

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 511/TT/2020**

**Coram:**

**Shri I. S. Jha, Member  
Shri Arun Goyal, Member  
Shri P. K. Singh, Member**

**Date of Order: 21.03.2022**

**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 2004-09 and 2009-14 tariff periods, truing up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of combined elements comprising of Kaiga - Narendra 400 kV D/C Transmission Line, 400/220 kV Sub-station at Narendra with one 315 MVA ICT and 2<sup>nd</sup> 315 MVA ICT at Narendra Sub-station under "Kaiga-Narendra Transmission System" in the 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 Bhawan, Bangalore-560 009.
2. Transmission Corporation of Andhra Pradesh Limited,  
Vidyut Soudha, Hyderabad-500 082.
3. Kerala State Electricity Board,  
Vaidyuthi Bhavanam,  
Pattom, Thiruvananthapuram-695 004.
4. Tamil Nadu Generation and Distribution Corporation Limited,  
NPKRR Maaligai, 800, Anna Salai,  
Chennai-600 002.



5. Electricity Department,  
Government of Pondicherry,  
Pondicherry-605 001.
6. Eastern Power Distribution Company of Andhra Pradesh Limited,  
P&T Colony, Seethmmadhara, Vishakhapatanam,  
Andhra Pradesh.
7. Southern Power Distribution Company of Andhra Pradesh Limited,  
Srinivasasa Kalyana Mandapam Backside,  
Tiruchanoor Road, Kesavayana Gunta,  
Chittoor District, Andhra Pradesh, Tirupati-517 501.
8. Central Power Distribution Company of Andhra Pradesh Limited,  
Corporate Office, Mint Compound,  
Hyderabad -500 063 (Telangana).
9. Northern Power Distribution Company of Andhra Pradesh Limited,  
Opp. NIT Petrol Pump,  
Chaitanyapuri, Kazipet,  
Warangal-506 004 (Telangana).
10. Bangalore Electricity Supply Company Limited,  
Corporate Office, K.R. Circle,  
Bangalore-560 001 (Karnataka).
11. Gulbarga Electricity Supply Company Limited,  
Station Main Road, Gulbarga,  
Karnataka.
12. Hubli Electricity Supply Company Limited,  
Navanagar, PB Road,  
Hubli, Karnataka.
13. MESCOM Corporate Office,  
Paradigm Plaza, AB Shetty Circle,  
Mangalore-575 001 (Karnataka).
14. Chamundeswari Electricity Supply Corporation Limited,  
927, LJ Avenue, Ground Floor, New Kantharaj Urs Road,  
Saraswatipuram, Mysore-570 009 (Karnataka).
15. Electricity Department,  
Government of Goa,  
Vidyuti Bhawan, Panaji, Goa-403001.



16. Transmission Corporation of Telangana Limited,  
Vidhyut Sudha, Khairatabad,  
Hyderabad-500082.

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

.....Respondent(s)

**For Petitioner** : Shri S. S. Raju, PGCIL  
Shri D. K. Biswal, PGCIL  
Shri V. P. Rastogi, PGCIL  
Ms. Anshul Garg, PGCIL

**For Respondents** : Shri S. Vallinyagam, Advocate, TANGEDCO

### **ORDER**

The Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee, has filed the instant petition for revision of transmission tariff of 2004-09 and 2009-14 tariff periods, truing up of transmission tariff of 2014-19 tariff period 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 tariff for 2019-24 tariff period 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 combined elements of Kaiga-Narendra Transmission System in the Southern Region (hereinafter referred to as “the transmission system”):

**Asset-I:** 400 kV D/C Kaiga-Narendra transmission line

**Asset-II:** 400/220 kV Sub-station at Narendra with 1x315 MVA transformer

and

**Asset-III:** 2<sup>nd</sup> 315 MVA Auto Transformer at Narendra Sub-station.



*(Asset-I, Asset-II and Asset-III have hereinafter been referred to as “the transmission assets” with reference to 2004-09 tariff period and for 2009-14 tariff period onwards they have been combined and as such referred to as “the Combined Asset”)*

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

- “1) Approve the revised Transmission Tariff for 2004-09 block and transmission tariff for 2009-14 block for the assets covered under this petition, 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) 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.*
- 4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70(1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure ( if any) in relation to the filing of petition.*
- 5) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*
- 6) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.*
- 7) Allow the petitioner to file a separate petition before Hon’ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 10.5 above.*
- 8) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.*
- 9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.*

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



3. **Backdrop of the case**

a) Investment Approval (IA) and expenditure sanction in respect of Asset-I was accorded by the Board of Directors of the Petitioner's Company vide Memorandum dated 27.4.2000 at an estimated cost of ₹7599 lakh (2<sup>nd</sup> quarter, 1999 price level) which included IDC of ₹912 lakh. Subsequently, revised cost estimate of Asset-I was accorded by the Board of Directors of the Petitioner's Company vide Memorandum dated 30.8.2005 at an estimated cost of ₹18161 lakh (1<sup>st</sup> quarter, 2005 price level) including IDC of ₹3131 lakh. IA and expenditure sanction in respect of Asset-II and Asset-III was accorded by the Board of Directors of the Petitioner's Company vide Memorandum dated 27.2.2003 at an estimated cost of ₹6051 lakh including IDC of ₹487 lakh. Subsequently, Revised Cost Estimate (RCE) in respect of Asset-II and Asset-III was approved by the Board of Directors of the Petitioner's Company vide Memorandum dated 26.2.2008 at an estimated cost of ₹6231 lakh including IDC of ₹223 lakh.

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

**Transmission Line:**

- i. Kaiga-Narendra Line D/C twin sub-conductors (107.662 km)

**Sub-stations:**

**400 kV**

- i. Narendra:Kaiga-I and II Bay
- ii. Narendra:ICT-I Bay
- iii. Narendra:ICT-II Bay I

**220 kV**

- i. Narendra:ICT-II Bay I
- ii. Narendra:ICT-I Bay I
- iii. Narendra:Narendra-Bus Extension Sectionaliser I and II



- iv. Narendra: Mahalingapur I and II Bay at Narendra
- v. Narendra: Bagalkot Bay I and II at Narendra

**Transformer**

- i. Narendra: ICT-I and II at Narendra 400 kV 2x315 MVA
- c) The complete scope of the work is covered in the instant petition. The Dates of Commercial Operation (COD) of Asset-I, Asset-II and Asset-III are 1.11.2005, 1.11.2005 and 1.9.2006 respectively.
- d) The transmission tariff of 2004-09 tariff period in respect of Asset-I and Asset-II was approved vide order dated 15.3.2007 in Petition No. 128/2006. Further, tariff for 2004-09 period was revised on account of Additional Capital Expenditure (ACE) during 2006-07 in case of Asset-I and Asset-II. Transmission tariff from COD to 31.3.2009 in respect of Asset-III was approved vide orders dated 30.5.2008 and dated 29.8.2008 in Petition No. 123/2007. Tariff with respect to Asset-II and Asset-III was further revised on account of ACE during 2008-09 vide order dated 24.5.2010 in Petition No. 5/2010.
- e) Asset-I, Asset-II and Asset-III were combined with notional COD as 1.9.2006 during 2009-14 period and transmission tariff of the Combined Asset for 2009-14 tariff period was allowed vide order dated 31.3.2011 in Petition No. 211/2010.
- f) Transmission tariff of 2009-14 tariff period was trued-up and tariff of 2014-19 tariff period was determined vide order dated 8.1.2016 in Petition No. 212/TT/2014.



g) The Petitioner has sought revision of transmission tariff allowed for 2004-09 tariff period 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 (“the APTEL”) 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. The Petitioner has also sought consequential revision of transmission tariff allowed for 2009-14 tariff period, truing up of tariff of 2014-19 tariff period and determination of transmission tariff of 2019-24 tariff period in respect of the transmission assets.

h) 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 the APTEL and its decisions are as given in the following table:

<b>Sl. No.</b>	<b>Issue</b>	<b>APTEL’s decisions/ directions</b>
1	Whether APTEL can enquire into the validity of Regulations framed by the Commission?	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 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.	The Commission’s view upheld.
3(b)	O&M Expenses: Non-inclusion of incentives and ex-gratia payment to employees.	The Commission’s view upheld.
4	Cost of spares for calculation of working capital.	The Commission’s view upheld.



i) APTEL in its 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 given in the following table:

Sl. No.	Issue	APTEL's decision/direction
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.
III	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 Variation (FERV).	FERV has been kept as pass through to 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 Appeals Nos.135 to 140 of 2005. The Commission to act accordingly.
IX	Computation of IoL in Singrauli Station.	Net loan closing at the end of a year is reflected as net loan opening on the first day of the next year. The Commission shall re-compute the interest accordingly.

j) 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.

k) Based on APTEL's judgment dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and judgment 13.6.2007 in Appeal No. 139 of 2007 and batch matters, the Petitioner had sought revision of tariff of its transmission assets for 2001-04 and 2004-09 tariff periods in 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 the Civil Appeals by the Hon'ble Supreme Court.

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

m) 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 before the Commission. 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 of the petitions for 2014-19 tariff period.

n) The instant petition was heard on 11.2.2022 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 the Southern Region.

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers. None of the Respondents have filed any reply in the matter.

**Re: Interest on Loan (“IoL”)**

6. 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 loan 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, interest allowed for 2004-09 tariff period is revised on the basis of the normative debt repayment methodology.

**Re: Additional Capital Expenditure (“ACE”)**

7. APTEL vide judgment dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters held that ACE after COD should also be considered for computation of maintenance spares. In view of above, maintenance spares to be considered for computation of working capital for 2004-09 tariff period are also required to be revised taking into consideration ACE after COD.



## **Re: Depreciation**

8. As regards depreciation, APTEL vide judgement dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters 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 above directions of APTEL, the outstanding loan allowed in respect of the transmission assets for 2004-09 period is revised in the instant order.

9. The revision of transmission tariff allowed for 2004-09 tariff period necessitates the revision of transmission tariff allowed for 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 cases in the case of the Petitioner was kept pending 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 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 11.2.2022 through video conference and order was reserved.



11. This order is issued considering the submissions made by the Petitioner in the petition vide affidavits dated 3.8.2019, 30.3.2021 and 23.9.2021.

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 2004-09 AND 2009-14 TARIFF PERIODS**

**2004-09 Tariff Period**

13. The Commission vide order dated 15.3.2007 in Petition No. 128/2006 allowed transmission tariff in respect of Asset-I and Asset-II for 2004-09 period and revised the tariff with respect to Asset-I and Asset-II on account of ACE during the year 2006-07 and determined tariff of Asset-III vide orders dated 30.5.2008 and 29.8.2008 in Petition No. 123/2007. Subsequently, tariff was revised vide order dated 24.5.2010 in Petition No. 5/2010 with respect to Asset-II and Asset-III on account of ACE. The details of the tariff allowed are as follows:

(₹ in lakh)

Particulars	Asset-I			
	2005-06 (Pro-rata 5 months)	2006-07	2007-08	2008-09
Depreciation	156.57	381.40	386.51	386.51
Interest on Loan	331.83	782.25	748.44	689.36
Return on Equity	254.19	619.23	627.58	627.58
Advance against Depreciation	20.13	15.23	222.21	383.83
O&M Expenses	21.17	52.97	54.91	57.28
Interest on Working Capital	20.15	48.24	52.47	55.31
<b>Total</b>	<b>804.04</b>	<b>1899.32</b>	<b>2092.11</b>	<b>2199.86</b>

(₹ in lakh)

Particulars	Asset-II			
	2005-06 (Pro-rata 5 months)	2006-07	2007-08	2008-09
Depreciation	60.20	160.46	165.06	165.68
Interest on Loan	98.22	259.53	261.29	250.20



Return on Equity	81.57	218.48	227.65	228.37
Advance against Depreciation	0.00	0.00	0.00	0.00
O&M Expenses	121.88	304.20	316.30	329.00
Interest on Working Capital	9.24	23.67	24.54	25.00
<b>Total</b>	<b>371.10</b>	<b>966.33</b>	<b>994.84</b>	<b>998.25</b>

(₹ in lakh)

Particulars	Asset-III		
	2006-07 (Pro-rata 7 months)	2007-08	2008-09
Depreciation	13.46	23.71	24.86
Interest on Loan	21.10	35.74	35.58
Return on Equity	15.66	27.58	28.92
Advance against Depreciation	0.00	0.00	0.00
O&M Expenses	35.49	63.26	65.80
Interest on Working Capital	2.18	3.83	3.98
<b>Total</b>	<b>87.89</b>	<b>154.12</b>	<b>159.15</b>

14. The Petitioner has claimed the following revised transmission charges in respect of the transmission assets for 2004-09 tariff period in the instant petition:

(₹ in lakh)

Particulars	Asset-I			
	2005-06 (Pro-rata 5 months)	2006-07	2007-08	2008-09
Depreciation	156.57	381.40	386.51	386.51
Interest on Loan	331.83	781.79	748.53	689.32
Return on Equity	254.19	619.23	627.58	627.58
Advance against Depreciation	20.13	15.23	222.20	383.82
O&M Expenses	21.17	52.97	54.91	57.28
Interest on Working Capital	20.16	49.02	53.52	56.42
<b>Total</b>	<b>804.06</b>	<b>1899.63</b>	<b>2093.26</b>	<b>2200.94</b>

(₹ in lakh)

Particulars	Asset-II			
	2005-06 (Pro-rata 5 months)	2006-07	2007-08	2008-09
Depreciation	60.20	160.46	165.06	165.68
Interest on Loan	99.11	269.75	282.79	278.69
Return on Equity	81.57	218.48	227.65	228.37
Advance against Depreciation	0.00	0.00	0.00	0.00
O&M Expenses	121.88	304.20	316.30	329.00
Interest on Working Capital	9.39	24.95	26.32	27.00
<b>Total</b>	<b>372.15</b>	<b>977.85</b>	<b>1018.12</b>	<b>1028.74</b>



(₹ in lakh)

Particulars	Asset-III		
	2006-07 (Pro-rata 7 months)	2007-08	2008-09
Depreciation	13.46	23.71	24.86
Interest on Loan	21.42	37.81	39.65
Return on Equity	15.66	27.58	28.92
Advance against Depreciation	0.00	0.00	0.00
O&M Expenses	35.49	63.26	65.80
Interest on Working Capital	2.19	3.93	4.14
<b>Total</b>	<b>88.22</b>	<b>156.29</b>	<b>163.37</b>

15. We have considered the submissions of the Petitioner. The transmission tariff for 2004-09 period is allowed in respect of the transmission assets on the basis of the following:

- a) Admitted capital cost and ACE approved during 2004-09 period which are as follows:

Particulars	Admitted Capital Cost (as on COD)					Admitted Capital Cost as on 31.3.2009
		2005-06	2006-07	2007-08	2008-09	
Asset-I	14602.02	39.52	397.61	0.00	0.00	15039.15
Asset-II	4347.57	644.85	436.76	0.00	34.31	5463.49
Asset-III	623.59	N/A	35.10	0.00	63.98	722.67

- b) Weighted Average Rate of Interest (WAROI) on actual loan, Weighted Average Rate of Depreciation (WAROD), Rate of Interest on Working Capital and O&M Expenses as adopted from order dated 15.3.2007 in Petition No. 128/2006 and revised orders dated 30.5.2008 and 29.8.2008 in Petition No. 123/2007 and revised tariff order dated 24.5.2010 in Petition No. 5/2010.
- c) With respect to calculation of IoL, moratorium period was availed by the Petitioner for Asset-II during the years 2005-06 and 2006-07, for Asset-III during the years 2006-07, 2007-08 and 2008-09 and no actual repayment of loan was made. Earlier, the Commission vide order dated 15.3.2007 in Petition



No. 128/2006, later vide revised orders dated 30.5.2008 and 29.8.2008 in Petition No. 123/2007 as well as revised order dated 24.5.2010 in Petition No. 5/2010 had considered depreciation provided during 2004-09 tariff period as loan repayment. Therefore, depreciation provided for Asset-II during the years 2005-06 and 2006-07 and for Asset-III during the years 2006-07, 2007-08 and 2008-09 has been considered as loan repayment in accordance with Regulation 56(i)(f) of the 2004 Tariff Regulations, which is as follows:

**“56 (i) Interest on Loan Capital**

*(f) In case any moratorium period is availed of by the transmission licensee, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly;”*

- d) Maintenance Spares component of IWC adjusted with respect to ACE incurred during 2004-09 tariff period.

16. In view of the above, the revised transmission charges allowed in respect of the transmission assets for 2004-09 tariff period are as follows:

(₹ in lakh)

Particulars	Asset-I			
	2005-06 (Pro-rata 5 months)	2006-07	2007-08	2008-09
Depreciation	156.57	381.40	386.51	386.51
Interest on Loan	331.83	782.25	748.44	689.36
Return on Equity	254.19	619.23	627.58	627.58
Advance against Depreciation	20.13	15.23	222.21	383.83
O&M Expenses	21.17	52.97	54.91	57.28
Interest on Working Capital	20.16	48.49	52.96	55.82
<b>Total</b>	<b>804.05</b>	<b>1899.56</b>	<b>2092.59</b>	<b>2200.37</b>

(₹ in lakh)

Particulars	Asset-II			
	2005-06 (Pro-rata 5 months)	2006-07	2007-08	2008-09
Depreciation	60.20	160.46	165.06	165.68
Interest on Loan	98.22	259.53	266.22	262.59
Return on Equity	81.57	218.48	227.65	228.37
Advance against	0.00	0.00	0.00	0.00



Depreciation				
O&M Expenses	121.88	304.20	316.30	329.00
Interest on Working Capital	9.38	24.61	25.86	26.54
<b>Total</b>	<b>371.25</b>	<b>967.28</b>	<b>1001.09</b>	<b>1012.18</b>

(₹ in lakh)

Particulars	Asset-III		
	2006-07 (Pro-rata 7 months)	2007-08	2008-09
Depreciation	13.46	23.71	24.86
Interest on Loan	21.10	35.74	35.58
Return on Equity	15.66	27.58	28.92
Advance against Depreciation	0.00	0.00	0.00
O&M Expenses	35.49	63.26	65.80
Interest on Working Capital	2.19	3.87	4.06
<b>Total</b>	<b>87.90</b>	<b>154.16</b>	<b>159.22</b>

17. The Annual Fixed Charges (AFC) allowed for 2004-09 tariff period vide order dated 15.3.2007 in Petition No. 128/2006, revised vide orders dated 30.5.2008 and 29.8.2008 in Petition No. 123/2007 as well as revised vide order dated 24.5.2010 in Petition No. 5/2010, revised AFC claimed in the instant petition and revised AFC allowed in the instant order are as follows:

(₹ in lakh)

Particulars	Asset-I			
	2005-06 (Pro-rata 5 months)	2006-07	2007-08	2008-09
Allowed vide order dated 15.3.2007 in Petition No. 128/2006, revised vide orders dated 30.5.2008 and 29.8.2008 in Petition No. 123/2007.	804.04	1899.32	2092.11	2199.86
Claimed by the Petitioner in the instant Petition.	804.06	1899.63	2093.26	2200.94
Approved in the instant order.	804.05	1899.56	2092.59	2200.37

(₹ in lakh)

Particulars	Asset-II			
	2005-06 (Pro-rata 5 months)	2006-07	2007-08	2008-09
Allowed vide order dated 15.3.2007 in Petition No. 128/2006, revised vide orders dated 30.5.2008	371.10	966.33	994.84	998.25





and 29.8.2008 in Petition No. 123/2007 and further revised vide order dated 24.5.2010 in Petition No. 5/2010.				
Claimed by the Petitioner in the instant Petition.	372.15	977.85	1018.12	1028.74
Approved in the instant order.	371.25	967.28	1001.09	1012.18

(₹ in lakh)

Particulars	Asset-III		
	2006-07 (Pro-rata 7 months)	2007-08	2008-09
Allowed vide revised orders dated 30.5.2008 and 29.8.2008 in Petition No. 123/2007 and further revised vide order dated 24.5.2010 in Petition No. 5/2010.	87.89	154.12	159.15
Claimed by the Petitioner in the instant Petition.	88.22	156.29	163.37
Approved in the instant order	87.90	154.16	159.22

### **2009-14 Tariff Period**

18. The transmission assets were put into commercial operation during 2004-09 tariff period and the Petitioner combined them during 2009-14 period. Accordingly, combined tariff was claimed in respect of Combined Asset for 2009-14 period. The Commission vide order dated 31.3.2011 in Petition No. 211/2010 allowed transmission tariff in respect of the Combined Asset for 2009-14 tariff period which was trued-up vide order dated 8.1.2016 in Petition No. 212/TT/2014. The trued-up tariff allowed in respect of the Combined Asset is as follows:

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1078.97	1079.81	1079.81	1079.81	1079.81
Interest on Loan	896.96	813.65	735.39	647.30	557.41
Return on Equity	1183.93	1228.22	1231.42	1233.41	1248.26
O&M Expenses	570.54	603.22	637.75	674.18	712.70
Interest on Working Capital	94.40	95.24	95.40	95.43	95.79
<b>Total</b>	<b>3824.80</b>	<b>3820.14</b>	<b>3779.77</b>	<b>3730.13</b>	<b>3693.97</b>



19. The Petitioner has claimed the following revised transmission charges in respect of the Combined Asset for 2009-14 period in this petition:

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1078.97	1079.81	1079.81	1079.81	1079.81
Interest on Loan	934.34	851.08	773.09	684.75	594.56
Return on Equity	1183.93	1228.22	1231.42	1233.41	1248.26
O&M Expenses	570.54	603.22	637.75	674.18	712.70
Interest on Working Capital	95.18	96.02	96.18	96.21	96.56
<b>Total</b>	<b>3862.96</b>	<b>3858.35</b>	<b>3818.25</b>	<b>3768.36</b>	<b>3731.89</b>

20. We have considered the submissions of the Petitioner. Revised transmission tariff is allowed in respect of the Combined Asset on the basis of the following:

- a) The admitted capital cost as on 1.4.2009 of ₹21225.31 lakh; and
- b) WAROI on actual loan and WAROD has been considered from order dated 8.1.2016 in Petition No. 212/TT/2014.

21. In view of above, the revised transmission charges allowed in respect of the Combined Asset for 2009-14 tariff period are as follows:

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1078.97	1079.81	1079.81	1079.81	1079.81
Interest on Loan	912.68	829.39	751.24	663.05	573.03
Return on Equity	1183.93	1228.22	1231.42	1233.41	1248.25
O&M Expenses	570.54	603.22	637.75	674.18	712.70
Interest on Working Capital	94.73	95.56	95.73	95.76	96.12
<b>Total</b>	<b>3840.84</b>	<b>3836.20</b>	<b>3795.95</b>	<b>3746.21</b>	<b>3709.91</b>

22. AFC allowed for 2009-14 tariff period vide order dated 8.1.2016 in Petition No. 212/TT/2014, revised AFC claimed in the instant petition and AFC allowed in the instant order in respect of the Combined Asset are as follows:

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
AFC allowed vide order dated 8.1.2016 in Petition No. 212/TT/2014.	3824.80	3820.14	3779.77	3730.13	3693.97



AFC claimed by the Petitioner in the instant petition.	3862.96	3858.35	3818.25	3768.36	3731.89
Approved after true-up in this order.	3840.84	3836.20	3795.95	3746.21	3709.91

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

23. The Petitioner has revised its submission vide affidavit dated 23.9.2021 on account of de-capitalization of one number of 315 MVA ICT at Narendra Sub-station which is covered in the instant transmission system. The details of the trued-up transmission charges claimed by the Petitioner in respect of the Combined Asset for 2014-19 tariff period is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1079.82	1079.82	1079.82	1060.15	1040.48
Interest on Loan	502.15	413.79	328.08	245.81	169.39
Return on Equity	1248.33	1254.38	1254.38	1232.39	1213.60
O&M Expenses	655.00	676.78	699.24	722.42	746.42
Interest on Working Capital	101.33	100.64	99.91	98.34	97.02
<b>Total</b>	<b>3586.63</b>	<b>3525.41</b>	<b>3461.43</b>	<b>3359.11</b>	<b>3266.91</b>

24. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner in respect of the Combined Asset for 2014-19 tariff period are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	54.58	56.40	58.27	60.20	62.20
Maintenance Spares	98.25	101.52	104.89	108.36	111.96
Receivables	597.77	587.57	576.91	559.85	544.49
<b>Total Working Capital</b>	<b>750.60</b>	<b>745.49</b>	<b>740.07</b>	<b>728.41</b>	<b>718.65</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>IWC</b>	<b>101.33</b>	<b>100.64</b>	<b>99.91</b>	<b>98.34</b>	<b>97.02</b>

### **Capital Cost**

25. The capital cost of the Combined Asset has been calculated in accordance with Regulation 9(3) of the 2014 Tariff Regulations. The Commission vide order dated 8.1.2016 in Petition No. 212/TT/2014 allowed the capital cost as on 31.3.2014 of



₹21326.20 lakh in respect of the Combined Asset. The same capital cost of ₹21326.20 lakh of the Combined Asset as on 31.3.2014 has been claimed by the Petitioner as on 1.4.2014 and has been considered for trueing up tariff for 2014-19 tariff period.

26. The Petitioner has not claimed any ACE during 2014-19 tariff period.

### **De-capitalisation**

27. The Petitioner vide affidavit dated 23.9.2021 has submitted that Asset-II, i.e. 315 MVA ICT at Narendra Sub-station, which was put into commercial operation on 1.11.2005, was shifted to Misa Sub-station and replaced with a 500 MVA ICT. The 315 MVA shifted to Misa Sub-station has been re-capitalised in Petition No. 504/TT/2020. The Petitioner has submitted that the Commission in various orders has directed that in case of shifting of equipment from one place to another, the replaced equipment needs to be de-capitalised from the original project and re-capitalised in the new project. Accordingly, the 315 MVA ICT at Narendra Sub-station which is originally covered in the instant petition is required to be de-capitalized. The Petitioner has further made the following submissions in respect of 315 MVA ICT at Narendra Sub-station:

- a. The 315 MVA ICT at Narendra Sub-station (Asset-II) was replaced with 500 MVA ICT at Narendra Sub-station under SRSS XX. The replaced 315 MVA ICT was approved to be kept as regional spare vide RCE approved by the Board of Directors of the Petitioner's Company vide Memorandum Ref No: C/CP/PA1617-01-0R-RCE 006 dated 13.1.2017. The Board of Directors of the Petitioner's Company approved RCE of NERSS-VII vide Memorandum Ref. No.: C/CP/PA1718-10-0D-RCE 004 dated 18.10.2017, wherein it was stated that the replaced 315 MVA ICT at Narendra Sub-station shall be



diverted to Misa Sub-station and to be re-capitalized as regional spare at Misa Sub-station under NERSS-VII. The Petitioner filed Petition No. 504/TT/2020 for determination of transmission tariff for assets under NERSS-VII which includes 315 MVA spare ICT at Misa Sub-station (diverted from Narendra Sub-station) with COD as 31.12.2018.

- b. The Commission vide order dated 5.9.2021 in Petition No. 504/TT/2020 has already approved the tariff of the assets under NERSS-VII including 315 MVA spare ICT at Misa Sub-station for a net block of ₹304.57 lakh as claimed by the Petitioner. However, the said 315 MVA spare ICT at Misa Sub-station (diverted from Narendra Sub-station) is not de-capitalized from SRSS-XX and the same is now required to be de-capitalized under instant project from its original date of removal which was 14.12.2017. There is no de-capitalization with respect to said ICT in the true up petition filed for the transmission assets under SRSS-XX (Petition No. 23/TT/2021). The Petitioner has further submitted that associated bay for the replaced ICT is being utilized by 500 MVA ICT and as such the bay is not de-capitalized in the transmission project. Accordingly, the Petitioner has de-capitalised the 315 MVA spare ICT at Misa Sub-station (diverted from Narendra Sub-station) in the instant petition and has submitted the revised tariff forms and Auditor's Certificate in this regard. The Petitioner vide Form-10B has submitted the following details for the purpose of de-capitalisation of 315 MVA spare ICT at Misa Sub-station (diverted from Narendra Sub-station):



Equipment/ Asset	Year of capitalisation of asset/ equipment being de- capitalised	Actual date of de- capitalisation claimed in the instant petition	Original book value of the asset being de- capitalised	Debt-Equity ratio at the time of capitalisation	Cumulative depreciation corresponding to de- capitalisation	Cumulative repayment of loan corresponding to de- capitalisation	Date of re- capitalisation claimed in the respective petition
A	B	C	D	E	F	G	H
One number of 315 MVA 400/220 kV ICT at Narendra	2005-06 (1.11.2005)	14.12.2017	745.10	70.05:29.95	440.53	440.53	31.12.2018

28. We have considered the submissions of the Petitioner. The Commission vide order dated 5.9.2021 in Petition No. 504/TT/2020 has already allowed tariff in respect of 315 MVA spare ICT at Misa Sub-station (Asset-7 in Petition No. 504/TT/2020) with effect from 31.12.2018. The relevant extracts of the order dated 5.9.2021 in Petition No. 504/TT/2020 are as follows:

“Capital Cost for the 2014-19 tariff period

33. Accordingly, the capital cost of the transmission assets considered for the 2014- 19 tariff period is as follows:

Particulars	Apportioned Approved Capital Cost as per RCE	Capital Cost as on COD on cash basis	Additional Capital Expenditure (ACE)		Total Capital Cost as on 31.3.2019
			2017-18	2018-19	
Asset-1	168.85	65.46	0.00	14.52	79.98
Asset-2	2923.15	1905.35	0.00	615.78	2521.13
Asset-3	1358.71	1020.90	138.21	10.58	1169.69
Asset-4	1628.97	1072.77	0.00	144.14	1216.91
Asset-5	1380.49	868.18	0.00	233.23	1101.41
Asset-6	1809.96	1449.72	0.00	205.91	1655.64
Asset-7	194.69	359.40	0.00	104.65	464.05
Total	9464.82	6741.78	138.21	1328.81	8208.81

34.....

35. In Asset-7, the cost is inclusive of ₹304.57 lakh (net block of 315 MVA, 400/ 220 kV ICT-I at Narendra S/S (decapitalized vide order dated 18.8.2018 in Petition No. 176/TT/2017) and diverted to Misa S/S. The remaining cost pertains to diversion cost of ICT from Narendra to Misa.

36. The completion cost including additional capital expenditure in respect of the transmission assets is within approved apportioned capital cost.”



29. The 315 MVA ICT has been removed from Narendra Sub-station on 14.12.2017 and installed in Misa Sub-station on 31.12.2018. Accordingly, tariff was allowed for the ICT at Misa Sub-station with effect from 31.12.2018 in Petition No. 504/TT/2020. Therefore, we are of the view that 315 MVA ICT at Misa Sub-station is required to be de-capitalised in the instant petition. Accordingly, the capital cost considered for 2014-19 tariff period after de-capitalization is as follows:

(₹ in lakh)			
Capital Cost (as on 1.4.2014) (A)	ACE (2014-19) (B)	De-capitalisation (2017-18) (C)	Capital Cost (as on 31.3.2019) (D=A+B-C)
21326.20	0.00	745.10	20581.10

### **Debt-Equity Ratio**

30. 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, debt-equity ratio allowed by the Commission for determination of transmission tariff for the period ending on 31.3.2014 has been considered. Accordingly, the details of debt-equity ratio as on 1.4.2014 and 31.3.2019 in respect of the Combined Asset is as follows:

Particulars	Capital Cost as on 1.4.2014 (₹ in lakh)	(in %)	De-capitalisation (2017-18)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	14960.74	70.15	521.94	70.05	14438.80	70.16
Equity	6365.46	29.85	223.16	29.95	6142.30	29.84
<b>Total</b>	<b>21326.20</b>	<b>100.00</b>	<b>745.10</b>	<b>100.00</b>	<b>20581.10</b>	<b>100.00</b>

### **Depreciation**

31. The Gross Block during 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-I has been worked out after taking into account the depreciation rates of the Combined Asset as specified in



the 2014 Tariff Regulations. The trued-up depreciation for 2014-19 tariff period in respect of the Combined Asset is as follows:

(₹ in lakh)

	Particulars	2014-15	2015-16	2016-17	1.4.2017 to 14.12.2017 (258 days)	15.12.2017 to 31.3.2018 (107 days)	2018-19
	<b>Depreciation</b>						
A	Opening Gross Block	21326.20	21326.20	21326.20	21326.20	20581.10	20581.10
B	ACE	0.00	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	21326.20	21326.20	21326.20	21326.20	20581.10	20581.10
D	Average Gross Block (A+C)/2	21326.20	21326.20	21326.20	21326.20	20581.10	20581.10
E	Freehold land	616.61	616.61	616.61	616.61	616.61	616.61
F	Weighted Average Rate of Depreciation (in %)	5.06	5.06	5.06	5.06	5.06	5.06
G	Aggregate Depreciable Value	18638.63	18638.63	18638.63	18638.63	17968.04	17968.04
H	Balance useful life of the asset (Year)	25	24	23	22	22	21
I	Lapsed life (Year)	7	8	9	10	10	11
J	<b>Combined Depreciation during the year</b>	<b>1079.81</b>	<b>1079.81</b>	<b>1079.81</b>	<b>763.27</b>	<b>305.02</b>	<b>1040.47</b>
K	Depreciation upto previous year	7964.03	9043.84	10123.66	11203.47	11526.20	11831.22
L	Adjustment of Cumulative Depreciation for De-capitalised Asset	0.00	0.00	0.00	440.53	0.00	0.00
M	Cumulative depreciation	9043.84	10123.66	11203.47	11526.20	11831.22	12871.69
N	Aggregate Remaining Depreciable Value	9594.79	8514.97	7435.16	7112.43	6136.82	5096.35

32. The details of depreciation allowed vide order dated 8.1.2016 in Petition No. 212/TT/2014, claimed by the Petitioner in the instant petition and trued-up depreciation allowed in the instant order are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 8.1.2016 in Petition No. 212/TT/2014.	1079.81	1079.81	1079.81	1079.81	1079.81
Claimed by the Petitioner in the instant Petition.	1079.82	1079.82	1079.82	1060.15	1040.48





Approved after true-up in this order.	1079.81	1079.81	1079.81	1068.28	1040.47
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### **Interest on Loan (“IoL”)**

33. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. 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	1.4.2017 to 14.12.2017 (258 days)	15.12.2017 to 31.3.2018 (107 days)	2018-19
	<b>Interest on Loan</b>						
A	Gross Normative Loan	14960.74	14960.74	14960.74	14960.74	14438.80	14438.80
B	Cumulative Repayments upto Previous Year	8191.00	9270.81	10350.63	11430.44	11753.18	12058.19
C	Net Loan-Opening (A-B)	6769.74	5689.93	4610.12	3530.30	2685.62	2380.61
D	Additions	0.00	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	1079.81	1079.81	1079.81	763.27	305.02	1040.47
F	Net Loan-Closing (C+D-E)	5689.93	4610.12	3530.30	2767.04	2380.61	1340.14
G	Average Loan (C+F)/2	6229.84	5150.02	4070.21	3148.67	2533.12	1860.37
H	Weighted Average Rate of Interest on Loan (in %)	7.7691	7.6506	7.5515	7.6011	7.6011	7.9049
I	<b>Interest on Loan (G*H)</b>	<b>484.00</b>	<b>394.01</b>	<b>307.36</b>	<b>169.17</b>	<b>56.44</b>	<b>147.06</b>

34. The details of IoL allowed vide order dated 8.1.2016 in Petition No. 212/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 8.1.2016 in Petition No. 212/TT/2014.	468.52	378.76	292.31	212.15	135.27
Claimed by the Petitioner in the instant Petition.	502.15	413.79	328.08	245.81	169.39



Approved after true-up in this order.	484.00	394.01	307.36	225.62	147.06
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### **Return on Equity (“RoE”)**

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

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

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

<b>Year</b>	<b>Notified MAT rates (in %) (inclusive of surcharge &amp; cess)</b>	<b>Effective tax (in %)</b>
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

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

<b>Year</b>	<b>Notified MAT rates (in %) (inclusive of surcharge &amp; cess)</b>	<b>Base rate of RoE (in %)</b>	<b>Grossed-up RoE (in %) [(Base Rate)/(1-t)]</b>
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

38. The details of trued up RoE allowed in respect of the Combined Asset for 2014-19 tariff period are as follows:

(₹ in lakh)

	Particulars	2014-15	2015-16	2016-17	1.4.2017 to 14.12.2017 (258 days)	15.12.2017 to 31.3.2018 (107 days)	2018-19
	<b>Return on Equity</b>						
A	Opening Equity	6365.46	6365.46	6365.46	6365.46	6142.30	6142.30
B	Additions	0.00	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	6365.46	6365.46	6365.46	6365.46	6142.30	6142.30
D	Average Equity (A+C)/2	6365.46	6365.46	6365.46	6365.46	6142.30	6142.30
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.705	19.758
H	<b>Return on Equity (D*G)</b>	<b>1248.27</b>	<b>1254.31</b>	<b>1254.31</b>	<b>886.61</b>	<b>354.81</b>	<b>1213.60</b>

39. The details of RoE allowed vide order dated 8.1.2016 in Petition No. 212/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 8.1.2016 in Petition No. 212/TT/2014.	1248.27	1248.27	1248.27	1248.27	1248.27
Claimed by the Petitioner in the instant Petition.	1248.33	1254.38	1254.38	1232.39	1213.60
Approved after true-up in this order.	1248.27	1254.31	1254.31	1241.42	1213.60

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

40. The total O&M Expenses claimed by the Petitioner in respect of the Combined Asset are as follows:



<b>O&amp;M Expenses</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Transmission line</b>					
Kaiga-Narendra Line D/C twin sub-conductors (107.662 km)					
<b>Sub-station</b>					
220 kV bays at (a)Narendra:ICT-II Bay I, (b) Narendra:ICT I Bay I, (c) Narendra:Narendra-Bus Extention Sectionaliser I & II, (d) Narendra:Mahalingapur I & II Bay at Narendra, (e) Narendra:Bagalkot Bay I and II at Narendra					
Number of bays	8	8	8	8	8
Norms (₹ lakh/bay)	42.21	43.61	45.06	46.55	48.10
400 kV bays at (a) Narendra:Kaiga-I & II Bay, (b) Narendra:ICT-I Bay, and (c)Narendra:ICT-II Bay I					
Number of bays	4	4	4	4	4
Norms (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>655.00</b>	<b>676.78</b>	<b>699.24</b>	<b>722.42</b>	<b>746.42</b>

41. Regulation 29(4) of the 2014 Tariff Regulations specifies norms for O&M Expenses for the transmission system. The norms specified in respect of elements covered under the transmission assets are as follows:

<b>O&amp;M Expenses</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Transmission line</b>					
D/C twin/triple conductors					
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
<b>Sub-station</b>					
220 kV					
Norms (₹ lakh/bay)	42.21	43.61	45.06	46.55	48.10
400 kV					
Norms (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71

42. O&M Expenses allowed as per the norms under the 2014 Tariff Regulations are as follows:

<b>O&amp;M Expenses</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Transmission line</b>					
D/C twin sub-conductors	76.12	78.70	81.28	83.98	86.78
<b>Sub-station</b>					
220 kV	337.68	348.88	360.48	372.40	384.80
400 kV	241.20	249.20	257.48	266.04	274.84
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>655.00</b>	<b>676.78</b>	<b>699.24</b>	<b>722.42</b>	<b>746.42</b>



43. The details of O&M Expenses allowed vide order dated 8.1.2016 in Petition No. 212/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 8.1.2016 in Petition No. 212/TT/2014	655.00	676.78	699.24	722.41	746.41
Claimed by the Petitioner in the instant Petition	655.00	676.78	699.24	722.42	746.42
Approved after true-up in this order	655.00	676.78	699.24	722.42	746.42

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

44. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and trued-up IWC approved in respect of the Combined Asset for 2014-19 tariff period are as follows:

(₹ in lakh)							
	Particulars	2014-15	2015-16	2016-17	1.4.2017 to 14.12.2017 (258 days)	15.12.2017 to 31.3.2018 (107 days)	2018-19
	<b>Interest on Working Capital</b>						
A	Working Capital for O&M Expenses (O&M Expenses for one month)	54.58	56.40	58.27	60.20	60.20	62.20
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	98.25	101.52	104.89	108.36	108.36	111.96
C	Working Capital for Receivables (equivalent to two months of Annual Fixed Charges/Annual Transmission Charges)	594.66	584.18	573.36	565.84	543.65	540.67
D	<b>Total Working Capital (A+B+C)</b>	<b>747.50</b>	<b>742.10</b>	<b>736.52</b>	<b>734.40</b>	<b>712.22</b>	<b>714.84</b>
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50	13.50
F	<b>Interest of working capital (D*E)</b>	<b>100.91</b>	<b>100.18</b>	<b>99.43</b>	<b>70.08</b>	<b>28.19</b>	<b>96.50</b>



45. The details of IWC allowed vide order dated 8.1.2016 in Petition No. 212/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 8.1.2016 in Petition No. 212/TT/2014.	100.56	99.69	98.94	98.38	97.94
Claimed by the Petitioner in the instant Petition.	101.33	100.64	99.91	98.34	97.02
Approved after true-up in this order.	100.91	100.18	99.43	98.27	96.50

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

46. The trued-up AFC approved in respect of the Combined Asset for 2014-19 tariff period are as follows:

(₹ in lakh)						
Particulars	2014-15	2015-16	2016-17	1.4.2017 to 14.12.2017 (258 days)	15.12.2017 to 31.3.2018 (107 days)	2018-19
<b>Annual Transmission Charges</b>						
Depreciation	1079.81	1079.81	1079.81	763.27	305.02	1040.47
Interest on Loan	484.00	394.01	307.36	169.17	56.44	147.06
Return on Equity	1248.27	1254.31	1254.31	886.61	354.81	1213.60
Interest on Working Capital	100.91	100.18	99.43	70.08	28.19	96.50
O&M Expenses	655.00	676.78	699.24	510.64	211.78	746.42
<b>Total</b>	<b>3567.99</b>	<b>3505.10</b>	<b>3440.16</b>	<b>2399.77</b>	<b>956.23</b>	<b>3244.05</b>

47. Accordingly, the Annual Transmission Charges allowed vide order dated 8.1.2016 in Petition No. 212/TT/2014, claimed by the Petitioner in the instant petition and approved after truing 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 8.1.2016 in Petition No. 212/TT/2014	3552.15	3483.32	3418.58	3361.03	3307.70
Claimed by the Petitioner in the instant Petition	3586.63	3525.41	3461.43	3359.11	3266.91



Approved after true-up in this order	3567.99	3505.10	3440.16	3356.00	3244.05
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### **DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 PERIOD**

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	255.22	255.22	255.22	255.22	255.22
Interest on Loan	127.89	107.26	87.30	64.67	42.04
Return on Equity	1153.65	1153.65	1153.65	1153.65	1153.65
Interest on Working Capital	45.73	46.30	46.82	47.33	47.77
O&M Expenses	519.10	537.38	556.15	575.68	595.48
<b>Total</b>	<b>2101.59</b>	<b>2099.81</b>	<b>2099.14</b>	<b>2096.55</b>	<b>2094.16</b>

49. The details of IWC claimed by the Petitioner in respect of the Combined Asset for the 2019-24 period are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	43.26	44.78	46.35	47.97	49.62
Maintenance Spares	77.87	80.61	83.42	86.35	89.32
Receivables	258.39	258.88	258.80	258.48	257.48
<b>Total Working Capital</b>	<b>379.52</b>	<b>384.27</b>	<b>388.57</b>	<b>392.80</b>	<b>396.42</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>IWC</b>	<b>45.73</b>	<b>46.30</b>	<b>46.82</b>	<b>47.33</b>	<b>47.77</b>

### **Capital Cost**

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

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

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

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

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

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



- (d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;
- (e) Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;
- (f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;
- (g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;
- (h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;
- (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;
- (n) Expenditure on account of change in law and force majeure events; and
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;
- (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;
- (c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.”

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

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





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

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

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

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

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

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

(c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;

(d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and

(e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”

51. The Petitioner has claimed capital cost of ₹20581.10 lakh as on 31.3.2019 in respect of the Combined Asset. The same capital cost has been admitted by the Commission as on 31.3.2019. Accordingly, capital cost of ₹20581.10 lakh has been considered as the opening capital cost for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

52. The Petitioner has not projected any ACE during 2019-24 tariff period in respect of the Combined Asset. Accordingly, capital cost considered for 2019-24 tariff period in respect of the Combined Asset is as follows:

(₹ in lakh)

Capital Cost (as on 1.4.2019)	ACE (2019-24)	Capital Cost (as on 31.3.2024)
20581.10	0.00	20581.10



## **Debt-Equity Ratio**

53. 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.*

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

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

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

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

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

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.



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

(6) Any expenditure incurred for the emission control system during the tariff period as may be admitted by the Commission as additional capital expenditure for determination of supplementary tariff, shall be serviced in the manner specified in clause (1) of this Regulation.”

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

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	14438.80	70.16	14438.80	70.16
Equity	6142.30	29.84	6142.30	29.84
<b>Total</b>	<b>20581.10</b>	<b>100.00</b>	<b>20581.10</b>	<b>100.00</b>

### **Depreciation**

55. 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 assets shall be considered depreciable;

Provided further that in case of hydro generating stations, the salvage value



shall be as provided in the agreement, if any, signed by the developers with the State Government for development of the generating station:

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

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

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

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

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

(6) *In case of the existing projects, the balance depreciable value as on 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2019 from the gross depreciable value of the assets.*

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

(8) *In case of de-capitalization of assets in respect of generating station or unit 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.*

(9) *Where the emission control system is implemented within the original scope of the generating station and the date of commercial operation of the generating station or unit thereof and the date of operation of the emission control system are the same, depreciation of the generating station or unit thereof including the emission control system shall be computed in accordance with Clauses (1) to (8) of this Regulation.*

(10) *Depreciation of the emission control system of an existing or a new generating station or unit thereof where the date of operation of the emission control system is subsequent to the date of commercial operation of the generating station or unit thereof, shall be computed annually from the date of operation of such emission control system based on straight line method, with salvage value of 10%, over a period of-*

a) *twenty five years, in case the generating station or unit thereof is in*



operation for fifteen years or less as on the date of operation of the emission control system; or  
b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or  
c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life.”

56. Depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The Combined Asset has completed 12 years of useful life as on 31.3.2019. Accordingly, the remaining depreciable value has been spread across the balance useful life in accordance with Regulation 33(5) of the 2019 Tariff Regulations. WAROD has been worked out and has been placed as Annexure-II. Depreciation allowed in respect of the Combined Asset for 2019-24 tariff period is as follows:

		(₹ in lakh)				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	20581.10	20581.10	20581.10	20581.10	20581.10
B	Addition during the year 2019-24 due to projected ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	20581.10	20581.10	20581.10	20581.10	20581.10
D	Average Gross Block (A+C)/2	20581.10	20581.10	20581.10	20581.10	20581.10
E	Freehold Land	616.61	616.61	616.61	616.61	616.61
F	Weighted Average Rate of Depreciation (WAROD) (in %)	1.24	1.24	1.24	1.24	1.24
G	Balance useful life at the beginning of the year (Year)	20	19	18	17	16
H	Lapsed life of the asset at the beginning of the year (Year)	12	13	14	15	16
I	Depreciable Value	17968.04	17968.04	17968.04	17968.04	17968.04
J	<b>Depreciation during the year</b>	<b>254.82</b>	<b>254.82</b>	<b>254.82</b>	<b>254.82</b>	<b>254.82</b>
K	Cumulative Depreciation at the end of the year	13126.51	13381.33	13636.14	13890.96	14145.78
L	Remaining Depreciable Value	4841.53	4586.71	4331.90	4077.08	3822.26

### **Interest on Loan (“IoL”)**

57. 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 assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.*

(4) *Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*

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

*Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered;*

*Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.*

(5a) *The rate of interest on loan for installation of emission control system shall be the weighted average rate of interest of actual loan portfolio of the emission control system or in the absence of actual loan portfolio, the weighted average rate of interest of the generating company 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.”*

58. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. Therefore, IoL has been allowed in accordance with Regulation 32 of





the 2019 Tariff Regulations. IoL allowed in respect of the Combined Asset for 2019-24 tariff period is as follows:

		(₹ in lakh)				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	14438.80	14438.80	14438.80	14438.80	14438.80
B	Cumulative Repayments upto Previous Year	13098.66	13353.48	13608.30	13863.11	14117.93
C	Net Loan-Opening (A-B)	1340.14	1085.32	830.50	575.69	320.87
D	Additions due to ACE	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	254.82	254.82	254.82	254.82	254.82
F	Net Loan-Closing (C+D-E)	1085.32	830.50	575.69	320.87	66.05
G	Average Loan (C+F)/2	1212.73	957.91	703.09	448.28	193.46
H	Weighted Average Rate of IoL (in %)	8.5549	8.6521	8.8673	8.8673	8.8673
I	<b>IoL (G*H)</b>	<b>103.75</b>	<b>82.88</b>	<b>62.35</b>	<b>39.75</b>	<b>17.15</b>

### **Return on Equity (“RoE”)**

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

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

(2) *Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of-river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of-river generating station with pondage:*

*Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope, excluding additional capitalization on account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.*

*Provided further that:*

- i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation*



(RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;

- ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;
- iii. in case of a thermal generating station, with effect from 1.4.2020:
  - a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;
  - b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:

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

*(3) The return on equity in respect of additional capitalization on account of emission control system shall be computed at the base rate of one year marginal cost of lending rate (MCLR) of the State Bank of India as on 1st April of the year in which the date of operation (ODe) occurs plus 350 basis point, subject to ceiling of 14%;*

**“31. Tax on Return on Equity.** (1) *The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.*

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

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

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





**Illustration-**

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

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

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

(a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;

(b) Estimated Advance Tax for the year on above is Rs 240 crore;

(c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;

(d) Rate of return on equity =  $15.50/(1-0.24) = 20.395\%$ .

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

60. As MAT rate is applicable to the Petitioner, we have considered the MAT rate applicable in 2019-20 for the purpose of RoE which shall be trued-up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed in respect of the Combined Asset for 2019-24 tariff period is as follows:

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	6142.30	6142.30	6142.30	6142.30	6142.30
B	Additions due to ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	6142.30	6142.30	6142.30	6142.30	6142.30
D	Average Equity (A+C)/2	6142.30	6142.30	6142.30	6142.30	6142.30
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	<b>Return on Equity (D*G)</b>	<b>1153.65</b>	<b>1153.65</b>	<b>1153.65</b>	<b>1153.65</b>	<b>1153.65</b>



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

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

O&M Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Transmission line</b>					
Kaiga-Narendra Line D/C twin sub-conductors (107.662 km)					
<b>Sub-station</b>					
220 kV bays at (a)Narendra: ICT-II Bay I, (b) Narendra: ICTI Bay I, (c) Narendra: Narendra- Bus Extension Sectionaliser I & II, (d) Narendra: Mahalingapur I & II Bay at Narendra, (e) Narendra:Bagalkot Bay I and II at Narendra					
Number of bays	8	8	8	8	8
Norms (₹ lakh/bay)	22.51	23.30	24.12	24.96	25.84
400 kV bays at (a) Narendra:Kaiga-I & II Bay, (b) Narendra: ICT-I Bay, and (c)Narendra: ICT-II Bay I					
Number of bays	4	4	4	4	4
Norms (₹ lakh/bay)	32.15	33.28	34.45	35.66	36.91
<b>Transformers</b>					
400 kV 1x315 MVA transformer at Narendra:ICT-I at Narendra					
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411
<b>PLCC</b>					
2% of Capital Cost - (2% of ₹139.76 lakh)					
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>519.10</b>	<b>537.38</b>	<b>556.15</b>	<b>575.68</b>	<b>595.48</b>

62. Regulation 35(3)(a) and Regulation 35(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
<b>Norms for sub-station Bays (Rs Lakh per bay)</b>					
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
<b>Norms for Transformers (Rs Lakh per MVA)</b>					
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



<b>Norms for AC and HVDC lines (Rs Lakh per km)</b>					
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
<b>Norms for HVDC stations</b>					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (Rs. 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 bipole scheme (Rs Lakh)(3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

- (i) the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;
- (ii) the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;
- (iii) the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2500 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  $\pm 800$  kV, Bishwanath-Agra HVDC bi-pole scheme;
- (v) the O&M expenses of  $\pm 800$  kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for  $\pm 800$  kV, Bishwanath-Agra HVDC bi-pole scheme; and
  - (vi) the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.

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

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

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

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

63. 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. As discussed above in this order, the Petitioner has submitted that one number of 315 MVA ICT at Narendra Substation has been de-capitalised from the instant petition and tariff for the same has been claimed in Petition No. 504/TT/2020. The Petitioner has further submitted that 315 MVA ICT in the instant petition has been replaced by a 500 MVA ICT and the associated bay for the replaced ICT is being utilized by 500 MVA ICT and as such the bay is not de-capitalized in the transmission project. We have considered the submissions of the Petitioner and O&M Expenses for de-capitalised 315 MVA ICT are not being allowed in the instant petition.

64. It has been further observed that the Petitioner has further claimed the O&M Expenses in respect of the 400 kV 1x315 MVA transformer at Narendra: ICT-I at Narendra which is an spare ICT. In a similar Petition, the Commission *vide* order dated 24.1.2021 in Petition No. 136/TT/2020 has already decided not to allow O&M Expenses for spare ICT. The relevant portion of the order dated 24.1.2021 is as follows:

*“28. We are also not convinced with the Petitioner’s clarification that it has not claimed O&M Expenses for the 2014-19 tariff period since the 2019 Tariff Regulations provide for O&M Expenses for transformers based on their rating. The norms specified in the 2019 Tariff Regulations are for transmission elements that are in regular use and not for spares which are used only in case of any eventualities. As already stated earlier, the ‘assets in use as spares’ are being granted tariff only on the basis of consent and approval of the concerned Regional Power Committee and as these assets are not being in regular use, we are of the view that O&M Expenses cannot be granted to the transmission assets. Accordingly, O&M Expenses are not allowed for the Combined Asset for the 2019-24 tariff period. We also feel that it is pertinent to mention here that disallowance of O&M Expenses for the Combined Asset does not mean that they do not need any maintenance and the consequent expenditure. The Combined Asset requires maintenance and the expenditure involved in maintaining them would be miniscule compared to the O&M Expenses in respect of transformers put to regular use. We are also of the view that the Petitioner should meet this expenditure from the O&M Expenses allowed for the regular ICTs installed at Mandola and Ludhiana in Northern Region. In case, the expenses are unusually high and cannot be met from the O&M Expenses allowed for the regular ICTs, the Petitioner may approach the Commission with certification of O&M Expenses from RPC at the time of true-up.”*



65. Accordingly, O&M Expenses in respect of 400 kV 1x315 MVA transformer at Narendra: ICT-I is not allowed as the same is spare ICT. Accordingly, O&M Expenses allowed in respect the Combined Asset are as follows:

O&M Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Transmission line</b>					
Kaiga-Narendra Line D/C twin sub-conductors (107.662 km)					
O&M Expenses (₹ in lakh)	94.85	98.19	101.63	105.19	108.85
<b>Sub-station</b>					
220 kV bays at (a) Narendra: ICT-II Bay I, (b) Narendra: ICT-I Bay I, (c) Narendra:Narendra-Bus Extention Sectionaliser I & II, (d) Narendra:Mahalingapur I & II Bay at Narendra, (e) Narendra:Bagalkot Bay I and II at Narendra					
O&M Expenses (₹ in lakh)	180.08	186.40	192.96	199.68	206.72
400 kV bays at (a) Narendra: Kaiga-I & II Bay, (b) Narendra: ICT-I Bay, and (c)Narendra: ICT-II Bay I					
O&M Expenses (₹ in lakh)	128.60	133.12	137.80	142.64	147.64
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>403.53</b>	<b>417.71</b>	<b>432.39</b>	<b>447.51</b>	<b>463.21</b>

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

66. Regulation 34 and Regulation 3(7) of the 2019 Tariff Regulations specify as follows:

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

**(a) For Coal-based/lignite-fired thermal generating stations:**

- (i) *Cost of coal or lignite and limestone towards stock, if applicable, for 10 days for pit-head generating stations and 20 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower;*
- (ii) *Advance payment for 30 days towards cost of coal or lignite and limestone for generation corresponding to the normative annual plant availability factor;*
- (iii) *Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;*
- (iv) *Maintenance spares @ 20% of operation and maintenance expenses including water charges and security expenses;*
- (v) *Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on the normative annual plant availability factor; and*
- (vi) *Operation and maintenance expenses, including water charges and security expenses, for one month.*

**(aa) For emission control system of coal or lignite based thermal generating stations:**





- (i) Cost of limestone or reagent towards stock for 20 days corresponding to the normative annual plant availability factor;
- (ii) Advance payment for 30 days towards cost of reagent for generation corresponding to the normative annual plant availability factor;
- (iii) Receivables equivalent to 45 days of supplementary capacity charge and supplementary energy charge for sale of electricity calculated on the normative annual plant availability factor;
- (iv) Operation and maintenance expenses in respect of emission control system for one month;
- (v) Maintenance spares @20% of operation and maintenance expenses in respect of emission control system.

**(b) For Open-cycle Gas Turbine/Combined Cycle thermal generating stations:**

- (i) Fuel cost for 30 days corresponding to the normative annual plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;
- (ii) Liquid fuel stock for 15 days corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel;
- (iii) Maintenance spares @ 30% of operation and maintenance expenses including water charges and security expenses;
- (iv) Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel; and
- (v) Operation and maintenance expenses, including water charges and security expenses, for one month.

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

- (i) Receivables equivalent to 45 days of annual fixed cost;
- (ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and
- (iii) Operation and maintenance expenses, including security expenses for one month.

(2) The cost of fuel in cases covered under sub-clauses (a) and (b) of clause (1) of this Regulation shall be based on the landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of these regulations) by the generating station and gross calorific value of the fuel as per actual weighted average for the third quarter of preceding financial year in case of each financial year for which tariff is to be determined:

Provided that in case of new generating station, the cost of fuel for the first financial year shall be considered based on landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of these regulations) and gross calorific value of the fuel as per actual weighted average for three months, as used for infirm power, preceding date of commercial operation for which tariff is to be determined.



(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 1<sup>st</sup> 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.** - In these regulations, unless the context otherwise requires:-

‘**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;”

67. IWC has been worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of IWC considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-2021 and from 2021-22 onwards as 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest allowed thereon in respect of the Combined Asset are as follows:

		(₹ in lakh)				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (O&M Expenses for one month)	33.63	34.81	36.03	37.29	38.60
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	60.53	62.66	64.86	67.13	69.48
C	Working Capital for Receivables (Equivalent to 45 days of Annual Fixed Charges/Annual Transmission Charges)	240.50	240.04	239.04	238.15	236.68
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>334.66</b>	<b>337.51</b>	<b>339.93</b>	<b>342.57</b>	<b>344.76</b>
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
<b>F</b>	<b>IWC (D*E)</b>	<b>40.33</b>	<b>37.97</b>	<b>35.69</b>	<b>35.97</b>	<b>36.20</b>





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

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

<b>Particulars</b>	<b>(₹ in lakh)</b>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Depreciation	254.82	254.82	254.82	254.82	254.82
Interest on Loan	103.75	82.88	62.35	39.75	17.15
Return on Equity	1153.65	1153.65	1153.65	1153.65	1153.65
O&M Expenses	403.53	417.71	432.39	447.51	463.21
Interest on Working Capital	40.33	37.97	35.69	35.97	36.20
<b>Total</b>	<b>1956.07</b>	<b>1947.02</b>	<b>1938.90</b>	<b>1931.69</b>	<b>1925.03</b>

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

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

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

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

### **Goods and Services Tax**

71. The Petitioner has submitted that if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged



and billed separately by the Petitioner. Further, additional taxes, if any, are to be paid by the Petitioner on account of demand from Government/ Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

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

### **Security Expenses**

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

74. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses on projected basis for 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 has disposed of the said petition and has already approved the 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 in Petition No. 260/MP/2020. 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**

75. 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**

76. During the tariff periods 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 system was governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010. With effect from 1.11.2020 (after repeal of the 2010 Sharing Regulations), 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 Regulations and Sharing Regulations and shall be recovered from the concerned DICs through Bills under 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 as provided in Regulation 57 of the 2019 Tariff Regulations.

77. To summarise:

- a) The revised AFC approved in respect of the transmission assets for 2004-09 tariff period are as follows:

(₹ in lakh)

Particulars	Asset-I			
	2005-06 (Pro-rata 5 months)	2006-07	2007-08	2008-09
AFC	804.05	1899.56	2092.59	2200.37



(₹ in lakh)

Particulars	Asset-II			
	2005-06 (Pro-rata 5 months)	2006-07	2007-08	2008-09
AFC	371.25	967.28	1001.09	1012.18

(₹ in lakh)

Particulars	Asset-III		
	2006-07 (Pro-rata 7 months)	2007-08	2008-09
AFC	87.90	154.16	159.22

- b) The consequential revision of AFC approved in respect of the Combined Asset for 2009-14 tariff period are as follows:

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
AFC	3840.84	3836.20	3795.95	3746.21	3709.91

- c) The trued-up AFC approved in respect of the Combined Asset for 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	3567.99	3505.10	3440.16	3356.00	3244.05

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	1956.07	1947.02	1938.90	1931.69	1925.03

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

79. This order disposes of Petition No. 511/TT/2020 in terms of the above discussions and findings.

sd/-  
(P. K. Singh)  
Member

sd/-  
(Arun Goyal)  
Member

sd/-  
(I. S. Jha)  
Member



**Annexure-I**

2014-19		ACE (₹ in lakh)	Decapitalisation (₹ in lakh)				Depreciation as per Regulations						
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-19	2017-18	Allowed De-capitalisation (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	2014-15	2015-16	2016-17	1.4.2017 to 14.12.2017	15.12.2017 to 31.3.2018	2018-19	
Land - Freehold	616.61	0.00	0.00	0.00	616.61	-	0.00	0.00	0.00	0.00	0.00	0.00	
Land - Leasehold	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00	0.00	
Building Civil Works & Colony	779.41	0.00	0.00	0.00	779.41	3.34%	26.03	26.03	26.03	26.03	26.03	26.03	
Transmission Line	15053.55	0.00	0.00	0.00	15053.55	5.28%	794.83	794.83	794.83	794.83	794.83	794.83	
Sub Station	4736.87	0.00	745.10	745.10	3991.77	5.28%	250.11	250.11	250.11	250.11	210.77	210.77	
PLCC	139.76	0.00	0.00	0.00	139.76	6.33%	8.85	8.85	8.85	8.85	8.85	8.85	
IT Equipment (Incl. Software)	0.00	0.00	0.00	0.00	0.00	15.00%	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Total</b>	<b>21326.20</b>	<b>0.00</b>	<b>745.10</b>	<b>745.10</b>	<b>20581.10</b>	<b>Total</b>	1079.81	1079.81	1079.81	1079.81	1040.47	1040.47	
<b>Average Gross Block</b>								21326.20	21326.20	21326.20	21326.20	20581.10	20581.10
<b>(₹ in lakh)</b>													
<b>Weighted Average Rate of Depreciation (in %)</b>								5.06%	5.06%	5.06%	5.06%	5.06%	5.06%



Annexure-II

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh) 2019-24	Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
					2019-20	2020-21	2021-22	2022-23	2023-24
Land - Freehold	616.61	0.00	616.61	-	Spreading				
Land - Leasehold	0.00	0.00	0.00	3.34%					
Building Civil Works & Colony	779.41	0.00	779.41	3.34%					
Transmission Line	15053.55	0.00	15053.55	5.28%					
Sub Station	3991.77	0.00	3991.77	5.28%					
PLCC	139.76	0.00	139.76	6.33%					
IT Equipment (Incl. Software)	0.00	0.00	0.00	15.00%					
Total	20581.10	0.00	20581.10						
<b>Average Gross Block (₹ in lakh) (A)</b>					<b>20581.10</b>	<b>20581.10</b>	<b>20581.10</b>	<b>20581.10</b>	<b>20581.10</b>
<b>Remaining Depreciable Value (₹ in lakh) (B)</b>					<b>5096.35</b>	<b>4841.53</b>	<b>4586.71</b>	<b>4331.90</b>	<b>4077.08</b>
<b>Balance useful life (in years) (C)</b>					<b>20.00</b>	<b>19.00</b>	<b>18.00</b>	<b>17.00</b>	<b>16.00</b>
<b>Depreciation (D)=[(B)/(C)]</b>					<b>254.82</b>	<b>254.82</b>	<b>254.82</b>	<b>254.82</b>	<b>254.82</b>
<b>Weighted Average Rate of Depreciation (E)=[(D)/(A)]</b>					<b>1.24%</b>	<b>1.24%</b>	<b>1.24%</b>	<b>1.24%</b>	<b>1.24%</b>

