

# CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 465/TT/2020

Coram:

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

Date of orde : 16.06.2021

**In the matter of:**

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and revision of transmission tariff of 2004-09 and 2009-14 periods, truing up of transmission tariff of 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for 03 number of assets under Transmission System associated with Teesta (Stage-V) HEP in Eastern Region.

**And in the matter of:**

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

.....Petitioner

**Versus**

1. Bihar State Power (Holding) Company Ltd.,  
(Formerly Bihar State Electricity Board-BSEB),  
Vidyut Bhavan, Bailey Road, Patna-800001.
2. West Bengal State Electricity Distribution Company Ltd.,  
Bidyut Bhawan, Bidhan Nagar,  
Block DJ, Sector-II, Salt Lakecity,  
Calcutta-700091.
3. Grid Corporation of Orissa Ltd.,  
Shahid Nagar, Bhubaneswar-751007.



4. Jharkhand State Electricity Board,  
In front of Main Secretariat,  
Doranda, Ranchi-834002.
5. Damodar Valley Corporation,  
DVC Tower, Maniktala,  
Civic Centre, VIP Road, Calcutta-700054.
6. Power Department  
Government of Sikkim, Gangtok-737101.

.....Respondent(s)

**For Petitioner:** Shri S. S. Raju, PGCIL  
Shri B. Dash, PGCIL  
Shri V. P. Rastogi, PGCIL  
Shri A. K. Verma, PGCIL

**For Respondents:** None

### **ORDER**

The instant petition has been filed by the Petitioner, Power Grid Corporation of India Ltd., for revision of transmission tariff of 2004-09 and 2009-14 periods, truing up of capital expenditure for the period from 1.4.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of tariff of the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following transmission assets under Transmission System associated with Teesta (Stage-V) HEP in Eastern Region (hereinafter referred to as “the transmission project”):

**Asset-I:** Combined Asset of Ckt-I and Ckt-II of 400 kV Teesta (Stage-V) Siliguri Transmission Line;

**Asset-II:** 315 MVA, 400/220 kV ICT-II at Baripada Sub-station along with associated bays; and



**Asset-III:** Shifting of 50 MVAR Reactor from Rengali to Baripada (hereinafter referred to as “the transmission assets/Combined Asset”).

2. The Petitioner has made the 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.”*

### **Background**

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



a. The Investment Approval (IA) for the transmission project was accorded by the Board of Directors of the Petitioner vide Memorandum No. C/CP/Teesta dated 25.2.2004 at an estimated cost of ₹20875 lakh, including an IDC of ₹1483 lakh (based on 4<sup>th</sup> quarter, 2003 price level). Revised Cost Estimate (RCE) for the transmission project was accorded by the Board of Directors of the Petitioner vide Memorandum No. C/CP/Teesta-V RCE dated 17.10.2008 at an estimated cost of ₹31558 lakh, including IDC of ₹1800 lakh.

b. The scope of work covered under the transmission project is as follows:

**Transmission line:**

Teesta-V HEP-Siliguri 400 kV D/C line - 120 kms

**Sub-stations:**

- i. Extension of Siliguri 400/220 kV Sub-station by 02 numbers of 400 kV line bays; and
- ii. Extension of Baripada 400/220 kV Sub-station with 1X315 MVA, 400/220 kV transformer and associated bays.

Subsequently, as per requirement, shifting of 50 MVAR Line Reactor of Rengali-Baripada line from Rengali to Baripada end was included in the scope of work.

c. The complete scope of the transmission project as per IA is covered in the instant petition.

d. The transmission tariff for part of Asset-I i.e. Circuit-I of 400 kV D/C Teesta (Stage-V) - Siliguri Transmission Line for the 2004-09 period (from its COD i.e. 1.2.2008 to 31.3.2009) was approved by the Commission vide order dated 16.3.2009 in Petition No. 130/2008. The transmission tariff so determined for part of Asset-I i.e. Circuit-I of 400 kV D/C Teesta (Stage-V) - Siliguri Transmission Line was revised due to ACE incurred during 2008-09 vide order dated 1.6.2010 in Petition No. 24/2010.

e. The transmission tariff and Additional Capital Expenditure (ACE) up to 31.3.2009 for other part of Asset-I i.e. Circuit-II of 400 kV D/C Teesta (Stage-V) - Siliguri Transmission Line along with associated bays was determined vide order dated 21.12.2009 in Petition No. 164/2009. Vide the same order dated



21.12.2009, the transmission tariff from its COD to 31.3.2009 in respect of Asset-II i.e. 315 MVA 400/ 220 kV ICT-II at Baripada Sub-station was also determined.

f. The transmission tariff for Asset-I and Asset-II for the period from 1.4.2009 to 31.3.2014 was determined vide order dated 14.2.2012 in Petition No. 299/2010. The transmission tariff of Asset-I and Asset-II for 2009-14 tariff period was trued up and tariff for 2014-19 tariff period was determined vide order dated 7.1.2016 in Petition No. 556/TT/2014.

g. The transmission tariff of Asset-III for the period from 1.4.2009 to 31.3.2014 as well as that for the period from 1.4.2014 to 31.3.2019 was determined vide order dated 31.12.2015 in Petition No. 531/TT/2014.

h. The Petitioner has sought revision of transmission tariff approved 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 Appellate Tribunal for Electricity (APTEL) judgment dated 22.1.2007 and dated 13.6.2007 in Appeal No. 81/2005 and batch matters and Appeal No. 139/2006 and batch cases respectively. The Petitioner has sought consequential revision of tariff allowed for the 2009-14 tariff period and truing up of tariff of 2014-19 tariff period and determination of transmission tariff of the 2019-24 tariff period for the transmission assets in Eastern Region.

i. APTEL in its judgment dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters pertaining to generating stations of NTPC had considered four issues. The issues considered by APTEL and its decisions are as given in the following table:

<b>Sr. No.</b>	<b>Issues</b>	<b>APTEL's decision/direction</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 interest on loan	In view of the order of the 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. Commission is required to recalculate the loan outstanding as on 31.3.2004 based on loan repayment on normative basis.
3(a)	O&M Expenses: Inadequate provision of employee costs as part of O&M Expenses due to variation in salary and wages	Commission's view upheld.
3(b)	O&M Expenses: Non-inclusion of incentives and ex-gratia payment to employees	Commission's view upheld.
4	Cost of spares for calculation of working capital	Commission's view upheld.

j. 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 issues. The issues considered and the decision of APTEL are given in the following table:

<b>Sr. No.</b>	<b>Issues</b>	<b>APTEL's decision/direction</b>
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	Commission to consider the issue afresh.
III	Treating depreciation available as deemed repayment of loan	Commission to make a fresh computation of outstanding loan.
IV	Admissibility of depreciation up to 90%	Commission to consider the issue afresh.
V	Cost of Maintenance Spares	Commission to consider the issue afresh.
VI	Impact of decapitalisation of the assets on cumulative repayment of Loan	The cumulative repayment of the loan proportionate to the assets decapitalized required to be reduced. Commission to act accordingly.
VII	Non-consideration of normative transit loss for coal import	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 Appeal No.135 to 140 of 2005. Commission to act accordingly.
IX	Computation of interest on loan 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. Commission shall re-compute the interest accordingly.



k. The Commission and certain other 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.

l. Based on the APTEL's judgments dated 22.1.2007 in Appeal No. 81/2005 & batch matters and dated 13.6.2007 in Appeal No. 139/2007 and batch cases, the Petitioner had sought revision of transmission tariff of its transmission assets of the 2001-04 and 2004-09 tariff periods in Petition No. 121/2007. The Commission, after taking into consideration the pending Appeals before the Hon'ble Supreme Court adjourned the matter *sine die* and directed that the same be revived after the disposal of the Civil Appeals by the Hon'ble Supreme Court.

m. The Hon'ble Supreme Court vide order dated 10.4.2018, dismissed the said civil appeals. Thus, the said judgments of the APTEL have attained finality.

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

o. In view of APTEL's judgments dated 22.1.2007 in Appeal No. 81/2005 and batch matters and dated 13.6.2007 in Appeal No. 139/2006 and batch matters as well as 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 service from the Petitioner and are mainly beneficiaries of the Eastern Region.





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

6. This order is issued considering the submissions made by the Petitioner in the petition dated 30.8.2019 and Petitioner's affidavit dated 17.3.2021.

7. The hearing in this matter was held on 6.4.2021 through video conference and order was reserved. Having heard the representatives of the Petitioner and after perusal of the material on record, we proceed to dispose of the petition.

**Re: Interest on Loan (IoL)**

8. APTEL while dealing with the issue of computation of IoL in its judgment dated 22.1.2007 in Appeal No. 81/2005 and batch matters observed that IoL for the period from 1.4.1998 to 31.3.2001 shall be computed only on normative loan repayment as per its judgment dated 14.11.2006 in Appeal No. 94 and Appeal No. 96 of 2005. APTEL vide its judgment dated 14.11.2006 in Appeal No. 94 and Appeal No. 96 of 2005 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 the IoL liability for the period from 1.4.1998 to 31.3.2001. In view of above, the interest allowed for 2004-09 period is to be revised on the basis of the normative debt repayment methodology.

9. The commercial operation dates of the transmission assets are as follows:





<b>Sr. No.</b>	<b>Particulars</b>	<b>COD</b>
1	Asset-I	1.6.2008 (Notional)
2	Asset-II	1.5.2008
3	Asset-III	1.3.2014

10. COD of Asset-III is during 2009-14 tariff period and there is no impact of IoL on this asset. Accordingly, no revision is being carried out for Asset-III during 2009-14 tariff period.

**Re: Additional Capital Expenditure**

11. APTEL in its 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 the above, the maintenance spares to be considered for computation of working capital for 2004-09 period are also required to be revised taking into consideration the ACE after the date of commercial operation.

**Re: Depreciation**

12. As regards depreciation, APTEL in its judgment 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 this direction of APTEL, the outstanding loan allowed for the transmission assets for 2004-09 period is revised in the instant order.

13. The revision of transmission tariff allowed for 2004-09 tariff period necessitates the revision of tariff allowed for 2009-14 tariff period, which is also allowed in the present order. The implementation of the directions of APTEL in case of the Petitioner remained pending awaiting for the outcome of the Civil Appeals filed before the Hon'ble Supreme Court. Taking into consideration the facts of the case and keeping in view the interest of the consumers, we are of the view that the beneficiaries should not be burdened with the carrying cost for the difference in the tariff allowed earlier and



allowed in the instant order for the 2004-09 and 2009-14 tariff periods. Therefore, we direct that the Petitioner will neither claim nor pay any carrying cost from the beneficiaries for the difference, if any, in the tariff allowed earlier and the tariff being allowed in the present 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.

**Revision of Transmission Charges Allowed for 2004-09 and 2009-14 Tariff Periods**

14. The Commission had approved the transmission charges for part of Asset-I i.e. Circuit-I of 400 kV D/C Teesta (Stage-V) - Siliguri Transmission Line for 2004-09 tariff period vide order dated 16.3.2009 in Petition No. 130/2008 and revised the transmission charges for this part of Asset-I for 2008-09 period vide order dated 1.6.2010 in Petition No. 24/2010. The Commission had approved transmission charges for other part of Asset-I i.e. Circuit-II of 400 kV D/C Teesta (Stage-V) - Siliguri Transmission Line along with associated bays and that of Asset-II i.e. 315 MVA 400/220 kV ICT-II at Baripada Sub-station for 2004-09 tariff period vide order dated 21.12.2009 in Petition No. 164/2009. The transmission tariff for the two parts of Asset-I and that of Asset-II have been summarised as follows:

**Part of Asset-I i.e. Circuit-I of 400 kV D/C Teesta (Stage-V)-Siliguri Transmission Line**

<b>Particulars</b>	<b>(₹ in lakh)</b>	
	<b>2007-08 (pro rata 2 months)</b>	<b>2008-09</b>
Depreciation	83.56	561.32
Interest on Loan	207.74	1406.95
Return on Equity	135.97	913.48
Advance against Depreciation	0.00	0.00
Interest on Working Capital	13.11	85.62
O&M Expenses	10.15	63.40
<b>Total</b>	<b>450.5383</b>	<b>3030.77</b>



Part of Asset-I i.e. Circuit-II of 400 kV D/C Teesta (Stage-V)-Siliguri Transmission Line

(₹ in lakh)	
Particulars	2008-09 (pro rata 10 months)
Depreciation	84.14
Interest on Loan	196.99
Return on Equity	128.23
Advance against Depreciation	0.00
Interest on Working Capital	13.98
O&M Expenses	52.84
<b>Total</b>	<b>476.18</b>

Asset-II i.e. 315 MVA 400/ 220 kV ICT-II at Baripada Sub-station

(₹ in lakh)	
Particulars	2008-09 (pro rata 11 months)
Depreciation	33.61
Interest on Loan	58.38
Return on Equity	39.21
Advance against Depreciation	0.00
Interest on Working Capital	5.64
O&M Expenses	60.32
<b>Total</b>	<b>197.17</b>

15. The Petitioner has claimed the revised transmission charges for the following transmission assets for 2004-09 tariff period:

Part of Asset-I i.e. Circuit-I of 400 kV D/C Teesta (Stage-V)-Siliguri Transmission Line

(₹ in lakh)		
Particulars	2007-08 (pro rata 2 months)	2008-09
Depreciation	83.56	561.32
Interest on Loan	208.38	1441.78
Return on Equity	135.97	913.48
Advance against Depreciation	0.00	0.00
Interest on Working Capital	13.28	91.48
O&M Expenses	10.15	63.40
<b>Total</b>	<b>451.34</b>	<b>3071.47</b>

Part of Asset-I i.e. Circuit-II of 400 kV D/C Teesta (Stage-V)-Siliguri Transmission Line

(₹ in lakh)	
Particulars	2008-09 (pro rata 10 months)
Depreciation	84.14
Interest on Loan	200.25
Return on Equity	128.23
Advance against Depreciation	0.00
Interest on Working Capital	14.07
O&M Expenses	52.84



<b>Total</b>	<b>479.53</b>
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Asset-II i.e. 315 MVA 400/ 220 kV ICT-II at Baripada Sub-station

<b>Particulars</b>	<b>(₹ in lakh)</b>
	<b>2008-09 (pro rata 11 months)</b>
Depreciation	33.61
Interest on Loan	59.80
Return on Equity	39.21
Advance against Depreciation	0.00
Interest on Working Capital	5.82
O&M Expenses	60.32
<b>Total</b>	<b>198.76</b>

16. We have considered the Petitioner's claim. The tariff is revised for transmission assets for 2004-09 period on the basis of following:

(a) Admitted capital cost as on COD which is as follows:

<b>Particulars</b>	<b>₹ in lakh</b>
Part of Asset-I/Circuit-I of 400 kV D/C Teesta (Stage-V)-Siliguri Transmission Line	18664.24
Part of Asset-I/Circuit-II of 400 kV D/C Teesta (Stage-V)-Siliguri Transmission Line	3640.34
Asset-II 315 MVA, 400/ 220 kV ICT-II at Baripada Sub-station	892.01

(b) Weighted Average Rate of Interest on actual loan, Weighted Average Rate of Depreciation (WAROD), Rate of Interest for Working Capital and O&M Expenses as per orders dated 16.3.2009, dated 1.6.2010 and dated 21.12.2009 in Petition No. 130/2008, Petition No. 24/2010 and Petition No. 164/2009 respectively.

(c) With respect to calculation of IoL, the Petitioner has availed moratorium period for Asset-I i.e. Circuits-I and II of 400 kV D/C Teesta (Stage-V)-Siliguri Transmission Line and Asset-II i.e. 315 MVA 400/ 220 kV ICT-II at Baripada Sub-station during 2004-09 tariff period and no actual repayment of loan was made. Earlier, the Commission vide orders dated 16.3.2009, dated 1.6.2010 and dated 21.12.2009 in Petition No. 130/2008, Petition No. 24/2010 and Petition No. 164/2009 respectively had considered depreciation during 2004-09 tariff period as loan repayment. Therefore, depreciation during 2004-09 tariff period has been



considered as loan repayment in accordance with Regulation 56(i)(f) of the 2004 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;”*

17. In view of the above, the revised transmission charges allowed for the Asset-I (Circuit-I and Circuit-II) and Asset-II for the 2004-09 tariff period are as follows:

Part of Asset-I i.e. Circuit-I of 400 kV D/C Teesta (Stage-V)-Siliguri Transmission Line

Particulars	(₹ in lakh)	
	2007-08 (pro rata 2 months)	2008-09
Depreciation	83.56	561.32
Interest on Loan	207.74	1406.95
Return on Equity	135.97	913.48
Advance against Depreciation	0.00	0.00
Interest on Working Capital	13.27	89.59
O&M Expenses	10.15	63.40
<b>Total</b>	<b>450.70</b>	<b>3034.73</b>

Part of Asset-I i.e. Circuit-II of 400 kV D/C Teesta (Stage-V)-Siliguri Transmission Line

Particulars	(₹ in lakh)	
	2008-09 (pro rata 10 months)	
Depreciation	84.14	
Interest on Loan	196.99	
Return on Equity	128.23	
Advance against Depreciation	0.00	
Interest on Working Capital	14.00	
O&M Expenses	52.84	
<b>Total</b>	<b>476.21</b>	

Asset-II i.e. 315 MVA 400/ 220 kV ICT-II at Baripada Sub-station

Particulars	(₹ in lakh)	
	2008-09 (pro rata 11 months)	
Depreciation	33.61	
Interest on Loan	58.38	
Return on Equity	39.21	
Advance against Depreciation	0.00	
Interest on Working Capital	5.79	
O&M Expenses	60.32	
<b>Total</b>	<b>197.31</b>	



18. The Annual Fixed Charges (AFC) allowed earlier for 2004-09 tariff period *vide* orders dated 16.3.2009 in Petition No. 130/2008 and dated 1.6.2010 in Petition No. 24/2010, the revised AFC claimed in the instant petition and revised AFC approved in the instant order are as follows:

Part of Asset-I i.e. Circuit-I of 400 kV D/C Teesta (Stage-V)-Siliguri Transmission Line

Particulars	(₹ in lakh)	
	2007-08 ( <i>pro rata</i> 2 months)	2008-09
AFC approved vide order dated 16.3.2009 in Petition No. 130/2008 and order dated 1.6.2010 in Petition No. 24/2010	450.53	3030.77
AFC claimed by the Petitioner in the instant Petition	451.34	3071.47
AFC allowed in the instant order	450.70	3034.73

Part of Asset-I i.e. Circuit-II of 400 kV D/C Teesta (Stage-V)-Siliguri Transmission Line

Particulars	(₹ in lakh)	
	2008-09 ( <i>pro rata</i> 10 months)	
AFC approved vide order dated 21.12.2009 in Petition No. 164/2009	476.18	
AFC claimed by the Petitioner in the instant petition	479.53	
AFC allowed in the instant order	476.21	

Asset-II i.e. 315 MVA, 400/ 220 kV ICT-II at Baripada Sub-station

Particulars	(₹ in lakh)	
	2008-09 ( <i>pro rata</i> 11 months)	
AFC approved vide order dated 21.12.2009 in Petition No. 164/2009	197.17	
AFC claimed by the Petitioner in the instant petition	198.76	
AFC allowed in the instant order	197.31	

**2009-14 Tariff Period**

19. The tariff of Asset-I i.e. Circuits-I and-II of 400 kV D/C Teesta (Stage-V) Siliguri Transmission Line and Asset-II 315 MVA 400/220 kV ICT-II Baripada Sub-station along with associated bays for 2009-14 tariff period was trued up and tariff for 2014-19 tariff period was determined vide order dated 7.1.2016 in Petition No. 556/TT/2014.



The tried-up tariff approved for 2009-14 tariff period for Assets-I and II vide order dated 7.1.2016 is as follows:

**Asset-I**

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1452.65	1482.05	1485.54	1485.89	1486.23
Interest on Loan	1657.93	1556.69	1423.26	1285.15	1147.12
Return on Equity	1540.51	1629.28	1634.72	1635.10	1655.14
Interest on Working Capital	105.78	106.64	104.58	102.28	100.42
O&M Expenses	176.70	186.83	197.52	208.81	220.71
<b>Total</b>	<b>4933.56</b>	<b>4961.48</b>	<b>4845.63</b>	<b>4717.23</b>	<b>4609.63</b>

**Asset-II**

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	60.70	61.13	61.35	61.99	62.67
Interest on Loan	67.39	62.36	57.02	52.21	47.34
Return on Equity	64.40	67.24	67.55	68.25	69.82
Interest on Working Capital	8.47	8.69	8.86	9.07	9.31
O&M Expenses	89.08	94.18	99.57	105.26	111.28
<b>Total</b>	<b>290.04</b>	<b>293.59</b>	<b>294.34</b>	<b>296.77</b>	<b>300.42</b>

20. The Petitioner has claimed the following revised transmission charges for 2009-14 tariff period for Assets-I and II in the instant petition:

**Asset-I**

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1452.65	1482.05	1485.54	1485.89	1486.23
Interest on Loan	1725.86	1624.57	1491.18	1353.06	1215.03
Return on Equity	1540.51	1629.28	1634.72	1635.10	1655.14
Interest on Working Capital	107.19	108.05	105.99	103.69	101.84
O&M Expenses	176.70	186.83	197.52	208.81	220.71
<b>Total</b>	<b>5002.91</b>	<b>5030.78</b>	<b>4914.95</b>	<b>4786.55</b>	<b>4678.94</b>

**Asset-II**

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	60.70	61.13	61.35	61.99	62.67
Interest on Loan	70.44	65.42	60.08	55.26	50.39
Return on Equity	64.40	67.24	67.55	68.25	69.82
Interest on Working Capital	8.53	8.75	8.92	9.13	9.38
O&M Expenses	89.08	94.18	99.57	105.26	111.28





<b>Total</b>	<b>293.16</b>	<b>296.72</b>	<b>297.47</b>	<b>299.89</b>	<b>303.54</b>
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21. We have considered the Petitioner's claim. The transmission tariff of 2009-14 tariff period is revised in respect of Assets-I and II on the basis of following:

- (a) Admitted capital cost as on 1.4.2009 of ₹27000.94 lakh for Asset-I and ₹1145.04 lakh for Asset-II.
- (b) Weighted Average Rate of Interest on actual loan and WAROD as per order dated 7.1.2016 in Petition No. 556/TT/2014.

22. In view of the above, the revised transmission charges allowed for Assets-I and II in this petition for 2009-14 tariff period are as follows:

#### **Asset-I**

(₹ in lakh)

<b>Particulars</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Depreciation	1452.65	1482.05	1485.54	1485.89	1486.23
Interest on Loan	1657.93	1556.69	1423.26	1285.15	1147.12
Return on Equity	1540.51	1629.28	1634.72	1635.10	1655.14
Interest on Working Capital	105.78	106.64	104.58	102.28	100.42
O&M Expenses	176.70	186.83	197.52	208.81	220.71
<b>Total</b>	<b>4933.56</b>	<b>4961.48</b>	<b>4845.63</b>	<b>4717.23</b>	<b>4609.63</b>

#### **Asset-II**

(₹ in lakh)

<b>Particulars</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Depreciation	60.70	61.13	61.35	61.99	62.67
Interest on Loan	67.39	62.36	57.02	52.21	47.34
Return on Equity	64.40	67.24	67.55	68.25	69.82
Interest on Working Capital	8.47	8.69	8.86	9.07	9.31
O&M Expenses	89.08	94.18	99.57	105.26	111.28
<b>Total</b>	<b>290.04</b>	<b>293.59</b>	<b>294.34</b>	<b>296.77</b>	<b>300.42</b>

23. AFC allowed earlier for 2009-14 tariff period vide order dated 7.1.2016 in Petition No. 556/TT/2014, the revised AFC claimed in the instant petition and the revised AFC allowed in the instant order are as follows:



**Asset-I**

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
AFC approved vide order dated 7.1.2016 in Petition No. 556/TT/2014	4933.56	4961.48	4845.63	4717.23	4609.63
AFC claimed by the Petitioner in the instant petition	5002.91	5030.78	4914.95	4786.55	4678.94
AFC allowed in the instant order	4933.56	4961.48	4845.63	4717.23	4609.63

**Asset-II**

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
AFC approved vide order dated 7.1.2016 in Petition No. 556/TT/2014	290.04	293.59	294.34	296.77	300.42
AFC claimed by the Petitioner in the instant petition	293.16	296.72	297.47	299.89	303.54
AFC allowed in the instant order	290.04	293.59	294.34	296.77	300.42

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

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

**Asset-I**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1486.58	1486.58	1486.58	1486.58	1486.58
Interest on Loan	1077.09	938.73	800.36	661.99	523.62
Return on Equity	1656.79	1664.39	1663.55	1663.55	1668.02
Interest on Working Capital	108.29	105.65	102.83	100.04	97.36
O&M Expenses	201.67	208.42	215.32	222.46	229.84
<b>Total</b>	<b>4530.42</b>	<b>4403.77</b>	<b>4268.64</b>	<b>4134.62</b>	<b>4005.42</b>

**Asset-II**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	62.74	62.74	62.74	62.74	62.74
Interest on Loan	44.77	39.07	33.37	27.67	21.97
Return on Equity	69.95	70.27	70.24	70.24	70.43
Interest on Working Capital	9.75	9.81	9.87	9.94	10.02
O&M Expenses	102.51	105.91	109.43	113.06	116.81
<b>Total</b>	<b>289.72</b>	<b>287.80</b>	<b>285.65</b>	<b>283.65</b>	<b>281.97</b>



**Asset-III**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	10.86	10.86	10.86	10.86	10.86
Interest on Loan	13.28	12.24	11.19	10.14	9.09
Return on Equity	12.11	12.16	12.16	12.16	12.19
Interest on Working Capital	0.83	0.81	0.79	0.76	0.74
O&M Expenses	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>37.08</b>	<b>36.07</b>	<b>35.00</b>	<b>33.92</b>	<b>32.88</b>

25. The details of the trued-up IWC claimed by the Petitioner for the transmission assets is as follows:

**Asset-I**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	16.81	17.37	17.94	18.54	19.15
Maintenance Spares	30.25	31.26	32.30	33.37	34.48
Receivables	755.07	733.96	711.44	689.10	667.57
Total Working Capital	802.13	782.59	761.68	741.01	721.20
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>108.29</b>	<b>105.65</b>	<b>102.83</b>	<b>100.04</b>	<b>97.36</b>

**Asset-II**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	8.54	8.83	9.12	9.42	9.73
Maintenance Spares	15.38	15.89	16.41	16.96	17.52
Receivables	48.29	47.97	47.61	47.28	47.00
<b>Total Working Capital</b>	<b>72.21</b>	<b>72.69</b>	<b>73.14</b>	<b>73.66</b>	<b>74.25</b>
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>9.75</b>	<b>9.81</b>	<b>9.87</b>	<b>9.94</b>	<b>10.02</b>

**Asset-III**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
Receivables	6.18	6.01	5.83	5.65	5.48
Total Working Capital	6.18	6.01	5.83	5.65	5.48
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>0.83</b>	<b>0.81</b>	<b>0.79</b>	<b>0.76</b>	<b>0.74</b>



### **Capital Cost**

26. The capital cost of the transmission assets has been calculated in accordance with Regulation 9(3) of the 2014 Tariff Regulations.

27. The details of capital cost approved by the Commission vide order dated 7.1.2016 in Petition No. 556/TT/2014 in respect of Assets-I and II and vide order dated 31.12.2015 in Petition No. 531/TT/2014 in respect of Asset-III is as follows:

<b>Particulars</b>	<b>Capital cost approved as on 1.4.2014 (₹ in lakh)</b>	<b>Order details</b>
Asset-I	28140.98	Order dated 7.1.2016 in Petition No. 556/TT/2014
Asset-II	1188.19	
Asset-III	205.68	Order dated 31.12.2015 in Petition No. 531/TT/2014

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

28. The details of ACE approved by the Commission vide order dated 7.1.2016 in Petition No. 556/TT/2014 in respect of Assets-I and II and vide order dated 31.12.2015 in Petition No. 531/TT/2014 is as follows:

<b>Particulars</b>	<b>Projected ACE 2014-15 (₹ in lakh)</b>	<b>Order details</b>
Asset-I	106.71	Order dated 7.1.2016 in Petition No. 556/TT/2014
Asset-II	115.17	
Asset-III	0.00	Order dated 31.12.2015 in Petition No. 531/TT/2014

29. The Petitioner has not claimed any ACE during 2014-19 period. Accordingly, the capital cost considered for truing up of tariff of 2014-19 tariff period is as follows:

<b>Particulars</b>	<b>Capital Cost as on 1.4.2014</b>	<b>(₹ in lakh)</b>	
		<b>ACE 2014-19</b>	<b>Capital Cost as on 31.3.2019</b>
Asset-I	28140.98	0.00	28140.98
Asset-II	1188.19	0.00	1188.19
Asset-III	205.68	0.00	205.68



### Debt-Equity Ratio

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

<b>Funding</b>	<b>Capital Cost as on 1.4.2014 (₹ in lakh)</b>	<b>(%)</b>	<b>Capital Cost as on 31.3.2019 (₹ in lakh)</b>	<b>(%)</b>
<b>Asset-I</b>				
Debt	19698.72	70.00	19698.72	70.00
Equity	8442.26	30.00	8442.26	30.00
<b>Total</b>	<b>28140.98</b>	<b>100.00</b>	<b>28140.98</b>	<b>100.00</b>
<b>Asset-II</b>				
Debt	831.74	70.00	831.74	70.00
Equity	356.46	30.00	356.46	30.00
<b>Total</b>	<b>1188.19</b>	<b>100.00</b>	<b>1188.19</b>	<b>100.00</b>
<b>Asset-III</b>				
Debt	143.98	70.00	143.98	70.00
Equity	61.70	30.00	61.70	30.00
<b>Total</b>	<b>205.68</b>	<b>100.00</b>	<b>205.68</b>	<b>100.00</b>

### Depreciation

31. Depreciation has been worked out as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. The Gross Block during the 2014-19 tariff period has been depreciated at WAROD. WAROD given at Annexure-I has been worked out after taking into account the depreciation rates of assets as prescribed in the 2014 Tariff Regulations. The trued up depreciation for 2014-19 tariff period for the transmission assets is as follows:

#### **Asset-I**

<b>Particulars</b>	<b>(₹ in lakh)</b>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Depreciation</b>					
Opening Gross Block	28140.98	28140.98	28140.98	28140.98	28140.98
ACE	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	28140.98	28140.98	28140.98	28140.98	28140.98
Average Gross Block	28140.98	28140.98	28140.98	28140.98	28140.98



Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	25326.88	25326.88	25326.88	25326.88	25326.88
Balance useful life of the asset (Year)	30	29	28	27	26
Elapsed life (Year)	5	6	7	8	9
<b>Depreciation during the year</b>	<b>1486.58</b>	<b>1486.58</b>	<b>1486.58</b>	<b>1486.58</b>	<b>1486.58</b>
Cumulative Depreciation	9607.96	11094.54	12581.12	14067.70	15554.28
Remaining Depreciable Value Total	15718.92	14232.34	12745.76	11259.18	9772.60

### Asset-II

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	1188.19	1188.19	1188.19	1188.19	1188.19
ACE	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	1188.19	1188.19	1188.19	1188.19	1188.19
Average Gross Block	1188.19	1188.19	1188.19	1188.19	1188.19
Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	1069.37	1069.37	1069.37	1069.37	1069.37
Balance useful life of the asset (Year)	20	19	18	17	16
Elapsed life (Year)	5	6	7	8	9
<b>Depreciation during the year</b>	<b>62.74</b>	<b>62.74</b>	<b>62.74</b>	<b>62.74</b>	<b>62.74</b>
Cumulative Depreciation	404.18	466.92	529.65	592.39	655.13
Remaining Depreciable Value Total	665.19	602.45	539.72	476.98	414.24

### Asset-III

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	205.68	205.68	205.68	205.68	205.68
ACE	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	205.68	205.68	205.68	205.68	205.68
Average Gross Block	205.68	205.68	205.68	205.68	205.68
Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	185.11	185.11	185.11	185.11	185.11
Balance useful life of the asset (Year)	25	24	23	22	21
Elapsed life (Year)	0	1	2	3	4
<b>Depreciation during the year</b>	<b>10.86</b>	<b>10.86</b>	<b>10.86</b>	<b>10.86</b>	<b>10.86</b>



Cumulative Depreciation	11.76	22.62	33.48	44.34	55.20
Remaining Depreciable Value Total	173.35	162.49	151.63	140.77	129.91

32. The details of depreciation approved vide order dated 7.1.2016 in Petition No. 556/TT/2014 in respect of Assets-I and II and order dated 31.12.2015 in Petition No. 531/TT/2014 in respect of Asset-III, claimed by the Petitioner in the instant petition and true up depreciation in the instant order is as follows:

**Asset-I**

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.1.2016 in Petition No. 556/TT/2014	1489.40	1492.21	1492.21	1492.21	1492.21
Claimed by the Petitioner in the instant petition	1486.58	1486.58	1486.58	1486.58	1486.58
Allowed after true up in this order	1486.58	1486.58	1486.58	1486.58	1486.58

**Asset-II**

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.1.2016 in Petition No. 556/TT/2014	65.78	68.82	68.82	68.82	68.82
Claimed by the Petitioner in the instant petition	62.74	62.74	62.74	62.74	62.74
Allowed after true up in this order	62.74	62.74	62.74	62.74	62.74

**Asset-III**

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 31.12.2015 in Petition No. 531/TT/2014	10.86	10.86	10.86	10.86	10.86
Claimed by the Petitioner in the instant petition	10.86	10.86	10.86	10.86	10.86
Allowed after true up in this order	10.86	10.86	10.86	10.86	10.86





### **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 calculated IoL based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations. Trued up IoL allowed for the transmission assets for 2014-19 tariff period is as follows:

#### **Asset-I**

(₹ in lakh)

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Interest on Loan</b>					
Gross Normative Loan	19698.72	19698.72	19698.72	19698.72	19698.72
Cumulative Repayments up to Previous Year	8121.38	9607.96	11094.54	12581.12	14067.70
Net Loan-Opening	11577.34	10090.76	8604.18	7117.60	5631.02
Additions due to ACE	0.00	0.00	0.00	0.00	0.00
Repayment during the year	1486.58	1486.58	1486.58	1486.58	1486.58
Net Loan-Closing	10090.76	8604.18	7117.60	5631.02	4144.44
Average Loan	10834.05	9347.47	7860.89	6374.31	4887.73
Weighted Average Rate of Interest on Loan (%)	9.3149	9.3160	9.3175	9.3195	9.3224
<b>Interest on Loan</b>	<b>1009.18</b>	<b>870.81</b>	<b>732.44</b>	<b>594.05</b>	<b>455.65</b>

#### **Asset-II**

(₹ in lakh)

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Interest on Loan</b>					
Gross Normative Loan	831.74	831.74	831.74	831.74	831.74
Cumulative Repayments up to Previous Year	341.45	404.18	466.92	529.65	592.39
Net Loan-Opening	490.29	427.55	364.82	302.08	239.34
Additions due to ACE	0.00	0.00	0.00	0.00	0.00
Repayment during the year	62.74	62.74	62.74	62.74	62.74
Net Loan-Closing	427.55	364.82	302.08	239.34	176.61
Average Loan	458.92	396.18	333.45	270.71	207.98
Weighted Average Rate of Interest on Loan (%)	9.0908	9.0911	9.0914	9.0919	9.0927
<b>Interest on Loan</b>	<b>41.72</b>	<b>36.02</b>	<b>30.32</b>	<b>24.61</b>	<b>18.91</b>



**Asset-III**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Interest on Loan</b>					
Gross Normative Loan	143.98	143.98	143.98	143.98	143.98
Cumulative Repayments up to Previous Year	0.90	11.76	22.62	33.48	44.34
Net Loan-Opening	143.08	132.22	121.36	110.50	99.64
Additions due to ACE	0.00	0.00	0.00	0.00	0.00
Repayment during the year	10.86	10.86	10.86	10.86	10.86
Net Loan-Closing	132.22	121.36	110.50	99.64	88.78
Average Loan	137.65	126.79	115.93	105.07	94.21
Weighted Average Rate of Interest on Loan (%)	9.6500	9.6500	9.6500	9.6500	9.6500
<b>Interest on Loan</b>	<b>13.28</b>	<b>12.24</b>	<b>11.19</b>	<b>10.14</b>	<b>9.09</b>

34. The details of IoL approved vide order dated 7.1.2016 in Petition No. 556/TT/2014 in respect of Assets-I and II and order dated 31.12.2015 in Petition No. 531/TT/2014 in respect of Asset-III, claimed by the Petitioner in the instant petition and trued up in the instant order is as follows:

**Asset-I**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.1.2016 in Petition No. 556/TT/2014	1012.53	877.25	738.35	599.44	460.52
Claimed by the Petitioner in the instant petition	1077.09	938.73	800.36	661.99	523.62
Allowed after true up in this order	1009.18	870.81	732.44	594.05	455.65

**Asset-II**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.1.2016 in Petition No. 556/TT/2014	45.25	42.79	36.54	30.28	24.03
AFC claimed by the Petitioner in the instant petition	44.77	39.07	33.37	27.67	21.97
AFC allowed in the instant order	41.72	36.02	30.32	24.61	18.91



**Asset-III****(₹ in lakh)**

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Approved vide order dated 31.12.2015 in Petition No. 531/TT/2014	13.28	12.23	11.19	10.14	9.09
Claimed by the Petitioner in the instant petition	13.28	12.24	11.19	10.14	9.09
Allowed after true up in this order	13.28	12.24	11.19	10.14	9.09

**Return on Equity (RoE)**

35. The Petitioner has claimed RoE for the transmission assets in terms of Regulations 24 and 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 following effective tax rates for the 2014-19 tariff period:

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

36. We have considered the submission of the Petitioner. The Commission in 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 given in the table below:

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

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

38. Trued up RoE is allowed on the basis of the MAT rate applicable in the respective years for the transmission assets for the 2014-19 tariff period and it is as follows:

#### Asset-I

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	8442.26	8442.26	8442.26	8442.26	8442.26
Additions due to ACE	0.00	0.00	0.00	0.00	0.00
Closing Equity	8442.26	8442.26	8442.26	8442.26	8442.26
Average Equity	8442.26	8442.26	8442.26	8442.26	8442.26
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (%)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity</b>	<b>1655.53</b>	<b>1663.55</b>	<b>1663.55</b>	<b>1663.55</b>	<b>1668.02</b>

#### Asset-II

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	356.46	356.46	356.46	356.46	356.46
Additions due to ACE	0.00	0.00	0.00	0.00	0.00
Closing Equity	356.46	356.46	356.46	356.46	356.46
Average Equity	356.46	356.46	356.46	356.46	356.46
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (%)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity</b>	<b>69.90</b>	<b>70.24</b>	<b>70.24</b>	<b>70.24</b>	<b>70.43</b>



**Asset-III**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	61.70	61.70	61.70	61.70	61.70
Additions due to ACE	0.00	0.00	0.00	0.00	0.00
Closing Equity	61.70	61.70	61.70	61.70	61.70
Average Equity	61.70	61.70	61.70	61.70	61.70
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (%)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity</b>	<b>12.10</b>	<b>12.16</b>	<b>12.16</b>	<b>12.16</b>	<b>12.19</b>

39. The details of RoE approved vide order dated 7.1.2016 in Petition No. 556/TT/2014 in respect of Assets-I and II and order dated 31.12.2015 in Petition No. 531/TT/2014 in respect of Asset-III, claimed by the Petitioner in the instant petition and trued up in the instant order is as follows:

**Asset-I**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.1.2016 in Petition No. 556/TT/2014	1658.67	1661.80	1661.80	1661.80	1661.80
Claimed by the Petitioner in the instant petition	1656.79	1664.39	1663.55	1663.55	1668.02
Allowed after true up in this order	1655.53	1663.55	1663.55	1663.55	1668.02

**Asset-II**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.1.2016 in Petition No. 556/TT/2014	73.29	76.68	76.68	76.68	76.68
Claimed by the Petitioner in the instant petition	69.95	70.27	70.24	70.24	70.43
Allowed after true up in this order	69.90	70.24	70.24	70.24	70.43

**Asset-III**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 31.12.2015 in Petition No. 531/TT/2014	12.10	12.10	12.10	12.10	12.10
Claimed by the Petitioner in the instant petition	12.11	12.16	12.16	12.16	12.19



Allowed after true up in this order	12.10	12.16	12.16	12.16	12.19
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### **Operation & Maintenance Expenses (O&M Expenses)**

40. The Petitioner has not claimed any O&M Expenses for Asset-III in this petition. The trued up O&M Expenses claimed by the Petitioner for Assets-I and II are as follows:

#### **Asset-I**

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Transmission Line</b>					
Teesta-V - Siliguri 400 kV D/C line Double Conductor (114.67 km)					
<b>Sub-station</b>					
Teesta Bay I and Bay II					
Number of Bays					
400 kV	2	2	2	2	2
Claimed by the Petitioner in the instant petition	201.67	208.42	215.32	222.46	229.84

#### **Asset-II**

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Sub-station</b>					
Baripada Bays					
Number of Bays					
400 kV	1	1	1	1	1
220 kV	1	1	1	1	1
Claimed by the Petitioner in the instant petition	102.51	105.91	109.43	113.06	116.81

41. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The norms specified in respect of the elements covered in the transmission asset are as follows:

Element	Unit of Measurement	2014-15	2015-16	2016-17	2017-18	2018-19
D/C (Double Conductor)	₹ lakh/km	0.707	0.731	0.755	0.780	0.806
400 kV	₹ lakh/bay	60.30	62.30	64.37	66.51	68.71
220 kV	₹ lakh/bay	42.21	43.61	45.06	46.55	48.10

42. We have considered the submissions of the Petitioner. The O&M Expenses allowed in respect of Assets-I and II are as follows:



**Asset-I**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Teesta-V Siliguri Transmission Line D/C line Double Conductor (114.67 km)	81.07	83.82	86.58	89.44	92.42
2 number of 400 kV Bays at Teesta	120.60	124.60	128.74	133.02	137.42
<b>Total</b>	<b>201.67</b>	<b>208.42</b>	<b>215.32</b>	<b>222.46</b>	<b>229.84</b>

**Asset-II**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
1 number 400 kV Bay at Baripada	60.30	62.30	64.37	66.51	68.71
1 number 220 kV Bay at Baripada	42.21	43.61	45.06	46.55	48.10
<b>Total</b>	<b>102.51</b>	<b>105.91</b>	<b>109.43</b>	<b>113.06</b>	<b>116.81</b>

43. As O&M Expenses have not been claimed by the Petitioner for Asset-III in this petition and as such no O & M Expenses are allowed in respect of Asset-III.

44. The details of the O&M Expenses approved vide order dated 7.1.2016 in Petition No. 556/TT/2014 in respect of Assets-I and II, claimed by the Petitioner in the instant petition and true up in the instant order are as follows:

**Asset-I**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.1.2016 in Petition No. 556/TT/2014	201.67	208.42	215.32	222.46	229.84
Claimed by the Petitioner in the instant petition	201.67	208.42	215.32	222.46	229.84
Allowed after true up in this order	201.67	208.42	215.32	222.46	229.84

**Asset-II**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.1.2016 in Petition No. 556/TT/2014	102.51	105.91	109.43	113.06	116.81
Claimed by the Petitioner in the instant petition	102.51	105.91	109.43	113.06	116.81
Allowed after true up in this order	102.51	105.91	109.43	113.06	116.81





### Interest on Working Capital (IWC)

45. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and trued up IWC has been allowed for the transmission assets as follows:

#### **Asset-I**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Interest on Working Capital</b>					
O&M Expenses (O&M Expenses for 1 month)	16.81	17.37	17.94	18.54	19.15
Maintenance Spares (15% of O&M Expenses)	30.25	31.26	32.30	33.37	34.48
Receivables (Equivalent to 2 months of annual fixed cost)	743.28	722.24	699.86	677.52	655.98
<b>Total Working Capital</b>	<b>790.33</b>	<b>770.87</b>	<b>750.10</b>	<b>729.43</b>	<b>709.61</b>
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>106.69</b>	<b>104.07</b>	<b>101.26</b>	<b>98.47</b>	<b>95.80</b>

#### **Asset-II**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Interest on Working Capital</b>					
O&M Expenses (O&M Expenses for 1 month)	8.54	8.83	9.12	9.42	9.73
Maintenance Spares (15% of O&M Expenses)	15.38	15.89	16.41	16.96	17.52
Receivables (Equivalent to 2 months of annual fixed cost)	47.76	47.44	47.09	46.75	46.47
<b>Total Working Capital</b>	<b>71.68</b>	<b>72.15</b>	<b>72.62</b>	<b>73.13</b>	<b>73.73</b>
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>9.68</b>	<b>9.74</b>	<b>9.80</b>	<b>9.87</b>	<b>9.95</b>

#### **Asset-III**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Interest on Working Capital</b>					
O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00	0.00
Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
Receivables (Equivalent to 2 months of annual fixed cost)	6.18	6.01	5.83	5.65	5.48
<b>Total Working Capital</b>	<b>6.18</b>	<b>6.01</b>	<b>5.83</b>	<b>5.65</b>	<b>5.48</b>



Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>0.83</b>	<b>0.81</b>	<b>0.79</b>	<b>0.76</b>	<b>0.74</b>

46. The details of IWC approved vide order dated 7.1.2016 in Petition No. 556/TT/2014 in respect of Assets-I and II and order dated 31.12.2015 in Petition No. 531/TT/2014 in respect of Asset-III, claimed by the Petitioner in the instant petition and trued up IWC in the instant order is as follows:

**Asset-I**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.1.2016 in Petition No. 556/TT/2014	106.91	104.31	101.49	98.69	95.90
Claimed by the Petitioner in the instant petition	108.29	105.65	102.83	100.04	97.36
Allowed after true up in this order	106.69	104.07	101.26	98.47	95.80

**Asset-II**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.1.2016 in Petition No. 556/TT/2014	9.91	10.18	10.24	10.29	10.35
Claimed by the Petitioner in the instant petition	9.75	9.81	9.87	9.94	10.02
Allowed after true up in this order	9.68	9.74	9.80	9.87	9.95

**Asset-III**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 31.12.2015 in Petition No. 531/TT/2014	0.83	0.81	0.79	0.76	0.74
Claimed by the Petitioner in the instant petition	0.83	0.81	0.79	0.76	0.74
Allowed after true up in this order	0.83	0.81	0.79	0.76	0.74

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

47. The trued up AFC approved for the transmission assets for 2014-19 tariff period are as follows:



**Asset-I**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1486.58	1486.58	1486.58	1486.58	1486.58
Interest on Loan	1009.18	870.81	732.44	594.05	455.65
Return on Equity	1655.53	1663.55	1663.55	1663.55	1668.02
Interest on Working Capital	106.69	104.07	101.26	98.47	95.80
O&M Expenses	201.67	208.42	215.32	222.46	229.84
<b>Total</b>	<b>4459.66</b>	<b>4333.43</b>	<b>4199.14</b>	<b>4065.12</b>	<b>3935.90</b>

**Asset-II**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	62.74	62.74	62.74	62.74	62.74
Interest on Loan	41.72	36.02	30.32	24.61	18.91
Return on Equity	69.90	70.24	70.24	70.24	70.43
Interest on Working Capital	9.68	9.74	9.80	9.87	9.95
O&M Expenses	102.51	105.91	109.43	113.06	116.81
<b>Total</b>	<b>286.54</b>	<b>284.64</b>	<b>282.53</b>	<b>280.52</b>	<b>278.84</b>

**Asset-III**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	10.86	10.86	10.86	10.86	10.86
Interest on Loan	13.28	12.24	11.19	10.14	9.09
Return on Equity	12.10	12.16	12.16	12.16	12.19
Interest on Working Capital	0.83	0.81	0.79	0.76	0.74
O&M Expenses	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>37.08</b>	<b>36.06</b>	<b>34.99</b>	<b>33.92</b>	<b>32.88</b>

48. Accordingly, the Annual Transmission Charges allowed vide order dated 7.1.2016 in Petition No. 556/TT/2014 in respect of Assets-I and II and dated 31.12.2015 in Petition No. 531/TT/2014 in respect of Asset-III, claimed by the Petitioner in the instant petition and approved after truing up in the instant order is as follows:

**Asset-I**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.1.2016 in Petition No. 556/TT/2014	4469.17	4343.99	4209.17	4074.60	3940.27
Claimed by the Petitioner in the instant petition	4530.42	4403.77	4268.64	4134.62	4005.42
Allowed after true up in this order	4459.66	4333.43	4199.14	4065.12	3935.90



**Asset-II**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.1.2016 in Petition No. 556/TT/2014	296.73	304.38	301.70	299.13	296.69
Claimed by the Petitioner in the instant petition	289.72	287.80	285.65	283.65	281.97
Allowed after true up in this order	286.54	284.64	282.53	280.52	278.84

**Asset-III**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 31.12.2015 in Petition No. 531/TT/2014	37.08	36.00	34.93	33.86	32.79
Claimed by the Petitioner in the instant petition	37.08	36.07	35.00	33.92	32.88
Allowed after true up in this order	37.08	36.06	34.99	33.92	32.88

49. The Annual Transmission Charges for the transmission assets now trued-up vary in comparison to what was approved in previous orders due to ACE and consideration of actual MAT rates for RoE.

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

50. The Petitioner has combined the Assets-I, II and III and claimed the following transmission charges for Combined Asset for 2019-24 tariff period:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	1560.17	1560.17	327.08	327.08	327.08
Interest on Loan	409.43	264.26	176.65	145.77	112.73
Return on Equity	1750.64	1750.64	1750.64	1750.64	1750.64
Interest on Working Capital	70.51	69.01	49.62	49.70	49.65
O&M Expenses	334.15	345.99	358.08	370.74	383.37
<b>Total</b>	<b>4124.90</b>	<b>3990.07</b>	<b>2662.07</b>	<b>2643.93</b>	<b>2623.47</b>

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	27.85	28.83	29.84	30.90	31.95



Maintenance Spares	50.12	51.90	53.71	55.61	57.51
Receivables	507.16	491.93	328.20	325.96	322.56
Total Working Capital	585.13	572.66	411.75	412.47	412.02
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>70.51</b>	<b>69.01</b>	<b>49.62</b>	<b>49.70</b>	<b>49.65</b>

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

52. The Petitioner has claimed E-COD of the Combined Asset as 14.6.2008. Based on the trued-up admitted capital cost and actual COD of the transmission assets, E-COD has been worked out as follows:

Particulars	Capital Cost as on 31.3.2019 (₹ in lakh)	Actual COD	Number of days from last COD	Weightage of cost (%)	Weighted days	Effective COD (Latest COD - Total Weighted days)
Asset-I	28140.98	01-06-2008	2099	95.28%	1999.94	14.6.2008
Asset-II	1188.19	01-05-2008	2130	4.02%	85.69	
Asset-III	205.68	01-03-2014	0	0.70%	0	
<b>Total</b>	<b>29534.85</b>				<b>2085.63</b>	

53. E-COD is used to determine the lapsed life of the project as a whole which works out as ten (10) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).

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

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

55. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as specified in the 2019 Tariff Regulations. The element-wise life as defined in the 2014 Tariff Regulations prevailing



at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of the Combined Asset has been worked out as 34 years as follows:

Particulars	Life (in years) (1)	Capital Cost as on 31.3.2019 (₹ in lakh) (2)	Weighted Cost (₹ in lakh) (3) = (1) x (2)	Weighted Average Life of Asset (in years) (4) = (3) / (2)
Transmission Line	35	27348.01	957180.35	34.24 (rounded off to 34 years)
Sub-station	25	2116.72	52918.00	
PLCC	15	70.12	1051.80	
<b>Total</b>		<b>29534.85</b>	<b>1011150.15</b>	

56. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. E-COD of the transmission assets is 14.6.2008 and the lapsed life of the project as a whole, works out as ten (10) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 24 years.

### **Capital Cost**

57. 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."*

58. The Petitioner has claimed capital cost of ₹29534.85 lakh as on 31.3.2019 for the Combined Asset. The same has been worked out by the Commission as on 31.3.2019 and considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations. The Petitioner has not claimed ACE for 2019-24 tariff period for the Combined Asset.

### **Debt-Equity Ratio**

59. 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.”*

60. The debt and equity considered for the purpose of computation of tariff for 2019-24 tariff period are as follows:



Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	%	Capital Cost as on 31.3.2024 (₹ in lakh)	%
Debt	20674.43	70.00	20674.43	70.00
Equity	8860.42	30.00	8860.42	30.00
<b>Total</b>	<b>29534.85</b>	<b>100.00</b>	<b>29534.85</b>	<b>100.00</b>

### **Depreciation**

61. Regulations 33(1), 33(2) and 33(5) of the 2019 Tariff Regulations provide as follows:

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

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

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

62. WAROD has been worked out at Annexure-II to this order and the same is based on as per the rates of depreciation specified in 2019 Tariff Regulations. The depreciation is approved considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The depreciation allowed for the Combined Asset for 2019-24 tariff period is as follows:



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Depreciation</b>					
Opening Gross Block	29534.85	29534.85	29534.85	29534.85	29534.85
Addition during the year 2019-24 due to projected ACE	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	29534.85	29534.85	29534.85	29534.85	29534.85
Average Gross Block	29534.85	29534.85	29534.85	29534.85	29534.85
Rate of Depreciation (%)	5.28	5.28	1.11	1.11	1.11
Balance useful life of the asset (Year)	24	23	22	21	20
Elapsed life (Year)	10	11	12	13	14
Depreciable Value	26581.37	26581.37	26581.37	26581.37	26581.37
<b>Depreciation during the year</b>	<b>1560.18</b>	<b>1560.18</b>	<b>327.11</b>	<b>327.11</b>	<b>327.11</b>
Cumulative Depreciation at the end of the year	17824.79	19384.96	19712.07	20039.18	20366.29
Remaining Depreciable Value at the end of the year	8756.58	7196.40	6869.29	6542.18	6215.08

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

63. 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.*



(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.”

64. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period will be adjusted.

65. We have considered the submission of the Petitioner. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for the Combined Asset for 2019-24 tariff period is as follows:

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	20674.43	20674.43	20674.43	20674.43	20674.43
Cumulative Repayments up to Previous Year	16264.61	17824.79	19384.96	19712.07	20039.18
Net Loan-Opening	4409.82	2849.65	1289.47	962.36	635.25
Additions due to ACE	0.00	0.00	0.00	0.00	0.00
Repayment during the year	1560.18	1560.18	327.11	327.11	327.11
Net Loan-Closing	2849.65	1289.47	962.36	635.25	308.14
Average Loan	3629.74	2069.56	1125.92	798.81	471.70
Weighted Average Rate of Interest on Loan (%)	9.3206	9.3293	9.3517	9.3331	9.1294
<b>Interest on Loan</b>	<b>338.31</b>	<b>193.07</b>	<b>105.29</b>	<b>74.55</b>	<b>43.06</b>

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

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

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

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



*Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;*

*Provided further that:*

*i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;*

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

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

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

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

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

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

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

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

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

67. The Petitioner has submitted that MAT rate is applicable to the Petitioner's Company. We have considered the submissions of the Petitioner. Accordingly, MAT rate applicable in 2019-20 has been considered for the purpose of RoE which shall be trued up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed for the Combined Asset for 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	8860.42	8860.42	8860.42	8860.42	8860.42
Additions due to ACE	0.00	0.00	0.00	0.00	0.00
Closing Equity	8860.42	8860.42	8860.42	8860.42	8860.42
Average Equity	8860.42	8860.42	8860.42	8860.42	8860.42
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (%)	18.782	18.782	18.782	18.782	18.782
<b>Return on Equity</b>	<b>1664.16</b>	<b>1664.16</b>	<b>1664.16</b>	<b>1664.16</b>	<b>1664.16</b>



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

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Transmission Line</b>					
Teesta - Siliguri 400 kV D/C line Double Conductor (114.67 km)					
<b>Sub-station</b>					
Teesta Bay I and Bay II and Baripada bays					
Number of Bays					
400 kV	3	3	3	3	3
220 kV	1	1	1	1	1
<b>Transformer</b>					
<b>Baripada 400 kV</b>					
Capacity (MVA)	315.00	315.00	315.00	315.00	315.00
<b>PLCC</b>					
Capital Cost	70.12	70.12	70.12	70.12	70.12
2% of Capital Cost	1.40	1.40	1.40	1.40	1.40
<b>Total</b>	<b>334.15</b>	<b>345.99</b>	<b>358.08</b>	<b>370.74</b>	<b>383.37</b>

69. Regulation 35(3)(a) and Regulation 35(4) of the 2019 Tariff Regulations provide norms for the O&M Expenses for the transmission system 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 (₹ 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 (₹ 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 (₹ Lakh per km)</b>					
Single Circuit (Bundled Conductor with six or more	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor	1.322	1.368	1.416	1.466	1.517





Double Circuit (Twin & Triple)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple)	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	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;
- v. the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme; and
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three year



(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.”

70. 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.

71. We have considered the submissions of the Petitioner. The O&M Expenses have been worked out as per the norms specified in the 2019 Tariff Regulations and the same are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>O&amp;M Expenses</b>					
Transmission Line 400 kV D/C line Double Conductor (114.67 km)	101.02	104.58	108.25	112.03	115.93
<b>Sub-station</b>					



400 kV	96.45	99.84	103.35	106.98	110.73
220 kV	22.51	23.30	24.12	24.96	25.84
<b>Transformer</b>					
400 kV 315 MVA	112.77	116.87	120.96	125.37	129.47
<b>Total O&amp;M Expenses allowed (₹ in lakh)</b>	<b>332.75</b>	<b>344.58</b>	<b>356.68</b>	<b>369.34</b>	<b>381.97</b>

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

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

#### ***“34. Interest on Working Capital***

(1)...

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

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

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

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

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

*“3.Definitions ...*

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

73. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. Rate of Interest considered is 12.05%



(SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20 whereas Rate of Interest for 2020-21 onwards has been considered as 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points). The components of the working capital and interest allowed thereon for the Combined Asset is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses (O&M Expenses for 1 month)	27.73	28.72	29.72	30.78	31.83
Maintenance Spares (15% of O&M Expenses)	49.91	51.69	53.50	55.40	57.29
Receivables (Equivalent to 45 days of annual transmission cost)	487.31	471.46	307.88	305.66	302.50
<b>Total Working Capital</b>	<b>564.96</b>	<b>551.87</b>	<b>391.10</b>	<b>391.84</b>	<b>391.63</b>
Rate of Interest (%)	12.05	11.25	11.25	11.25	11.25
<b>Interest on Working Capital</b>	<b>68.08</b>	<b>62.08</b>	<b>44.00</b>	<b>44.08</b>	<b>44.06</b>

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

74. The transmission charges allowed for the Combined Asset for the 2019-24 tariff period are summarised as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	1560.18	1560.18	327.11	327.11	327.11
Interest on Loan	338.31	193.07	105.29	74.55	43.06
Return on Equity	1664.16	1664.16	1664.16	1664.16	1664.16
Interest on Working Capital	68.08	62.08	44.00	44.08	44.06
O&M Expenses	332.75	344.58	356.68	369.34	381.97
<b>Total</b>	<b>3963.48</b>	<b>3824.08</b>	<b>2497.24</b>	<b>2479.25</b>	<b>2460.36</b>

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

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



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

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

### **Goods and Services Tax (GST)**

77. 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.

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

### **Security Expenses**

79. The Petitioner has submitted that security expenses for the transmission assets are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 shall be filed on a yearly basis on the basis of the actual expenses of previous year subject to



true up at the end of the year on actual expenses. The Petitioner has submitted that difference, if any, between the estimated security expenses and actual security expenses as per the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

80. We have considered the submissions of the Petitioner. We are of the view that the Petitioner should claim security expenses for all the transmission assets in one petition. It is observed that the Petitioner has already filed Petition No. 260/MP/2020 claiming consolidated security expenses on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19. Therefore, security expenses will be dealt with in Petition No. 260/MP/2020 in accordance with the applicable provisions of the 2019 Tariff Regulations.

### **Capital Spares**

81. 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**

82. 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 systems is governed by Central Electricity Regulatory Commission(Sharing of Transmission Charges and Losses) Regulations, 2010 and with effect from 1.11.2020, sharing is governed by Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 (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 Bill 2 under Regulation 15(2)(b) of the 2020 Sharing Regulations.

**83. To summarise:**

a. The revised AFC allowed for Assets-I and II for 2004-09 tariff period are:

Part of Asset-I/Circuit-I of 400 kV D/C Teesta (Stage-V)-Siliguri Transmission Line

(₹ in lakh)

Particulars	2007-08 ( <i>pro rata</i> 2 months)	2008-09
AFC	450.70	3034.73

Part of Asset-I/Circuit-II of 400 kV D/C Teesta (Stage-V)-Siliguri Transmission Line

(₹ in lakh)

Particulars	2008-09 ( <i>pro rata</i> 10 months)
AFC	476.21

**Asset-II**

(₹ in lakh)

Particulars	2008-09 ( <i>pro rata</i> 11 months)
AFC	197.31

b. The consequential revision of AFC allowed for Assets-I and II for 2009-14 tariff period are:

**Asset-I**

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
AFC	4933.56	4961.48	4845.63	4717.23	4609.63

**Asset-II**

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
AFC	290.04	293.59	294.34	296.77	300.42

c. The trued-up AFC allowed for the transmission assets for 2014-19 tariff period are:

**Asset-I**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	4459.66	4333.43	4199.14	4065.12	3935.90



**Asset-II**

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	286.54	284.64	282.53	280.52	278.84

**Asset-III**

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	37.08	36.06	34.99	33.92	32.88

d. AFC approved for the Combined Asset for 2019-24 tariff period are:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	3963.48	3824.08	2497.24	2479.25	2460.36

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

85. This order disposes of Petition No. 465/TT/2020 in terms of the above discussions and findings.

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

sd/-  
**(Arun Goyal)**  
Member

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

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





## Asset-I

2014-19		ACE (₹ in lakh)		Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-19	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depn.	2014-15	2015-16	2016-17	2017-18	2018-19
Land - Freehold	-	-	-	-	-	-	-	-	-
Land - Leasehold	-	-	-	3.34%	-	-	-	-	-
Building Civil Works & Colony	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	27348.01	0.00	27348.01	5.28%	1443.97	1443.97	1443.97	1443.97	1443.97
Sub Station	722.85	0.00	722.85	5.28%	38.17	38.17	38.17	38.17	38.17
PLCC	70.12	0.00	70.12	6.33%	4.44	4.44	4.44	4.44	4.44
IT Equipment (Incl. Software)	0.00	0.00	0.00	15.00%	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>28140.98</b>	<b>0.00</b>	<b>28140.98</b>	<b>Total</b>	<b>1486.58</b>	<b>1486.58</b>	<b>1486.58</b>	<b>1486.58</b>	<b>1486.58</b>
<b>Average Gross Block (₹ in lakh)</b>					<b>28140.98</b>	<b>28140.98</b>	<b>28140.98</b>	<b>28140.98</b>	<b>28140.98</b>
<b>Weighted Average Rate of Depreciation</b>					<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>

## Asset-II

2014-19		ACE (₹ in lakh)		Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-19	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depn.	2014-15	2015-16	2016-17	2017-18	2018-19
Land - Freehold	-	-	-	-	-	-	-	-	-
Land - Leasehold	-	-	-	3.34%	-	-	-	-	-
Building Civil Works & Colony	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Sub Station	1188.19	0.00	1188.19	5.28%	62.74	62.74	62.74	62.74	62.74
PLCC	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
IT Equipment (Incl. Software)	0.00	0.00	0.00	15.00%	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>1188.19</b>	<b>0.00</b>	<b>1188.19</b>	<b>Total</b>	<b>62.74</b>	<b>62.74</b>	<b>62.74</b>	<b>62.74</b>	<b>62.74</b>
<b>Average Gross Block (₹ in lakh)</b>					<b>1188.19</b>	<b>1188.19</b>	<b>1188.19</b>	<b>1188.19</b>	<b>1188.19</b>
<b>Weighted Average Rate of Depreciation</b>					<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>



### Asset-III

2014-19		ACE (₹ in lakh)		Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-19	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Deprn.	2014-15	2015-16	2016-17	2017-18	2018-19
Land - Freehold	-	-	-	-	-	-	-	-	-
Land - Leasehold	-	-	-	3.34%	-	-	-	-	-
Building Civil Works & Colony	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Sub Station	205.68	0.00	205.68	5.28%	10.86	10.86	10.86	10.86	10.86
PLCC	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
IT Equipment (Incl. Software)	0.00	0.00	0.00	15.00%	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>205.68</b>	<b>0.00</b>	<b>205.68</b>	<b>Total</b>	<b>10.86</b>	<b>10.86</b>	<b>10.86</b>	<b>10.86</b>	<b>10.86</b>
<b>Average Gross Block (₹ in lakh)</b>					205.68	205.68	205.68	205.68	205.68
<b>Weighted Average Rate of Depreciation</b>					5.28%	5.28%	5.28%	5.28%	5.28%



## Combined Asset

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)	Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-24			2019-20	2020-21	2021-22	2022-23	2023-24
Land - Freehold	-	-	-	-	-	-			
Land - Leasehold	-	-	-	3.34%	-	-			
Building Civil Works & Colony	-	-	-	3.34%	-	-			
Transmission Line	27348.01	-	27348.01	5.28%	1443.97	1443.97			
Sub Station	2116.72	-	2116.72	5.28%	111.76	111.76			
PLCC	70.12	-	70.12	6.33%	4.44	4.44			
IT Equipment (Incl. Software)	-	-	-	15.00%	-	-			
<b>Total</b>	<b>29534.85</b>	<b>-</b>	<b>29534.85</b>		<b>1560.18</b>	<b>1560.18</b>	<b>327.11</b>	<b>327.11</b>	<b>327.11</b>
<b>Average Gross Block (₹ in lakh)</b>					<b>29534.85</b>	<b>29534.85</b>	<b>29534.85</b>	<b>29534.85</b>	<b>29534.85</b>
<b>Weighted Average Rate of Depreciation</b>					<b>5.28%</b>	<b>5.28%</b>	<b>1.11%</b>	<b>1.11%</b>	<b>1.11%</b>

\*Since the asset has completed 12 years of life as on 31.3.2021, the remaining depreciable value of ₹7196.40 lakh as on 31.3.2021 has been spread across the balance useful life of 22 years in accordance with Regulation 33(5) of the 2019 Tariff Regulations. The annual depreciation from 2021-22 onwards is ₹327.11 lakh.

