

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 147/TT/2020

Coram:

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

Date of order: 03.08.2021

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 and revision of transmission tariff 2004-09 tariff period, 2009-14 tariff period and truing up of transmission tariff of 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff for 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2019 for Combined Asset consisting of **Asset-i**: 400 kV S/C Jalandhar-Amritsar line along with associated bays at Amritsar and Jalandhar, ICT-I along with associated bays at Amritsar Sub-station and 220 kV Verpal feeder bays I and II at Amritsar Sub-station; **Asset-ii**: 315 MVA 400/220 kV ICT-II at Gorakhpur S/S along with associated bays (includes 2 Number 220 kV Line Bays) and **Asset-iii**: LILO of Bawana- Bhiwani line along with associated bays at Bahadurgarh, 315 MVA ICT-I along with associated bays at Bahadurgarh Sub-station and 220 kV Nuna Majra Feeder Bays at Bahadurgarh Sub-station under Transmission System associated with System Strengthening Scheme (Formerly Tala Supplementary Scheme) in the Northern Region.

And in the matter of:

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

.....Petitioner

Versus

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,
Vidyut Bhawan, Vidyut Marg, Jaipur-302005
2. Ajmer Vidyut Vitran Nigam Ltd.,
132 kV, Gss Rvpnl Sub-Station Building,



Caligiri Road, Malviya Nagar, Jaipur-302017 (Rajasthan)

3. Jaipur Vidyut Vitran Nigam Ltd.,
132 kV, Gss Rvpnl Sub-Station Building,
Caligiri Road, Malviya Nagar, Jaipur-302017 (Rajasthan)
4. Jodhpur Vidyut Vitran Nigam Ltd.,
132 kV, Gss Rvpnl Sub-Station Building,
Caligiri Road, Malviya Nagar, Jaipur-302017 (Rajasthan)
5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla-171004
6. Punjab State Electricity Board,
The Mall, Patiala-147001
7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula (Haryana) 134109
8. Power Development Deptt.,
Govt. Of Jammu & Kashmir,
Mini Secretariat, Jammu
9. Uttar Pradesh Power Corporation Ltd.,
(Formerly Uttar Pradesh State Electricity Board),
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226001
10. Delhi Transco Ltd.,
Shakti Sadan, Kotla Road,
New Delhi-110002
11. BSES Yamuna Power Ltd.,
Bses Bhawan, Nehru Place,
New Delhi
12. BSES Rajdhani Power Ltd.,
Bses Bhawan, Nehru Place,
New Delhi
13. Tata Power Delhi Distribution Ltd.,
33 kV Sub-station Building, Hudson Lane,
Kingsway Camp,
North Delhi-110009



14. Chandigarh Administration,
Sector-9, Chandigarh

15. Uttarakhand Power Corporation Ltd.,
Urja Bhawan, Kanwali Road,
Dehradun

16. North Central Railway,
Allahabad

17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi-110002

...Respondent(s)

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

For Respondent: Shri Mohit Mudgal, Advocate, BYPL

ORDER

The instant petition has been filed by Power Grid Corporation of India Ltd., the Petitioner, for revision of transmission tariff for the 2004-09 and 2009-14 tariff periods; truing up of tariff for the period from 1.4.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (“the 2014 Tariff Regulations”); and for determination of tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (“the 2019 Tariff Regulations”) for the period from 1.4.2019 to 31.3.2024 in respect of the following transmission assets covered under System Strengthening Scheme (Formerly Tala Supplementary Scheme) in the Northern Region (hereinafter referred to as ‘the transmission project’):

Asset-i: 400 kV S/C Jalandhar-Amritsar line along with associated bays at Amritsar and Jalandhar, ICT-I along with associated bays at Amritsar Sub-station and 220 kV Verpal feeder bays I and II at Amritsar Sub-station;



Asset-ii: 315 MVA 400/220 kV ICT-II at Gorakhpur S/S along with associated bays (includes 2 number 220 kV Line Bays); and

Asset-iii: LILO of Bawana-Bhiwani line along with associated bays at Bahadurgarh, 315 MVA ICT-I along with associated bays at Bahadurgarh Sub-station and 220 kV Nuna Majra Feeder Bays at Bahadurgarh Sub-station.

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 regulations 2014 and tariff regulation’19 as per para 9.0 & 10 above for respective block.

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

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

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

6) Allow the petitioner to 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 recover FERV on the foreign loans deployed as provided under clause 68 of the Tariff Regulations,2019



8) 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.

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

10) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is withdrawn from negative list at any time 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 Board of Directors of the Petitioner Company vide Memorandum dated 25.2.2003 at an estimated cost of ₹14329 lakh including IDC of ₹1761 lakh. Subsequently, the approval for Revised Cost Estimate (RCE) was accorded by Board of Directors of the Petitioner Company vide Memorandum dated 7.12.2007 at an estimated cost of ₹15408 lakh which includes IDC of ₹1232 lakh.

b. The scope of the work as per IA is as follows:

Transmission Lines:

- (i) 400 kV S/C Jalandhar-Amritsar Transmission Line
- (ii) LILO of 400 kV Bhiwani-Bawana line at Bahadurgarh

Sub-station:

400 kV bays:

- (i) 1 number 400 kV Amritsar bay
- (ii) 1 number 400 kV Jalandhar line bay
- (iii) 400 kV ICT-1 bay at Amritsar
- (iv) 400 kV ICT-II bay at Gorakhpur
- (v) 400 kV Bahadurgarh-Bhiwani line bay
- (vi) 400 kV Bahadurgarh-Bhawana line bay
- (vii) 400 kv ICT –I bay at Bahadurgarh
- (viii) 315 MVA ICT-1 at Amritsar



- (ix) 315 MVA ICT-1 at Bahadurgarh
- (x) 315 MVA ICT-1 at Gorakhpur

220 kV bays:

- (i) 1 number 220 kV ICT-1 bay at Amritsar
- (ii) 2 number of 220 kV line bays at Verpal-I & II
- (iii) 1 number 220 kV ICT-II bay at Gorakhpur
- (iv) 2 number of 220 kV line bays at Gorakhpur
- (v) 1 number 220 kV ICT bay at Bahadurgarh
- (vi) 2 number of line bays at Nuna Majra

c. The complete scope of the work as per I.A is covered in the instant petition.

d. The transmission tariff was allowed from COD to 31.3.2009 for Asset-i, Asset-ii and Asset-iii *vide* order dated 19.5.2008 in Petition No. 133/2007 and the same was revised due to Additional Capital Expenditure (ACE) *vide* order dated 23.7.2009 in Petition No. 74/2009 and *vide* order dated 16.3.2010 in Petition No. 272/2009. The transmission tariff for the period from 1.4.2009 to 31.3.2014 was allowed for the combined asset comprising of Assets-i, Asset-ii and Asset-iii *vide* order dated 22.6.2011 in Petition No. 244/2010. The tariff for the 2009-14 period was trued-up and tariff for the period from 1.4.2014 to 31.3.2019 was allowed *vide* order dated 14.3.2016 in Petition No. 496/TT/2014.

e. The Petitioner has sought revision of transmission tariff approved for the 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 13.6.2007 in Appeal No. 81/2005 and Appeal No. 139/2006 respectively. The Petitioner has sought consequential revision of tariff allowed for the 2009-14 tariff block and truing up of tariff of 2014-19 tariff block and determination of tariff for 2019-24 tariff block for transmission project.

f. APTEL in 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:

Sr. No.	Issue	APTEL's decision/direction
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 No. 94 of 2005 and Appeal No. 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

g. 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 decisions of APTEL are given in the following table:

Sr. No.	Issue	APTEL's decision/direction
I	Computation of outstanding loan at the beginning of the tariff period i.e. 1.4.2004	The Commission is required to recalculate the loan outstanding as on 31.3.2004 based on loan repayment on normative basis.
II	Consequence of refinance of Loan	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 de-capitalisation 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 Appeals 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.

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

i. Based on APTEL's judgments dated 22.1.2007 in Appeal No. 81 of 2005 and 13.6.2007 in Appeal No. 139 of 2007 and the Commission's order dated 18.1.2019 in Petition No. 121/2007, the Petitioner had sought re-determination 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 pendency of Appeals before the Hon'ble Supreme Court, adjourned the said petition sine die and directed that the same be revived after the disposal of the Civil Appeals by the Hon'ble Supreme Court.

j. The Hon'ble Supreme Court vide order dated 10.4.2018, dismissed the said Civil Appeals. Thus, the said order of the APTEL has attained finality.



k. Consequent to the Hon'ble Supreme Court's order dated 10.4.2018, the 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 of the petitions for the 2014-19 tariff period in respect of concerned transmission assets.

l. Accordingly, the Petitioner has sought revision of transmission tariff approved for the 2004-09 tariff period on account of change in IoL and IWC to the extent of revision in IoL and in Maintenance Spares in terms of the APTEL's judgements dated 22.1.2007 and 13.6.2007.

m. The instant petition was heard on 8.6.2021 and in view of APTEL's judgments dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters along with order dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters and the order of Hon'ble Supreme Court dated 10.4.2018, transmission tariff is being revised. Although, period-wise transmission tariff is being re-worked based on the Tariff Regulations applicable for the respective tariff periods, suitable assumptions at certain places, if required, are being applied which are indicated.

n. The transmission assets were put under commercial operation as follows:

Asset	COD
Asset-i	1.5.2006
Asset-ii	1.8.2006
Asset-iii	1.11.2006
Combined Asset	1.11.2006

o. The admitted capital cost of ₹7133.00 lakh for Asset-i, ₹1051.09 lakh for Asset-ii and ₹5148.13 lakh for Asset-iii as on COD has been allowed by the Commission *vide* its order dated 19.5.2008 in Petition No. 133/2007. The tariff from COD was worked out based on the admitted capital cost as stated above. Accordingly, tariff is being revised for the 2004-09 and 2009-14 tariff periods in terms of the APTEL's judgement dated 22.1.2007 and 13.6.2007.



p. Asset-i, Asset-ii and Asset-iii were combined for the determination of tariff for the period from 1.4.2009 to 31.3.2014 *vide* order dated 22.6.2011 in Petition No. 244/2010.

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

5. The Petitioner has served the petition on the Respondents and notice of this petition has been published in the newspaper 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 newspaper by the Petitioner.

6. This order is issued considering the submissions made by the Petitioner dated 3.1.2020, 23.9.2020 and 1.6.2021. During the hearing learned counsel for the Respondent, BYPL, sought a week's time to file reply in the matter. The Commission permitted the Respondent to file reply by 15.6.2021. However, the Respondent did not file it reply by that date and did so only subsequently on 18.6.2021. Accordingly, the same is not considered in the instant order.

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

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

Re: Interest on Loan (IoL)

9. APTEL while dealing with the issue of computation of IoL, in judgement dated 22.1.2007 in Appeal No.81 of 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 judgement dated 14.11.2006 in Appeal No. 94 of 2005 and Appeal No. 96 of 2005. APTEL vide its judgement dated 14.11.2006 in Appeal No. 94 of 2005 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 the judgement of APTEL, interest allowed for the 2004-09 period are to be revised on the basis of the normative debt repayment methodology.

Re: Additional Capital Expenditure (ACE)

10. APTEL in its judgement 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 judgement of APTEL, maintenance spares to be considered for computation of working capital for the 2004-09 period are also required to be revised taking into consideration ACE after COD.

Re: Depreciation

11. As regards depreciation, APTEL in its judgement dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters observed that depreciation is an expense and it cannot be deployed for deemed repayment of loan and accordingly directed the Commission to compute the outstanding loan afresh. Accordingly, the outstanding loan allowed for the transmission asset for the 2004-09 period is revised in the instant order.

12. In view of the above directions of APTEL, the outstanding loan allowed for the transmission assets for the 2004-09 periods is revised in the instant order.

13. The revision of transmission tariff allowed for the 2004-09 tariff period necessitates the revision of transmission tariff allowed for the 2009-14 tariff period,



which is also being done in the present order. The implementation of the directions of APTEL in judgments dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters was kept pending in case of the Petitioner awaiting the outcome of the Civil Appeals filed before the Hon'ble Supreme Court. Taking into consideration the facts of the case and keeping in view the interest of the consumers, we are of the view that the beneficiaries should not be burdened with the carrying cost for the difference in the tariff allowed earlier and allowed in the instant order for the 2004-09 and 2009-14 tariff periods. Therefore, we direct that the Petitioner will neither claim nor pay any carrying cost from or to the beneficiaries for the difference, if any, in the tariff allowed earlier and the tariff being allowed in the instant order. Further, the said difference in tariff shall be recovered/ paid over a period of six months from the date of issue of this order.

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

2004-09 Period

14. Transmission tariff for Asset-i, Asset-ii and Asset-iii was determined *vide* order dated 19.5.2008 in Petition No. 133/2007, and revised due to ACE *vide* order dated 23.7.2009 in Petition No. 74/2009 and *vide* order dated 16.3.2010 in Petition No. 272/2009 for the 2004-09 period. The capital cost considered for determination of tariff in respect of these assets is as under:

Asset-i

Particulars	(₹ in lakh)		
	2006-07 (Pro-rata 11 months)	2007-08	2008-09
Depreciation	197.12	227.36	234.97
Interest on Loan	389.19	444.27	446.38
Return on Equity	283.93	329.92	343.42
Advance against Depreciation	0.00	0.00	0.00
Interest on Working Capital	26.66	30.60	31.69



O&M Expenses	180.77	205.01	213.28
Total	1077.67	1237.15	1269.75

Asset-ii

Particulars	(₹ in lakh)		
	2006-07 (Pro-rata 8 months)	2007-08	2008-09
Depreciation	25.64	41.49	43.90
Interest on Loan	39.93	62.81	63.87
Return on Equity	29.91	48.40	51.22
Advance against Depreciation	0.00	0.00	0.00
Interest on Working Capital	4.51	7.09	7.40
O&M Expenses	81.12	126.52	131.60
Total	181.11	286.31	297.99

Asset-iii

Particulars	(₹ in lakh)		
	2006-07 (Pro-rata 5 months)	2007-08	2008-09
Depreciation	67.81	168.98	174.09
Interest on Loan	132.56	322.59	321.62
Return on Equity	91.84	229.95	238.73
Advance against Depreciation	0.00	0.00	0.00
Interest on Working Capital	9.39	23.22	23.98
O&M Expenses	79.57	198.55	206.54
Total	381.18	943.28	964.96

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

Asset-i

Particulars	(₹ in lakh)		
	2006-07 (Pro-rata 11 months)	2007-08	2008-09
Depreciation	197.12	227.36	234.97
Interest on Loan	396.56	470.69	492.81
Return on Equity	283.93	329.92	343.42
Advance against Depreciation	0.00	0.00	0.00
Interest on Working Capital	27.02	31.88	33.72
O&M Expenses	180.77	205.01	213.28
Total	1085.40	1264.86	1318.20

Asset-ii

Particulars	(₹ in lakh)		
	2006-07 (Pro-rata 8 months)	2007-08	2008-09
Depreciation	25.64	41.49	43.90
Interest on Loan	40.63	66.64	71.28



Return on Equity	29.91	48.40	51.22
Advance against Depreciation	0.00	0.00	0.00
Interest on Working Capital	4.53	7.29	7.74
O&M Expenses	81.12	126.52	131.60
Total	181.83	290.33	305.74

Asset-iii

Particulars	(₹ in lakh)		
	2006-07 (Pro-rata 5 months)	2007-08	2008-09
Depreciation	67.81	168.98	174.09
Interest on Loan	133.79	336.10	350.14
Return on Equity	91.84	229.95	238.73
Advance against Depreciation	0.00	0.00	0.00
Interest on Working Capital	9.45	24.00	25.28
O&M Expenses	79.57	198.55	206.54
Total	382.46	957.58	994.78

16. We have considered the Petitioner's claim. The tariff is allowed for the transmission assets considering the following facts of the matter:

- a) The admitted capital cost of ₹7133.00 lakh for Asset-i, ₹1051.09 lakh for Asset-ii and ₹5148.13 lakh for Asset-iii as on COD allowed by the Commission vide order dated 19.5.2008 in Petition No. 133/2007.
- b) Weighted Average Rate of Interest on actual loan adopted from order dated 19.5.2008 in Petition No. 133/2007, order dated 23.7.2009 in Petition No. 74/2009 and order dated 16.3.2010 in Petition No. 272/2009.
- c) With respect to calculation of IoL for 2004-09 tariff period, during the year 2006-07, 2007-08 and 2008-09 moratorium period was availed by the Petitioner for Asset-i, Asset-ii and Asset-iii and no actual repayment of loan was done. Earlier, the Commission vide order dated 19.5.2008 in Petition No. 133/2007, vide order dated 23.7.2009 in Petition No. 74/2009 and vide order dated 16.3.2010 in Petition No. 272/2009 considered depreciation provided during 2006-07, 2007-08 and 2008-09 as loan repayment. Therefore, depreciation provided during 2006-07, 2007-08 and 2008-09 has been considered as loan repayment in accordance with Regulation 56(i)(f) of the 2004 Tariff Regulations. The relevant extract of the Regulation 56(i)(f) of the 2004 Tariff Regulations is reproduced below:



“56 (i) Interest on Loan Capital

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

d) Weighted Average Rate of Depreciation, Rate of Interest for Working Capital and O & M Expenses as per order dated 19.5.2008 in Petition No. 133/2007, order dated 23.7.2009 in Petition No. 74/2009 and order dated 16.3.2010 in Petition No. 272/2009.

e) Actual ACE of ₹483.75 lakh for Asset-i, ₹34.33 lakh for Asset-ii and ₹200.31 lakh for Asset-iii in 2006-07 that had been allowed by the Commission *vide* order dated 19.5.2008 in Petition No. 133/2007. Actual ACE of ₹477.03 lakh for Asset-i, ₹134.09 lakh for Asset-ii and ₹252.94 lakh for Asset-iii in 2007-08 that had been allowed by the Commission *vide* order dated 23.7.2009 in Petition No. 74/2009. Actual ACE of ₹165.91 lakh for Asset-i and ₹165.35 lakh for Asset-iii in 2008-09 that had been allowed by the Commission *vide* order dated 16.3.2010 in Petition No. 272/2009.

17. In view of the above, the revised transmission charges allowed for Asset-i, Asset-ii and Asset-iii for the 2004-09 tariff period is as follows:

Asset-i

Particulars	(₹ in lakh)		
	2006-07 (Pro-rata 11 months)	2007-08	2008-09
Depreciation	197.12	227.35	234.97
Interest on Loan	389.19	444.27	446.38
Return on Equity	283.93	329.92	343.42
Advance against Depreciation	0.00	0.00	0.00
Interest on Working Capital	26.89	31.38	32.87
O&M Expenses	180.77	205.01	213.28
Total	1077.90	1237.94	1270.93

Asset-ii

Particulars	(₹ in lakh)		
	2006-07 (Pro-rata 8 months)	2007-08	2008-09
Depreciation	25.64	41.49	43.90
Interest on Loan	39.93	62.81	63.87
Return on Equity	29.91	48.40	51.22
Advance against Depreciation	0.00	0.00	0.00
Interest on Working Capital	4.52	7.20	7.59



O&M Expenses	81.12	126.52	131.60
Total	181.12	286.42	298.18

Asset-iii

(₹ in lakh)			
Particulars	2006-07 (Pro-rata 5 months)	2007-08	2008-09
Depreciation	67.81	168.98	174.09
Interest on Loan	132.56	322.59	321.62
Return on Equity	91.84	229.95	238.73
Advance against Depreciation	0.00	0.00	0.00
Interest on Working Capital	9.43	23.57	24.58
O&M Expenses	79.57	198.55	206.54
Total	381.21	943.64	965.56

18. AFC allowed earlier for 2004-09 period *vide* order dated 19.5.2008 in Petition No. 133/2007, order dated 23.7.2009 in Petition No. 74/2009 and order dated 16.3.2010 in Petition No. 272/2009, the revised AFC claimed in the instant petition and AFC approved in the instant order is as follows:

Asset-i

(₹ in lakh)			
Particulars	2006-07 (Pro-rata 11 months)	2007-08	2008-09
AFC allowed <i>vide</i> order dated 16.3.2010 in Petition No. 272/2009	1077.67	1237.15	1269.75
AFC claimed by the Petitioner in the instant petition	1085.40	1264.86	1318.20
AFC approved in the instant order	1077.90	1237.94	1270.93

Asset-ii

(₹ in lakh)			
Particulars	2006-07 (Pro-rata 8 months)	2007-08	2008-09
AFC allowed <i>vide</i> order dated 23.7.2009 in Petition No. 74/2009	181.11	286.31	297.99
AFC claimed by the Petitioner in the instant petition	181.83	290.33	305.74
AFC approved in the instant order	181.12	286.42	298.18



Asset-iii

(₹ in lakh)

Particulars	2006-07 (Pro-rata 5 months)	2007-08	2008-09
AFC allowed <i>vide</i> order dated 16.3.2010 in Petition No. 272/2009	381.18	943.28	964.96
AFC claimed by the Petitioner in the instant petition	382.46	957.58	994.78
AFC approved in the instant order	381.21	943.64	965.56

2009-14 Period

19. The Commission *vide* order dated 22.6.2011 in Petition No. 244/2010 had allowed the tariff for the Combined Asset for the 2009-14 period and *vide* order dated 14.3.2016 in Petition No. 496/TT/2014 had trued-up the transmission tariff for the 2009-14 tariff period as follows:

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	763.87	773.49	774.81	775.20	775.20
Interest on Loan	801.35	756.80	717.00	666.37	599.15
Return on Equity	863.54	914.83	941.30	957.05	968.58
Interest on Working Capital	87.09	89.52	91.47	93.09	94.39
O&M Expenses	729.07	770.79	814.92	861.49	910.75
Total	3244.91	3305.43	3339.50	3353.20	3348.07

20. The Petitioner has claimed the following revised transmission charges for the Combined Asset for the 2009-14 period in the instant petition:

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	763.87	773.49	774.81	775.20	775.20
Interest on Loan	903.95	859.62	819.94	769.37	702.21
Return on Equity	863.54	914.83	941.30	957.05	968.58
Interest on Working Capital	89.23	91.66	93.62	95.23	96.54
O&M Expenses	729.07	770.79	814.92	861.49	910.75
Total	3349.66	3410.39	3444.59	3458.34	3453.27

21. We have considered the Petitioner's claim. The tariff is allowed for the Combined Asset on the basis of the following:



- a) Admitted capital cost of ₹15245.93 lakh for Combined Asset as on 1.4.2009.
- b) Weighted Average Rate of Interest on actual loan derived/ adopted from order dated 14.3.2016 in Petition No. 496/TT/2014.
- c) Weighted Average Rate of Depreciation as per order dated 14.3.2016 in Petition No. 496/TT/2014.
- d) Actual ACE of ₹1217.74 lakh for Combined Asset that had been approved by the Commission *vide* order dated 14.3.2016 in Petition No. 496/TT/2014.

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

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	763.87	773.49	774.81	775.20	775.20
Interest on Loan	801.35	756.80	717.00	666.37	599.15
Return on Equity	863.54	914.83	941.30	957.05	968.58
Interest on Working Capital	87.09	89.52	91.47	93.09	94.39
O&M Expenses	729.07	770.79	814.92	861.49	910.75
Total	3244.92	3305.42	3339.51	3353.20	3348.07

23. AFC allowed earlier for 2009-14 period *vide* order dated 22.6.2011 in Petition No. 244/2010 and subsequently trued-up *vide* order dated 14.3.2016 in Petition No. 496/TT/2014, the revised AFC claimed in the instant petition and AFC approved in the instant order is given below:

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
AFC allowed <i>vide</i> order dated 14.3.2016 in Petition No. 496/TT/2014	3244.91	3305.43	3339.50	3353.20	3348.07
AFC claimed by the Petitioner in the instant petition	3349.66	3410.39	3444.59	3458.34	3453.27
AFC approved in the instant order	3244.92	3305.42	3339.51	3353.20	3348.07

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

24. The details of the transmission charges claimed by the Petitioner in respect of the Combined Asset is as follows:-



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	775.20	775.20	775.20	775.20	775.20
Interest on Loan	639.19	576.22	509.19	442.22	375.41
Return on Equity	972.86	980.90	980.41	980.41	983.04
Interest on Working Capital	101.26	101.53	101.57	101.66	101.88
O&M Expenses	838.26	866.12	894.90	924.56	955.25
Total	3326.77	3299.97	3261.27	3224.05	3190.78

25. The details of the Interest on Working Capital (IWC) claimed by the Petitioner in respect of the Combined Asset are as follows:

(₹ in lakh)

Particular	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	69.86	72.18	74.58	77.05	79.60
Maintenance Spares	125.74	129.92	134.24	138.68	143.29
Receivables	554.46	550.00	543.55	537.34	531.80
Total Working Capital	750.06	752.10	752.37	753.07	754.69
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	101.26	101.53	101.57	101.66	101.88

Capital Cost

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

27. The Commission *vide* order 14.3.2016 in Petition No. 496/TT/2014 had allowed capital cost as on 1.4.2014 of ₹16463.67 lakh and capital cost as on 1.4.2019 of ₹16641.49 lakh including projected ACE of ₹177.82 lakh for determination of tariff for the 2014-19 period for Combined Asset as follows:

(₹ in lakh)

Admitted <i>vide</i> order dated 14.3.2016 in Petition No. 496/TT/2014		ACE admitted during 2014-19 period	Admitted Capital Cost as on 31.03.2019
Name of Asset	Admitted Capital Cost as on 31.3.2014		
Combined Asset	16463.67	177.82	16641.49



28. The Petitioner has claimed the same capital cost as on 1.4.2014 of ₹16463.67 lakh for the Combined Asset and it has been considered for working out the trued-up tariff for 2014-19 tariff period.

Additional Capital Expenditure (ACE)

29. The Commission *vide* order dated 14.3.2016 in Petition No. 496/TT/2014 had allowed ACE of ₹177.82 lakh for Combined Asset for 2014-19 tariff period on account of court order for enhanced land compensation.

30. The Petitioner in the instant petition has claimed ACE of ₹121.06 lakh. The Petitioner has submitted that ACE claimed during 2014-15 for Combined Asset is beyond the cut-off date and is due to enhanced land payment on account of court order already admitted by the commission *vide* order dated 14.3.2016 in Petition No. 496/TT/2014 and is under Regulation 14(3)(i) of the 2014 Tariff Regulations. The Petitioner has claimed following ACE based on actual expenditure:

(₹ in lakh)		
Admitted Capital Cost as on 1.4.2014	ACE	Total Capital Cost claimed as on 31.3.2019
	2014-15	
16463.67	121.06	16584.73

31. The Petitioner *vide* affidavit dated 1.6.2021 has submitted the proof of payment of ₹121.06 lakh.

32. We have considered the submissions made by the Petitioner. ACE claimed by the Petitioner has been allowed under Regulation 14(3)(i) of the 2014 Tariff Regulations. Capital Cost allowed for the combined Asset from 1.4.2014 to 31.3.2019 is as follows:

(₹ in lakh)		
Admitted Capital Cost as on 1.4.2014	ACE	Total Capital Cost as on 31.3.2019
	2014-15	
16463.67	121.06	16584.73



Debt-Equity ratio

33. The debt-equity ratio has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations that provides that 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 debt-equity ratio considered for the purpose of determination of tariff of the 2014-19 tariff period has been considered for truing up of the tariff of the Combined Asset for the 2014-19 tariff period. The details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 of the Combined Asset is as follows:

Funding	Capital Cost as on 1.4.2014 (₹ in lakh)	(in %)	Total Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	11524.57	70.00	11609.31	70.00
Equity	4939.10	30.00	4975.42	30.00
Total	16463.67	100.00	16584.73	100.00

Depreciation

34. The Gross Block during the tariff period 2014-19 has been depreciated at weighted average of depreciation (WAROD). WAROD at Annexure-1 has been worked out after taking into account the depreciation rates of assets as specified in the 2014 Tariff Regulations and depreciation allowed is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation					
Opening Gross Block	16463.67	16584.73	16584.73	16584.73	16584.73
ACE	121.06	0.00	0.00	0.00	0.00
Closing Gross Block	16584.73	16584.73	16584.73	16584.73	16584.73
Average Gross Block	16524.20	16584.73	16584.73	16584.73	16584.73
Freehold Land	1221.02	1281.55	1281.55	1281.55	1281.55
Weighted Average Rate of Depreciation (WAROD) (in %)	4.69	4.67	4.67	4.67	4.67
Balance useful life of the asset (Year)	21	20	19	18	17
Lapsed Life of the asset (Year)	7	8	9	10	11



Depreciable Value	13772.86	13772.86	13772.86	13772.86	13772.86
Depreciation during the year	775.20	775.20	775.20	775.20	775.20
Cumulative Depreciation at the end of the year	5819.13	6594.34	7369.54	8144.74	8919.94
Aggregate Depreciable Value at the end of the year	7953.73	7178.53	6403.32	5628.12	4852.92

35. The details of depreciation allowed vide order dated 14.3.2016 in Petition No. 496/TT/2014, depreciation claimed by the Petitioner and as trued-up in the instant order is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 14.3.2016 in Petition No. 496/TT/2014	775.20	775.20	775.20	775.20	775.20
Claimed by the Petitioner in the instant petition	775.20	775.20	775.20	775.20	775.20
Approved after true-up in this order	775.20	775.20	775.20	775.20	775.20

Interest on Loan (IoL)

36. The Petitioner has claimed the weighted average rate of IoL, based on its actual loan portfolio and rate of interest. Accordingly, IoL has been calculated based on actual interest rate submitted by the Petitioner, in accordance with Regulation 26 of the 2014 Tariff Regulations. IoL allowed in respect of the Combined Asset is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Loan					
Gross Normative Loan	11524.57	11609.31	11609.31	11609.31	11609.31
Cumulative Repayments up to Previous Year	5043.93	5819.13	6594.34	7369.54	8144.74
Net Loan-Opening	6480.64	5790.18	5014.98	4239.77	3464.57
Additions	84.74	0.00	0.00	0.00	0.00
Repayment during the year	775.20	775.20	775.20	775.20	775.20
Net Loan-Closing	5790.18	5014.98	4239.77	3464.57	2689.37
Average Loan	6135.41	5402.58	4627.37	3852.17	3076.97
Weighted Average Rate of Interest on Loan (in %)	8.7359	8.7519	8.7659	8.7854	8.8158



Interest on Loan	535.98	472.83	405.63	338.43	271.26
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37. The details of IoL allowed *vide* order dated 14.3.2016 in Petition No. 496/TT/2014, IoL claimed by the Petitioner in the instant petition and as trued-up in the instant order is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 14.3.2016 in Petition No. 496/TT/2014	537.35	475.56	408.36	341.19	274.09
Claimed by the Petitioner in the instant petition	639.19	576.22	509.19	442.22	375.41
Approved after true-up in this order	535.98	472.83	405.63	338.43	271.26

Return on Equity (RoE)

38. The Petitioner has claimed RoE for the Combined Asset 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 MAT rates and has claimed following effective tax rates for the 2014-19 tariff period:

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

39. We have considered the submissions of the Petitioner. The Commission in order dated 27.4.2020 in Petition No.274/TT/2019 has arrived at the effective tax rate as follows:

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



40. The same MAT rates as above are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations which is as follows:

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

41. The Petitioner has claimed RoE for the 2014-19 period after grossing up the ROE of 15.50% with Effective Tax rates (based on MAT rates) each year in terms of Regulation 24 and Regulation 25 of the 2014 Tariff Regulations. RoE is trued-up on the basis of the MAT rate applicable in the respective years and is allowed for the Combined Asset as follows:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	4939.10	4975.42	4975.42	4975.42	4975.42
Additions	36.32	0.00	0.00	0.00	0.00
Closing Equity	4975.42	4975.42	4975.42	4975.42	4975.42
Average Equity	4957.26	4975.42	4975.42	4975.42	4975.42
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
Return on Equity	972.12	980.41	980.41	980.41	983.04

42. The details of RoE allowed vide order dated 14.3.2016 in Petition No. 496/TT/2014, RoE claimed by the Petitioner and as trued-up in the instant order is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 14.3.2016 in Petition No. 496/TT/2014	973.81	979.04	979.04	979.04	979.04



Claimed by the Petitioner in the instant petition	972.86	980.90	980.41	980.41	983.04
Approved after true-up in this order	972.12	980.41	980.41	980.41	983.04

Operation & Maintenance Expenses (O&M Expenses)

43. The O&M Expenses claimed by the Petitioner are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
7 Numbers 400 kV Sub-station Bays (Amritsar, Jalandhar, Gorakhpur and Bahadurgarh)					
9 Numbers 220 kV Sub-station Bays (Amritsar, Gorakhpur and Bahadurgarh)					
59.708 km S/C (Twin/Triple Conductor) (Jalandhar-Amritsar)					
17.189 km D/C (Twin/Triple Conductor) (Bhiwani-Bawana Line at Bahadurgarh)					
O&M Expenses claimed by the Petitioner in the instant petition	1359.77	1404.96	1451.65	1499.77	1549.54

44. We have considered the submissions of the Petitioner. 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 Combined Asset are as follows:

Element	Norms for 2014-15	Norms for 2015-16	Norms for 2016-17	Norms for 2017-18	Norms for 2018-19
S/C (Twin/Triple Conductor)	₹0.404 lakh/km	₹0.418 lakh/km	₹0.432 lakh/km	₹0.446 lakh/km	₹0.461 lakh/km
D/C (Twin/Triple Conductor)	₹0.707 lakh/km	₹0.731 lakh/km	₹0.755 lakh/km	₹0.780 lakh/km	₹0.806 lakh/km
400 kV Sub-station	₹60.30 lakh/ bay	₹ 62.30 lakh/ bay	₹64.37 lakh/ bay	₹66.51 lakh/ bay	₹68.71 lakh/ bay
220 kV Sub-station	₹42.21 lakh/ bay	₹43.61 lakh/ bay	₹45.06 lakh/ bay	₹46.55 lakh/ bay	₹48.10 lakh/ bay

45. The O&M Expenses allowed under Regulation 29(3) of the 2014 Tariff Regulations are as follows:

(₹ in lakh)					
Details	2014-15	2015-16	2016-17	2017-18	2018-19
7 Numbers 400 kV Sub-station Bays	422.10	436.10	450.59	465.57	480.97
9 Numbers 220 kV Sub-station Bays	379.89	392.49	405.54	418.95	432.90
59.708 km S/C (Twin/Triple Conductor)	24.12	24.96	25.79	26.63	27.53
17.189 km D/C (Twin/Triple Conductor)	12.15	12.57	12.98	13.41	13.85
Total	838.26	866.11	894.90	924.56	955.25



46. The details of O&M Expenses allowed *vide* order dated 14.3.2016 in Petition No. 496/TT/2014, O&M Expenses claimed by the Petitioner and as trued-up in the instant order is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 14.3.2016 in Petition No. 496/TT/2014	838.26	866.11	894.90	924.56	955.25
Claimed by the Petitioner in the instant petition	838.26	866.12	894.90	924.56	955.25
Approved after true-up in this order	838.26	866.11	894.90	924.56	955.25

Interest on Working Capital (IWC)

47. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and is allowed for the Combined Asset as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Working Capital					
O&M Expenses (O&M Expenses for 1 month)	69.86	72.18	74.58	77.05	79.60
Maintenance Spares (15% of O&M Expenses)	125.74	129.92	134.24	138.68	143.29
Receivables (Equivalent to 2 months of annual fixed cost)	536.74	532.28	525.89	519.65	514.04
Total Working Capital	732.33	734.38	734.70	735.38	736.93
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	98.87	99.14	99.18	99.28	99.49

48. The details of IWC allowed *vide* order dated 14.3.2016 in Petition No. 496/TT/2014, IWC claimed by the Petitioner and as trued-up in the instant order is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 14.3.2016 in Petition No. 496/TT/2014	98.94	99.17	99.22	99.31	99.46
Claimed by the Petitioner in the instant petition	101.26	101.53	101.57	101.66	101.88
Approved after true-up in this order	98.87	99.14	99.18	99.28	99.49



Approved Annual Fixed Charges for the 2014-19 Tariff Period

49. The trued-up annual fixed charges for the Combined Asset for the tariff period 2014-19 are summarised as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	775.20	775.20	775.20	775.20	775.20
Interest on Loan	535.98	472.83	405.63	338.43	271.26
Return on Equity	972.12	980.41	980.41	980.41	983.04
Interest on Working Capital	98.87	99.14	99.18	99.28	99.49
O & M Expenses	838.26	866.11	894.90	924.56	955.25
Total	3220.43	3193.69	3155.32	3117.87	3084.24

50. Accordingly, the Annual Transmission Charges as allowed vide order dated 14.3.2016 in Petition No. 496/TT/2014, as claimed by the Petitioner and as approved after truing up in the instant order is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 14.3.2016 in Petition No. 496/TT/2014	3223.56	3195.09	3156.72	3119.30	3083.05
Claimed by the Petitioner in the instant petition	3326.77	3299.97	3261.27	3224.05	3190.78
Approved after true-up in this order	3220.43	3193.69	3155.32	3117.87	3084.24

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

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	303.32	303.30	303.32	303.30	303.32
Interest on Loan	329.99	308.04	287.56	259.66	230.95
Return on Equity	934.48	934.48	934.48	934.48	934.48
Interest on Working Capital	59.09	60.12	61.10	62.03	62.84
O&M Expenses	815.00	843.94	873.40	904.36	935.11
Total	2441.88	2449.88	2459.86	2463.83	2466.70



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

Particular	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	67.92	70.33	72.78	75.36	77.93
Maintenance Spares	122.25	126.59	131.01	135.65	140.27
Receivables	300.23	302.04	303.27	303.76	303.28
Total Working Capital	490.40	498.96	507.06	514.77	521.48
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	59.09	60.12	61.10	62.03	62.84

Capital Cost

53. Regulation 19 of the 2019 Tariff Regulations provide 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.”

54. The Petitioner has claimed capital cost of ₹16584.73 lakh as on 31.3.2019 for the Combined Asset. The same capital cost has been admitted 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.

Additional Capital Expenditure (ACE)

55. Regulation 24 of the 2019 Tariff Regulations provides as follows:

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

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

(a) Undischarged liabilities recognized to be payable at a future date;

(b) Works deferred for execution;

(c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;

(d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;

(e) Change in law or compliance of any existing law; and

(f) Force Majeure events:

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

(2) The generating company or the transmission licensee, as the case may be shall submit the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution.



56. The Petitioner has not claimed any ACE for the 2019-24 tariff period. The Petitioner has submitted that in case of Asset-iii (which is now a part of the Combined Asset), a court case is pending adjudication in the Hon'ble High court of Punjab and Haryana for enhanced land compensation and a liability of approximately ₹781.00 lakh may be payable after the verdict. However, the same has not been considered by the Petitioner while calculating the tariff for the 2019-24 tariff period and the amount, if any, paid after the court's verdict will be claimed at the time of true-up of the 2019-24 tariff period.

57. We have considered the submissions of the Petitioner. The Petitioner has not claimed any ACE for the 2019-24 tariff period. However, the Petitioner has informed that a liability of approximately ₹781.00 lakh towards land compensation may arise after the court's verdict. As this liability of ₹781.00 lakh is yet to be decided by the Hon'ble High Court, the same is not considered at present and will be reviewed at the time of truing up based on the documentary evidence and proof of payment.

Debt-Equity ratio

58. 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.”

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

Funding	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	11609.31	70.00	11609.31	70.00
Equity	4975.42	30.00	4975.42	30.00
Total	16584.73	100.00	16584.73	100.00

Depreciation

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



"33. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element 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.”

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

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation					
Opening Gross Block	16584.73	16584.73	16584.73	16584.73	16584.73
ACE	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	16584.73	16584.73	16584.73	16584.73	16584.73
Average Gross Block	16584.73	16584.73	16584.73	16584.73	16584.73
Freehold Land	1281.55	1281.55	1281.55	1281.55	1281.55



Weighted average rate of Depreciation (WAROD) (in %)	1.83	1.83	1.83	1.83	1.83
Balance useful life at the beginning of the year (Year)	16	15	14	13	12
Lapsed life of the asset (Year)	12	13	14	15	16
Depreciable Value	13772.86	13772.86	13772.86	13772.86	13772.86
Remaining Depreciable Value at the beginning of the year	4852.92	4549.61	4246.30	3943.00	3639.69
Depreciation during the year	303.31	303.31	303.31	303.31	303.31
Cumulative Depreciation at the end of the year	9223.25	9526.56	9829.87	10133.17	10436.48
Remaining Depreciable Value at the end of the year	4549.61	4246.30	3943.00	3639.69	3336.38

Interest on Loan (IoL)

62. 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.”

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	11609.31	11609.31	11609.31	11609.31	11609.31
Cumulative Repayments up to Previous Year	8919.94	9223.25	9526.56	9829.87	10133.17
Net Loan-Opening	2689.37	2386.06	2082.75	1779.45	1476.14
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	303.31	303.31	303.31	303.31	303.31
Net Loan-Closing	2386.06	2082.75	1779.45	1476.14	1172.83
Average Loan	2537.71	2234.41	1931.10	1627.79	1324.49
Weighted Average Rate of Interest on Loan (in %)	8.8728	9.0182	9.2390	9.2434	9.2164
Interest on Loan	225.17	201.50	178.41	150.46	122.07

Return on Equity (RoE)

64. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provides as follows:

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

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

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



Provided further that:

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

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

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

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

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

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

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

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

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

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



Illustration-

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

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

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

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

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

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

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

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

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	4975.42	4975.42	4975.42	4975.42	4975.42
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	4975.42	4975.42	4975.42	4975.42	4975.42
Average Equity	4975.42	4975.42	4975.42	4975.42	4975.42
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity	934.48	934.48	934.48	934.48	934.48



Operation & Maintenance Expenses (O&M Expenses)

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
7 Numbers 400 kV Sub-station Bays	225.05	232.96	241.15	249.62	258.37
9 Numbers 220 kV Sub-station Bays	202.59	209.70	217.08	224.64	232.56
3 Numbers 315 MVA 400 kV Sub-station ICT	338.31	350.61	362.88	376.11	388.41
59.708 km Single Circuit (Twin Conductor)	30.03	31.11	32.18	33.32	34.51
17.189 km Double Circuit (Twin Conductor)	15.14	15.68	16.23	16.79	17.38
PLCC (2% of ₹193.86 lakh)	3.88	3.88	3.88	3.88	3.88
Total	815.00	843.94	873.40	904.36	935.11

67. We have considered the submissions of the Petitioner. The norms specified under Regulation 35(3)(a) of the 2019 Tariff Regulations provide that:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (₹ Lakh per MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (₹ Lakh per km)					
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
Norms for HVDC stations					
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.”

68. 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.

69. The O&M expenses has been worked out as per the norms specified in the 2019 Tariff Regulations and the same is as follows:

	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses					
7 Numbers of 400 kV Sub-station bays					
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
Total	225.05	232.96	241.15	249.62	258.37
9 Numbers of 220 kV Sub-station bays					



Norms (₹ lakh/Bay)	22.51	23.30	24.12	24.96	25.84
Total	202.59	209.70	217.08	224.64	232.56
59.708 km S/C (Twin/Triple Conductor)					
Norms (₹ lakh/km)	0.503	0.521	0.539	0.558	0.578
Total	30.03	31.11	32.18	33.32	34.51
17.189 km D/C (Twin/Triple Conductor)					
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
Total	15.14	15.68	16.23	16.79	17.38
3 Numbers of 315 MVA 400 kV Sub-station ICT					
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411
Total	338.31	350.60	362.88	376.11	388.40
Total O&M expenses allowed (₹ in lakh)	811.13	840.04	869.52	900.48	931.21

Interest on Working Capital (IWC)

70. Regulation 34(1)(c), Regulation 34(3), Regulation 34(4) and Regulation 3(7) of the 2019 Tariff Regulations specifies 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;”

71. 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%.

72. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (ROI) considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, ROI for 2020-21 has been considered as 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) whereas, ROI for 2021-22 onwards has been considered as 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest thereon allowed are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses (O&M Expenses for 1 month)	67.59	70.00	72.46	75.04	77.60
Maintenance Spares (15% of O&M Expenses)	121.67	126.01	130.43	135.07	139.68
Receivables (Equivalent to 45 days of annual transmission charges)	286.65	287.72	288.16	288.63	288.22
Total Working Capital	475.91	483.73	491.05	498.74	505.50
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital	57.35	54.42	51.56	52.37	53.08

Annual Fixed Charges of the 2019-24 Tariff Period

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	303.31	303.31	303.31	303.31	303.31
Interest on Loan	225.17	201.50	178.41	150.46	122.07



Return on Equity	934.48	934.48	934.48	934.48	934.48
Interest on Working Capital	57.35	54.42	51.56	52.37	53.08
O & M Expenses	811.13	840.04	869.52	900.48	931.21
Total	2331.43	2333.75	2337.28	2341.10	2344.15

Licence Fee & RLDC Fees and Charges

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

Goods and Services Tax

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

76. 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

77. The Petitioner has submitted that security expenses for the Combined Asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar



petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 shall be filed on a yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any, between the estimated security expenses and actual security expenses as per the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

78. 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. The Commission observes that the Petitioner has already filed the 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

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

Sharing of Transmission Charges

80. During the tariff periods 2004-09 and 2009-14 (upto to 30.6.2011), the transmission charges for inter-State transmission systems were being shared in accordance with the tariff regulations for the respective tariff periods. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission system was governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010. With effect from 1.11.2020, sharing of



transmission charges is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 (in short, “the 2020 Sharing Regulations”). Accordingly, the liabilities of the DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and shall be recovered from the concerned DICs through Bill 2 under Regulation 15(2) (b) of the 2020 Sharing Regulations. For subsequent period, the billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

81. To summarise:

a. The revised AFC approved for the transmission assets for 2004-09 period are as follows:

(₹ in lakh)

Asset	2006-07	2007-08	2008-09
Asset-i	1077.90	1237.94	1270.93
Asset-ii	181.12	286.42	298.18
Asset-iii	381.21	943.64	965.56

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

(₹ in lakh)

Particulars	2009-10	2010-11	2012-13	2013-14	2014-15
AFC	3244.92	3305.42	3339.51	3353.20	3348.07

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	3220.43	3193.69	3155.32	3117.87	3084.24

d. The AFC allowed for the Combined Asset for the 2019-24 tariff period in the instant order are as follows:



					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	2331.43	2333.75	2337.28	2341.10	2344.15

82. The Annexure-1 given hereinafter shall form part of the order.

83. This order disposes of Petition No. 147/TT/2020 in terms of the above findings and discussions.

sd/-
(Pravas Kumar Singh)
Member

sd/-
(I.S. Jha)
Member

sd/-
(P. K. Pujari)
Chairperson



ANNEXURE-1

2014-19 Capital Expenditure	Admitted Capital Cost as on COD (₹ in lakh)	ACE	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15			2014-15	2015-16	2016-17	2017-18	2018-19
Land - Freehold	1160.49	121.06	1281.55	0.00%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	1795.94	0.00	1795.94	3.34%	59.98	59.98	59.98	59.98	59.98
Transmission Line	5127.67	0.00	5127.67	5.28%	270.74	270.74	270.74	270.74	270.74
Sub Station	8185.71	0.00	8185.71	5.28%	432.21	432.21	432.21	432.21	432.21
PLCC	193.86	0.00	193.86	6.33%	12.27	12.27	12.27	12.27	12.27
Total	16463.67	121.06	16584.73	Total	775.20	775.20	775.20	775.20	775.20
Average Gross Block (₹ in lakh)					16524.20	16584.73	16584.73	16584.73	16584.73
Weighted Average Rate of Depreciation					4.69%	4.67%	4.67%	4.67%	4.67%

