circuit Line (Twin/ Triple Conductor) 400 kV Gooty-Neelamangala 256.130 256.130 256.130 256.130 256.130 Single Circuit Line (Twin/ Triple Conductor) 400 kV 144.580 144.580 144.580 144.580 144.580 Khamam-Nagarjunasagar Single Circuit Line (Twin/ Triple Conductor) Norm (₹ lakh/km) **Double Circuit** 0.881 0.912 0.944 0.977 1.011 (Twin/ Triple Conductor) Single Circuit 0.503 0.521 0.539 0.558 0.578 (Twin/ Triple Conductor) **Total Transmission Line** 573.42 535.14 554.18 593.58 614.65 **Communication System** PLCC (₹ in lakh) 301.25 301.25 301.25 301.25 301.25 Norms (%) 2 2 2 2 2 **Total Communication** 6.03 6.03 6.03 6.03 6.03 System

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(₹ in lakh)

Total O&M Expenses	862.66 893.00	923.95	956.21	989.78
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66. Regulations 35(3)(a) and 33(4) of the 2019 Tariff Regulations provide as

follows:

"35. Operation and Maintenance Expenses (3) Transmission system: (a) The following normative operation and maintenance expenses shall be admissible for the transmission system:

Particulars	2019- 20	2020- 21	2021- 22	2022- 23	2023- 24			
Norms for sub-station Bays (₹ Lakh per bay)								
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			
Norms for Transformers (₹ Lakh per MVA	4)	-						
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			
Norms for AC and HVDC lines (₹ Lakh p	er km)			•				
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011			
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867			
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578			
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289			
Double Circuit (Bundled conductor								
with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517			
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011			
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433			
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662			
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773			
Norms for HVDC stations								
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except	834	864	894	925	958			
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913			
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586			
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834			
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947			

±800 kV, Bishwanath-Agra HVDC	2 562	2 652	2 746	2 0 1 2	2,942
bipole scheme (Rs Lakh) (3000	2,003	2,005	2,740	2,042	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 ±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 ±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."



67. We have considered the submissions of the Petitioner. The Petitioner has claimed O&M Expenses separately for PLCC under Regulation 35(4) of the 2019 Tariff Regulations @2% of its original project cost in the instant petition. The Petitioner has made similar claim in other petitions as well. Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014 Tariff Regulations and the 2019 Tariff Regulations and the norms for sub-station have been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No. 126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication system. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed.

68. The O&M Expenses allowed for the Combined Asset for the 2019-24 tariff period are as follows:

					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays (Number)					
400 kV: Ramagundam-III and	2	2	2	2	2
IV bays at Hyderabad					
400 kV: Kurnool bay at Gooty	1	1	1	1	1
400 kV: Nagarjunasagar - bay	1	1	1	1	1
at Khammam					
400 kV: Khammam-Bay at	1	1	1	1	1
Nagarjunasagar					
400 kV: Kurnool bay at	1	1	1	1	1
Hyderabad					
400 kV: Neelmangala Bay at	1	1	1	1	1
Gooty					
400 kV: Hyderabad- Bay at	1	1	1	1	1
Kurnool					
400 kV: Gooty-Bay at Kurnool	1	1	1	1	1
400 kV: Kurnool Bay at	1	1	1	1	1
Kurnool					
Norm (₹ lakh/bay)					
400 kV	32.15	33.28	34.45	35.66	36.91
Total Sub-station O&M	321.50	332.80	344.50	356.60	369.10
Expenses (₹ in lakh)					
AC Lines (kms)					

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400 kV Ramagundam- Hyderabad III Double Circuit Line (Twin/ Triple Conductor)	201.250	201.250	201.250	201.250	201.250
400 kV Hyderabad-Kurnool- Gooty 400 kV Single Circuit Line (Twin/ Triple Conductor)	310.690	310.690	310.690	310.690	310.690
400 kV Gooty-Neelamangala Single Circuit Line (Twin/ Triple Conductor)	256.130	256.130	256.130	256.130	256.130
400 kV Khamam- Nagarjunasagar Single Circuit Line (Twin/ Triple Conductor)	144.580	144.580	144.580	144.580	144.580
Norm (₹ lakh/km)					
Double Circuit (Twin/ Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Twin/ Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Total Transmission Line	535.14	554.18	573.42	593.58	614.65
Total O&M Expenses	856.64	886.98	917.92	950.18	983.75

Interest on Working Capital

69. Regulations 34(1)(c), 34(3), 34(4) and Regulation 3(7) of the 2019 Tariff

Regulations specify as follows:

"34. Interest on Working Capital

(1) ...

- (c) For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System:
 - *i.* Receivables equivalent to 45 days of fixed cost;
 - *ii. Maintenance spares* @ 15% of operation and maintenance expenses including security expenses; and
 - *iii.* Operation and maintenance expenses, including security expenses for one month"

"(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:

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

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



"3.Definitions ...

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

70. The Petitioner has submitted that it has computed IWC for the 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 Interest (RoI) considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 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 1 year 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 is as follows:

					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
WC for O&M Expenses	71.39	73.91	76.49	79.18	81.98
(O&M Expenses for 1 Month)					
WC for Maintenance Spares	128.50	133.05	137.69	142.53	147.56
(15% of O&M)					
WC for Receivables	348.71	350.61	371.80	371.55	370.44
(Equivalent to 2 months of annual					
transmission charges)					
Total Working Capital	548.59	557.57	585.98	593.25	599.98
Rate of Interest on Working	12.05	11.25	10.50	10.50	10.50
Capital (in %)					
Interest of Working Capital	66.11	62.73	61.53	62.29	63.00

Annual Fixed Charges for the 2019-24 Tariff Period

71. The transmission charges allowed for the Combined Asset for the 2019-24

period are as follows:

					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	422.81	422.81	422.81	422.81	422.81
Interest on Loan	260.59	241.24	383.38	348.30	313.26
Return on Equity	1230.06	1230.06	1230.06	1230.06	1230.06
O&M Expenses	856.64	886.98	917.92	950.18	983.75
Interest on Working Capital	66.11	62.73	61.53	62.29	63.00

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Total 2836.19 2843.82 3015.70 3013.65 3012.88

Filing Fee and Publication Expenses

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

Licence Fee & RLDC Fees and Charges

73. The Petitioner has requested to allow the Petitioner to bill and recover License fee and RLDC fees and charges, separately from the Respondents.

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

Goods and Services Tax

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

Security Expenses

77. The Petitioner has submitted that security expenses for the transmission system are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC.

78. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses 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 Commission vide order dated 3.8.2021 in Petition No. 260/MP/2020 approved security expenses from 1.4.2019 to 31.3.2024. Therefore, security expenses will be shared in terms of the 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

79. 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

80. During the tariff periods 2001-04, 2004-09 and 2009-14 (upto 30.6.2011), the transmission charges for inter-State transmission systems were being shared in accordance with the Tariff Regulations for the respective tariff periods. With effect

from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010. With effect from 1.11.2020, sharing of transmission charges is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 (in short, "the 2020 Sharing Regulations"). Accordingly, the liabilities of the DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulation 15(2)(b) of the 2020 Sharing Regulations. For subsequent period, the billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of the 2020 Sharing Regulations.

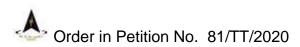
81. To summarise:

a) The revised AFC approved for Asset-III for the period from 1.3.2004 to 31.3.2004 are:

(₹ in lakh	I)				
2004-05 (pro-rata for 1					
month)					
44.00					

b) The consequential revision of AFC approved for the transmission assets for the 2004-09 tariff period are:

				(₹	tin lakh)
Asset	2004-05	2005-06	2006-07	2007-08	2008-09
	(Pro-rata for 5 months)				
Asset-I	411.94	1000.84	999.84	991.52	983.12



(₹ in lakh)

Asset	2004-05	2005-06	2006-07	2007-08	2008-09
	(Pro-rata for 1 month)				
Asset-II	81.76	1019.46	1054.45	1050.89	1043.36

(₹ in lakh)

Asset	2004-05	2005-06	2006-07	2007-08	2008-09
Asset-III	501.19	505.03	505.75	503.16	500.68

(₹ in lakh)

Asset	2005-06			
	(Pro-rata for 11 months)	2006-07	2007-08	2008-09
Asset-IV	728.74	824.83	830.18	826.78

c) The consequential revision of AFC approved for the Combined Asset for the 2009-14 tariff period are:

				(₹ in lakh)
2009-10	2010-11	2011-12	2012-13	2013-14
4391.60	4338.86	4348.48	4395.32	4405.76

d) The trued-up AFC approved for the Combined Asset for the 2014-19 tariff period are:

				(₹ in lakh)
2014-15	2015-16	2016-17	2017-18	2018-19
4293.71	4318.99	4377.69	4396.46	3270.51

e) AFC allowed for the Combined Asset for the 2019-24 tariff period in

the instant order are:

				(₹ in lakh)
2019-20	2020-21	2021-22	2022-23	2023-24
2836.19	2843.82	3015.70	3013.65	3012.88

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

83. This order disposes of petition No. 81/TT/2020 in terms of the above discussions and findings.

		sd/- S. Jha) ember	sd/- (P. K. Puja Chairperso	
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Petition No.:	81/TT/2020
Period	2014-19 Tariff

Annexure-I

2014-19	Admitted Capital	ACE (₹ in lakh)		Rate of		Annual Depreciation as per Regulations (₹ in lakh)					
Capital Expenditure	Cost as on 1.4.2014 (₹ in lakh)	2014-15	2015-16	Total	on 31.3.2019 (₹ in lakh)	as per Regulations	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission Line	26910.10	11.86	5.14	17.00	26927.10	5.28	1421.75	1421.75	1421.75	1421.75	
Sub Station	2748.16	0.00	0.00	0.00	2748.16	5.28	145.10	145.10	145.10	145.10	Spread
PLCC	301.25	0.00	0.00	0.00	301.25	6.33	19.07	19.07	19.07	19.07	
TOTAL	29959.51	11.86	5.14	17.00	29976.51		1585.34	1585.79	1585.92	1585.92	422.81
					Average Gro	Average Gross Block (₹ in					
					lakh)		29965.44	29973.94	29976.51	29976.51	29976.51
					Weighted Average Rate of Depreciation (%)		5.29	5.29	5.29	5.29	1.41

Petition No.:	81/TT/2020
Period	2019-24 Tariff

Annexure-II

2019-24	Admitted Capital Cost as on	Admitted Capital Cost as on	Rate of Depreciation	Annual Depreciation as per Regulations (₹ in lakh)				
Capital Expenditure	31.3.2019 (₹ in lakh)	31.3.2024 (₹ in lakh)	as per Regulations 2019-20		2020-21	2021-22	2022-23	2023-24
Transmission Line	26927.10	26927.10	5.28					
Sub Station	2748.16	2748.16	5.28			Spreading		
PLCC	301.25	301.25	6.33					
TOTAL	29976.51	29976.51		422.81	422.81	422.81	422.81	422.81
		Average Gross Bloc	ck (₹ in lakh)	29976.51	29976.51	29976.51	29976.51	29976.51
		Weighted Average Rate of Depreciation (%)		1.41	1.41	1.41	1.41	1.41