

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 353/TT/2019

Coram:

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

Date of Order: 25.01.2021

In the matter of

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 and revision of Transmission Tariff for 2001-04 tariff block, 2004-09 tariff block, 2009-14 tariff block 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 **Asset-A:** 220 kV Allahabad-Rewa Road D/C Transmission Line Ckt-1, **Asset-B:** 220 kV Allahabad-Rewa Road D/C Transmission Line Ckt-II, **Asset-C:** LILO of 220 kV Modipuram Nara Transmission Line, **Asset-D:** LILO of 220 kV Modipuram-Simbholi Transmission Line, **Asset-E:** 220 kV Allahabad-Phulpur S/C Transmission Line and **Asset-F:** 220 kV S/C Meerut-Shatabdinagar Transmission Line under transmission system associated with 220 kV System Strengthening Scheme in UP in Northern Region.

And in the matter of

Power Grid Corporation of India Limited
"Saudamini", Plot No.2,
Sector-29, Gurgaon -122 001

.... **Petitioner**

Versus

1. Uttar Pradesh Power Corporation Ltd.
(Formerly Uttar Pradesh State Electricity Board)
Shakti Bhawan, 14, Ashok Marg,
Lucknow - 226 001

... **Respondent**

Parties present:

For Petitioner: Shri S. S. Raju, PGCIL
Shri Zafrul Hasan, PGCIL
Shri A. K. Verma, PGCIL
Shri V. P. Rastogi, PGCIL



For Respondent: None

ORDER

The present Petition has been filed by Power Grid Corporation of India Ltd. (“the Petitioner”) for revision of Transmission Tariff for 2001-04, 2004-09 and 2009-14 Tariff Periods; truing up of the tariff of the 2014-19 Tariff Period under Regulation 8 of 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 2019-24 Tariff Period under Regulation 8 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) of transmission system associated with “220 kV System Strengthening Scheme in UP” in Northern Region (hereinafter referred as “the transmission scheme”) in respect of the following assets:

Asset-A: 220 kV Allahabad-Rewa Road D/C Transmission Line Ckt-1;

Asset-B: 220 kV Allahabad-Rewa Road D/C Transmission Line Ckt-II;

Asset-C: LILO of 220 kV Modipuram Nara Transmission Line;

Asset-D: LILO of 220 kV Modipuram-Simbholi Transmission Line;

Asset-E: 220 kV Allahabad-Phulpur S/C Transmission Line; and

Asset-F: 220 kV S/C Meerut-Shatabdinagar Transmission Line.

2. The Petitioner has made the following prayers:

- “1) Approve the revised Transmission Tariff for 2001-04 block, 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 the tariff block 2014-19 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 under clause 25 of the Tariff*



Regulations 2014 and Tariff Regulations 2019, as per para 9.0 & 10 above for respective block.

Further, it is submitted that deferred tax liability before 1.4.2009 shall be recoverable from the beneficiaries or long term customers/ DIC as the case may be, as and when the same is materialised as per regulation 49 of 2014 and regulation 67 of 2019 tariff regulation. The Petitioner may be allowed 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 the Commission for claiming the overall security expenses and consequential IOWC on that security expenses.*
- 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 the 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 for the transmission scheme was accorded by the Board of Directors of the Petitioner as per Memorandum dated 14.1.2002 at an estimated cost of ₹2257 lakh, including IDC of ₹107 lakh, based on 3rd quarter 2001 price level. Subsequently, because of changes in the scope of work, the Board of Directors of the Petitioner approved the Revised Cost Estimate (RCE) at an estimated cost of ₹2604 lakh, including IDC of ₹197 lakh, based on 4th quarter 2004 price level as per Memorandum dated 17.10.2005.

b. The scope of work under the transmission scheme consists of following elements:



- (i) Asset-A: 220 kV Allahabad-Rewa Road D/C Transmission Line Ckt-1,
- (ii) Asset-B: 220 kV Allahabad-Rewa Road D/C Transmission Line Ckt-II,
- (iii) Asset-C: LILO of 220 kV Modipuram – Nara Transmission Line,
- (iv) Asset-D: LILO of 220 kV Modipuram-Simbholi Transmission Line,
- (v) Asset-E: 220 kV Allahabad-Phulpur S/C Transmission Line and
- (vi) Asset-F: 220 kV S/C Meerut-Shatabdinagar Transmission Line

c. The Commission determined the tariff of the above assets individually as per their respective CODs up to the 2004-09 tariff period. Thereafter, Asset-A, Asset-B, Asset-C, Asset-D and Asset-E were combined as Asset-I while Asset-F was considered as Asset-II while determining the transmission charges for 2009-14 tariff period vide order dated 14.12.2010 in Petition No.173/2010. Later, all the above assets of the transmission scheme were combined in the 2014-19 tariff period vide order dated 29.2.2016 in Petition No. 181/TT/2014.

d. Transmission tariff for 2001-04 tariff period was determined vide order dated 2.9.2005 in Petition No. 193/2004; for the period from 1.4.2004 to 31.3.2009 in orders dated 9.5.2006, 19.9.2006, 9.3.2007 in Petition No. 133/2005, order dated 26.10.2006 in Petition No. 130/2005, order dated 17.7.2007 in Petition no. 10/2007 and order dated 8.6.2009 in Petition No.31/2009; and for the period from 1.4.2009 to 31.3.2014 vide order dated 14.12.2010 in Petition No.173/2010. The tariff for the 2009-14 period was trued up and tariff for the period from 1.4.2014 to 31.3.2019 was determined vide order dated 29.2.2016 in Petition No.181/TT/2014.

e. The Petitioner has sought revision of transmission tariff approved for the 2001-04 and 2004-09 tariff periods on account of change in Interest on Loan (IOL) and Interest on Working Capital (IWC) to the extent of revision in IOL and in maintenance spares in terms of the Appellate Tribunal for Electricity (APTEL) judgment dated 22.1.2007 and 13.6.2007 in Appeal No. 81/2005 and 139/2006 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.

f. APTEL, vide judgements dated 22.1.2007 in Appeal No. 81/2005 and other related Appeals, and judgement dated 13.6.2007 in Appeal No. 139/2006 pertaining to generating stations of NTPC decided on, mainly, the following issues:-

- (a) Computation of interest on loan
- (b) Consequences of refinancing of loan
- (c) Depreciation as deemed repayment



- (d) Admissibility of depreciation up to 90% of the value of the assets
- (e) Consideration of maintenance of spares for working capital
- (f) Depreciation of assets.

g. The Commission and certain beneficiaries of generating stations of NTPC filed Appeals against 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.

h. The Petitioner based on the APTEL's judgments dated 22.1.2007 and 13.6.2007, sought re-determination of tariff of the transmission assets for the tariff periods 2001-04 and 2004-09 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 to revive the same after the disposal of the Civil Appeals by the Hon'ble Supreme Court.

i. The Hon'ble Supreme Court dismissed the said Civil Appeals filed against APTEL's said judgments vide its judgment dated 10.4.2018.

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

k. The instant Petition was heard on 29.6.2020 and in view of APTEL's judgments dated 22.1.2007 and 13.6.2007 and the judgement of Hon'ble Supreme Court dated 10.4.2018, tariff is being revised. Although, period-wise tariff is being reworked out based on the Tariff Regulations applicable for the respective tariff periods, suitable assumptions at certain places have been applied.

l. Various assets of the transmission scheme were put under commercial operation as under:

Name of the Asset	COD (Actual)
Asset-(a): 220 kV Allahabad-Rewa Road D/C Transmission Line Ckt-1	1.1.2003
Asset-(b): 220 kV Allahabad-Rewa Road D/C Transmission Line Ckt-II	1.8.2003



Asset-(c): LILO of 220 kV Modipuram – Nara Transmission Line	1.4.2003
Asset-(d): LILO of 220 kV Modipuram-Simbholi Transmission Line	1.7.2003
Asset-(e): 220 kV Allahabad-Phulpur S/C Transmission Line	1.6.2004
Asset-(f): 220 kV S/C Meerut-Shatabdinagar Transmission Line	1.1.2006

m. Accordingly, tariff is being revised for the 2001-04, 2004-09, 2009-14 tariff periods in terms of APTEL's judgement dated 22.1.2007 and 13.6.2007.

4. Further, as provided under Regulation 8(1) of the 2014 Tariff Regulations, the tariff allowed for the period from 1.4.2014 to 31.3.2019 is being trued-up and the tariff for the 2019-24 period is being determined under Regulation 8 of the 2019 Tariff Regulations.

5. The respondent is Uttar Pradesh Power Corporation Ltd (UPPCL), which is procuring transmission service from the Petitioner.

6. The Petitioner has served the Petition on the respondent and notice of this application has been published in newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments/ objections have been received from the public in response to the notice in newspaper. Reply to the Petition has been filed by UPPCL, vide affidavit dated 21.11.2019 and the Petitioner vide its affidavit dated 29.6.2020 filed its rejoinder to the reply of UPPCL.

7. This order has been issued after considering the main Petition dated 19.8.2019 and Petitioner's affidavits dated 29.6.2020 and 10.7.2020 and reply of UPPCL dated 21.11.2019.

8. The matter was heard on 29.6.2020 and the Commission reserved the order in the Petition.

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



10. The Petitioner has sought revision in tariff for 2001-04 and 2004-09 periods on the issues of computation of the Interest on Loan, consideration of maintenance spares for working capital and depreciation as deemed repayment allowed for the tariff periods 2001-04 and 2004-09 on the basis of the judgements of APTEL dated 22.1.2007 and 13.6.2007 in Appeal No.81 of 2005 and in Appeal No.139/2006 respectively. APTEL while dealing with the issue of computation of Interest on Loan in judgement dated 22.1.2007 observed that interest on loan 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 Nos. 94 and 96 of 2005. APTEL in its judgement dated 14.11.2006 set aside the Commission's methodology of computation of loan on the actual repayment basis or normative repayment whichever is higher. The relevant portions of the judgement dated 14.11.2006 is as follows:

"12. We have heard the arguments of the Senior Counsel(s) of appellant and respondents. We notice that the appellant has not challenged the formula for computing the annual repayment amount as provided in Appeal No. 96 of 2005 & IA No.117 of 2006 in Appeal No. 94 of 2005 para-22 of the impugned order and has only challenged the provisions at para 23 specifying that the amount of annual repayment for calculation of interest on loan is chosen higher of the normative debt and actual debt.

13. As mentioned earlier the servicing of the capital (equity or debt) is financed by the recovery of interest on debt capital and through earning of return on equity capital. The actual loan repayment has been normalized to 50% of the total capital by the formula in para 22 of the impugned order given in para 11 above. Once it has been decided and agreed that the financing plan would be based on normative debt-equity ratio of 50:50 and not the actual debt-equity ratio, the same normative basis should be adopted for recovery of cost of servicing the capital.

14. In the instant case since the normative debt-equity ratio of 50:50 has been adopted in the financing plan, the loan repayment should be computed based on normative debt. This is to ensure that whatever normative debt has been considered, tariff should ensure the recovery of the same normative debt and interest thereon.

18. In its Tariff Regulation of 2004 the Central Commission perhaps recognizing the aforesaid anomaly has dispensed with the practice of adopting higher of actual or normative repayment and has corrected the method of determination of quantum of debt repayment only on the basis of the normative debt with effect from 01.04.2004

19. In view of the above, the Central Commission is required to adopt normative debt repayment methodology for working out the interest on loan liability for the period 01.04.1998 to 31.03.2001."



11. In view of the above, the interest allowed for the 2001-04 and 2004-09 tariff periods is revised on the basis of the normative debt repayment methodology.

12. APTEL in judgement dated 13.6.2007 in Appeal No.139 of 2006 and others held that additional capitalisation after the date of commercial operation should also be considered for computation of maintenance spares as under:-

“Analysis and Decision

We are not inclined to agree with the contention of the respondents that escalation of 6% will take care of the additional capitalization. Escalation is meant to factor inflation and is allowed as per CERC Regulations whether or not additional capitalization takes place. Question before us is that: can the historical cost be frozen with the Commissioning of the station. It is quite normal and prudent to ensure earliest operation of the plant without necessarily 100% completion of plants and works, of course not at the cost of safety of the plant. Adding some of the plants and works after the commercial operation will reduce interest during construction. If technically it is possible to delay some of the plants or works, it is only prudent to do so. For example it is common to build redundancies in the plant at a little later stage. CERC’s own regulations rightly recognized additional capitalization. It is pertinent to set out excerpts pertaining to additional capitalization from CERC (Terms & Conditions of Tariff) Regulation, 2004 Clause 18 as below:-

“Additional capitalization (1) The following capital expenditure within the original scope of work actually incurred after the date of commercial operation and up to the cut off date may be admitted by the Commission, subject to prudence check:

(i) Deferred liabilities

(ii) Works deferred for execution

(iii) Procurement of initial capital spares in the original scope of work, subject to ceiling specified in regulation 17.

(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and

(v) On account of change in law.

Provided that original scope of work along with estimates of expenditure shall be submitted along with the application for provisional tariff.

Provided further that a list of the deferred liabilities and works deferred for execution shall be submitted along with the application for final tariff after the date of commercial operation of the generating station.”

It is clear from the abovementioned Clause 18 of the CERC Regulations that additional capitalization after the date of commercial operation is recognized as part of the capital expenditure. Historical cost does not literally mean that the cost on the date of the commercial operation. The term historical cost is used so as to distinguish it from ‘book value’ or ‘the replacement cost’. The cost of maintenance spares limited to 1% of the historical cost corresponds to the plant and equipment and installations which are required to be maintained. If the cost of additional equipment is not included in the historical cost, how spares for the additional equipment be procured for maintenance of the additional equipment. In this view of the matter, the CERC needs to examine afresh in the light of the aforesaid observations.”



13. In view of the above, maintenance spares to be considered for computation of working capital for the 2001-04 and 2004-09 tariff periods are also required to be revised taking into consideration the additional capitalisation after the date of commercial operation.

14. As regards depreciation, APTEL in its judgement dated 13.6.2007 in Appeal No.139 of 2006 observed that depreciation is an expense and it cannot be deployed for deemed repayment of loan and accordingly directed the Commission to compute the outstanding loan afresh. The relevant portion of the judgement is as under:-

“Analysis and Decision

In the orders of this Tribunal dated November 14, 2006 and January 24, 2007 it has been laid down that the computation of outstanding loan will be on normative basis only (instead of normative or actual whichever is higher). In view of this there is no question of any adjustment of the depreciation amount as deemed repayment of loan.

It is to be understood that the depreciation is an expense and not an item allowed for repayment of loan. If a corporation does not borrow, it would not mean that the corporation will not be allowed any depreciation. Depreciation is an expense it represents a decline in the value of asset because of use, wear or obsolescence. The Accounting Principles Board of USA defines depreciation as under:-

“The cost of a productive facility is one of the costs of the service it renders during its useful economic life. Generally accepted accounting principles require that this cost be spread over the expected useful life of the facility in such a way as to allocate it as equitably as possible to the periods during which services are obtained from the use of the facility. This procedure is known as depreciation accounting, a system of accounting which aims to distribute the cost or other basic value of tangible capital assets, less salvage (if any), over the estimated useful life of the unit (which may be a group of assets) in a systematic and rational manner. It is a process of allocation, not of valuation”

It is well established that the depreciation is an expense and therefore, it cannot be deployed for deemed repayment of loan. In this view of the matter the CERC shall need to make a fresh computation of outstanding loan in the light of the aforesaid observations.”

15. Accordingly, in view of the above directions of APTEL, the outstanding loan allowed for the instant assets for the 2001-04 and 2004-09 periods is revised in the instant order.

16. The revision of tariff allowed for 2001-04 and 2004-09 tariff periods necessitates consequential revision of tariff allowed for the 2009-14 period, which is also allowed in



the instant order. The implementation of the directions of APTEL in case of the Petitioner was kept pending waiting 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 period 2001-04, 2004-09 and 2009-14 tariff periods. Therefore, the Petitioner will not claim or pay any carrying cost from the beneficiaries for the difference, if any, in tariff allowed earlier and allowed in the instant order. Further, the 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 2001-04, 2004-09 and 2009-14 TARIFF PERIODS

2001-04 Tariff Period

17. The Commission in order dated 2.9.2005 in Petition No.193/2004 had approved the following transmission charges for the instant assets for the 2001-04 tariff period:

(₹ in lakh)

Particulars	Asset-(A)		Asset-(B)	Asset-(C)	Asset-(D)
	2002-03	2003-04	2003-04	2003-04	2003-04
Depreciation	0.71	2.83	0.85	2.58	5.10
Interest on Loan	1.86	7.55	2.09	7.02	13.73
Return on Equity	1.04	4.17	1.56	3.89	8.34
Advance Against	0.00	0.00	0.00	0.00	0.00
Interest on Working	0.11	0.43	0.15	0.43	0.91
O&M Expenses	0.40	1.70	1.14	2.78	8.08
Total	4.12	16.69	5.79	16.70	36.16

18. The Petitioner has claimed the following revised transmission charges for the instant transmission assets for the 2001-04 period in this Petition:

(₹ in lakh)

Particulars	Asset-(A)		Asset-(B)	Asset-(C)	Asset-(D)
	2002-03	2003-04	2003-04	2003-04	2003-04
Depreciation	0.71	2.83	0.85	2.58	5.10
Interest on Loan	1.86	7.55	2.09	7.02	13.73
Return on Equity	1.04	4.17	1.56	3.89	8.34
Advance Against	0.00	0.00	0.00	0.00	0.00
Interest on Working	0.11	0.44	0.15	0.44	0.92



O&M Expenses	0.40	1.70	1.14	2.78	8.08
Total	4.12	16.69	5.79	16.71	36.17

19. We have considered the Petitioner's claim. The tariff is allowed for the instant assets on basis of the following:-

- a) Admitted capital cost of ₹110.07 lakh, ₹49.65 lakh, ₹100.31 lakh and ₹264.53 lakh as on COD of Asset-A, Asset-B, Asset-C and Asset-D respectively as per order dated 2.9.2005 in Petition No.193/2004.
- b) Weighted Average Rate of Interest on actual loan derived/ adopted from Order dated 2.9.2005 in Petition no.193/2004.
- c) Weighted average rate of depreciation, rate of Interest for Working Capital and O&M data as per order dated 2.9.2005 in Petition no.193/2004.
- d) There was additional capital expenditure of ₹5.75 lakh and ₹18.03 lakh during financial year 2003-04 for the Asset-C and Asset-D respectively. The additional capital expenditure incurred in the previous year has been affected in the beginning of the following year as per order dated 9.5.2006 in Petition no. 133/2005. Hence, the effect of additional capital expenditure during 2003-04 in tariff calculation has been considered from 1.4.2004.

20. In view of the above, the revised transmission charges allowed for the instant assets for the 2001-04 tariff period is as follows:

Particulars	(₹ in lakh)				
	Asset-(A)		Asset-(B)	Asset-(C)	Asset-(D)
	2002-03	2003-04	2003-04	2003-04	2003-04
Depreciation	0.71	2.83	0.85	2.58	5.10
Interest on Loan	1.86	7.55	2.09	7.02	13.73
Return on Equity	1.04	4.17	1.56	3.89	8.34
Advance Against	0.00	0.00	0.00	0.00	0.00
Interest on Working	0.11	0.43	0.15	0.44	0.92
O&M Expenses	0.40	1.70	1.14	2.78	8.08
Total	4.12	16.68	5.79	16.70	36.17

2004-09 Tariff Period

21. The Commission vide various orders in earlier Petitions (in Petition No. 133/2005 vide order dated 9.5.2006; in Petition No. 133/2005 vide order dated 19.9.2006; in IA No. 8/2007 in Petition No. 133/2005 vide order dated 9.3.2007; in Petition No. 130/2005 vide order dated 26.10.2006; in Petition No. 10/2007 vide order dated 17.07.2007; and



in Petition No. 31/2009 vide order dated 8.6.2009) had approved the following transmission charges for the instant transmission assets for the 2004-09 period:

(₹ in lakh)					
Asset	2004-05	2005-06	2006-07	2007-08	2008-09
Asset-(A)	14.95	14.73	14.68	17.70	17.13
Asset-(B)	7.33	7.31	7.80	8.44	8.22
Asset-(C)	15.39	15.23	16.33	17.77	17.25
Asset-(D)	42.70	42.10	48.27	48.53	47.24
Asset-(E)	161.30	193.14	190.03	231.75	225.56
Asset-(F)	-	17.59	56.57	55.55	54.65

22. The Petitioner has claimed the following revised transmission charges for the instant Transmission Assets for the 2004-09 period in this Petition:

(₹ in lakh)					
Asset	2004-05	2005-06	2006-07	2007-08	2008-09
Asset-(A)	15.08	15.00	14.60	15.66	17.64
Asset-(B)	7.39	7.45	7.30	7.82	8.50
Asset-(C)	15.50	15.44	15.02	17.64	17.61
Asset-(D)	43.01	42.67	43.55	49.54	48.20
Asset-(E)	162.24	195.86	193.19	198.65	231.82
Asset-(F)	-	17.59	56.59	55.59	54.69

23. We have considered the Petitioner's claim. The tariff is allowed for the instant assets on the basis of the following:-

- a) The admitted capital cost as on 1.4.2004/ COD and additional capital expenditure during 2004-09 along with transmission tariff for 2004-09 tariff period approved by the Commission are as below:

(₹ in lakh)					
Assets	Admitted Capital Cost as on 1.4.2004 / COD	Add Cap during 2004-05	Add Cap during 2005-09	Admitted Capital Cost as on 31.03.2009	Base Orders
Asset (A)	110.07	0.00	0.00	110.07	Order dated 9.5.2006 in Petition no. 133/2005
Asset (B)	49.65	0.81	0.00	50.46	Order dated 9.3.2007 in Petition no. 133/2005
Asset (C)	106.06	1.07	0.00	107.13	
Asset (D)	282.56	1.05	0.00	283.61	
Asset (E)	1459.77	35.45	0.00	1495.22	Order dated 26.10.2006 in Petition no. 130/2005
Asset (F)	327.25		17.61	344.86	Order dated 17.07.2007 in Petition no. 10/2007 (2005-07) & Order dated 8.6.2009 in Petition no. 31/2009 (2007-09)
TOTAL				2391.35	



b) The Petitioner has submitted revised calculations for Weighted Average Rate of Interest on actual loan which have been considered in our tariff calculation. The Commission had given liberty to the Petitioner in previous orders for revision and mutual settlement of floating rate of interest of PNB loan and OBC loan and consequent revisions in interest rates during the period.

c) Weighted average rate of Depreciation, Rate of Interest for Working Capital and O & M expenses are as per order indicated above.

d) Maintenance spares component for calculating IWC is adjusted w.r.t. additional capital expenditure during 2004-09 for all the assets.

e) Admitted Capital cost as on 31.3.2009 is ₹2391.35 lakh for Combined Asset vide orders indicated in the above table.

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

(₹ in lakh)

Asset-(A)					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	2.83	2.83	2.83	2.83	2.83
Interest on Loan	7.54	7.42	7.00	6.37	5.74
Return on Equity	3.65	3.65	3.65	3.65	3.65
Advance against Depreciation	0.00	0.00	0.00	1.64	4.17
Interest on Working Capital			0.39	0.42	0.46
	0.38	0.39			
O&M Expenses	0.67	0.70	0.73	0.75	0.79
Total	15.08	14.99	14.60	15.66	17.64

(₹ in lakh)

Asset-(B)					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	1.30	1.32	1.32	1.32	1.32
Interest on Loan	3.16	3.14	2.96	2.69	2.44
Return on Equity	2.07	2.09	2.09	2.09	2.09
Advance against Depreciation	0.00	0.00	0.00	0.74	1.64
Interest on Working Capital		0.19	0.19		
	0.19			0.20	0.22
O&M Expenses	0.67	0.70	0.73	0.75	0.79
Total	7.39	7.44	7.29	7.79	8.50



(₹ in lakh)

Asset-(C)					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	2.76	2.79	2.79	2.79	2.79
Interest on Loan	7.02	6.87	6.40	5.80	5.21
Return on Equity	4.23	4.25	4.25	4.25	4.25
Advance against Depreciation	0.00	0.00	0.00	3.12	3.61
Interest on Working Capital	0.39	0.40	0.40	0.45	0.46
O&M Expenses	1.10	1.14	1.19	1.23	1.29
Total	15.50	15.45	15.03	17.64	17.61

(₹ in lakh)

Asset-(D)					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	7.29	7.32	7.32	7.32	7.32
Interest on Loan	18.50	17.94	16.61	15.06	13.51
Return on Equity	11.89	11.91	11.91	11.91	11.91
Advance against Depreciation	0.00	0.00	1.97	9.22	9.22
Interest on Working Capital	1.07	1.09	1.12	1.25	1.25
O&M Expenses	4.25	4.42	4.60	4.77	4.98
Total	43.01	42.68	43.53	49.53	48.20

(₹ in lakh)

Asset-(E)					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	31.65	38.45	38.45	38.45	38.45
Interest on Loan	67.93	80.99	77.87	72.62	65.72
Return on Equity	51.23	62.22	62.22	62.22	62.22
Advance against Depreciation	0.00	0.00	0.00	10.17	49.14
Interest on Working Capital	4.10	5.03	5.09	5.29	5.97
O&M Expenses	7.33	9.15	9.54	9.89	10.31
Total	162.24	195.84	193.17	198.63	231.80

(₹ in lakh)

Asset-(F)					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	-	2.97	12.15	12.26	12.34
Interest on Loan	-	4.87	18.63	17.19	15.64
Return on Equity	-	3.94	16.02	16.20	16.32
Advance against Depreciation	-	4.93	6.41	6.47	6.83
Interest on Working Capital	-	0.39	1.34	1.34	1.36
O&M Expenses	-	0.49	2.03	2.10	2.19
Total	-	17.59	56.58	55.57	54.67



2009-14 Period

25. The Commission, vide order dated 29.2.2016 in Petition No. 181/TT/2014 had trued up the tariff allowed for 2009-14 period and the same is as under:

(₹ in lakh)

Particulars	Asset-I (Asset-A, Asset-B, Asset-C, Asset-D and Asset-E)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	108.09	108.09	108.09	108.09	108.09
Interest on Loan	80.00	71.18	62.51	53.48	44.42
Return on Equity	112.20	116.31	116.42	116.42	117.82
Interest on Working Capital	6.80	6.74	6.59	6.44	6.32
O&M Expenses	10.90	11.51	12.19	12.91	13.64
Total	318.00	313.82	305.81	297.34	290.29

(₹ in lakh)

Particulars	Asset-II				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	19.27	19.27	19.27	19.27	19.27
Interest on Loan	13.90	12.16	10.44	8.65	6.85
Return on Equity	21.77	22.57	22.59	22.59	22.86
Interest on Working Capital	1.22	1.20	1.17	1.14	1.11
O&M Expenses	1.47	1.56	1.65	1.75	1.84
Total	57.63	56.76	55.13	53.40	51.94

26. The Petitioner has claimed the following revised transmission charges for the instant Transmission Assets for the 2009-14 period in the instant Petition:

(₹ in lakh)

Particulars	Asset-I				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	108.09	108.09	108.09	108.09	108.09
Interest on Loan	83.35	74.53	65.86	56.82	47.73
Return on Equity	112.20	116.31	116.42	116.42	117.82
Interest on Working Capital	6.87	6.81	6.66	6.51	6.39
O&M Expenses	10.90	11.51	12.19	12.91	13.64
Total	321.42	317.24	309.22	300.75	293.67

(₹ in lakh)

Particulars	Asset-II				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	19.27	19.27	19.27	19.27	19.27
Interest on Loan	13.90	12.16	10.44	8.65	6.85
Return on Equity	21.77	22.57	22.59	22.59	22.86
Interest on Working Capital	1.22	1.20	1.17	1.14	1.11
O&M Expenses	1.47	1.56	1.65	1.75	1.84
Total	57.63	56.76	55.12	53.40	51.94

27. We have considered the Petitioner's claim. The tariff is allowed for the instant assets on the basis of the following:-



a) The Commission, vide true-up order dated 29.02.2016 in Petition No. 181/TT/2014, had combined the Asset-A, Asset-B, Asset-C, Asset-D and Asset-E into Asset-I while Asset-F was rechristened as Asset-II for the purpose of determination of tariff during 2009-14 tariff period and approved the following capital cost as on 1.4.2009 and 31.03.2014:

(₹ in lakh)					
Assets	Capital Cost as on 31.3.2009	Asset as on 1.4.2009	Capital Cost as on 1.4.2009	Additional Capitalisation in 2009-14	Capital Cost as on 1.4.2014
Asset (A)	110.07	Asset-I	2046.49	0.00	2046.49
Asset (B)	50.46				
Asset (C)	107.13				
Asset (D)	283.61				
Asset (E)	1495.22				
Asset (F)	344.86	Asset-II	344.86	0.00	344.86
Total	2391.35		2391.35		2391.35

b) Weighted Average Rate of Interest on actual loan derived/ adopted from order dated 29.2.2016 in Petition No 181/TT/2014.

c) Weighted Average Rate of Depreciation as per order dated 29.2.2016 in Petition No. 181/TT/2014.

d) There is 'NIL' additional capitalisation during 2009-14 Tariff Period.

28. In view of the above, the revised transmission charges allowed for the instant assets for the 2009-14 tariff period are as follows:

(₹ in lakh)					
Particulars	Asset-I				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	108.09	108.09	108.09	108.09	108.09
Interest on Loan	83.35	74.53	65.86	56.82	47.73
Return on Equity	112.20	116.31	116.42	116.42	117.82
Interest on Working Capital	6.87	6.81	6.66	6.51	6.39
O&M Expenses	10.90	11.51	12.19	12.91	13.64
Total	321.42	317.24	309.23	300.75	293.67

(₹ in lakh)					
Particulars	Asset-II				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	19.27	19.27	19.27	19.27	19.27
Interest on Loan	13.90	12.15	10.44	8.65	6.85
Return on Equity	21.77	22.57	22.59	22.59	22.86



Interest on Working Capital	1.22	1.20	1.17	1.14	1.11
O&M Expenses	1.47	1.56	1.65	1.75	1.84
Total	57.63	56.76	55.12	53.40	51.94

TRUING-UP OF ANNUAL TRANSMISSION CHARGES OF 2014-19 TARIFF PERIOD

29. The Commission vide order dated 29.2.2016 in Petition No 181/TT/2014 had approved the tariff allowed for the 2014-19 period as below:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	127.36	127.36	127.36	30.19	30.19
Interest on Loan	40.13	29.32	18.54	11.82	9.23
Return on Equity	140.68	140.68	140.68	140.68	140.68
Interest on Working Capital	7.86	7.64	7.42	5.06	5.02
O&M Expenses	13.96	14.44	14.93	15.41	15.91
Total	330.00	319.45	308.94	203.17	201.04

30. The Petitioner has submitted the information as required under the 2014 Tariff Regulations for truing up of annual fixed charges for 2014-19 period. The tariff for 2014-19 period has been trued up as discussed in the subsequent paragraphs.

31. The details of the trued-up transmission charges claimed by the Petitioner are as under:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	127.37	127.37	127.37	32.07	32.07
Interest on Loan	43.44	32.56	21.64	14.66	11.80
Return on Equity	140.79	141.44	141.37	141.37	141.75
Interest on Working Capital	7.94	7.73	7.51	5.18	5.15
O&M Expenses	13.96	14.44	14.92	15.42	15.91
Total	333.50	323.54	312.81	208.70	206.68

32. The details of the trued-up interest on working capital claimed by the Petitioner are as under: -

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	2.09	2.17	2.24	2.31	2.39
O&M expenses	1.16	1.20	1.24	1.29	1.33
Receivables	55.58	53.92	52.14	34.79	34.45
Total	58.83	57.29	55.62	38.39	38.17
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	7.94	7.73	7.51	5.18	5.15



Capital Cost as on 1.4.2014

33. The capital cost of the instant asset has been calculated in accordance with the Regulation 9(3) and Regulation 9(6) of the 2014 Tariff Regulations. The Commission vide order dated 29.2.2016 in Petition No. 181/TT/2014 had combined all the assets of the subject transmission scheme and approved the transmission tariff for the instant assets for the 2014-19 tariff period based on admitted capital cost of ₹2391.35 lakh as on 31.3.2014 for the instant assets. The Petitioner has not claimed any additional capital expenditure during the 2014-19 Tariff Period.

34. The Commission vide ROP of hearing dated 29.6.2020 directed the Petitioner to clarify whether any of the assets covered in the instant Petition have been de-capitalised and whether any asset was not put to use during the earlier tariff period. In response, the Petitioner vide affidavit dated 10.7.2020 has submitted that all assets are in use and none of the asset has been de-capitalized.

35. Accordingly, the capital cost of ₹2391.35 lakh has been considered for the purpose of truing up of the tariff of the 2014-19 tariff period as under:

(₹ in lakh)			
Particulars	Combined capital cost as on 1.4.2014	Additional Capitalisation in 2014-19	Combined capital cost as on 31.3.2019
Freehold Land	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00
Building & Other Civil Works	0.00	0.00	0.00
Transmission Line	2286.51	0.00	2286.51
Sub-Station Equipments	0.00	0.00	0.00
PLCC	104.84	0.00	104.84
Total	2391.35	0.00	2391.35

Debt-Equity Ratio

36. The debt-equity ratio has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations. As per Regulation 19(3) of the 2014 Tariff Regulations, the debt-equity ratio as allowed by the Commission for determination of tariff for the period



ending on 31.3.2014 shall be considered. Accordingly, the debt-equity ratio of 70:30 for the period ending on 31.3.2014 has been considered for the purpose of determination of tariff for the 2014-19 tariff period as also for the purpose of truing-up of the tariff of the assets for the 2014-19 tariff period. Since no additional capital expenditure is claimed during 2014-19 tariff period, the debt-equity ratio as on 31.3.2019 also remains the same (i.e. 70:30). The details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 of the instant transmission asset is as follows:

Funding	Capital Cost as on 1.4.2014 (₹ in lakh)	%	Capital Cost as on 31.3.2019 (₹ in lakh)	%
Debt	1673.94	70.00	1673.94	70.00
Equity	717.41	30.00	717.41	30.00
Total	2391.35	100.00	2391.35	100.00

Interest on Loan (IOL)

37. The details of Interest on Loan allowed in accordance with Regulation 26 of the 2014 Tariff Regulations are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	1673.94	1673.94	1673.94	1673.94	1673.94
Cumulative Repayment upto previous Year	1067.11	1194.47	1321.84	1449.20	1481.27
Net Loan-Opening	606.83	479.47	352.10	224.74	192.67
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Repayment during the year	127.36	127.36	127.36	32.07	32.07
Net Loan-Closing	479.47	352.10	224.74	192.67	160.60
Average Loan	543.15	415.78	288.42	208.70	176.63
Weighted Average Rate of Interest on Loan (%)	7.9962%	7.8299%	7.5041%	7.0249%	6.6800%
Interest on Loan	43.43	32.56	21.64	14.66	11.80

Return on Equity (ROE)

38. The Petitioner is entitled for Return on Equity for the instant 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 MAT rates and has claimed following effective tax rates for the 2014-19 Tariff Period: -

Year	Claimed effective tax rate (%)	Grossed up ROE (Base Rate/1-t) (%)
2014-15	21.02	19.625
2015-16	21.38	19.715
2016-17	21.34	19.705
2017-18	21.34	19.705
2018-19	21.55	19.758

39. The Respondent, UPPCL, has submitted that RoE shall be calculated as per effective tax rate arrived on the basis of authentic tax rates approved by Income Tax authorities in the assessment orders of respective year. In response, the Petitioner has submitted that effective rate of tax considered for FY 2014-15, 2015-16 and 2016-17 are based on Assessment Orders issued by Income Tax authorities for the purpose of grossing up of ROE rate. The effective tax rate considered for FY 2017-18 and 2018-19 are based on the Income-tax returns filed, for the purpose of grossing up of ROE rate of respective years. The Petitioner has submitted that the authenticated tax rates have been considered for calculation Return of Equity.

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

Year	Notified MAT rates (inclusive of surcharge & cess) (%)	Base Rate of ROE (%)	Grossed up ROE (Base Rate/1-t) (%)
2014-15	20.9605	15.50	19.610
2015-16	21.3416	15.50	19.705
2016-17	21.3416	15.50	19.705



Year	Notified MAT rates (inclusive of surcharge & cess) (%)	Base Rate of ROE (%)	Grossed up ROE (Base Rate/1-t) (%)
2017-18	21.3416	15.50	19.705
2018-19	21.5488	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. ROE is trued up on the basis of the MAT rate applicable in the respective years and is allowed as follows:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	717.41	717.41	717.41	717.41	717.41
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	717.41	717.41	717.41	717.41	717.41
Average Equity	717.41	717.41	717.41	717.41	717.41
Return on Equity (Base Rate) (%)	15.50%	15.50%	15.50%	15.50%	15.50%
MAT rate for the Respective year (%)	20.961%	21.342%	21.342%	21.342%	21.549%
Rate of Return on Equity (Pre-tax) (%)	19.610%	19.705%	19.705%	19.705%	19.758%
Return on Equity (Pre-tax)	140.68	141.37	141.37	141.37	141.75

Depreciation

42. Regulation 6 of the 2014 Tariff Regulations requires submission of single consolidated Petition where all elements of a transmission system have been declared under commercial operation prior to 01.04.2014, so that Commission may grant single tariff for all the assets covered under the project. In order to determine a single transmission tariff, the concept of Effective Date of Commercial Operation (E-COD) and weighted average life (WAL) had been introduced under Regulation 27 of the 2014 Tariff Regulations. The Commission vide order dated 29.2.2016 in Petition No. 181/TT/2014 has worked out the E-COD of 23.8.2004 for the transmission scheme as a whole based on the admitted capital cost of individual assets as on 31.03.2014 and the actual COD of individual Assets. Accordingly, as per above order dated 29.2.2016, the weighted average life of project as a whole is worked out as 34 years on the basis of both admitted capital cost of individual elements as on 31.3.2014 and their respective life as prescribed



in 2014 Tariff Regulations. Therefore, elapsed life of project as a whole works out to 9 years as on 1.4.2014.

43. The depreciation has been worked out as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. The Gross Block during the tariff period 2014-19 has been depreciated at weighted average rate of depreciation (WAROD) and workings of WAROD is given at Annexure-1. WAROD has been worked out after taking into account the depreciation rates of assets as prescribed in the 2014 Tariff Regulations. E-COD of the Combined Asset is 23.8.2004. Therefore, the asset has completed 12 years of life during FY 2017-18. Accordingly, remaining depreciable value of the assets has been spread over based on the remaining depreciable value to be recovered in the balance useful life from FY 2017-18 onwards. The depreciation allowed is as follows:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	2391.35	2391.35	2391.35	2391.35	2391.35
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	2391.35	2391.35	2391.35	2391.35	2391.35
Average Gross Block	2391.35	2391.35	2391.35	2391.35	2391.35
Freehold Land	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Depreciation (WAROD)	5.3260%	5.3260%	5.3260%	SPREAD	
Balance useful life of the asset at the beginning of the year	9	10	11	12	13
Elapsed life	25	24	23	22	21
Aggregated Depreciable Value	2152.22	2152.22	2152.22	2152.22	2152.22
Combined Depreciation during the Year	127.36	127.36	127.36	32.07	32.07
Aggregate Cumulative Depreciation	1191.94	1319.31	1446.67	1478.74	1510.81
Remaining Aggregate Depreciable Value	1087.64	960.27	832.91	705.54	673.47

Operation and Maintenance Expenses (O&M Expenses)

44. The instant transmission scheme includes the following assets:



Asset	Description	Type of line (AC/HVDC)	S/C or D/C	No of Sub-conductors	Voltage Level kV	Line length km	E-COD
Asset-A	220kV Allahabad-Rewa Road D/C Line Ckt-I						
Asset-B	220kV Allahabad-Rewa Road D/C Line Ckt-II	AC	DC	1	220 KV	2.960	23.08.2004
Asset-C	LILO of 220kV Modipuram-Nara Line	AC	DC	1	220 KV	2.416	23.08.2004
Asset-D	LILO of 220kV Modipuram-Simbholi Line	AC	DC	1	220 KV	9.359	23.08.2004
Asset-E	220kV Allahabad-Phulpur S/C Line	AC	SC	1	220 KV	38.773	23.08.2004
Asset-F	220kV S/C Meerut-Shatabdinagar Line	AC	SC	1	220 KV	8.234	23.08.2004

45. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system.

46. The Petitioner has claimed the O&M Expenses for the instant transmission system for the 2014-19 period as per the norms specified in the 2014 Tariff Regulations.

Hence, the same are allowed as follows:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner	13.96	14.44	14.92	15.42	15.91
Allowed after true-up	13.96	14.44	14.93	15.40	15.91

Interest on Working Capital (IWC)

47. The Petitioner is entitled for IWC as per Regulation 28 of the 2014 Tariff Regulations. IWC allowed as per the methodology provided in the Regulation 28 of the 2014 Tariff Regulations is as under: -

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	2.09	2.17	2.24	2.31	2.39
O&M expenses	1.16	1.20	1.24	1.29	1.33
Receivables	55.56	53.91	52.13	34.78	34.45
Total	58.82	57.28	55.61	38.38	38.16
Rate of Interest on working capital	13.50%	13.50%	13.50%	13.50%	13.50%



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	2.09	2.17	2.24	2.31	2.39
Interest on Working Capital	7.94	7.73	7.51	5.18	5.15

48. The details of IWC approved vide order dated 26.2.2016 in Petition No. 181/TT/2016, IWC claimed by the Petitioner in the instant Petition and trued up IWC in the instant order for the 2014-19 period is shown as under: -

(₹ in lakh)					
Particulars (IWC)	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 26.2.2016 in 181/TT/2014	7.86	7.64	7.42	5.06	5.02
Claimed by the Petitioner in the instant Petition	7.94	7.73	7.51	5.18	5.15
Allowed after true-up in this order	7.94	7.73	7.51	5.18	5.15

Approved Annual Transmission Charges For 2014-19 Tariff Period

49. The trued-up Annual Transmission Charges for the instant assets for the tariff period 2014-19 are summarised below:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	127.36	127.36	127.36	32.07	32.07
Interest on Loan	43.43	32.56	21.64	14.66	11.80
Return on Equity	140.68	141.37	141.37	141.37	141.75
Interest on Working Capital	7.94	7.73	7.51	5.18	5.15
O&M Expenses	13.96	14.44	14.92	15.42	15.91
Total	333.38	323.46	312.80	208.70	206.68

50. The details of Annual Transmission Charges approved earlier, claimed by the Petitioner in the instant Petition and trued up in the instant order for the 2014-19 period is shown as under: -

(₹ in lakh)					
Particulars (IWC)	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 26.2.2016 in 181/TT/2014	330.00	319.45	308.94	203.17	201.04
Claimed by the Petitioner in the instant Petition	333.50	323.54	312.81	208.70	206.68
Allowed after true-up in this order	333.38	323.46	312.80	208.70	206.68

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2019-24 TARIFF PERIOD



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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	32.07	32.07	32.07	32.07	32.07
Interest on Loan	9.66	7.52	5.37	3.23	1.09
Return on Equity	141.75	141.75	141.75	141.75	141.75
Interest on Working Capital	3.61	3.61	3.61	3.60	3.59
O&M Expenses	19.50	20.08	20.75	21.39	22.07
Total	206.59	205.03	203.55	202.04	200.57

52. The details of the Interest on Working Capital claimed by the Petitioner are as under: -

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Maintenance Spares	2.93	3.01	3.11	3.21	3.31
O&M expenses	1.63	1.67	1.73	1.78	1.84
Receivables	25.40	25.28	25.09	24.91	24.66
Total	29.96	29.96	29.93	29.90	29.81
Rate of Interest	12.05%	12.05%	12.05%	12.05%	12.05%
Interest on Working Capital	3.61	3.61	3.61	3.60	3.59

53. The tariff for 2019-24 period is allowed as discussed in the subsequent paragraphs.

Capital Cost

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

“(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 renovation and modernisation as admitted by this Commission in accordance with these regulations;
- (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.”

55. The capital cost of ₹2391.35 lakh has been considered by the Commission for the assets as on 31.3.2019. The Petitioner has not claimed any additional capital expenditure during 2019-24 period. Therefore, the capital cost of ₹2391.35 lakh as on 31.3.2019 has been considered for the purpose of determination of transmission tariff for 2019-24 period in accordance with Regulation 19 of the 2019 Tariff Regulations.

Debt-Equity Ratio

56. Regulation 18 of the 2019 Tariff Regulations provides as under:-

“18. Debt-Equity Ratio: (1) For new projects, the debt:equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.*

(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the



utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

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

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

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

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

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

57. The debt-equity ratio for the 2019-24 period is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. The details of the debt-equity ratio considered for the purpose of tariff for 2019-24 Tariff Period is as follows:-

Particulars	Capital cost as on 1.4.2019 (₹ in lakh)	%	Total cost as on 31.3.2024 (₹ in lakh)	%
Debt	1673.94	70.00	1673.94	70.00
Equity	717.41	30.00	717.41	30.00
Total	2391.35	100.00	2391.35	100.00

Return on Equity (“ROE”)

58. Regulations 30 and Regulation 31 of the 2019 Tariff Regulations specify as under:-



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

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

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

Provided further that:

i. In case of a new project, the rate of return on equity shall be reduced 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.

(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.”

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

(₹ in lakh)



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	717.41	717.41	717.41	717.41	717.41
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	717.41	717.41	717.41	717.41	717.41
Average Equity	717.41	717.41	717.41	717.41	717.41
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
MAT rate for the Financial year 2019-20	17.472%	17.472%	17.472%	17.472%	17.472%
Rate of Return on Equity (Pre-tax)	18.782%	18.782%	18.782%	18.782%	18.782%
Return on Equity (Pre-tax)	134.74	134.74	134.74	134.74	134.74

Interest on Loan (IOL)

60. Regulation 32 of the 2019 Tariff Regulations provides as under:-

“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 upto 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”.



61. We observe that all the actual loan has been repaid during 2014-19 period. In line with the proviso to the regulation 32(5) quoted above, the weighted average rates of IOL have been considered on the basis of last available applied rate for FY 2018-19. The Petitioner has prayed for the change in interest rate due to floating rate of interest as applicable, if any, during 2019-24 Tariff Period. As there are no loans to be repaid, Petitioner's prayer is in fructuous. In view of the above, IOL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations.

62. The details of IOL allowed is as follows:-

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	1673.94	1673.94	1673.94	1673.94	1673.94
Cumulative Repayment upto previous Year	1513.34	1545.41	1577.48	1609.55	1641.62
Net Loan-Opening	160.60	128.53	96.46	64.39	32.32
Addition due to ACE	0.00	0.00	0.00	0.00	0.00
Repayment during the year	32.07	32.07	32.07	32.07	32.07
Net Loan-Closing	128.53	96.46	64.39	32.32	0.25
Average Loan	144.56	112.49	80.42	48.35	16.28
Weighted Average Rate of Interest on Loan (%)	6.6800%	6.6800%	6.6800%	6.6800%	6.6800%
Interest on Loan	9.66	7.51	5.37	3.23	1.09

Depreciation

63. Regulation 33 of the 2019 Tariff Regulations provide that:-

"33. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of a transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first



year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

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

Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;

Provided further that in case of hydro generating stations, the salvage value shall be as provided in the agreement, if any, signed by the developers with the State Government for development of the generating station:

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

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

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

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

Provided that the remaining depreciable value as on 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.

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

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

(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful services.”

64. The depreciation has been worked out considering the admitted capital cost of ₹2391.35 lakh as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The



Effective Date of Commercial Operation or E-COD of the combined assets is 23.8.2004. Therefore, the asset has completed 12 years of life at the beginning of FY 2017-18 itself and accordingly, remaining depreciable value of the assets has been spread over the balance useful life from FY 2017-18 onwards. Accordingly, the depreciation for entire tariff period 2019-24 has been allowed by spreading over of balance depreciable value as on 1.4.2019 under Regulation 33(5) of 2019 Tariff Regulations (as placed in Annexure-2). The detailed calculations for depreciation for the transmission assets are worked out and allowed as follows:-

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	2391.35	2391.35	2391.35	2391.35	2391.35
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	2391.35	2391.35	2391.35	2391.35	2391.35
Average Gross Block	2391.35	2391.35	2391.35	2391.35	2391.35
Freehold Land	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Depreciation (WAROD)	SPREADING (12 years completed in 2017-18 Tariff Period)				
Balance useful life of the asset at the beginning of the year	20	19	18	17	16
Elapsed life	14	15	16	17	18
Aggregated Depreciable Value	2152.22	2152.22	2152.22	2152.22	2152.22
Combined Depreciation during the Year	32.07	32.07	32.07	32.07	32.07
Aggregate Cumulative Depreciation	1542.88	1574.95	1607.02	1639.09	1671.16
Remaining Aggregate Depreciable Value	641.41	609.33	577.26	545.19	513.12

Operation and Maintenance Expenses (O&M Expenses)

65. Regulation 35(3)(a) of the 2019 Tariff Regulations specifies the norms for the O&M Expenses for the transmission system and it is as follows:-

“(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
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<i>Norms for Transformers (₹ Lakh per MVA)</i>					



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
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 sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

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



operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.

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

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

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

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

66. The O&M expenses claimed by the Petitioner are as per the norms specified in the 2019 Tariff Regulations. Accordingly, the O&M expenses for 2019-24 Tariff Period are allowed as under:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Claimed by the Petitioner	19.50	20.08	20.75	21.39	22.07
Allowed in the instant order	19.50	20.08	20.74	21.39	22.06

Interest on Working Capital (IWC)

67. 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;”

68. The Petitioner has submitted that it has computed IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of interest on working capital as 12.05%.

69. The interest on working capital is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of interest on working capital 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, ROI for 2020-21 onwards has been considered as 11.25% (SBI 1 year MCLR applicable as on 1.2.2020 of 7.75% plus 350 basis points). The components of the working capital and interest thereon allowed is as under:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Maintenance Spares	2.92	3.01	3.11	3.21	3.31
O&M expenses	1.62	1.67	1.73	1.78	1.84
Receivables	24.53	24.37	24.19	24.00	23.76
Total	29.07	29.06	29.03	28.99	28.90
Rate of Interest on working capital	12.05%	11.25%	11.25%	11.25%	11.25%
Interest on Working Capital	3.50	3.27	3.27	3.26	3.25

Approved Annual Transmission Charges For 2019-24 Tariff Period

70. The Transmission Charges allowed for the instant transmission assets for the 2019-24 period are summarised below:-

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	32.07	32.07	32.07	32.07	32.07
Interest on Loan	9.66	7.51	5.37	3.23	1.09
Return on Equity	134.74	134.74	134.74	134.74	134.74
Interest on Working Capital	3.50	3.27	3.27	3.26	3.25
O&M Expenses	19.50	20.08	20.74	21.39	22.06
Total	199.47	197.68	196.19	194.69	193.22

Filing Fee and Publication Expenses

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

License fee and RLDC Fees and Charges

72. The Respondent, UPPCL, has submitted that the license fee is the onus of the Petitioner. In reply, the Petitioner has requested to allow to bill and recover License fee and RLDC fees and charges, separately from the Respondents in terms of Regulation 70 of 2019 Tariff Regulations.

73. We have considered the submissions of Petitioner and Respondent. 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.



Security Expenses

74. The Petitioner has submitted that security expenses for the instant assets are not claimed in the instant Petition and it would file a separate Petition for claiming the overall security expenses and the consequential Interest on Working Capital. 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 FYs 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.

75. We have considered the submissions of the Petitioner. We are of the view that Petitioner should claim security expenses for all the Transmission Assets in one Petition. It is observed 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, the issue of security expenses will be dealt with in Petition No. 260/MP/2020 in accordance with the appropriate provisions of the 2019 Tariff Regulations.

Goods and Services Tax

76. 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 & 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.

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

Capital Spares

78. As 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

79. The billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time as provided in Regulation 43 of 2014 Tariff Regulations for the 2014-19 Tariff Period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 Tariff Period.

80. To summarise, the trued-up Annual Transmission Charges allowed for the instant asset for the 2014-19 Tariff Period are as under:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Transmission Charges	333.38	323.46	312.80	208.70	206.68

81. The Annual Transmission Charges allowed for the instant asset for the 2019-24 Tariff Period in this order are as under:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Transmission Charges	199.47	197.68	196.19	194.69	193.22



82. This order disposes of Petition No. 353/TT/2019.

Sd/-
(Arun Goyal)
Member

Sd/-
(I. S. Jha)
Member

Sd/-
(P. K. Pujari)
Chairperson



**DETAILS OF WEIGHTED AVERAGE RATE OF DEPRECIATION (WAROD)
FOR THE 2014-19 TARIFF PERIOD**

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014	Projected Additional Capitalisation during Tariff Period 2014-19	Admitted Capital Cost as on 31.3.2019	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations				
					2014-15	2015-16	2016-17	2017-18	2018-19
Land-Freehold	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
Land-Lease hold	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building, Civil Works & Colony	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	2286.51	0.00	2286.51	5.28%	120.73	120.73	120.73	-	-
Substation	0.00	0.00	0.00	5.28%	5.3260%	5.3260%	5.3260%	Spreading	
PLCC	104.84	0.00	104.84	6.33%	6.64	6.64	6.64	-	-
IT Equipment (Incl. Software)	0.00	0.00	0.00	15.00%	0.00	0.00	0.00	0.00	0.00
Total	2391.35	0.00	2391.35	Total	127.36	127.36	127.36	32.07	32.07
Average Gross Block (₹ in lakh)					2391.35	2391.35	2391.35	2391.35	2391.35
Weighted Average Rate of Depreciation (WAROD)					(*)				

(*¹) Since the asset has completed 12 years of life as on 31.3.2017, the remaining depreciable value of ₹705.54 lakh as on 31.3.2017 has been spread across the balance useful life in accordance with Regulation 27(5) of the 2014 Tariff Regulations. The annual depreciation from 2017-18 onwards is ₹32.07 lakh.

**DETAILS OF WEIGHTED AVERAGE RATE OF DEPRECIATION (WAROD)
FOR THE 2019-24 TARIFF PERIOD**

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019	Projected Additional Capitalisation during Tariff Period 2019-24	Admitted Capital Cost as on 31.3.2024	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations				
					2019-20	2020-21	2021-22	2022-23	2023-24
Land-Freehold	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
Land-Lease hold	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building, Civil Works & Colony	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	2286.51	0.00	2286.51	5.28%	0.00	0.00	0.00	0.00	0.00
Substation	0.00	0.00	0.00	5.28%	Spreading (12 years completed in 2014-19 Tariff Period)				
PLCC	104.84	0.00	104.84	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
Total	2391.35	0.00	2391.35	Total	32.07	32.07	32.07	32.07	32.07
Average Gross Block (₹ in lakh)					2391.35	2391.35	2391.35	2391.35	2391.35
Weighted Average Rate of Depreciation					(*)				

(*) Since the asset has completed 12 years of life as on 31.3.2017, the remaining depreciable value of ₹705.54 lakh as on 31.3.2017 has been spread across the balance useful life of 22 years in accordance with Regulation 27(5) of the 2014 Tariff Regulations. The annual depreciation from 2017-18 onwards is ₹32.07 lakh.