CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 216/TT/2020
alongwith
Petition No.184/TT/2013 & Petition No.146/TT/2016

Coram:

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

Date of Order: 21.01.2022

In the Matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of the 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for Transmission System constructed, maintained and operated by Adani Transmission (India) Limited *vide* License No. 20/Transmission/2013/CERC.

And in the matter of:

Adani Transmission (India) Limited (ATIL),
(earlier in the name of Adani Power Limited),
Shikhar, Near Adani House,
Mithakhali Six Roads, Navrangpura,
Ahmedabad-389009. **….Petitioner**

Vs

1. Power Grid Corporation of India Limited,
   Saudamini, Plot-2, Sector-29,
   Near IFFCO Chowk,
   Gurgaon-122001, Haryana.

2. National Load Dispatch Centre,
   B-9, Qutab Industrial Area, Katwaria Sarai,
   New Delhi-110016.

3. Northern Regional Load Despatch Centre,
   18-A, Shaheed Jeet Singh Sansanwal Marg,
   Katwaria Sarai,
   New Delhi-110016.

4. Western Regional Power Committee,
F-3, MIDC Area, Marol, Opposite SEEPZ,
Central Road, Andheri (East),
Mumbai-400093.

5. Central Electricity Authority,
Sewa Bhawan,
Sector-1,R.K. Puram,
New Delhi-110066.

6. Gujarat Energy Transmission Company Limited,
Sardar Patel Vidyut Bhavan, Race Course,
Vadodra-390007.

7. Haryana Vidyut Prasaran Nigam Limited,
1st Floor, Shakti Bhawan, Sector-6,
PanchKula-134109, Haryana.

8. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan, Race Course,
Vadodra-390007.

9. Maharashtra State Electricity Distribution Company Limited,
"Prakashgarh", Bandra (East),
Mumbai-400051, Maharashtra.

10. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Vidyut Nagar, Rampur,
Jabalpur (MP)-482008.

11. M.P. Audyokik Kendra Vikas Nigam Limited,
Free Press House, 1st Floor,
3/54-Press Complex, A. B. road,
Indore-452008, Madhya Pradesh.

12. Chhattisgarh State Power Distribution Company Limited,
Vidyut Seva Bhawan Parisar, Dangania,
Raipur-492013, Chhattisgarh.

13. Goa State Electricity Department,
Vidyut Bhawan, Panaji,
Goa-403001.

14. Daman and Diu Electricity Department,
Administration of Daman & Diu,
Near Satya Narayan Temple,
Nani Daman-396210.

15. Electricity Department,
Administration of Dadra Nagar Haveli,
Dadra Nagar Haveli UT, Silvasa-396230.

16. Heavy water Projects, Department of Atomic Energy,
Heavy Water Board,
Vikram Sarabhai Bhawan, Anushakti Nagar,
Mumbai-400094.

17. Jindal Power Limited,
Tamnar,
Raigarh, Chattisgarh-496001.

18. Torrent Power Limited,
Torrent House, Opposite Ashram Road,
Ahmedabad-380009.

19. PTC India Limited,
2nd Floor, NBCC Tower,
15, Bhikaji Complex,
New Delhi-110066.

20. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula, (Haryana)-134109.

21. Rajasthan Power Procurement Centre,
Room No. 24, Vidyut Bhawan, Janpath, Jyoti Nagar,
Jaipur-302005, Rajasthan.

22. Jodhpur Vidyut Vitran Nigam Limited,
New Power House Industrial Area,
Jodhpur-342003, Rajasthan.

23. Jaipur Vidyut Vitran Nigam Limited,
Vidyut Bhawan, Janpath, Jyoti Nagar, Jyoti Marg,
Jaipur-302005, Rajasthan.

24. Ajmer Vidyut Vitran Nigam Limited,
Old Power House, Hathi Bhatta, Jaipur Road,
Ajmer-305001, Rajasthan.

25. BSES Yamuna Power Limited,
Shakti Kiran Building, Karkardooma,
Delhi-110092.

26. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi-110019.

27. Tata Power Delhi Distribution Limited,
Cennet Building, 33 kV Substation Building,
Hudson Lines, Kingsway Camp,
Delhi-110009.

28. New Delhi Municipal Council,
Palika Kendra Building, Opposite Jantar Mantra,
Parliament Street,
New Delhi-110001.

29. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road,
Dehradun-248001.

30. Uttar Pradesh Power Corporation Limited,
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226001, UP.

31. North Central Railway,
Allahabad, Uttar Pradesh.

32. Punjab State Power Corporation Limited,
The Mall, Ablowal,
Patiala-147001.

33. Power Development Department,
Jammu and Kashmir,
Civil Secretariat,
Jammu-180001.

34. Himachal Pradesh State Electricity Board,
Vidyut Bhawan,
Shimla-171004.

35. Electricity Department, UT Chandigarh,
Sector-9,
Chandigarh.

36. Northern Regional Power Committee,
18-A, Qutab Institutional Area,
Shaheed Jeet Singh Marg, Katwaria Sarai,
New Delhi-110016.

37. Western Regional Power Committee,
F-3, M.I.D.C. Area, Marol,
Andheri (East), Mumbai-400093.

38. Kanpur Electricity Supply Company Limited (NR),
14/71, Civil Lines,
Kanpur-208001.

39. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg,
Jaipur- 302005.

40. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110002. …**Respondent(s)**

For Petitioner	:	Shri Sourav Roy, Advocate, ATIL Shri Prabudh Singh, Advocate, ATIL Shri Afak Pothiawala, Advocate,ATIL Shri Bhavesh Kundalia, ATIL
For Respondents	:	Shri Manoj Dubey, Advocate, MPPMCL Shri Rajeev Gupta,Advocate, MPPMCL Shri Anindya Khare, MPPMCL Shri K.M. Lal, DTL, Shri S.K. Chaurvedi, DTL Shri Gaurav Gupta, DTL Shri Aditya Das, WRLDC Ms. S. Usha, WRLDC

ORDER

The Petitioner, Adani Transmission (India) Limited (ATIL), a transmission licensee, has filed the instant petition for truing up of transmission tariff of the period from 1.4.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") and for determination of transmission tariff for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations") in respect of the following assets (hereinafter referred to as "the transmission assets") under evacuation of power from Mundra Power Project to Northern Region and Western Region (hereinafter referred to as "the transmission project"):

Asset-I: ±500 kV bipole Mundra-Mohindergarh HVDC Transmission Line including associated 400 kV lines, terminal sub-stations & bays; and

Asset-II: 400 kV D/C Mundra-Dehgam Transmission Line including associated system.

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

"1) Approve the Trued-up Transmission Tariff for the Period of FY 2014-15 to FY 2018-19 for the assets covered under this petition.

2) Approve the Additional Capitalisation actually incurred during the tariff block FY 2014-15 to FY 2018-19 as claimed in the petition.

3) Approve the transmission tariff for the tariff block FY 2019-20 to FY 2023-24 for the assets covered under this petition, claimed in this petition.

4) Approve the Additional capitalisation projected to be incurred during the tariff block of FY 2019-20 to FY 2023-24 as claimed in the petition.

5) Approve the reimbursement of expenditure by the beneficiaries towards Petition filing fee, and expenditure on publishing of notices in newspapers in terms of Tariff Regulations and other expenditure (if any) in relation to the filing of petition.

6) Allow the Petitioner to bill and recover the Licence fee and RLDC fees and charges, separately from the respondents in terms of Tariff Regulations: and

7) 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 Petitioner had filed Petition No. 44/TL/2012 for grant of transmission licence for the transmission assets as they are being used as part of ISTS. The Commission *vide* order dated 29.7.2013 in Petition No. 44/TL/2012 granted the transmission license and held that the transmission assets will be considered as part of ISTS from the date of grant of transmission license i.e. with effect from 29.7.2013.

(b) The scope of the work as per order dated 29.7.2013 in Petition No. 44/TL/2012 is as follows:

Particulars of Assets
AC system
Transmission line
(i) 400 kV D/C Mohindergarh-Dhanonda
(ii) 400 kV D/C Mohindergarh-Bhiwani
(iii) 400 kV D/C Mundra-Sami-Dehgam
Sub-stations
(i) Sub-stations at Mundra & Mohindergarh
(ii) Bays at Bhiwani (PG) Sub-station
(iii) Sub-stations at Mundra & Sami
(iv) Bays at Dehgam (PG) Sub-station
HVDC System
Transmission line
(i) ± 500 kV Bipole Mundra-Mohindergarh HVDC line
(ii) 33 kV D/C Electrode lines for HVDC Mundra and Mohindergarh Terminal Stations
Sub-station
(i) HVDC Terminal Stations at Mundra & Mohindergarh

(c) The entire scope of work under the transmission project has been completed and is covered in the instant petition, the particulars of the assets under scope of the work is as follows:

AC system	Asset details
Transmission line	
(i) 400 kV D/C Mohindergarh Dhanonda	Asset-I
(ii) 400 kV D/C Mohindergarh-Bhiwani	Asset-I
(iii) 400 kV D/C Mundra -Sami - Dehgam	Asset-II
Sub-stations	
(i) Sub-stations at Mundra & Mohindergarh	Asset-I
(ii) Bays at Bhiwani (PG) Substation	Asset-I
(iii) Sub-stations at Mundra & Sami	Asset-II
(iv) Bays at Dehgam (PG) Sub-station	Asset-II
HVDC System	
Transmission line	
± 500 kV Bipole Mundra -Mohindergarh HVDC line	Asset-I
33 kV D/C Electrode lines for HVDC Mundra and Mohindergarh Terminal Stations	Asset-I
Sub-station	
HVDC Terminal Stations at Mundra & Mohindergarh	Asset-I

(d) The transmission project was executed in two sets for evacuation of power from Mundra Power Project namely, Asset-I (for evacuation of power to NR) and Asset-II (for evacuation of power to WR) as detailed hereunder:

Asset	Name of Asset	Actual COD
Asset-I	HVDC Pole-I along with HVDC line	12.07.2012
	HVDC Pole-II along with HVDC line	09.10.2012
	400 kV D/C Mohindergarh-Dhanonda AC line	12.07.2012
	400 kV D/C Mohindergarh-Bhiwani AC Line	09.08.2012
Asset II	400 kV D/C Mundra-Sami-Dehgam	13.07.2009
	400 kV D/C Sami-Dehgam along with Switching Station	13.07.2009

(e) The tariff for the transmission assets was allowed for the period from 1.10.2013 to 31.3.2014 vide order dated 18.3.2016 in Petition No.184/TT/2013, considering the deemed COD as 1.10.2013.

(f) Aggrieved with the Commission's order dated 18.3.2016 in Petition No.184/TT/2013, the Petitioner filed Appeal No. 226 of 2016 before the Appellate Tribunal for Electricity (APTEL) contesting decision of the Commission to approve COD as 1.10.2013 instead of 29.7.2013 and against reduction of capital cost of sub-stations.

(g) APTEL vide judgment dated 8.11.2017 in Appeal No. 226 of 2016 partly allowed the Appeal. APTEL held that there is no infirmity in Commission's decision to consider the opening loan as on the date of commencement of tariff after reducing it by cumulative depreciation. However, APTEL remanded the matter back to the Commission for considering the date of grant of transmission licence, i.e. 29.7.2013, as COD of the transmission assets and also directed to consider the actual cost paid by the Petitioner to PGCIL towards construction of sub-station on deposit work basis while determining the capital cost of the transmission assets.

(h) The relevant portion of the judgment dated 8.11.2017 of APTEL in Appeal No. 226/2016 regarding COD is extracted hereunder:

> *"We are of the considered opinion that some issues raised in the present Appeal have merit as discussed above. The Appeal is hereby partially allowed.*
>
> *The Impugned Order dated 18.3.2016 passed by the Central Commission is hereby remanded to the Central Commission for allowing the date of grant of Transmission License i.e. 29.7.2013 as the date of tariff commencement for the transmission assets of the Appellant & to determine the capital cost of the said transmission assets including Bhiwani & Dehgam sub stations as on*

date of grant of Transmission License as decided above including consequential reliefs to the Appellant."

(i) As regards the capital cost of the sub-station, APTEL in its judgement dated 8.11.2017 in Appeal No. 226/2016 has held as follows:

"Reduction of Capital Cost of AC Substation Portion

1) In view of the above we are of the considered opinion that the Central Commission is justified in using benchmark capital cost while deciding capital cost of the AC substation of the Appellant and there is no infirmity in the decision of the Central Commission. (Ref: 16 (c) v)

2) We observe that in case of the sub stations (Bhiwani & Dehgam) where Powergrid has carried out the works of the Appellant on deposit works basis in the premises of its existing sub stations, the Central Commission has compared the capital cost of the Appellant with that of the indicative cost of similar works carried out by Powergrid. (Ref: 16 (h) ii)

3) We see some merit in the claim of the Appellant that the Central Commission has subjectively used indicative cost or benchmark cost as prudence check for arriving at the capital cost of the Appellant. In view of our discussions as above, the deposit works carried out by the Powergrid on behalf of the Appellant and the cost of those works being less than as derived from the benchmark model, we are of the considered opinion that the Appellant is entitled to recover the cost for the said sub stations where Powergrid has executed the works on behalf of the Appellant. The Central Commission is hereby directed to consider the actual capital cost considering the deposit work executed by Powergrid for the said transmission assets. Here we would like to clarify that the capital cost in this case for the said assets is to be considered as on date of grant of TL as we have decided the date of tariff commencement as the date of grant of TL to the Appellant. (Ref: 16 (h) iii)

Reduction of Loan Outstanding by Cumulative Depreciation till the Date of Transmission License

1) Accordingly, as per the foregoing discussions, we decide that the opening loan as on date of tariff commencement date is to be considered after reducing it by cumulative depreciation as done by the Central Commission and there is no infirmity in the decision of the Central Commission in this regard. (Ref: 16 (j) v)

2) We have already decided that the tariff commencement date is to be considered as date of grant of TL i.e. 29.7.2013 therefore, the Central Commission is directed to work out the capital cost as on 28.7.2013 and the other tariff components including interest on loan as per the provisions of the Tariff Regulations, 2009. (Ref: 16 (j) vi)

3) On the issue of depreciation on pruned capital cost as on date of tariff determination, the Central Commission has submitted that this issue is being dealt in true up petition filed by the Appellant. Accordingly, with the consent of the parties this issue is not dealt in the present Appeal. However, it is clarified *that the date of tariff commencement is to be taken as 29.7.2013 as decided in this judgement. (Ref: 16 (j) vii)"*

(j) Aggrieved with the decision of APTEL on the issue of amount of opening loan, the Petitioner has filed a Review Petition No. 3 of 2018 in Appeal No. 226/2016 before APTEL and same is pending. The Petitioner has also filed Civil Appeal against the judgment of the APTEL in Appeal No. 226/2016 before the Hon'ble Supreme court and the same is also pending before the Hon'ble Supreme court.

(k) In the meanwhile, the Petitioner filed Petition No. 146/TT/2016 for truing up of tariff of 2013-14 period and for determination of transmission tariff for the 2014-19 tariff period. The trued-up tariff determined *vide* order dated 3.11.2017 in Petition No.146/TT/2016 was based on admitted capital cost of ₹364539.06 lakh and ₹54089.69 lakh as on 1.10.2013 and ₹370083.06 lakh and ₹54089.69. lakh as on 31.3.2014, in case of Asset-I and Asset-II respectively. The trued-up additional capital expenditure (ACE) considered for Asset-I and Asset-II during 2013-14 period was ₹5544.00 lakh and 'nil', respectively.

(l) The present petition is filed by the Petitioner for truing up of tariff of 2014-19 tariff period in accordance with the 2014 Tariff Regulations and determination of tariff for the 2019-24 tariff period in accordance with the 2019 Tariff Regulations.

4. The matter was heard on 28.8.2020 and order was reserved. Thereafter, the Petitioner submitted letter dated 7.10.2021 stating that it is not inclined to press for the implementation of the APTEL judgment dated 8.11.2017 in Appeal No. 226/2016 for redetermination of tariff of the transmission assets for 2013-14 period based on revised COD as the annual accounts for the Petitioner are already settled. The said letter is as follows:

“ANNEXURE A-1

Ref: ATIL/CERC/07102021 ***Date: 07.10.2021***

Shri Sanoj Kumar Jha
Secretary,
Central Electricity Regulatory Commission,
3rd & 4th Floor, Chanderlok Building,
36, Janpath,
New Delhi-110001

Subject-APTEL judgment dated 08.11.2017 in Appeal No. 226 of 2016

Dear Sir,

ATIL was granted Transmission license No. 20/Transmission/2013/CERC dated 29.07.2013. ATIL had filed Petition No. 184/TT/2013 for determination of tariff for the control period 2009-14 (FY 2013-14). Hon’ble Commission vide order dated 18.03.2016 determined the tariff for the year 2013-14. ATIL filed Appeal no. 226/2016 before the Hon’ble APTEL challenging order of the Commission against certain disallowance of cost and consideration of COD as 01.10.2013 in place of 29.07.2013.

Hon’ble Tribunal, vide its judgment dated 08.11.2017 in appeal no. 226/2016, partly allowed the Appeal and decided the issue of date of commencement of tariff in favour of ATIL. The Hon’ble Tribunal had directed the Hon’ble Commission to pass consequential order and grant tariff considering 29.7.2013 as deemed DOCO/tariff commencement date.

It is pertinent to note ATIL has been managing its operations and accounts in terms of the Hon’ble Commission’s order dared 18.03.2016, granting commencement of tariff w.e.f 01.10.2013. Accordingly, the Hon’ble Commission has also determined tariff for the control period 2014-19 vide order dated 03.11.2017 in Petition No 146/TT/2016 . ATIL has also filed tariff Petition bearing no 216/TT/2020 for the control period 2019-2020, considering COD as 01.10.2013, which was reserved for order on 28.08.2020. Further, the Annual Accounts of ATIL are already settled. Therefore, ATIL is not inclined to press for the implementation of judgment of the Hon’ble Tribunal for re-determination of tariff based on revised COD.

In view of the above, we request the Hon’ble Commission not to pass consequential order in the above matter.

Your sincerely,

For Adani Transmission (India) Limited

Authorised Signatory

Tanmay Vyas”

5. In view of the Petitioner’s letter dated 7.10.2021, Petition No. 184/TT/2013, Petition No.146/TT/2016 and Petition No. 216/TT/2020 were listed for hearing on

25.11.2021, with a notice to the beneficiaries. The learned senior counsel for the Petitioner submitted that it is not inclined to take the benefit of the APTEL judgment dated 8.11.2017 for re-determination of tariff based on the revised COD, as considerable time has lapsed since the issue of order in Petition No. 184/TT/2013 and that the annual accounts of the Petitioner are already settled. He further submitted that consequential relief of the APTEL judgment dated 8.11.2017 involves opening of books of account of the Petitioner from 2013 onwards and tariff re-determination from the revised COD i.e. 29.7.2013 which is a complex procedure and that it does not accrue any commercial benefit to the Petitioner. He submitted that an affidavit relinquishing the right/ claim of the Petitioner confining to the issue of consideration of COD as 29.7.2013 will be placed on record. He also submitted that the pending Review Petition No.3/2018 before APTEL and Civil Appeal before the Hon'ble Supreme Court against the judgment dated 8.11.2017 in Appeal No. 226/2016 are regarding the disallowance of cost, and is not related to the issue of COD of the transmission assets. He further clarified that the Petitioner will not claim or pursue its relinquished claim regarding COD of the transmission assets as 29.7.2013 in any of the forums for the present or in future through any of the pending cases or future cases. After hearing the Petitioner, the Commission directed the Petitioner to submit a copy of the review petition filed before APTEL and the Civil Appeal filed before Hon'ble Supreme Court by 7.12.2021 on affidavit with a copy to the Respondents. The Respondents were directed to file reply by 14.12.2021 and the Petitioner to file rejoinder, if any, by 21.12.2021. However, none of the Respondents have filed their reply. But MPPMCL vide its letter dated 14.12.2021 sought extension of time to file its reply and was granted time till 29.12.2021 to file reply. However, no reply has been filed by MPPMCL. Therefore, we proceed to dispose of the instant petition.

6. In compliance of the direction of the Commission vide RoP dated 25.11.2021, the Petitioner has filed an affidavit, dated 4.12.2021, stating that it waives all/ any of its rights and interests in relation to consequential relief that may arise on account of change of date of tariff commencement. The said waiver of relief is for all times and the Petitioner undertakes to not to make claim in this regard at any time in future. The Petitioner has submitted that it has been managing its operations and accounts in terms of the order dated 18.3.2016, granting commencement of tariff w.e.f. 1.10.2013 and the said date of commencement of tariff may continue for the past and future period as has been recognised in the books of the Petitioner. The Petitioner has also filed true copy of the Review Petition No. 3 of 2018 (filed before APTEL) and Civil Appeal Diary No. 4551/2018 (filed before the Hon'ble Supreme Court).

7. We have considered the submissions of the Petitioner. The Commission in order dated 18.3.2016 in Petition No.184/TT/2013 approved COD of the transmission assets as 1.10.2013 against the Petitioner's claim of 29.7.2013, which was the date of grant of transmission licence. The relevant portion of the order dated 18.3.2016 is as follows:

> *"26………In our view, the reference date of 1.10.2013 can be taken for determination of tariff for the following reasons. Firstly, the assets were put into use as ISTS after taking into account all the requirements of the system operator like control area jurisdiction, scheduling, metering location, transmission charges and losses under PoC mechanism etc. which were decided in a meeting taken by Chairperson CEA with the attendance of all stakeholders including the representative of the petitioner. Secondly, the transmission charges will be serviced through PoC mechanism with effect from 1.10.2013 as decided in the said meeting. Thirdly, recovery of the transmission charges from the date of grant of licence till 30.9.2013 will no more remain an issue. Fourthly, since the transmission systems of the petitioner were effectively used as dedicated transmission system between 29.7.2013 till 30.9.2013, the petitioner shall continue to recover the charges for the*

said period in the same manner it was recovering from the date of actual commissioning till 29.7.2013. Finally, taking 1.10.2013 as the date for determination of tariff will balance the interests of the petitioner and beneficiaries. In view of the above discussion, we decide that the deemed CoD for the purpose of determination of tariff shall be considered as 1.10.2013."

8. The Petitioner filed an Appeal before APTEL against the order dated 18.3.2016 and as stated above, APTEL directed the Commission to consider the date of licence i.e., 29.7.2013, as COD and, accordingly, directed to revise the tariff allowed for the transmission assets. During the intervening period, the Commission had trued up the tariff allowed vide order dated 18.3.2016 and also granted tariff for the 2014-19 tariff period vide order dated 3.11.2017 in Petition No.146/TT/2016. The Petitioner in the instant petition has submitted that it waives its rights and interest that may arise on account of revision of COD and consequent revision of tariff for the present and at any time in future. None of the Respondents have filed any response to the Petitioner's request. As the Petitioner on its own has relinquished the relief granted by APTEL vide judgement dated 8.11.2017 in Appeal No.226 of 2016, COD of the transmission asset is considered as 1.10.2013 (same as in Petition No. 184/TT/2013 and Petition No. 146/TT/2016) and the capital cost and tariff are allowed accordingly. As a result, there is no necessity to revise the tariff granted vide order dated 18.3.2016 in Petition No.184/TT/2013 and tariff trued up vide order dated 3.11.2017 in Petition No.146/TT/2016 for the period 2013-14. We would also like to reiterate that the issue of COD of the transmission assets would not be reopened anytime in future, in terms of affidavit submitted by the Petitioner thereby waiving off its rights and claims in this regard.

9. The Respondents are distribution licensees, power departments and transmission licensees, who are procuring transmission services from the Petitioner, mainly beneficiaries of the Northern Region.

10. The Petitioner has served the petition on the Respondents and notice of this application has also been published in the newspapers in accordance with Section 64 of the Electricity Act 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. Madhya Pradesh Power Management Company Limited (MPPMCL), Respondent No. 10, has filed its reply *vide* affidavits dated 23.5.2020 and 8.6.2020 and has raised issues of admissibility of ACE claimed by the Petitioner on account of SCADA upgradation, 12 ohm reactors and other items, additional O&M Expenses for increased line length of 2 km, etc. The Petitioner *vide* affidavit dated 19.8.2020 has filed rejoinder to the reply of MPPMCL.

11. Tariff for 2014-19 tariff period is being trued-up and tariff for 2019-24 period is being determined in this order taking into consideration the submissions made by the Petitioner in the petition dated 15.10.2019, reply of MPPMCL dated 23.5.2020 and 8.6.2020 and Petitioner's rejoinder dated 19.8.2020, additional information submitted *vide* affidavit dated 9.6.2020, and reply to TV letter dated 16.9.2020 filed *vide* affidavit dated 4.2.2021.

12. Having heard the representatives of the Petitioner and learned counsel for MPPMCL and having careful perusal of the materials on record, we proceed to dispose of the petition.

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

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

(₹ in lakh)

Particulars	Asset-I				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	19274.00	19720.00	19744.00	19750.00	19758.00
Interest on Loan	28780.00	25951.00	27403.00	22959.00	20354.00
Return on Equity	22253.00	22874.00	22905.00	22913.00	22981.00
Interest on working capital	1818.00	1788.00	1834.00	1745.00	1699.00
O & M Expenses	3618.00	3811.00	4018.00	4239.00	4473.00
Total	**75744.00**	**74144.00**	**75905.00**	**71605.00**	**69265.00**

(₹ in lakh)

Particulars	Asset-II				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	2801.00	2801.00	2801.00	2803.00	2806.00
Interest on Loan	3245.00	2769.00	2822.00	2266.00	1898.00
Return on Equity	3182.00	3198.00	3199.00	3202.00	3213.00
Interest on working capital	277.00	269.00	272.00	262.00	256.00
O & M Expenses	1175.00	1214.00	1255.00	1296.00	1339.00
Total	**10681.00**	**10251.00**	**10351.00**	**9832.00**	**9513.00**

14. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission assets are as follows:

(₹ in lakh)

Particulars	Asset-I				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	543.00	572.00	603.00	636.00	671.00
O&M expenses	301.00	318.00	335.00	353.00	373.00
Receivables	12624.00	12357.00	12651.00	11934.00	11544.00
Total	**13468.00**	**13247.00**	**13588.00**	**12923.00**	**12588.00**
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	**1818.00**	**1788.00**	**1834.00**	**1745.00**	**1699.00**

(₹ in lakh)

Particulars	Asset-II				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	176.27	182.16	188.19	194.44	200.89
O&M expenses	97.93	101.20	104.55	108.02	111.60
Receivables	1780.14	1708.43	1725.18	1638.70	1585.44
Total	**2054.34**	**1991.79**	**2017.92**	**1941.16**	**1897.93**
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	**277.34**	**268.89**	**272.42**	**262.06**	**256.22**

Capital Cost

15. The capital cost as on 31.3.2014 and estimated additional capital expenditure incurred or projected to be incurred during 2014-19 as admitted by the Commission *vide* order dated 3.11.2017 in Petition No. 146/TT/2016 are as follows:

(₹ in lakh)

Particulars	Asset-I				
	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Capital Cost	370083.06	386428.06	387437.06	387437.06	387437.06
Additional Capitalisation	16345.00	1009.00	0.00	0.00	0.00
Closing Capital Cost	386428.06	387437.06	387437.06	387437.06	387437.06

Particulars	Asset-II				
	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Capital Cost	54089.69	54089.69	54089.69	54089.69	54089.69
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Capital Cost	54089.69	54089.69	54089.69	54089.69	54089.69

16. The Commission vide order dated 3.11.2017 in Petition No. 146/TT/2016 had held as under:

> *"10. The petitioner has submitted the separate capital cost of AC and HVAC portions of Asset I duly certified by Statutory Auditor. However, the petitioner has not submitted separate details of additional Capitalisation, undischarged liabilities and FERV with respect to AC and HVAC portions of Asset I. In the absence of this information, it is not possible to work out separate tariff for AC and HVAC portions of Asset I. As such, tariff for Asset I is trued up on consolidated basis for the 2009-14 tariff period and the incentive in respect of HVAC and HVDC portions shall be in proportion to the capital cost of AC and HVDC portion as allowed in order dated 18.3.2016. Further, the tariff for Asset I for the 2014-19 tariff period is also allowed on a consolidated basis and separate tariff for AC and HVDC portions of Asset I shall be allowed at the time of truing up of the 2014-19 tariff on furnishing of the relevant information by the petitioner."*

17. The Petitioner in the instant petition has submitted that Asset-I and Asset-II is for the evacuation power from Mundra Power Project to Northern Region (NR) and Western Region (WR), respectively. Accordingly, Asset-I and Asset-II receive availability certificates from NRLDC and WRLDC, respectively. Accordingly, it will be difficult to calculate the availability for the asset as a whole and in turn calculation of transmission charges including incentive will not be possible for the

purpose of revenue calculation and billing. Therefore, the Petitioner has provided details of transmission charges separately for Asset-I and Asset-II.

18. We have considered the submissions of the Petitioner and noted that the Petitioner has not bifurcated the tariff for AC and HVDC portions of Asset-I in the instant true up petition also. Therefore, based on the available information, the capital cost is approved in the instant petition for AC and HVDC portions of Asset-I.

19. The Petitioner in the instant petition has claimed the same capital cost as on 1.4.2014 of ₹370083.06 lakh and ₹54089.69 lakh as on 31.3.2014 for Asset-I and Asset-II respectively as admitted by the Commission vide order dated 3.11.2017 in Petition No.146/TT/2016. Therefore, the capital cost of ₹370083.06 lakh and ₹54089.69 lakh for Asset-I and Asset-II respectively has been considered as opening capital cost as on 1.4.2014 for truing-up of transmission tariff for the 2014-19 tariff period.

Additional Capital Expenditure (ACE):

20. The Commission vide order 3.11.2017 in Petition No.146/TT/2017 had allowed the following ACE on account of spill-over of the expenditure to 2014-19 tariff period related to township and colony at Mohindergarh Sub-station and the Security System, cost escalation, price variation, balance payment for Asset-I:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
16345.00	1009.00	0.00	0.00	0.00

21. The Petitioner in the instant true up petition has claimed the following ACE for 2014-19 tariff period:

(₹ in lakh)

Asset	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	16345.00	1009.00	50.00	192.00	81.00
Asset-II	0.00	0.00	57.00	49.00	27.00

22. The Petitioner has claimed ACE in 2014-19 tariff period towards the following items:

2014-19 Tariff Period

(a) Undischarged liabilities and balance/ deferred payment

(b) New items such as:

(i) Truck mounted hot line washing machine for insulators
(ii) Silicon Paint Coating on High voltage Insulators
(iii) Replacement of Porcelain insulator
(iv) Expenses for installation of security system
(v) Automatic Power Factor Control (APFC) panel
(vi) Emergency Restoration System
(vii) Replacement of Battery Bank
(viii) Upgradation of Power Line Carrier Communication (PLCC)
(ix) Liabilities to meet award of arbitration for Land at Sami
(x) Change of possession of Land

23. Further, the Petitioner has prayed to admit the claimed ACE under applicable clause of Regulation 14(3) of the 2014 Tariff Regulations and has submitted the following justification:

Asset-I

(a) The copies of Auditor's certificates dated 6.8.2016 for 2014-15 and 2015-16 which were submitted while filing Petition No.146/TT/2016, have also been submitted in the instant petition.

(b) The Petitioner had claimed additional capital expenditure during 2014-15 and 2015-16 under Regulations 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations. ACE claimed for 2014-15 and 2015-16 are on account of undischarged liabilities and balance/ deferred payment and are within the "cut off" date. Item-wise break-up of additional capitalisation in 2014-15 and 2015-16 are as follows:

(₹ in lakh)

Sr. No.	Particulars	Asset-I	
		2014-15	2015-16
1.	Township & Colony at Mohindergarh	599.00	50.00
2.	Cost Escalation/ PV/ Balance Payment	382.00	140.00
3.	Security System	14.00	148.00
4.	Deferred payment of FERV accruing between 29.7.2013 to 30.9.2013 on LC/ borrowing/ vendor	15350.00	-
5.	Deferred payment of FERV up to 29.7.2013 on vendor payment/ Retention LC	-	671.00
	Total	**16345.00**	**1009.00**

(c) The Commission vide its order in Petition No.146/TT/2016 approved the above ACE of ₹16345 lakh and ₹1009 lakh in 2014-15 and 2015-16 respectively, for determination of tariff. Therefore, the Petitioner has considered the approved ACE of ₹16345 lakh in 2014-15 and ₹1009 lakh in 2015-16 in the present petition.

(d) The Petitioner has claimed following ACE in 2016-17, 2017-18 and 2018-19:

(₹ in lakh)

Sr. No.	ACE during FY	Amount capitalised/ proposed to be capitalised	Justification	Regulation under which covered
1	2016-17	25.00	Truck mounted hot line washing machine for insulators	14(3)(ix)
2		25.00	Silicon Paint Coating on High voltage Insulators	14(3)(ix)
Sub-total		**50.00**		
3	2017-18	23.00	Silicon Paint Coating on High voltage Insulators	14(3)(ix)
4		150.00	Replacement of porcelain insulator	14(3)(ix)
5		19.00	Expenses for installation of security system for efficient operation of transmission system	14(3)(ix)
Sub-total		**192.00**		
6	2018-19	52.00	APFC panel for successful and efficient operation of transmission system	14(3)(ix)
7		15.00	Emergency restoration system	14(3)(ix)
8		14.00	Replacement of porcelain insulator	14(3)(ix)
Sub-total		**81.00**		

(e) Reasoning/ justification submitted by the Petitioner for ACE in 2016-17, 2017-18 and 2018-19 is as follows:

(i) *Truck mounted hot line washing machine for insulators*: The insulators of lines & equipment are contaminated due to dust, birds' droppings, chemical pollution, saline weather etc. The contaminated insulators are susceptible for flashover during humid atmosphere, dew or foggy weather etc. Hence, there is a need to clean it periodically. The Petitioner was facing frequent failure and disturbances in HVDC line and to minimise it, the Petitioner decided to develop insulator cleaning infrastructure and purchased truck mounted hotline washing machine for insulators.

(ii) *Silicon Paint Coating on High Voltage Insulators*: Corrosion and pollution of outdoor high voltage insulators is a common problem for utilities, with a considerable impact to power system reliability. A possible outage in a high voltage system usually corresponds to a severe impact to the power system. To prevent the possible flashovers due to corrosion and pollution, high voltage insulation coating is done, aiming to improve the insulation performance, either by suppressing the formation of surface conductivity or by increasing the possible insulation level. Since the Petitioner's HVDC lines are in coastal area, there are issues of corrosion and subsequent failures of insulators and, hence, the Petitioner has carried out the silicon painting in HVDC sub-station equipment to avoid tripping due to dust and corrosion.

(iii) *Replacement of porcelain insulator*: The transmission lines of the Petitioner are around the humid area of Gujarat. Due to humid weather conditions near creek area in Gujarat section, dust film is forming on insulators, which creates a conducting path between conductors and the tower and same leads to frequent disturbances in power equipment. Further, as result of higher pollution level, frequent tripping of lines, especially those passing through creek and polluted area. Despite taking regular maintenance measures, including cleaning of insulators in critical stretches every year, tripping in some of the portion is matter of concern. To overcome this, the Petitioner has replaced

Porcelain Insulators with Silicon Rubber Insulators in humid areas, to avoid frequent disturbance in power evacuation through HVDC line.

(iv) *Expenses for installation of security system for efficient operation of transmission system*: The Mundra-Mohindergarh transmission system has been facing regular incidents of conductor theft in electrode line. Due to this, there has been frequent tripping of Mundra-Mohindergarh HVDC pole. In order to minimise theft, the Petitioner had deputed many security guards but it was not effective. There were few incidents where sudden outage of system had resulted into the restriction of power flow and ultimately hampered the system security and stability. Therefore, in order to resolve the situation permanently, it has been decided to install electronics online monitoring system.

(v) *Automatic Power Factor Control (APFC) panel for successful and efficient operation of transmission system*: It is pertinent to note that the Petitioner was facing the issue of Low Power Factor i.e. 75%. Low Power Factor draws a higher internal current and the excessive heat generated can damage and/or shorten equipment life. At low power factor, the higher current gives rise to copper losses in the system and the efficiency of the system gets reduced. Therefore, the Petitioner decided to install APFC system to improve Power Factor.

(vi) *Emergency Restoration System*: To mitigate any natural calamities or unforeseeable events such as sabotage and to restore the system within minimum time period, an Emergency Restoration System (ERS) was procured. This will enhance reliability and stability of transmission system.

(f) The Certificates of Chartered Accountant with respect to Additional Capitalisation in 2016-17, 2017-18 and 2018-19 are filed.

Asset-II

(a) The Petitioner has claimed the following ACE during 2016-17, 2017-18 and 2018-19:

(₹ in lakh)

Sr. No.	ACE during FY	Amount capitalised/ proposed to be capitalised	Justification	Regulation under which covered
1	2016-17	7.00	Replacement of Battery Bank	14(3)(ix)
2		50.00	Upgradation of power line carrier communication	14(3)(ix)
Sub-total		**57.00**		
3	2017-18	22.00	Change of possession of Land	14(3)(vii)
4		19.00	Expenses for installation of security system for efficient operation of transmission system	14(3)(ix)
5		8.00	Upgradation of power line carrier communication	14(3)(ix)
Sub-total		**49.00**		
6	2018-19	27.00	Liabilities to meet award of arbitration for Land at Sami	14(3)(i)

(b) Reasoning/ justification submitted by the Petitioner for ACE in 2016-17, 2017-18 and 2018-19 are as follows:

(i) *Expenses for installation of security system for efficient operation of transmission system*: The Mudra-Sami-Dehgam transmission system has been facing regular incidents of conductor theft in electrode line. Due to this, there has been frequent tripping of transmission line. In order to minimise theft, Petitioner had deputed many security guards but it was not effective. There were few incidents where sudden outage of system had resulted into the restriction of power flow and ultimately hampered the system security and stability. Therefore, in order to resolve the situation permanently, it has been decided to install electronics online monitoring system.

(ii) *Replacement of Battery Bank*: The Battery Bank's life has expired and it has started failing. So, it was decided to replace the complete Battery Bank to maintain reliability of the system.

(iii) *Upgradation of Power Line Carrier Communication (PLCC)*: The Petitioner had installed BPL make PLCC panels at Mundra-Sami-Dehgam. However, BPL has stopped their operations and was not providing the services. The BPL make panels are also very old and many mal-operations were observed and, therefore, the Petitioner decided to replace PLCC panels with ABB make panels for efficient operation of transmission system.

(iv) *Liabilities to meet award of arbitration for land at Sami*: The Petitioner paid settlement charges to purchase land measuring 1580 sq. mt. at 400 kV Switching Station, Sami.

(v) *Change of possession of land*: Some portion of land was not in possession of the Petitioner. Therefore, it was decided to change the ownership to the Petitioner and incurred the expense of ₹22 lakh.

24. MPPMCL, *vide* affidavit dated 8.6.2020 has submitted the following in respect of truing up of tariff for 2014-19 period for the transmission assets:

Asset-I

(a) The Petitioner has claimed true-up of tariff without clearly specifying the net over-expenditure against the approved ACE. In absence of a clear component-wise over-expenditure and under-expenditure as against those "Allowed on Estimated Basis" in Petition No. 146/TT/2016, a prudent true up exercise may not be possible. The Petitioner should be directed to submit the said details on affidavit to enable prudence check.

(b) The "cut-off date" of the transmission assets was 31.3.2016. Since ACE is said to have been made after the cut-off date, i.e., during 2017 and 2019, the same are not admissible in view of Regulation 14 of the 2014 Tariff Regulations.

(c) The claim of ₹25 lakh towards additional capitalization of Truck Mounted Hot Line Washing Machine for Insulators is not a capital expenditure but is a part of O&M Expenses already allowed on Normative Basis *vide* order dated 3.11.2017 in Petition No. 146/TT/2016. The Petitioner cannot claim it separately as ACE. Furthermore, the said expenditure was not included in the original scope of work and has been made after the cut-off date. The said expenditure is not of the nature of necessary or genuine expenditure which could not be avoided and a prior approval of the same was not sought from the Commission. The said expenditure is not covered under Regulation 14 of the 2014 Tariff Regulations. Hence, the Petitioner’s claim on this count be disallowed.

(d) ACE of ₹48 lakh towards Silicon Paint Coating on High Voltage Insulators is said to have been incurred after the cut-off date of 31.3.2016 and was not included in the original scope of work. Prior approval of the Commission and consent of the beneficiaries was not obtained by the Petitioner while incurring such expenditure. Even otherwise after incurring these expenditures, the Petitioner would obviously get compensated by way of savings in O&M expenses and repairs. The said expenditure is not covered under Regulation 14 of the 2014 Tariff Regulations. Hence, it may be disallowed.

(e) The Petitioner has claimed an ACE of ₹164 lakh towards replacement of Porcelain Insulators. This expenditure was also not envisaged in the original scope of work. It is an expenditure included under Repairs and Maintenance and is not a capital expenditure. Prior approval of the Commission and consent of the beneficiaries was not obtained by the Petitioner while incurring such expenditure. Even otherwise after incurring these expenditures, the Petitioner would obviously get compensated by way of savings in O&M expenses and repairs. The said expenditure is not covered under Regulation 14 of the 2014 Tariff Regulations. Hence, it may be disallowed.

(f) The Petitioner has further claimed ₹19 lakh towards installation of Security System for Efficient Operation of Transmission System; ₹52 lakh towards APFC Panel for Successful and Efficient Operation of Transmission System; and ₹15 lakh towards Emergency Restoration System. ACE on these heads stands considered vide earlier order dated 18.3.2016. By way of present petition, the Petitioner cannot seek a review of said order in the garb of a true up. These expenditure are not covered under Regulation 14 of 2014 Tariff Regulations. Hence, these may be disallowed.

(g) The Petitioner's claim of ₹19 lakh towards Installation of Security System for Efficient Operation of the Transmission System, being after the cut-off date is contrary to the provisions of Regulation 14 of the 2014 Tariff Regulations. The said expenditure was not declared earlier as a deferred capital expenditure. The Petitioner has not demonstrated any instance of conductor theft and has also not brought on record any First Information Report, if any, lodged by it for alleged theft of conductor in Mundra-Sami-Dehgam Transmission system. There is no bona fide basis for the Petitioner to claim this expense. The expense is not genuine and hence, may be disallowed.

Asset-II

(a) The Petitioner has claimed ACE of ₹7 lakh towards replacement of the entire Battery Bank, alleging that it has completed its life and has started failing. The Petitioner has failed to regularly maintain the batteries in the bank and has not provided timely maintenance to the bank. Even otherwise, in the original scope of the project, the capitalization towards Battery Bank was made for the entire life of the project. Additional Capitalization on this count would lead to additional recovery from the beneficiaries and result in undue tariff hike. The Petitioner may meet the said expense from Repairs & Maintenance Cost allowed to it. The Petitioner should have considered the Battery Bank's life in consultation with its provider at the initial stage in the original scope of work and claimed reasonable capitalization at the initial stage. Therefore, such a claim at this stage is not just and proper and may not be allowed.

(b) The Petitioner's claim of ₹58 lakh towards alleged Upgradation of Power Line Carrier Communication does not meet the requisites of Regulation 14 of the 2014 Tariff Regulations. The Petitioner has failed to bring on record any communication from BPL to the effect that they have stopped their operations and were not providing the services. Even otherwise, the beneficiaries cannot be saddled with the consequences of BPL in untimely stopping its services. The Petitioner ought to have made due representations at appropriate redressal forum in this respect and sought proper redressal. Such a redressal cannot be claimed by way of servicing the same in tariff on beneficiaries. Replacement of BPL make panels with PLCC panels is not a mandatory or regulatory requirement. Hence, may be dismissed.

(c) In respect of ₹27 lakh claimed by the Petitioner towards liabilities to meet the Arbitration Award of land at Sami is not supported by the certified copy of the Arbitration Award and a Satisfaction Certificate of the same. The mention of such deferred liability was also not made in the earlier tariff petitions by the Petitioner and the same was also not approved earlier by the Commission. The said claim is contrary to the provisions of Regulation 14 of the 2014 Tariff Regulations and, hence, may be dismissed.

(d) The Petitioner's claim of ₹22 lakh towards change in possession of land is baseless. The Petitioner had not disclosed this deferred liability at the initial stage. It has failed to produce on record as to from whom it has procured the said land and at which price. The Petitioner has failed to establish as to how it could take possession of the land without having prior right and title or lease / license over it. The Petitioner has not disclosed the description of the said land and its usage in the project. The claim is not bona fide and is contrary to provisions of Regulation 14 of the 2014 Tariff Regulations. Hence, may be disallowed.

25. In response, the Petitioner filed its rejoinder *vide* affidavit dated 18.8.2020 and reiterated the submissions made in the petition and we are not repeating here for the sake of brevity.

26. The Petitioner was directed *vide* TV letter dated 16.9.2020 to clarify the reasons for not claiming ACE in 2016-17, 2017-18 and 2018-19 in Petition No.146/TT/2016 and also to clarify whether ACE claimed beyond the cut-off date is within the original scope of work.

27. In response, the Petitioner vide affidavit dated 4.2.2021 has submitted

following:

(a) At the time of filing Petition No. 146/TT/2016 (i.e., on 11.8.2016), the Petitioner had submitted the details of ACE on actual basis only for 2014-15 and 2015-16, and estimated basis for the remaining years. The Petitioner has claimed ACE in 2016-17, 2017-18 and 2018-19 in the present petition in accordance with the 2014 Tariff Regulations. The said Regulations specifically contain provisions for claiming this type of expenditure on actual basis.

(b) The Petitioner has submitted the Certificate of Statutory Auditor with respect to ACE in 2016-17, 2017-18 and 2018-19.

(c) Further, the Petitioner has submitted that the details of ACE claimed by the Petitioner beyond the 'cut-off date' have been mentioned in the petition.

(d) The Petitioner has outlined the reasons as to why ACE is necessary for successful and efficient operation of transmission system qua Asset-I and Asset-II. It is clear from the pleadings that these works could not have been part of the Original Scope of Work.

28. We have considered the submissions made by the Petitioner and MPPMCL. The Commission in order dated 3.11.2017 in Petition No. 146/TT/2016 approved ACE of ₹16345 lakh and ₹1009 lakh for 2014-15 and 2015-16 respectively for Asset-I. The same ACE has been claimed by the Petitioner at the true up stage in the instant petition. Accordingly, ACE of ₹16345 lakh and ₹1009 lakh for 2014-15 and 2015-16 respectively, for Asset-I has been considered for determination of trued-up tariff. No ACE in respect of Asset-II for the period 2014-15 and 2015-16 was claimed by the Petitioner in Petition No. 146/TT/2016.

29. As regard ACE for the period 2016-17 to 2018-19, MPPMCL has contended that ACE claimed by the Petitioner in respect of Asset-I in 2016-17, 2017-18 and

2018-19 towards Truck Mounted Hot Line Washing Machine for Insulators, Silicon Paint Coating on high voltage insulators, replacement of porcelain insulators, expenses for installation of Security System for efficient operation of transmission system, expenses on APFC Panel etc. are part of O&M expenses and are not of capital nature. Further, the said expenditure was not included in the original scope of work and same not being genuine or bona fide or necessary, may be disallowed. Similarly, ACE claimed in case of Asset-II in 2017-18 and 2018-19 on account of installation of security system, replacement of battery bank, upgradation of Power Line Carrier Communication, liabilities to meet award of Arbitration for land at Sami Sub-station and expenses towards change of possession of land are not bona fide and are also liable to be rejected. MPPMCL has also submitted that no satisfaction certificate has been filed by the Petitioner for the liability because of the arbitration award of land at Sami. Hence, the claim towards change in the possession of land may be disallowed.

30. The Petitioner has submitted that ACE during 2016-17, 2017-18 and 2018-19 is beyond the cut-off date of 31.3.2016 and the same is claimed under Regulations 14(3)(vii) and 14(3)(ix) of the 2014 Tariff Regulations. The Petitioner has submitted Auditor certificate in support of ACE in 2016-17, 2017-18 and 2018-19 for the transmission assets.

31. ACE claimed for Asset-I is on account of expenses involved in changing of equipment at the sub-stations, installation of cleaning infrastructure and replacement of porcelain insulators due to excessive corrosion because of a nearby creek. ACE in case of Asset- II is due to replacement of battery banks and obsolescence of technology and non-availability of servicing facility of PLCC equipment of BPL make, which were replaced with panels made by ABB for

efficient operation.

32. The Petitioner has submitted that the contaminated insulators were susceptible to flashover during humid conditions or foggy weather and, therefore, there was a need for periodic cleaning. Accordingly, the Petitioner developed deep insulator cleaning mechanism and purchased truck mounted hotline washing machine for insulators. Therefore, the expenditure towards them was not anticipated in the original scope and were required to be carried out beyond 'cut-off date'. The Petitioner has submitted that ACE claimed by the Petitioner is justified to ensure smooth and continuing operations as the transmission assets are over a decade old.

33. ACE claimed by the Petitioner vide affidavit dated 4.2.2021 is as follows:

Asset-I

(₹ in lakh)

Sr. No.	ACE during FY	Amount capitalised/ proposed to be capitalised	Justification	Regulation under which covered
1	2016-17	25.00	Truck mounted hot line washing machine for insulators	14(3)(ix)
2		25.00	Silicon Paint Coating on High voltage Insulators	14(3)(ix)
Sub-total		**50.00**		
3	2017-18	23.00	Silicon Paint Coating on High voltage Insulators	14(3)(ix)
4		133.00	Replacement of porcelain insulator	14(3)(ix)
5		20.00	Expenses for installation of security system for efficient operation of transmission system	14(3)(ix)
Sub-total		**176.00**		
6	2018-19	52.00	APFC panel for successful and efficient operation of transmission system	14(3)(ix)
7		14.00	Replacement of porcelain insulator	14(3)(ix)
Sub-total		**66.00**		
Total (Asset-I)		**292.00**		

Asset-II

(₹ in lakh)

Sr. No.	ACE during FY	Amount capitalised/ proposed to be	Justification	Regulation under which covered

		capitalised		
1	2016-17	7.00	Replacement of Battery Bank	14(3)(ix)
2		50.00	Upgradation of power line carrier communication	14(3)(ix)
Sub-total		**57.00**		
3	2017-18	22.00	Change of possession of Land	14(3)(vii)
4		19.00	Expenses for installation of security system for efficient operation of transmission system	14(3)(ix)
5		8.00	Upgradation of power line carrier communication	14(3)(ix)
Sub-total		**49.00**		
6	2018-19	27.00	Liabilities to meet award of arbitration for Land at Sami	14(3)(i)
		15.00	Emergency restoration system	14(3)(ix)
Sub-total		**42.00**		
Total (Asset-II)		**148.00**		

34. Regulation 14(3)(vii) and Regulation 14(3)(ix) of the 2014 Tariff Regulations provides as follows:

> *"14. Additional Capitalisation and De-capitalisation:*
>
> *(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:*
> *xxxxxxx xxxxx xxxxx*
>
> *(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal/lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;*
> *xxxxxxx xxxxx xxxxx*
>
> *ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolescence of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system;"*

35. The O&M Expenses is defined under the 2014 Tariff Regulations as follows:

"42) 'Operation and Maintenance Expenses or 'O&M expenses' means the expenditure incurred for operation and maintenance of the project, or part thereof, and includes the expenditure on manpower, repairs, maintenance spares, consumables, insurance and overheads but excludes fuel expenses and water charges;"

36. The Commission *vide* order dated 3.11.2017 in Petition No. 146/TT/2016 has considered ACE during 2014-19 within the cut-off date, i.e. in 2014-15 and 2015-16. The Petitioner has not submitted Form-5 for the tariff period 2014-19 in case of Asset-I and Asset-II. It is observed that the Petitioner is claiming ACE towards obsolescence of technology even before completion of the useful life of the transmission assets. It is also observed that the works are beyond original scope of work and the Petitioner has not submitted any test reports duly certified by independent agency which is required if the Petitioner is claiming ACE under Regulation 14(3)(vii) of the 2014 Tariff Regulations. The Petitioner has not submitted recommendations of OEM with respect to obsolescence of technology and up-gradation of equipment and also not submitted any approval of SCM/ RPC or approval of beneficiaries. Further, it is also observed that the expenditure claimed by the Petitioner under the head ACE, which is beyond cut-off date in 2016-17, 2017-18 and 2018-19, is towards operation and maintenance of the transmission assets and, hence, should be met from the approved O&M Expenses.

37. As regards ACE claimed in respect of porcelain insulators for 2017-18 and 2018-19 for Asset-I, there is a difference between the amount claimed initially in the petition and claimed vide affidavit dated 4.2.2021 in response to TV letter. The same has been summarised in the following table:

(₹ in lakh)

Particulars	Year	Amount claimed at the time of filing of	Amount claimed vide affidavit

		instant petition	dated 4.2.2021
Replacement of porcelain insulators	**2017-18**	150.00	133.00
	2018-19	14.00	14.00

38. We note that consent of the beneficiaries for replacing the existing insulators has not been obtained. The Petitioner has also not submitted any approval of RPC for replacement of the existing insulators. Also, the Petitioner has not submitted the details of the de-capitalisation of existing porcelain insulators in any of the tariff forms. As such, we are not inclined to allow ACE towards this item. However, we have not gone into the merit of ACE claimed towards replacement of porcelain insulators.

39. The reasons of ACE disallowed during 2016-17 to 2018-19 is as follows:

Asset-I

(₹ in lakh)

Sl. No.	**ACE during FY**	**Amount capitalised/ proposed to be capitalised (claimed vide affidavit dated 4.2.2021)**	**Justification submitted by petitioner**	**Regulation under which ACE claimed**	**Reasons for allowing/ not allowing ACE**
1	2016-17	25.00	Truck mounted hot line washing machine for insulators	14(3)(ix)	O&M in nature and not allowable under Regulation 14(3)(ix) of the 2014 Tariff Regulations.
2		25.00	Silicon Paint Coating on High voltage Insulators	14(3)(ix)	O&M in nature and not allowable under Regulation 14(3)(ix) of the 2014 Tariff Regulations.
3	2017-18	23.00	Silicon Paint Coating on High voltage Insulators	14(3)(ix)	O&M in nature and not allowable under Regulation 14(3)(ix) of the 2014 Tariff Regulations.
4		133.00	Replacement of porcelain insulator	14(3)(ix)	Not allowed.
5		20.00	Expenses for installation of security system	14(3)(ix)	O&M in nature and not allowable under Regulation

Sl. No.	ACE during FY	Amount capitalised/ proposed to be capitalised (claimed vide affidavit dated 4.2.2021)	Justification submitted by petitioner	Regulation under which ACE claimed	Reasons for allowing/ not allowing ACE
			for efficient operation of transmission system		14(3)(ix) of the 2014 Tariff Regulations.
6	2018-19	52.00	APFC panel for successful and efficient operation of transmission system	14(3)(ix)	Not submitted any Test reports or any OEM certificate.
7		14.00	Replacement of porcelain insulator	14(3)(ix)	Not Allowed.

Asset-II

(₹ in lakh)

Sr. No.	ACE during FY	Amount capitalised/ proposed to be capitalised claimed vide affidavit dated 4.2.2021	Justification submitted by Petitioner	Regulation under which covered	Reasons for allowing/ not allowing ACE
1	2016-17	7.00	Replacement of Battery Bank	14(3)(ix)	Not submitted any Test reports or any OEM certificate. Not allowed.
2		50.00	Up-gradation of power line carrier communication	14(3)(ix)	Not submitted RPC/SCM approval. Not allowed.
3	2017-18	22.00	Change of possession of Land	14(3)(vii)	Not submitted documentary proof. Not allowed.
4		19.00	Expenses for installation of security system for efficient operation of transmission system	14(3)(ix)	O&M in nature and not allowable under Regulation 14(3)(ix) of the 2014 Tariff Regulations.
5		8.00	Up-gradation of power line carrier communication	14(3)(ix)	Not Submitted RPC/SCM approval. Not allowed.
6	2018-19	27.00	Liabilities to meet award of arbitration for land at Sami	14(3)(i)	Not submitted any documentary evidence. Not allowed.
7		15.00	Emergency restoration system	14(3)(ix)	O&M in nature and not allowable under Regulation 14(3)(ix) of the 2014 Tariff

Sr. No.	ACE during FY	Amount capitalised/ proposed to be capitalised claimed vide affidavit dated 4.2.2021	Justification submitted by Petitioner	Regulation under which covered	Reasons for allowing/ not allowing ACE
					Regulations.

Capital cost for the tariff period 2014-19

40. In view of the above, the capital cost allowed as on 31.3.2019 for tariff purpose at the time of truing up is as follows:

(₹ in lakh)

Asset	Capital cost allowed as on 1.4.2014	ACE allowed					Total capital cost allowed as on 31.3.2019
		2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	370083.06	16345.00	1009.00	0.00	0.00	0.00	387437.06
Asset-II	54089.69	0.00	0.00	0.00	0.00	0.00	54089.69

41. The details of capital cost allowed for the transmission assets *vide* order dated 3.11.2017 in Petition No. 146/TT/2016, claimed by the Petitioner in the instant petition and trued up in the instant order is as follows:

(₹ in lakh)

Asset-I	Capital cost as on 1.4.2014	ACE 2014-19	Total Capital cost including ACE as on 31.3.2019
Allowed earlier in order dated 3.11.2017 in Petition No. 146/TT/2016	370083.06	17354.00	387437.06
As claimed by the Petitioner in the instant petition	370083.06	17646.00	387729.06
Allowed after truing up in this order	370083.06	17354.00	387437.06

(₹ in lakh)

Asset-II	Capital cost as on 1.4.2014	ACE 2014-19	Total Capital cost including ACE as on 31.3.2019
Allowed earlier in order dated 3.11.2017 in Petition No. 146/TT/2016	54089.69	0.00	54089.69
As claimed by the Petitioner in the instant petition	54089.69	148.00	54237.69
Allowed after truing up in this order	54089.69	0.00	54089.69

Debt-Equity Ratio

42. The debt-equity ratio of 70:30 as on 31.3.2014 was admitted *vide* order

dated 3.11.2017 in Petition No. 146/TT/2016. The Petitioner has claimed the debt-equity ratio of 70:30 as on 1.4.2014. Further, for the purpose of ACE, debt-equity ratio has been considered in accordance with Regulation 19(3) of the 2014 Tariff Regulations. The details of debt-equity ratio in respect of the transmission assets as on 1.4.2014 and as on 31.3.2019 are as follows:

Funding Asset-I	Capital Cost as on 1.4.2014		Capital Cost as on 31.3.2019	
	Amount (₹ in lakh)	(%)	Amount (₹ in lakh)	(%)
Debt	259058.14	70.00	271205.94	70.00
Equity	111024.92	30.00	116231.12	30.00
Total	**370083.06**	**100.00**	**387437.06**	**100.00**

Funding Asset-II	Capital Cost as on 1.4.2014		Capital Cost as on 31.3.2019	
	Amount (₹ in lakh)	(%)	Amount (₹ in lakh)	(%)
Debt	37862.78	70.00	37862.78	70.00
Equity	16226.91	30.00	16226.91	30.00
Total	**54089.69**	**100.00**	**54089.69**	**100.00**

Depreciation

43. The depreciation has been allowed as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. Depreciation has been allowed considering capital expenditure as on 1.4.2014 and approved ACE during the 2014-19 tariff period. The value of freehold land in respect of Asset-I and Asset-II as considered in order dated 3.11.2017 in Petition No. 146/TT/2016 has been considered in the instant order. The Gross Block during the 2014-19 tariff period has been depreciated at weighted average rate of depreciation (WAROD) and working of WAROD is at Annexure-I. The depreciation for the 2014-19 period is trued-up for the transmission assets as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations and the same is as follows:

(₹ in lakh)

Asset-I					
Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Gross Block	370083.06	386428.06	387437.06	387437.06	387437.06
Additional Capitalisation	16345.00	1009.00	0.00	0.00	0.00
Closing Gross Block	386428.06	387437.06	387437.06	387437.06	387437.06
Average Gross Block	378255.56	386932.56	387437.06	387437.06	387437.06

Freehold Land	6070.00	6070.00	6070.00	6070.00	6070.00
Weighted Average Rate of Depreciation (WAROD) (%)	5.09	5.09	5.09	5.09	5.09
Balance useful life of the asset at the beginning of the year (Year)	28	27	26	25	24
Lapsed life of the asset at the beginning of the year (Year)	1	2	3	4	5
Aggregated Depreciable Value	334967.00	342776.30	343230.35	343230.35	343230.35
Depreciation during the year	**19258.75**	**19704.10**	**19727.01**	**19727.01**	**19727.01**
Cumulative Depreciation at the end of the year	48678.74	68382.84	88109.85	107836.85	127563.86
Remaining Aggregated Depreciable Value at the end of the Year	286288.26	274393.46	255120.51	235393.50	215666.50

(₹ in lakh)

Asset-II					
Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Gross Block	54089.69	54089.69	54089.69	54089.69	54089.69
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	54089.69	54089.69	54089.69	54089.69	54089.69
Average Gross Block	54089.69	54089.69	54089.69	54089.69	54089.69
Freehold land	742.00	742.00	742.00	742.00	742.00
Weighted Average Rate of Depreciation (WAROD) (%)	5.16%	5.16%	5.16%	5.16%	5.16%
Balance useful life of the asset at the beginning of the year (Year)	28	27	26	25	24
Lapsed life of the asset at the beginning of the year (Year)	5	6	7	8	9
Aggregated Depreciable Value	48012.92	48012.92	48012.92	48012.92	48012.92
Depreciation during the year	**2793.33**	**2793.33**	**2793.33**	**2793.33**	**2793.33**
Cumulative Depreciation at the end of the year	13804.30	16597.62	19390.95	22184.27	24977.60
Remaining Aggregated Depreciable Value at the end of the Year	34208.62	31415.30	28621.97	25828.65	23035.32

44. The details of the depreciation allowed *vide* order dated 3.11.2017 in Petition No. 146/TT/2016, claimed by the Petitioner in the instant petition and trued up in the instant order is as follows:

(₹ in lakh)

Asset-I					
Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Allowed earlier in order dated 3.11.2017 in Petition No. 146/TT/2016	19265.49	19710.82	19733.74	19733.74	19733.74
Claimed by the Petitioner in the instant petition	19274.00	19720.00	19744.00	19750.00	19758.00
Allowed after true-up in this order	19258.75	19704.10	19727.01	19727.01	19727.01

(₹ in lakh)

Asset-II					
Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Allowed earlier in order dated 3.11.2017 in Petition No. 146/TT/2016	2801.08	2801.08	2801.08	2801.08	2801.08
Claimed by the Petitioner in the instant petition	2801.00	2801.00	2801.00	2806.00	2806.00
Allowed after true-up in this order	2793.33	2793.33	2793.33	2793.33	2793.33

Interest on Loan (IoL)

45. The Petitioner has submitted that IOL is calculated for 2014-15 to 2018-19 as prescribed in Regulations 26 of the 2014 Tariff Regulations. The Petitioner has considered the actual loan portfolio for the purpose of deriving actual weighted average interest rates during 2014-15 to 2018-19. The repayment is considered equal to the depreciation for the year. The calculation of Weighted Average interest rate based on actual loan portfolio is attached as Form 9C of true up formats.

46. The Petitioner was directed *vide* Technical Validation (TV) letter dated 16.9.2020 to furnish Form-9C indicating asset-wise loan details and copies of Loan Agreement and repayment schedule in respect of loans indicated in form 9C including inter-company deposit (ICD) for both the assets.

47. In response, the Petitioner vide affidavit dated 4.2.2021 has submitted that since the loans are not asset-specific, any allocation of loans on any acceptable/

rationale basis like proration based on hard cost etc. leads to the same weighted average rate of interest on loan portfolio for each asset. With regard to the submission of copies of Loan Agreement and repayment schedule in respect of loans indicated in form 9C, the Petitioner has submitted that it has got Form 9C audited by the Statutory Auditor.

48. The Petitioner was directed to provide the reasons for availing loan from Inter-company deposit (ICD) instead of bank or any other financial institutions.

49. In response, the Petitioner has submitted that the Petitioner had filed Petition No 184/TT/2013 on 5.9.2013 for determination of tariff for the control period 2009-14 for Mundra-Mohindergarh transmission asset. During the pendency of the said petition, starting in 2015, the lenders had held several meetings and raised concerns about lower Debt Service Coverage Ratio [DSCR] which was less than 1 during the said period. During the meetings, the lenders had also raised concern about growing NPAs in the power sector and stated to be stricter in monitoring of the projects, going forward with increase in the rate of interest by 1% with revised terms and conditions. The additional 1% rate of interest would have taken the loan portfolio close to 13.5%. The Petitioner explored the possibility of availing loan through various other lenders. However, alternate lenders were not willing to make available finances for replacement of loan at better rates. PFC rate schedule for 2013-14 i.e., the rate of interest for finance to Private Sector Borrowings to Transmission Sector entities for three years was 13.50%. A copy of the PFC rate schedule is submitted with affidavit. While the Petitioner was still negotiating with the lenders, in view of the persistence pressure from the lenders, the Petitioner requested its group

company to explore funding from the market. Thereafter, the Group entity offered loan to the Petitioner at a rate lower than the existing loan portfolio as follows:

Particulars	Rate of Interest (per annum)
Rate of Interest*	12.50%

** Additional 0.75% of interest rate shall be charged from next financial year i.e. w.e.f. 01.04.2016 in case of disallowance of Capital Cost, by Hon'ble CERC, is more than 2% of the claimed capital cost by ATIL for Mundra-Mohindergarh & Mundra-Sami-Dehgam Assets.*

50. The Petitioner has further submitted that the Petitioner entered into the agreement with the Group Company with flexibility in drawl of funds. As the lenders sought to revise the terms and conditions including increase in rate of interest by 1%, the Petitioner repaid the then existing Rupee Term Loan (RTL) with loan arranged from the group company. Under the compelling circumstances, the Petitioner agreed to the above terms of the loan of ICD. Based on the study of tariff orders in case of other utilities, the Petitioner had anticipated that its entire capital cost shall be allowed by this Commission and the benefit of lower rates (12.5%) would be passed on to the end consumers. A copy of ICD loan agreement is submitted with the affidavit.

51. We have considered the submissions of the Petitioner and observe that the Weighted Average Rate of Interest (WAROI) claimed by the Petitioner for computing IOL for transmission assets for the period 2015-16 to 2018-19 is in the range of 12.22% to 14.20%. It is also observed that the Petitioner has availed ICD from its group company instead of taking loan from bank or any other financial institutions. The Petitioner has furnished the copy of ICD loan agreement executed with group company which reveals that the said agreement was executed on 31.7.2015. Further, the Petitioner had filed Petition No. 146/TT/2016 for determination of tariff for 2014-19 tariff period for the transmission assets on

9.8.2016. However, the Petitioner had not disclosed this arrangement of availing ICD loan from group company viz. Adani Transmission Limited while claiming the tariff for 2014-19 tariff period in Petition No. 146/TT/2016. The Petitioner now in the instant true-up petition has disclosed this ICD loan agreement executed on 31.7.2015. The Petitioner should have brought to the notice of the Commission this ICD loan agreement in Petition No. 146/TT/2016, filed for determination of tariff for 2014-19 tariff period for the instant assets. Further, the submissions/ justifications made for availing ICD loan from group company viz. Adani Transmission Limited instead of any bank or any other financial institutions in the instant true-up petition by the Petitioner does not appear convincing. Therefore, WAROI of 12.22% (the lowest WAROI claimed among the 5 years of 2014-19 tariff period) has been considered for truing up of IOL for the period 2015-16 to 2018-19 for the transmission assets.

52. Accordingly, IoL is computed in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of IoL calculated in respect of the transmission assets are as follows:

(₹ in lakh)

Asset-I					
Particular	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Gross Normative Loan	259058.14	270499.64	271205.94	271205.94	271205.94
Cumulative Repayments up to Previous Year	29419.99	48678.74	68382.84	88109.85	107836.85
Net Loan-Opening	229638.15	221820.90	202823.10	183096.09	163369.09
Addition due to Additional Capitalization	11441.50	706.30	0.00	0.00	0.00
Repayment during the year	19258.75	19704.10	19727.01	19727.01	19727.01
Net Loan-Closing	221820.90	202823.10	183096.09	163369.09	143642.08
Average Loan	225729.52	212322.00	192959.59	173232.59	153505.58
Weighted Average Rate of Interest on Loan (%)	12.75	12.22	12.22	12.22	12.22
Interest on Loan	**28781.38**	**25945.75**	**23579.66**	**21169.02**	**18758.38**

(₹ in lakh)

Asset-II					
Particular	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**

Gross Normative Loan	37862.78	37862.78	37862.78	37862.78	37862.78
Cumulative Repayments up to Previous Year	11010.97	13804.30	16597.62	19390.95	22184.27
Net Loan-Opening	26851.81	24058.49	21265.16	18471.84	15678.51
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Repayment during the year	2793.33	2793.33	2793.33	2793.33	2793.33
Net Loan-Closing	24058.49	21265.16	18471.84	15678.51	12885.19
Average Loan	25455.15	22661.82	19868.50	17075.17	14281.85
Weighted Average Rate of Interest on Loan (%)	12.75	12.22	12.22	12.22	12.22
Interest on Loan	**3245.63**	**2769.27**	**2427.93**	**2086.59**	**1745.24**

53. The details of Interest on Loan allowed *vide* order dated 3.11.2017 in Petition No. 146/TT/2016, claimed by the Petitioner in the instant petition and trued up in the instant order is as follows:

(₹ in lakh)

Asset-I					
Particulars	**15-2014**	**16-2015**	**2016-17**	**2017-18**	**2018-19**
Allowed earlier in order dated 3.11.2017 in Petition No. 146/TT/2016	28780.93	25995.89	24231.75	21742.63	19235.18
Claimed by the Petitioner in the instant petition	28780.00	25951.00	27403.00	22959.00	20354.00
Allowed after true-up in this order	28781.38	25945.75	23579.66	21169.02	18758.38

(₹ in lakh)

Asset-II					
Particulars	**15-2014**	**16-2015**	**2016-17**	**2017-18**	**2018-19**
Allowed earlier in order dated 3.11.2017 in Petition No. 146/TT/2016	3245.13	2773.33	2492.86	2140.01	1785.58
Claimed by the Petitioner in the instant petition	3245.00	2769.00	2822.00	2266.00	1898.00
Allowed after true-up in this order	3245.63	2769.27	2427.93	2086.59	1745.24

Return on Equity (RoE)

54. The Petitioner has submitted that it is liable to pay income tax at MAT rate, and as such, RoE has been calculated after grossing up RoE to the extent of MAT rate for the control period. As per Regulation 25 of the 2014 Tariff Regulations, RoE is considered @15.5% per annum. The same is grossed up with applicable tax rate to arrive at pre-tax RoE.

55. The Petitioner has submitted that the applicable MAT rate was 20.961%

considering 10% surcharge and 3% education cess on MAT rate of 18.5% for 2014-15. The same has been further increased to 21.342% considering 12% surcharge and 3% education cess on MAT rate of 18.5% for 2015-16. For 2016-17 and 2017-18, the MAT rate remained same as 21.342% in line with MAT rate of 2015-16. For 2018-19 with MAT rate of 18.5% and surcharge of 12%, the Education cess has further increased from 3% to 4% resulting in applicable MAT rate of 21.549%. Accordingly, the Petitioner has considered the applicable Tax rate for 2013-14 to 2018-19. The applicable tax rate and resultant RoE are as follows:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
MAT rate	20.961%	21.342%	21.342%	21.342%	21.549%
ROE	19.61%	19.71%	19.71%	19.71%	19.76%

56. We are conscious that the entities covered under MAT regime are paying Income Tax as per MAT rates notified for respective financial years under IT Act, 1961, which is levied on the book profit of the entity computed as per the Section 115JB of the IT Act, 1961. Since the Petitioner has been paying income tax on income computed as per the MAT rates of the respective financial year, the notified MAT rates are considered for the purpose of grossing up of the rate of RoE for truing up of the tariff of the 2014-19 period in terms of the provisions of the 2014 Tariff Regulations as follows:

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

57. The MAT rates as above are considered for the purpose of grossing up of the 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	MAT Rate(%)	Grossed up RoE (%) [(Base Rate)/(1-t)]
2014-15	20.961	19.610
2015-16	21.342	19.705
2016-17	21.342	19.705
2017-18	21.342	19.705
2018-19	21.549	19.758

58. Accordingly, RoE allowed for the transmission assets is as follows:

(₹ in lakh)

Asset-I					
Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Equity	111024.92	115928.42	116231.12	116231.12	116231.12
Addition due to Additional Capitalization	4903.50	302.70	0.00	0.00	0.00
Closing Equity	115928.42	116231.12	116231.12	116231.12	116231.12
Average Equity	113476.67	116079.77	116231.12	116231.12	116231.12
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
Tax Rate applicable (%)	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)	**22252.77**	**22873.52**	**22903.34**	**22903.34**	**22964.94**

(₹ in lakh)

Asset-II					
Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Opening Equity	16226.92	16226.92	16226.92	16226.92	16226.92
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	16226.92	16226.92	16226.92	16226.92	16226.92
Average Equity	16226.92	16226.92	16226.92	16226.92	16226.92
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
Tax Rate applicable (%)	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)	**3182.10**	**3197.51**	**3197.51**	**3197.51**	**3206.11**

59. The details of RoE allowed *vide* order dated 3.11.2017 in Petition No. 146/TT/2016, claimed by the Petitioner in the instant petition and trued up in the instant order is shown is as follows:

(₹ in lakh)

Asset-I					
Particulars	**15-2014**	**16-2015**	**2016-17**	**2017-18**	**2018-19**
Allowed earlier in order dated 3.11.2017 in Petition No. 146/TT/2016	22252.77	22763.24	22792.92	22792.92	22792.92
Claimed by the Petitioner in the instant petition	22253.00	22874.00	22905.00	22913.00	22981.00
Allowed after true-up in this order	22252.77	22873.52	22903.34	22903.34	22964.94

(₹ in lakh)

Asset-II					
Particulars	**15-2014**	**16-2015**	**2016-17**	**2017-18**	**2018-19**
Allowed earlier in order dated 3.11.2017 in Petition No. 146/TT/2016	3182.10	3182.10	3182.10	3182.10	3182.10
Claimed by the Petitioner in the instant petition	3182.00	3198.00	3199.00	3202.00	3213.00
Allowed after true-up in this order	3182.10	3197.51	3197.51	3197.51	3206.11

Operation & Maintenance Expenses (O&M Expenses)

60. The Petitioner has submitted that the Commission vide order dated 3.11.2017 in Petition No. 146/TT/2016 has allowed the O&M Expenses considering actual line length of 187 km of electrode line at Mohindergarh Sub-station. The Commission *vide* order dated 3.11.2017 in Petition No. 146/TT/2016 further allowed the O&M Expenses of Petitioner's HVDC Scheme on the basis of Talcher-Kolar HVDC Bi-pole Scheme as per first proviso to Clause 4(a) of Regulation 29 of the 2014 Tariff Regulations, which provides as follows:

> *"84. xxxxxxxx. xxxxxxxx*
>
> *Provided that operation and maintenance expenses for new HVDC bi-pole scheme for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expense for 2000 MW, Talcher-Kolar HVDC bi-pole scheme for the respective year:"*

61. MPPMCL has submitted that the Petitioner has claimed additional O&M Expenses towards alleged increase in line length by 2 km due to RoW issues at Berwa Village. The said increase in line length is not reflected in actual capital

cost claimed by the Petitioner and allowed by the Commission at any point of time. Therefore, in the absence of related capitalization of the increased line, the Petitioner ought not to be entitled to proportionate increase in O&M Expenses. Therefore, the claim under this head may be dismissed.

62. In response, the Petitioner has submitted that the Commission had inadvertently missed out in considering O&M Expenses of 2 km length of Electrode line at Mohindergarh Sub-station over 185 km in order dated 18.3.2016 in Petition No. 184/TT/2013. However, same was considered by the Commission while allowing the O&M Expenses in order dated 3.11.2017 in Petition No. 146/TT/2016. The relevant extract of the order is as follows:

> *"54. We have considered the submissions of the petitioner and the respondents. Though licence was granted for 185 km of Electrode Line at Mohindergarh Substation, it is observed that the length of the said line increased by 2 km at the time of execution due to RoW issues at Berwa Village. This aspect was not brought to the notice of the Commission at the time of allowing final tariff in order dated 18.3.2016. As the actual length of the said line is 187 km, we have allowed O&M Expenses considering the actual length of 187 km."*

63. The Petitioner has further submitted that it has claimed the O&M Expenses in accordance with the 2014 Tariff Regulations and order dated 3.11.2017.

64. We have considered the submissions of the Petitioner and MPPMCL. As the Commission has already recognised the fact, in order dated 3.11.2017, that the length of the 33 kV D/C Electrode Line at Mohindergarh Sub-station increased from 185 km to 187 km due to RoW issues, we allow O&M Expenses considering the line length as 187 km. The details of the O&M Expenses allowed for the transmission assets under Regulation 29(4)(a) of the 2014 Tariff Regulations are as follows:

(₹ in lakh)

Asset-I					
Element	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Mundra Switchyard (400 KV bays) - 9 Numbers (6 line bays, 2 Bus sectionalizers and 1 Bus Reactors)	542.70	560.70	579.33	598.59	618.39
Mohindergarh HVAC Switchyard (400 kV bays) – 4Numbers	241.20	249.20	257.48	266.04	274.84
HVDC Transmission Line Length - 990 km	1051.38	1086.03	1121.67	1159.29	1197.90
Pole-I and II of 2500 MW of Bi-pole HVDC Stations (O&M=2500*C/2000)	1466.25	1588.75	1722.50	1866.25	2021.25
33 kV D/C Electrode Line at Mundra Station - 32 km	22.62	23.39	24.16	24.96	25.79
33 kV D/C Electrode Line at Mohindergarh Station – 187 km	132.21	136.70	141.19	145.86	150.72
400 kV D/C Mohindergarh-Bhiwani (Twin Moose) – 50 km	35.35	36.55	37.75	39.00	40.30
400 kV D/C Mohindergarh-Dhanonda (Quad Moose) - 5 km	5.31	5.49	5.67	5.86	6.05
Bhiwani Switchyard (400 kV bays) - 2 bays	120.60	124.60	128.74	133.02	137.42
Total	**3617.62**	**3811.40**	**4018.48**	**4238.87**	**4472.66**

(₹ in lakh)

Asset-II					
Element	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
400 kV D/C Mundra-Sami (Twin Moose) - 282 km	199.37	206.14	212.91	219.96	227.29
400 kV D/C Dehgam-Sami (Twin Moose) - 152 km	107.46	111.11	114.76	118.56	122.51
Mundra Switchyard (400 kV bays) - 4 Numbers	241.20	249.20	257.48	266.04	274.84
Mundra Switchyard (220 kV ICT bays) - 2 Numbers	84.42	87.22	90.12	93.10	96.20
Sami Sub-station (400 kV bays)-7 Numbers (4 line, 1 bus reactor, 2 FSC)	422.10	436.10	450.59	465.57	480.97
Dehgam (PG) Sub-station (400kV Bays) - 2 Numbers	120.60	124.60	128.74	133.02	137.42
Total	**1175.16**	**1214.37**	**1254.60**	**1296.25**	**1339.23**

65. The details of the O&M Expenses allowed *vide* order dated 3.11.2017 in

Petition No. 146/TT/2016, claimed by the Petitioner in the instant petition and trued up in the instant order is shown in the table below:

(₹ in lakh)

Asset-I					
Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Allowed earlier in order dated 3.11.2017 in Petition No. 146/TT/2016	3617.62	3811.40	4018.48	4238.87	4472.66
Claimed by the Petitioner in the instant petition	3617.62	3811.40	4018.48	4238.87	4472.66
Allowed after true-up in this order	3617.62	3811.40	4018.48	4238.87	4472.66

(₹ in lakh)

Asset-II					
Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Allowed earlier in order dated 3.11.2017 in Petition No. 146/TT/2016	1175.16	1214.37	1254.60	1296.25	1339.23
Claimed by the Petitioner in the instant petition	1175.16	1214.37	1254.60	1296.25	1339.23
Allowed after true-up in this order	1175.16	1214.37	1254.60	1296.25	1339.23

Interest on Working Capital (IWC)

66. The Petitioner is entitled to claim IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations as under:

i. **Maintenance spares:**

Working capital for maintenance spares have been worked out based on 15% of O&M Expenses as specified in Regulation 28 of the 2014 Tariff Regulations.

ii. **O & M Expenses:**

Working capital for O&M Expenses have been considered for one month of the allowed O&M Expenses.

iii. **Receivables:**

Working capital for receivables have been worked out on the basis of 2 months of annual transmission charges as worked out.

iv. **Rate of interest on working capital:**

Rate of IWC is considered on normative basis in accordance with Clause (3) of Regulation 28 of the 2014 Tariff Regulations.

67. The trued up IWC allowed for the transmission assets is as follows:

(₹ in lakh)

Asset-I					
Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Working capital for Maintenance Spares (15% of O&M expenses)	542.64	571.71	602.77	635.83	670.90
Working capital for O&M Expenses (O&M expenses for 1 month)	301.47	317.62	334.87	353.24	372.72
Working capital for Receivables (Equivalent to 2 months of annual fixed cost/ annual transmission charges)	12621.39	12353.76	11995.75	11623.49	11264.09
Total working capital	**13465.51**	**3243.09**	**12933.40**	**12612.56**	**12307.71**
Rate of Interest on working capital (%)	13.50	13.50	13.50	13.50	13.50
Interest on working Capital	**1817.84**	**1787.82**	**1746.01**	**1702.70**	**1661.54**

(₹ in lakh)

Asset-II					
Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Working capital for Maintenance Spares (15% of O&M expenses)	176.27	182.16	188.19	194.44	200.88
Working capital for O&M Expenses (O&M expenses for 1 month)	97.93	101.20	104.55	108.02	111.60
Working capital for Receivables (Equivalent to 2 months of annual fixed cost/ annual transmission charges)	1778.90	1707.20	1656.08	1605.20	1556.03
Total Working capital	**2053.10**	**1990.55**	**1948.82**	**1907.66**	**1868.51**
Rate of Interest on working capital (%)	13.50	13.50	13.50	13.50	13.50
Interest on working Capital	**277.17**	**268.72**	**263.09**	**257.53**	**252.25**

68. The details of the IWC allowed *vide* order dated 3.11.2017 in Petition No. 146/TT/2016, claimed by the Petitioner in the instant petition and trued up in the instant order is as follows:

(₹ in lakh)

Asset-I					
Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Allowed earlier in order dated 3.11.2017 in Petition No.	1817.99	1786.59	1758.63	1713.51	1668.71

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
146/TT/2016					
Claimed by the Petitioner in the instant petition	1818.00	1788.00	1834.00	1745.00	1699.00
Allowed after true-up in this order	1817.84	1787.82	1746.01	1702.70	1661.54

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 3.11.2017 in Petition No. 146/TT/2016	277.34	268.64	264.41	258.59	252.80
Claimed by the Petitioner in the instant petition	277.00	269.00	272.00	262.00	256.00
Allowed after true-up in this order	277.17	268.72	263.09	257.53	252.25

Approved Annual Fixed Charges for the 2014-19 Tariff Period

69. Accordingly, the annual fixed charges approved for the transmission assets after truing-up for the 2014-19 period are as follows:

(₹ in lakh)

Asset-I					
Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Depreciation	19258.75	19704.10	19727.01	19727.01	19727.01
Interest on Loan	28781.38	25945.75	23579.66	21169.02	18758.38
Return on Equity	22252.77	22873.52	22903.34	22903.34	22964.94
Operation and Maintenance	3617.62	3811.40	4018.48	4238.87	4472.66
Interest on Working Capital	1817.84	1787.82	1746.01	1702.70	1661.54
Total	**75728.37**	**74122.59**	**71974.50**	**69740.94**	**67584.53**

(₹ in lakh)

Asset-II					
Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Depreciation	2793.33	2793.33	2793.33	2793.33	2793.33
Interest on Loan	3245.63	2769.27	2427.93	2086.59	1745.24
Return on Equity	3182.10	3197.51	3197.51	3197.51	3206.11
Operation and Maintenance	1175.16	1214.37	1254.60	1296.25	1339.23
Interest on Working Capital	277.17	268.72	263.09	257.53	252.25
Total	**10673.38**	**10243.21**	**9936.46**	**9631.21**	**9336.16**

70. Accordingly, the Annual Transmission Charges allowed *vide* order dated 3.11.2017 in Petition No. 146/TT/2016, claimed by the Petitioner in the instant petition and trued up in the instant order is shown in the table below:

(₹ in lakh)

Asset-I					
Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Allowed earlier in order dated 3.11.2017 in Petition No. 146/TT/2016	75734.80	74067.95	72535.52	70221.68	67903.22
Claimed by the Petitioner in the instant petition	75744.00	74144.00	75905.00	71605.00	69265.00
Allowed after true-up in this order	75728.37	74122.59	71974.50	69740.94	67584.53

(₹ in lakh)

Asset-II					
Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Allowed earlier in order dated 3.11.2017 in Petition No. 146/TT/2016	10680.80	10239.52	9995.04	9678.02	9360.79
Claimed by the Petitioner in the instant petition	10681.00	10251.00	10351.00	9832.00	9513.00
Allowed after true-up in this order	10673.38	10243.21	9936.46	9631.21	9336.16

<u>Determination of Annual Fixed Charges for the 2019-24 Tariff Period</u>

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

(₹ in lakh)

Asset-I					
Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Depreciation	19763.00	19898.00	20030.00	20030.00	20030.00
Interest on Loan	17745.00	15355.00	12942.00	10288.00	7634.00
Return on Equity	22987.00	23139.00	23287.00	23287.00	23287.00
Interest on Working Capital	1177.00	1119.00	1082.00	1051.00	1020.00
Operation and Maintenance	6067.00	5459.00	5356.00	5565.00	5780.00
Total	**67740.00**	**64970.00**	**62697.00**	**60221.00**	**57752.00**

(₹ in lakh)

Asset-II					
Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Depreciation	2806.00	2806.00	2806.00	2806.00	2806.00
Interest on Loan	1527.00	1155.00	783.00	412.00	113.00
Return on Equity	3214.00	3214.00	3214.00	3214.00	3214.00
Interest on Working Capital	157.00	153.00	149.00	145.00	142.00
Operation and Maintenance	987.00	1018.00	1055.00	1093.00	1132.00
Total	**8691.00**	**8346.00**	**8007.00**	**7670.00**	**7407.00**

72. The Petitioner has claimed the following IWC for the transmission asset for

the 2019-24 tariff period:

(₹ in lakh)

Asset-I					
Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Maintenance Spares	910.00	819.00	803.00	835.00	867.00
O&M expenses	506.00	455.00	446.00	464.00	482.00
Receivables	8351.00	8010.00	7730.00	7425.00	7120.00
Total	**9767.00**	**9284.00**	**8980.00**	**8723.00**	**8469.00**
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	1177.00	1119.00	1082.00	1051.00	1020.00

(₹ in lakh)

Asset-II					
Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Maintenance Spares	148.00	153.00	158.00	164.00	170.00
O&M expenses	82.00	85.00	88.00	91.00	94.00
Receivables	1072.00	1029.00	987.00	946.00	913.00
Total	**1302.00**	**1267.00**	**1233.00**	**1201.00**	**1177.00**
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	**157.00**	**153.00**	**149.00**	**145.00**	**142.00**

Capital Cost

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

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

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

(a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;
(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;
(c) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;
(d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;
(e) Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;
(f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;
(g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;
(h) Adjustment of revenue earned by the transmission licensee by using the asset before the date of commercial operation;

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

(j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal 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 asset forming part of the project, but not in use, as declared in the tariff petition;

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

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

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

(c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;
(d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and
(e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment."

74. The admitted capital cost as on 31.3.2019 in respect of Asset-I and Asset-II of ₹387437.06 lakh and ₹54089.69 lakh, respectively has been considered as opening capital cost as on 1.4.2019 for working out tariff for the 2019-24 tariff period in accordance with Regulation 19 of the 2019 Tariff Regulations.

Additional Capital Expenditure (ACE)

75. Regulation 24 of the 2019 Tariff Regulations provide 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.”

76. The Petitioner has projected ACE in case of Asset-I in 2019-20 and 2020-21. The Petitioner has not claimed ACE in case of Asset-II during the 2019-24 tariff period. The Petitioner’s claim in case of Asset-I is as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-I	120.00	5000.00	0.00	0.00	0.00

77. The Petitioner has proposed ACE towards following items in case of Asset-I during the 2019-24 tariff period:

(i) Installation of 12-ohm Series Line Reactor in 400 kV D/C Mohindergarh-Dhanonda line Circuit-I & II at Mohindergarh end;
(ii) Up-gradation of SCADA system; and
(iii) Replacement of Porcelain Insulators with Silicon Rubber Insulator.

78. The Petitioner has submitted that during the 3rd Meeting of the Empowered Committee on Transmission (ECT) held on 21.12.2018, it was recommended that as part of scheme to control fault level in Northern Region, installation of 12 ohm Series Line Reactor in Mohindergarh-Dhanonda 400 kV D/C line Circuit-I & Circuit-II at Mohindergarh end is required under compressed time schedule through regulated tariff mechanism (RTM). In light of above decision by ECT, Ministry of Power requested the Petitioner to take necessary action. Therefore, the Petitioner approached the Commission *vide* Petition No. 118/TL/2019 for inclusion of the aforesaid reactor in its transmission licence (No. 20/Transmission/2013/CERC dated 29.7.2013). Subsequently, the Commission *vide* order dated 7.10.2019 in Petition No. 118/TL/2019 amended the transmission licence of the Petitioner and included the said reactor in the

amended scope of the transmission project. The requirement of installation of 12 ohm reactor is of extraordinary nature. However, the Petitioner has carried out Technical Feasibility study for installation of the reactor. The installation of 12 ohm series reactor to control fault level involves installation of 2 sets of 12 ohm series reactor at Mohindergarh HVDC terminal in AC side, one set each in Mohindergarh-Dhanonda 400 kV D/C line Circuit-I & Circuit-II. The installation of 12 ohm series reactor is proposed to be completed in 2020-21. The Petitioner has considered the estimated capital cost of 12 ohm reactor as ₹5000 lakh and claimed the same under Regulation 26(1)(b) of the 2019 Tariff Regulations.

79. MPPMCL has submitted that ACE of ₹5000 lakh towards 12 ohm series reactor has been included in the amended license, but merely by amendment in original license, the Petitioner does not get entitled to related additional capitalization. The Petitioner should demonstrate that the requirement of 12 ohm reactors was not included in the original scope of work and that the non-installation of the same was not a defect pointed out by MoP.

80. We have considered the submissions of Petitioner and MPPMCL. With respect to installation of 12-ohm Series Line Reactor in Mohindergarh-Dhanonda 400 kV D/C line Circuit-I & Circuit-II at Mohindergarh end, the Commission *vide* order dated 7.10.2019 in Petition No. 118/TL/2019 amended the transmission licence of the Petitioner and included the same in scope of the transmission project. The original transmission license was granted *vide* order dated 29.7.2013 in Petition No.44/TL/2012. The Petitioner implemented the transmission project as per the scope of the transmission license and was granted tariff for 2009-14 period vide order dated 18.3.2016 in Petition No. 184/TT/2013 that was trued up

and tariff for 2014-19 period was determined *vide* order dated 3.11.2017 in Petition No 146/TT/2016.

81. While amending the transmission license by including 12 ohm series line reactor in Mohindergarh-Dhanonda 400 kV D/C line Circuit-I & Circuit-II at Mohindergarh end, the Commission in order dated 7.10.2019 in Petition No. 118/TL/2019 held as follows:

> *"9……… The Representative of NRLDC during the hearing on 27.9.2019 submitted that NLRDC has no objection to the amendment of licence proposed in the Petition. Central Transmission Utility vide its letter dated 10.5.2019 has submitted that in order to control the fault level at 400 kV Mohindergarh sub- station developed by ATIL through TBCB route, installation of 12 ohm Series Line Reactor in each circuit of Mohindergarh-Dhanonda 400 kV D/C line at Mohindergarh end was agreed in the 39th meeting of the Standing Committee on Power System Planning of Northern Region held at 29/30-5.2017. CTU has further submitted that the scheme was also discussed in the 2nd Meeting of National Committee on Transmission (NCT) held on 4.12.2018 and NCT recommended implementation of above work. Considering all the materials on record, we are of view that it is in the public interest to approve amendment to the transmission licence granted to the Petitioner, Adani Transmission (India) Ltd. to include 12 ohm Series Line Reactor in Mohindergarh-Dhanonda 400 kV D/c line ckt I & II at Mohindergarh end. Accordingly, we direct to include the above scope of work in the transmission licence granted to the Petitioner vide Transmission Licence No. 20/Transmission/2013/CERC dated 29.7.2013. The licensee shall remain bound by the terms and conditions contained in the order dated 29.7.2013."*

82. Accordingly, the Petitioner has submitted the tariff proposal for 12 ohm series reactors in accordance with provisions of the 2019 tariff Regulations at an estimated cost of ₹5000 lakh.

83. We note that 'element', 'Transmission Line' and 'Transmission System' are defined in Clause (20), Clause (66) and Clause (68) respectively of Regulation 3 of the 2019 Tariff Regulations as follows:

> *"3. Definitions. - In these regulations, unless the context otherwise requires: -*
>
> > *(20) 'Element' means an asset which has been distinctively defined under the scope of the transmission project in the Investment Approval such as transmission lines including line bays and line reactors, substations, bays, compensation device, Interconnecting Transformers;"*

"(*66) 'Transmission Line' shall have the same meaning as defined in sub-section (72) of Section 2 of the Act;"*

"(*68) 'Transmission System' means a line or a group of lines with or without associated sub-station, equipment associated with transmission lines and sub-stations identified under the scheme as per the Investment Approval(s) and shall include associated communication system;"*

84. Therefore, the 12 ohm series reactor, which has been incorporated in the revised scope of the transmission project by way of amendment to the transmission license of the Petitioner is to be reckoned as a new and distinct 'element' of the transmission project. Therefore, the Petitioner is required to submit tariff application in accordance with 2019 Tariff Regulation with respect to the new and distinct 'element' ("12 ohm Series Line Reactor in 400 kV D/C Mohindergarh-Dhanonda 400kV line (Circuit-I & Circuit-II) at Mohindergarh end") of the transmission project.

85. Hence, we are not inclined to consider the "12 ohm Series Line Reactor in 400 kV D/C Mohindergarh-Dhanonda 400 kV line (Circuit-I & II) at Mohindergarh end" under the additional capitalisation provisions of the 2019 Tariff Regulations, since the said reactor is a distinct 'element' as defined under the 2014 Tariff Regulations. Moreover, the treatment of depreciation for the new 12 ohm series reactor, put into commercial operation in 2019-24 tariff period will be different from the depreciation allowed for the existing transmission assets put into commercial operation in the 2009-14 tariff regulations. Therefore, we are of the considered view that 12 ohm series reactor has to be treated distinctly and separate tariff has to be allowed for it.

86. In a similar matter in order dated 30.12.2019 in Petition No. 277/TT/2019 for determination of transmission tariff of assets of "Eastern region Strengthening

Scheme-XII (ERSS-XI)”, the Commission observed that the original Investment Approval dated 13.5.2014 provided for 2 numbers 500 MVA ICTs at Patna including 22 numbers other assets of the scheme based on approval of ERSS-XI scheme in SCM dated 27.8.2013 and ERPC dated 27.8.2013. Subsequently, after a gap of about 4 years, the requirement of 3rd ICT at Patna was discussed and agreed in the 19th SCM of ER held on 1.9.2017 and 36th ERPC meeting held on 14.9.2017 considering the peak load demand of 650 MW at Patna upon request from BSPTCL. Thereafter, MoP *vide* letter dated 10.1.2018 directed the Petitioner to implement the 3rd 500 MVA ICT at Patna Sub-station. Accordingly, the Petitioner has included the 3rd 500 MVA ICT at Patna Sub-station in Revised Cost estimate–II (RCE-II) dated 14.3.2019. As per RCE-II, the Asset-IV i.e. 3rd 500 MVA ICT at Patna Sub-station was put into commercial operation on 14.2.2018. Accordingly, the Commission has allowed the tariff of the new element, 3rd ICT at Patna Sub-station, introduced at the RCE-II stage in accordance with the 2014 Tariff Regulations after carrying out prudence check of time and cost over-run and capital cost stipulated in RCE-II, instead of original investment approval.

87. Accordingly, the Petitioner is directed to submit fresh petition for approval of tariff for ‘12 ohm Series Line Reactor in 400 kV D/C Mohindergarh-Dhanonda 400 kV line (Circuit-I & Circuit-II) at Mohindergarh end’ as a separate asset as per provisions of the 2019 Tariff Regulations along with the following information:

(i) Investment approval/ Revised Cost Estimate by the Board of Directors of the Petitioner company.

(ii) Documents in support of COD such as CEA certificate, RLDC certificate, CMD certificate etc. in accordance with relevant regulations and grid code.

(iii) Auditor's Certificate clearly indicating Hard Cost, IDC and IEDC as well as element wise (i.e. land, building, transmission line, sub-station, communication system) capital cost as on COD.

(iv) The claim of ACE under the Regulation concerned.

(v) Complete set of all the applicable Tariff Forms in line with Auditor's Certificates.

(vi) Statement of IDC computation containing name of loan, rate of interest drawl date and date of payment of last interest.

(vii) Documents in respect of rate of interest claimed and effective tax rate.

(viii) Justification of time and cost overrun, if any, together with supporting documents.

88. As regards ACE claimed in respect of other items such as upgradation of SCADA system and replacement of Porcelain Insulators with Silicon Rubber Insulator during the 2019-24 period, the Petitioner has submitted the following justification and has requested to admit the claimed ACE under applicable clause of Regulation 27(1)(d) of the 2019 Tariff Regulations:

(a) The Petitioner has installed SCADA system in Asset-I for the purpose of control and protection of the sub-station and associated transmission line. The SCADA system is in service since 2010 and sub-station automation system software is based on Windows-XP. As of now, the system is obsolete and support to cater to the various problems is not possible to maintain reliable grid operation. Further, Microsoft has stopped the Operating System support for Windows XP. Therefore, requirement of upgradation from existing version to new version is necessary to overcome following challenges:

i. Obsolete Version of PACIS SCADA Application for SAS and hence, there are problem in getting proper support on the same.
ii. Repeated hanging of Server application and auto-restart
iii. Frequent hanging of OWS.
iv. Hanging of BCU application
v. BCU reports hardware auto-re-closure fault.
vi. Communication issue of 40 platform relay with configuration tools.
vii. Communication issue of 30 platform relays with existing SCADA

viii. Re-configuration of certain special logics e.g. Automatic setting group change logic, CB Negative supply interruption scheme.

ix. Fixing of Bugs and Improvisation of feature & performance in upgraded version of SCADA software

x. Obsolete support for the Windows XP operating System from Microsoft.

xi. Cyber Security

xii. Frequent network disturbances like disconnection of IEDs

(b) Therefore, it is proposed to upgrade the existing version of software to new version. Benefit of new version of software are as follows:

i. Supports 250 IEDs and up to 100,000 data points managed.

ii. Fast and seamless redundancy for all functions (clients, real-time server, historian database) for higher availability

iii. Powerful graphical capability able to fit the highest resolution screens support up to 4 high-resolution screens

iv. Support 10 a View Clients per twin server (including remote and embedded a View clients)

v. Up to 4 VDU (Video Display Unit) on each a View Client

vi. Up to 2 Historian-IMS Servers, 1 per a View Server (redundancy)

vii. Web HMI features are available and same can be connected through firewall.

viii. Fully customizable HMI to customer's graphical preferences.

ix. Embedded Mimics capabilities (zoom-in/zoom-out, Panning, Print Mimic, Decluttering)

x. Substation Cyber security features (White listing /Hardening)

(c) The total estimated capital cost for upgradation is ₹120 lakh. The Petitioner has claimed the same as part of ACE in 2019-20 as per Regulation 27(1)(d) of the 2019 Tariff Regulations.

89. MPPMCL, *vide* affidavit dated 8.6.2020 has submitted that up-gradation of SCADA system from Windows XP to a new version is a matter of O&M and/or R&M of the transmission system and not covered under additional capitalization. The SCADA system based on Windows XP is still functioning well with other transmission licensees and cannot be said to be old and not supportive. The

Petitioner has not produced any instances to show of any complaints or objections, if any, made to it by the respective Load Dispatch Centre in respect of alleged mal-function of present SCADA system. The Petitioner has not even identified the new system to which it proposes to upgrade. In such a scenario, its self-assessment for additional expenditure of ₹120 lakh is imaginary and baseless.

90. We have considered the submissions of the Petitioner and MPPMCL. The 2019 Tariff Regulations allow for replacement of equipment on account of obsolescence of technology and otherwise necessary for successful operation of the system. In the instant case, the upgradation of SCADA system is critical in nature and upgradation of SCADA is required for control and protection of the sub-station and associated transmission line and maintaining the reliable grid operation and also required for security and safety of the HVDC station. Regarding de-capitalisation, if any, towards up-gradation of SCADA work, the Petitioner is directed to submit the de-capitalisation details at the time of truing up. The Petitioner shall submit obsolescence certificate from its management and OEM at the time of truing up. Accordingly, ACE proposed for an amount of ₹120.00 towards up-gradation of SCADA works is allowed subject to truing up.

91. The Petitioner was directed *vide* TV letter dated 16.9.2020 to provide clarification in respect of ACE claimed for the tariff period 2019-24 (which is beyond the cut-off date), and expenditure proposed for replacement of Porcelain Insulators with Silicon Rubber Insulator during the 2019-24 tariff period.

92. In response, the Petitioner *vide* affidavit dated 4.2.2021 has submitted that Mundra-Mohindergarh HVDC line is passing through coastal area which has

dusty and salty regions apart from industrial zones and foggy weather. The atmospheric conditions like salty, coastal, polluted, creek and desert area adversely affect the performance of porcelain disc insulators due to which the availability of lines and plants is severely affected. Due to high contaminations, dielectric strength of insulator gets reduced and tracking on insulators were observed which resulted into frequent transient faults online. Continuous tracking on insulator results into breakdown and forced outages which is affecting the system availability and grid stability. Despite taking regular maintenance measures including cleaning and washing of insulators every year, tripping and disturbances in some of the portions of the transmission line are matter of concern. The transient faults are also observed by other utilities in the same area. Industry has adopted practice of replacement of Porcelain Disc Insulators by Silicon Rubber Insulators (SRI) in the affected area. Due to better hydrophobicity of SRI, it gives better result in affected areas of line. Northern Regional Power Committee (NRPC) is also taking review of insulator replacement work/ progress of important link from transmission licensees. Therefore, in order to overcome this, the replacement of Porcelain Insulators with Silicon Rubber Insulator is taken up in a phased manner. The process of replacement of the insulator requires outages for the transmission line. The Petitioner has claimed the following ACE towards insulator replacement:

(₹ in lakh)

Additional capital expenditure proposed					**Total estimated amount of insulator replacement**
2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**	
375.00	331.00	210.00	214.00	208.00	1338.00

93. Regulations 26 of the 2019 Tariff Regulations provide as follows:

"26. Additional Capitalisation beyond the original scope

(1) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:

(a) Liabilities to meet award of arbitration or for compliance of order or directions of any statutory authority, or order or decree of any court of law;
(b) Change in law or compliance of any existing law;
(c) Force Majeure events;
(d) Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;
(e) Deferred works relating to ash pond or ash handling system in additional to the original scope of work, on case to case basis:

Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M) or repairs and maintenance under O&M expenses, the same shall not be claimed under this Regulation;

(f) Usage of water from sewage treatment plant in thermal generating station."

94. We have considered the submissions made by the Petitioner. The Petitioner has submitted that existing insulators are required to be replaced with SRI for efficient operation of Asset-I. We are of the view that the consent of the beneficiaries for replacing the existing insulators with SRI should be obtained for incurring such huge ACE towards replacement of existing insulators with SRI. The Petitioner has not submitted any approval of RPC for replacement of the existing insulators. The Petitioner is directed to discuss the issue of replacement of insulators at RPC level. Further, the Petitioner has not submitted what would be done with the replaced insulators and the details of decapitalisation of the insulators. Therefore, projected ACE of ₹1338 lakh during 2019-24 period on account of insulator replacement is disallowed at this stage. However, the Petitioner is given liberty to approach the Commission through a separate petition along with minutes of the RPC meeting and other details mentioned above so that proposal of replacement of insulators could be considered by the Commission.

Capital Cost for the 2019-24 Tariff Period

95. Accordingly, the capital cost of the transmission assets considered for the

tariff period 2019-24, subject to truing up, is as follows:

(₹ in lakh)

Asset	Capital cost allowed as on 1.4.2019	ACE allowed for the year 2019-24	Total Estimated Completion capital cost allowed as on 31.3.2024
	A	**B**	**C=A+B**
Asset-I	387437.06	120.00	387557.06
Asset-II	54089.69	0.00	54089.69

Debt-Equity Ratio

96. Regulations 18 of the 2019 Tariff Regulations provides as follows:

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

Provided that:

i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:

ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

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

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

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

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

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

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

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

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

97. The details of the debt-equity considered for the purpose of computation of tariff for the 2019-24 tariff period for the transmission assets are as follows:

Funding Asset-I	Capital Cost (₹ in lakh) as on 1.4.2019	(%)	Capital Cost (₹ in lakh) as on 31.3.2024	(%)
Debt	271205.94	70.00	271289.94	70.00
Equity	116231.12	30.00	116267.12	30.00
Total	**387437.06**	**100.00**	**387557.06**	**100.00**

Funding Asset-II	Capital Cost (₹ in lakh) as on 1.4.2019	(%)	Capital Cost (₹ in lakh) as on 31.3.2024	(%)
Debt	37862.78	70.00	37862.78	70.00
Equity	16226.91	30.00	16226.91	30.00
Total	**54089.69**	**100.00**	**54089.69**	**100.00**

Depreciation

98. Regulation 33 of the 2019 Tariff Regulations provide as follows:-

"33. Depreciation:

(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element 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 asset of the generating station and transmission system:

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

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

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

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

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

99. The Petitioner has submitted that it has calculated the depreciation for 2019-20 to 2023-24 as specified in Regulation 33 of the 2019 Tariff Regulations.

100. We have considered the submissions of the Petitioner. The Commission vide order dated 18.3.2016 in Petition No. 184/TT/2013 with regard to actual COD of the transmission assets had held as follows:

"22. The transmission assets covered under the scope of licence were commissioned as a part of generating station of the petitioner Company in the form of dedicated transmission lines along with the associated sub-stations as per the following timeline:

Particulars	*Elements*	*Actual COD*
Asset II	*400 kV D/C Mundra-Sami*	*13.7.2009*
	400 kv D/C Sami-Dehgam along with Switching Station	*13.7.2009*
Asset I	*HVDC Pole-I along with HVDC line*	*12.7.2012*
	HVDC Pole-II along with HVDC line	*9.10.2012*
	400 kV D/C Mohindergarh-Bhiwani	*12.7.2012*
	400 kV D/C Mohindergarh-Dhanonda	*9.8.2012*

Thus, the transmission assets of the petitioner were commissioned prior to the grant of transmission licence. The petitioner has considered the date of transmission licence as the deemed date of commercial operation for the purpose of tariff determination under Tariff Regulations, 2009 and has claimed the annual fixed charges on the basis of the capital cost as on the date of issue of transmission licence. The petitioner has argued that the date of commercial operation of the transmission assets should be reckoned from the date the assets were treated as ISTS i.e. from the date of grant of transmission licence.
………

26. The transmission assets of the petitioner have been commissioned with effect from the dates mentioned against each asset in para 22 above. These assets have been put to commercial use from these dates, though as dedicated transmission lines. The licence was granted on 29.7.2013 i.e. almost one year and in some cases, more than one year after the assets were commissioned. After the grant of licence, the dedicated assets acquired the status of ISTS. Therefore, there is a need to decide a reference date for determination of tariff of the transmission assets on their conversion to ISTS……………..…..
…………………………..Finally, taking 1.10.2013 as the date for determination of tariff will balance the interests of the petitioner and beneficiaries. In view of the above discussion, we decide that the deemed CoD for the purpose of determination of tariff shall be considered as 1.10.2013"

101. Further, the Commission vide its order dated 3.11.2017 in Petition No. 146/TT/2016 has already taken into account the cumulative depreciation as on 1.10.2013 while calculating the remaining depreciation value for the purpose of tariff. The relevant portion of the order dated 3.11.2017 in Petition no. 146/TT/2016 are as follows:

"49. The petitioner has claimed depreciation considering weighted average rate of depreciation (WAROD) of 5.10% and 5.18% for Asset-I and Asset-II, respectively for 2009-14. The said depreciation rates have been considered for the purpose of tariff. The petitioner has further submitted that the cumulative……..

Thus, cumulative depreciation as on 1.10.2013 amounting to ₹20078.57 lakh for Asset-I and ₹9614.27 lakh for Asset-II has been considered while calculating the remaining depreciation value for the purpose of tariff."

102. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. Based on the actual COD of the transmission assets as mentioned above, Asset-I will complete 12 years of useful life beyond 2019-24 tariff period. Accordingly, the depreciation in respect of Asset-I has been worked out based on the WAROD.

WAROD at Annexure-II has been worked out after taking into account the depreciation rates specified in the 2019 Tariff Regulations. Asset-II has completed 12 years of its useful life on 31.3.2021. Therefore, depreciation in respect of Asset-II from 2021-22 onwards has been calculated based on the remaining depreciable value in accordance with Regulation 33(5) of the 2019 Tariff Regulations. The depreciation allowed for the transmission asset is as follows:

(₹ in lakh)

Asset-I					
Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Opening Gross Block	387437.06	387557.06	387557.06	387557.06	387557.06
Additional Capitalisation	120.00	0.00	0.00	0.00	0.00
Closing Gross Block	387557.06	387557.06	387557.06	387557.06	387557.06
Average Gross Block	387497.06	387557.06	387557.06	387557.06	387557.06
Freehold land	6070.00	6070.00	6070.00	6070.00	6070.00
Weighted Average Rate of Depreciation (WAROD) (%)	5.09	5.09	5.09	5.09	5.09
Balance useful life of the asset at the beginning of the year (Year)	23.00	22.00	21.00	20.00	19.00
Lapsed life of the asset at the beginning of the year (Year)	6.00	7.00	8.00	9.00	10.00
Aggregated Depreciable Value	343284.35	343338.35	343338.35	343338.35	343338.35
Depreciation during the year	**19730.17**	**19733.34**	**19733.34**	**19733.34**	**19733.34**
Cumulative Depreciation at the end of the year	147294.03	167027.37	186760.71	206494.06	226227.40
Remaining Aggregated Depreciable Value at the end of the Year	195990.32	176310.98	156577.64	136844.30	117110.96

(₹ in lakh)

Asset-II					
Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Opening Gross Block	54089.69	54089.69	54089.69	54089.69	54089.69
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	54089.69	54089.69	54089.69	54089.69	54089.69
Average Gross Block	54089.69	54089.69	54089.69	54089.69	54089.69
Freehold land	742.00	742.00	742.00	742.00	742.00
Weighted Average Rate of Depreciation (WAROD) (%)	5.16	5.16	1.54	1.54	1.54

Asset-II					
Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Balance useful life of the asset at the beginning of the year (Year)	23.00	22.00	21.00	20.00	19.00
Lapsed life of the asset at the beginning of the year (Year)	10.00	11.00	12.00	13.00	14.00
Aggregated Depreciable Value	48012.92	48012.92	48012.92	48012.92	48012.92
Depreciation during the year	**2793.33**	**2793.33**	**830.89**	**830.89**	**830.89**
Cumulative Depreciation at the end of the year	27770.92	30564.25	31395.13	32226.02	33056.91
Remaining Aggregated Depreciable Value at the end of the Year	20242.00	17448.67	16655.55	15826.46	14997.55

Interest on Loan (IoL)

103. Regulation 32 of the 2019 Tariff Regulations provides as follows:-

"32. Interest on loan capital: (1) The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of asset, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.

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

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

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

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

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

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing".

104. The Petitioner has submitted that IoL is calculated for 2019-20 to 2023-24 as specified in Regulations 32 of the 2019 Tariff Regulations and has considered the weighted average interest rate of 2018-19 for the purpose of interest rates during 2019-20 to 2023-24. The repayment is considered equal to the depreciation for the year.

105. We have considered the submission of the Petitioner. As discussed earlier in this order, WAROI of 12.22% has been considered for truing up of tariff from 2015-16 to 2018-19. The same has been considered as WAROI for computing IoL for 2019-24 tariff period for the transmission assets. IoL considered for the transmission assets is as follows:

(₹ in lakh)

Asset-I					
Particular	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Gross Normative Loan	271205.94	271289.94	271289.94	271289.94	271289.94
Cumulative Repayments up to Previous Year	127563.86	147294.03	167027.37	186760.71	206494.06
Net Loan-Opening	143642.08	123995.91	104262.57	84529.23	64795.89
ACE	84.00	0.00	0.00	0.00	0.00
Repayment during the year	19730.17	19733.34	19733.34	19733.34	19733.34
Net Loan-Closing	123995.91	104262.57	84529.23	64795.89	45062.55
Average Loan	133819.00	114129.24	94395.90	74662.56	54929.22
Weighted Average Rate of Interest on Loan (%)	12.220	12.220	12.220	12.220	12.220
Interest on Loan	**16352.68**	**13946.59**	**11535.18**	**9123.76**	**6712.35**

(₹ in lakh)

Asset-II					
Particular	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Gross Normative Loan	37862.78	37862.78	37862.78	37862.78	37862.78
Cumulative Repayments up to Previous Year	24977.60	27770.92	30564.25	31395.13	32226.02
Net Loan-Opening	12885.19	10091.86	7298.54	6467.65	5636.76
ACE	0.00	0.00	0.00	0.00	0.00
Repayment during the year	2793.33	2793.33	830.89	830.89	830.89
Net Loan-Closing	10091.86	7298.54	6467.65	5636.76	4805.87
Average Loan	11488.52	8695.20	6883.09	6052.20	5221.31
Weighted Average Rate of Interest on Loan (%)	12.220	12.220	12.220	12.220	12.220
Interest on Loan	**1403.90**	**1062.55**	**841.11**	**739.58**	**638.04**

Return on Equity (RoE)

106. Regulations 30 and 31 of the 2019 Tariff Regulations provide as follows:-

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

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and 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 cutoff date beyond the original scope, excluding additional capitalization on 7 account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

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

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

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

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

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

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

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

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

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

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

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

Illustration-

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

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."

107. The Petitioner has submitted that it has paid MAT rate of 21.549% for 2018-19. Hence, MAT rate of 21.549% has been considered by the Petitioner which results into RoE of 19.758% for the entire control period of 2019-20 to 2023-24 as per Regulation 30 and Regulation 31 of the 2019 Tariff Regulations.

108. We have considered the submission of the Petitioner. 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 allowed for the transmission assets under Regulation 30 of the 2019 Tariff Regulations is as follows:

(₹ in lakh)

Asset-I					
Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Opening Equity	116231.12	116267.12	116267.12	116267.12	116267.12
ACE	36.00	0.00	0.00	0.00	0.00
Closing Equity	116267.12	116267.12	116267.12	116267.12	116267.12
Average Equity	116249.12	116267.12	116267.12	116267.12	116267.12
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (%)	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)	**21833.91**	**21837.29**	**21837.29**	**21837.29**	**21837.29**

(₹ in lakh)

Asset-II					
Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Opening Equity	16226.91	16226.91	16226.91	16226.91	16226.91
ACE	0.00	0.00	0.00	0.00	0.00
Closing Equity	16226.91	16226.91	16226.91	16226.91	16226.91
Average Equity	16226.91	16226.91	16226.91	16226.91	16226.91
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (%)	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)	**3047.74**	**3047.74**	**3047.74**	**3047.74**	**3047.74**

Operation & Maintenance Expenses (O&M Expenses)

109. Regulation 35(3)(a) of the 2019 Tariff Regulations provides as under:

"35 (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 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*

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
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	*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."

110. The O&M Expenses for the 2019-24 period is specified in Regulation 35(3) of 2019 Tariff Regulations. The O&M Expenses has been 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 O&M Expenses per bay, per MVA and per km respectively.

111. Regulation 35(3)(a)(iii) specifies that the O&M Expenses of ±500 kV Mundra - Mohindergarh HVDC Bi-pole scheme (2500 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M Expenses for ±500 kV Talchar-Kolar HVDC Bi-pole scheme (2500 MW). Accordingly, the Petitioner has calculated the normative O&M Expenses for ±500 kV Mundra-Mohindergarh HVDC Bi-pole scheme.

112. The Petitioner has claimed security expenses and capital spares for the 2019-24 tariff period. Further, as per Regulation 35(3)(a)(iv) of 2019 Tariff Regulation, 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. Accordingly, the Petitioner has considered the O&M cost towards FSC for the 2019-24 tariff period.

113. Regulation 35(4) of the 2019 Tariff Regulations provides for grant of O&M Expenses for the communication system at the rate of 2.0% of the original project cost related to such communication system. The Petitioner has claimed O&M Expenses for the communication system as per the original project cost as per the approved capital cost of communication system. The details of O&M Expenses claimed by the Petitioner for tariff period 2019-24 are as follows:

(₹ in lakh)

Asset	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-I	O&M Expenses	6067.37	5458.99	5356.20	5564.83	5780.34
Asset-II	O&M Expenses	986.97	1017.97	1054.73	1092.76	1132.11

114. The break up of O&M Expenses claimed by the Petitioner for 2019-24 tariff period are as follows:

(₹ in lakh)

Asset-I					
Element	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
(A)					
Transmission Line	1552	1606	1663	1721	1781
Substation	2682	2777	2875	2976	3080
Communication System	48.93	48.93	48.93	48.93	48.93
Sub-total (A)	**4284**	**4432**	**4586**	**4746**	**4910**
(B)					
Security Expenses	290	313	338	365	395
Capital Spares consumed	1494	713	431	453	476
Sub-total (B)	**1784**	**1027**	**770**	**818**	**870**
Total O & M Expenses claimed (A+B)	**6067**	**5459**	**5356**	**5565**	**5780**

Asset-II					
Element	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
(A)					
Transmission Line	382	396	410	424	439
Substation	463	479	496	514	532
Communication System	1.57	1.57	1.57	1.57	1.57
Sub-total (A)	**847**	**877**	**907**	**939**	**972**
(B)					
Security Expenses	6	6	7	8	8
Capital Spares consumed	54	52	54	57	60
Sub-total (B)	**60**	**58**	**61**	**65**	**68**
(C)					
FSC	**80**	**83**	**86**	**89**	**92**
Total O&M Expenses claimed (A+B+C)	**987**	**1018**	**1055**	**1093**	**1132**

115. The Petitioner has claimed O&M Expenses for Power Line Carrier Communication (PLCC) equipment for the 2019-24 tariff period separately @2% of the original project cost of that communication system under Regulation 35(4) of the 2019 Tariff Regulations for the transmission assets.

116. It is observed that the Petitioner had considered PLCC equipment as part of the sub-station during the 2014-19 tariff period and it was granted O&M Expenses accordingly as part of the sub-station and no separate O&M Expenses was granted for PLCC equipment. However, the Petitioner in the instant petition for the tariff period 2019-24, has segregated a part of the capital cost of the assets towards PLCC equipment, i.e. ₹2447.00 lakh and ₹79.00 lakh for Asset-I and Asset-II and has claimed O&M Expenses of ₹48.93 lakh and ₹1.57 lakh, respectively @2% of the capital cost under Regulation 35(4) of the 2019 Tariff Regulations. The Commission has dealt similar issue in order dated 24.1.2021 in Petition No. 126/TT/2020, wherein it has been held as follows:

> *"97. In the 2014 Tariff Regulations, PLCC equipment were not included in the definition of communication system under Regulation 3(11) of the 2014 Tariff*

Regulations and it rather formed part of sub-station. This is evident from Annexure Form 5 of Part-III of the 2014 Tariff Regulations, where PLCC equipment is included under the sub-station. Further, while fixing the norms for O&M Expenses for the 2014-19 tariff period, PLCC equipment were considered as part of the substation in the 2014 Tariff Regulations.

98. A combined reading of Regulation 3(12) of the 2019 Tariff Regulations and Regulation 2(i)(h) of the 2017Communication Regulations shows that PLCC equipment is a communication system. However, it continues to be considered as part of the sub-station (as in the case of 2014-19 tariff period), even though a specific provision has been made in the 2019 Tariff Regulations allowing O&M Expenses @2% for the communication system. The same is clear from the various Forms that are required to be submitted by a transmission licensee in terms of the 2019 Tariff Regulations. Form 5 under Part-III of the 2019 Tariff Regulations (similar table is there in the 2014 Tariff Regulations) requires the transmission licensee to provide "Element wise Break-up of Project/Asset/Element Cost for Transmission System or Communication System". Details are required to be furnished as regards a) transmission line (preliminary works, transmission lines material, taxes and duties); b) sub-stations (preliminary works & land, civil works, sub-station equipment, spares, taxes and duties); and c) communication system (preliminary works, communication system equipment, taxes and duties). We observe that PLCC forms a part (at Sl. No. 6.5) of sub-station equipment under the head 'sub-station equipment' and that there is no mention of PLCC under communication system.

99. Similarly, from table 3 of Form-2 under Part-III of the 2019 Tariff Regulations, it is observed that the types of communication system indicated are ULDC/SCADA/WAMS, fibre optic communication system, RTU/PABX/PMU and there is no mention of PLCC in this table. Other columns of this table require length of OPGW, number of RTUs and number of PMUs to be indicated by the transmission licensee. Again, we do not find any mention of PLCC equipment under communication system.

100. The Petitioner had itself considered PLCC equipment as part of the substation during the 2014-19 tariff period. In fact, for all sub-stations existing before 1.4.2019 and tariff for which have already been decided in previous tariff periods, the PLCC equipment were considered as part of sub-station and the Petitioner has also claimed it under sub-station and not claimed it under communication system. In this regard, we would like to refer to the claim made by the Petitioner for grant of tariff for the 2014-19 tariff period in Petition No. 404/TT/2014, where the Petitioner has claimed PLCC as part of sub-station in Form 5 and no claim was made in Form 2 for PLCC under heading "Communication system". Further, in the said petition, the Petitioner in Form 13 claimed the cost of PLCC under sub-station (₹9411.25 lakh= sub-station ₹9297.04 lakh + PLCC ₹114.21 lakh) for computation of initial spares in the Management certificate. Further, the cost of PLCC equipment is also included in the cost of the sub-station for the purpose of allowing initial spares.

101. It is observed that a fixed amount is allowed as O&M Expenses for a substation (in the form of "Rs. In lakh/ bay") in the 2014 Tariff Regulations for the 2014-19 tariff period on the basis of the type and voltage level of sub-station whereas for the 2019-24 tariff period, the 2019 Tariff Regulations provides for O&M Expenses for communication system @2% of the project cost. Thus, it appears that the Petitioner in the instant petition is attempting to take advantage of Regulation 35(4) of the 2019 Tariff Regulations which provides for O&M Expenses for *communication system @2% by segregating the project cost towards PLCC equipment during the 2019-24 tariff period.*

102. As PLCC was considered as part of the sub-station, the cost of PLCC was also included in the capital cost of sub-station. Accordingly, as per Tariff Regulations, spares were approved as a percentage (%) of capital cost, considering this capital cost. Therefore, if now PLCC is not considered as part of the sub-station, then it would require revision of the approved capital cost.

103. Thus, although PLCC equipment is a communication system, it has been considered as a part of sub-station, as it is used both for protection and communication. Therefore, we are of the considered view that rightly, it was not considered for separate O&M Expenses while framing norms of O&M for 2019-24 tariff period. While specifying norms for bays and transformers, O&M Expenses for PLCC have been included within norms for O&M Expenses for sub-station. Norms of O&M Expenses @2% of the capital cost in terms of Regulation 35(4) of the 2019 Tariff Regulations have been specified for communication system such as PMU, RMU, OPGW etc. and not for PLCC equipment.

104. In the present petition, it is observed that the Petitioner in Form-5 for Asset1 for the 2014-19 tariff period has included the PLCC under the head Sub-station Equipment and has claimed actual expenditure incurred towards PLCC for an amount of ₹55.49 lakh. The Petitioner did not claim any capital expenditure towards Communication system in the 2014-19 tariff period. However, on perusal of the Auditor certificate dated 27.11.2019, it is observed that an amount of ₹62.61 lakh for Asset-1 and ₹57.83 lakh for Asset-2 have been shown against PLCC/ communication system, which adds up to ₹120.44 lakh. Thus, there is a discrepancy in the amount claimed by the Petitioner towards PLCC and the amount mentioned in the Auditor certificate.

105. In our view, granting of O&M Expenses for PLCC equipment @2% of its capital cost under Regulation 35(4) of the 2014 Tariff Regulations under the communication system head would tantamount to granting O&M Expenses twice for PLCC equipment as PLCC equipment has already been considered as part of the sub-station. Therefore, the Petitioner's prayer for grant of O&M Expenses for the PLCC equipment @2% of its capital cost under Regulation 35(4) of the 2014 Tariff Regulations is rejected.

106. The principle adopted in this petition that PLCC is part of sub-station and accordingly no separate O&M Expenses is admissible for PLCC equipment in the 2019-24 tariff period under Regulation 35(4) of the 2019 Tariff Regulations shall be applicable in case of all petitions where similar claim is made by the Petitioner. As already mentioned, the Commission, however, on the basis of the claim made by the Petitioner has inadvertently allowed O&M Expenses for PLCC equipment @2% of its original project cost, which is applicable for other "communication system", for 2019-24 period in 31 petitions given in Annexure-3 of this order. Therefore, the decision in this order shall also be applicable to all the petitions given in Annexure3. Therefore, PGCIL is directed to bring this decision to the notice of all the stakeholders in the 31 petitions given in Annexure-3 and also make revised claim of O&M Expenses for PLCC as part of the sub-station at the time of truing up of the tariff allowed for 2019-24 period in respective petitions."

117. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC

@2% is not allowed.

118. The Petitioner has submitted that the security expenses and capital spares claimed in Form-2 are on estimation basis and that the actual security expenses and capital spares will be provided at the time of truing up. We have considered the submissions of the Petitioner. The Petitioner has not provided any details for the proposed security expenses and capital spares in case of Asset-I and Asset-II. Therefore, security expenses and capital spares are not being allowed at this stage. However, the Petitioner is given liberty to either approach the Commission through a separate petition for security expenses with all relevant details and basis of estimation or submit the actual security expenses at the time of true-up for appropriate consideration of the Commission. As regards the capital spares, the same shall be considered at the time of true-up.

119. The Petitioner has claimed O&M Expenses for FSC separately but has not submitted capital cost as on COD and also the tariff for FSC is not allowed separately. Therefore, we are not inclined to allow any O&M Expenses towards FSC.

120. The details of the O&M Expenses worked out for the transmission assets as per provisions of Regulations 35(3)(a) and 35(4) of the 2019 Tariff Regulations are as follows:

(₹ in lakh)

Asset-I					
Element	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
(A)					
Transmission Line					
Mundra-Mohindergarh Line (990 Kms) & Mohindergarh-Dhanonda Line (5 km)	1552.37	1606.48	1662.85	1721.48	1781.37

Sub-station					
400 kV bays at Mohindergarh/ Mundra/ Bhiwani Sub-station – 15 Numbers	482.25	499.20	516.75	534.90	553.65
HVDC Sub-station in Mundra & Mohindergarh	1974.40	2044.00	2116.00	2190.40	2267.20
Transformer for 400 kV bay (Capacity - 630 MVA)	225.54	233.73	241.92	250.74	258.93
Total (A)	**4234.57**	**4383.42**	**4537.53**	**4697.52**	**4861.15**

(₹ in lakh)

Asset-II					
Element	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
(A)					
Transmission Line					
400 kV D/C Mundra-Sami & Dehgam-Sami (Twin Moose) Lines- (434 km)	382.35	395.80	409.69	424.01	438.77
Sub-station					
400 kV bays at Mundra Switch-yard/ Sami Sub-station/ Dehgam (PG) Sub-station -13 Numbers	417.95	432.64	447.85	463.58	479.83
220 kV ICT bays at Mundra Switchyard – 2 Numbers	45.02	46.60	48.24	49.92	51.68
Total (A)	**845.32**	**875.04**	**905.79**	**937.51**	**970.28**

121. Accordingly, O&M Expenses claimed by the Petitioner in the instant petition and O&M Expenses allowed in the instant order are shown in the table below:

(₹ in lakh)

Asset	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-I	Claimed in the instant petition	6067.37	5458.99	5356.20	5564.83	5780.34
	Allowed in this order	**4234.57**	**4383.42**	**4537.53**	**4697.52**	**4861.15**

(₹ in lakh)

Asset	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-II	Claimed in the instant petition	986.97	1017.97	1054.73	1092.76	1132.11
	Allowed in this order	**845.32**	**875.05**	**905.79**	**937.51**	**970.28**

Interest on Working Capital (IWC)

122. Regulations 34(1)(c), (3) and (4) and 3(7) of the 2019 Tariff Regulations provide as follows:

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

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

(i) Receivables equivalent to 45 days of annual fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and

(iii) Operation and maintenance expenses, including security expenses for one month."

(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. Definition *- In these regulations, unless the context otherwise requires:-*

*(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;"*

123. 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%. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20 and 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and 10.50% (SBI 1 year MCLR applicable as on 1.4.2023 of 7.00% plus 350 basis points) for 2021-22

onwards. The components of the working capital and interest allowed thereon are as follows:

(₹ in lakh)

Asset-I					
Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Working Capital for Maintenance Spares (15% of O&M expenses)	635.19	657.51	680.63	704.63	729.17
Working Capital for O&M Expenses (O&M expenses for 1 month)	352.88	365.29	378.13	391.46	405.10
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/ annual transmission charges)	7771.33	7503.27	7213.80	6933.08	6634.41
Total Working Capital	**8759.40**	**8526.06**	**8272.56**	**8029.17**	**7768.68**
Rate of Interest (%)	12.05	11.25	10.50	10.50	10.50
Interest of working capital	**1055.51**	**959.18**	**868.62**	**843.06**	**815.71**

(₹ in lakh)

Asset-II					
Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Working Capital for Maintenance Spares (15% of O&M expenses)	126.80	131.26	135.87	140.63	145.54
Working Capital for O&M Expenses (O&M expenses for 1 month)	70.44	72.92	75.48	78.13	80.86
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/ annual transmission charges)	1012.63	975.37	705.43	696.80	686.41
Total Working Capital	**1209.87**	**1179.55**	**916.78**	**915.56**	**912.81**
Rate of Interest (%)	12.05	11.25	10.50	10.50	10.50
Interest of working capital	**145.79**	**132.70**	**96.26**	**96.13**	**95.84**

Annual Fixed Charges for the 2019-24 Tariff Period

124. The transmission charges allowed for the transmission asset for the 2019-24 tariff period are follows:

(₹ in lakh)

Asset-I					
Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Depreciation	19730.17	19733.34	19733.34	19733.34	19733.34
Interest on Loan	16352.68	13946.59	11535.18	9123.76	6712.35
Return on Equity	21833.91	21837.29	21837.29	21837.29	21837.29

Interest on Working Capital	1055.51	959.18	868.62	843.06	815.71
Operation and Maintenance	4234.57	4383.42	4537.53	4697.52	4861.15
Total	**63206.84**	**60859.83**	**58511.96**	**56234.98**	**53959.84**

(₹ in lakh)

Asset-II					
Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Depreciation	2793.33	2793.33	830.89	830.89	830.89
Interest on Loan	1403.90	1062.55	841.11	739.58	638.04
Return on Equity	3047.74	3047.74	3047.74	3047.74	3047.74
Interest on Working Capital	145.79	32.70	96.26	96.13	95.84
Operation and Maintenance	845.32	875.05	905.79	937.51	970.28
Total	**8236.07**	**7911.37**	**5721.79**	**5651.85**	**5582.80**

Filing Fee and Publication Expenses

125. The Petitioner has prayed for reimbursement of filing fee and publication expenses by the beneficiaries.

126. We have considered the submissions of the Petitioner. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

127. The Petitioner has prayed to bill and recover the licence fee and RLDC fees and charges, separately from the Respondents in terms of the Tariff Regulations.

128. We have considered the submissions of the Petitioner. The Petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for the 2019-24 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.

Goods and Services Tax

129. 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 Respondents 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.

130. We have considered the submission 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.

Sharing of Transmission Charges

131. The Commission *vide* order dated 3.11.2017 In Petition No. 146/TT/2016 has held as under w.r.t. incentive and sharing of transmission charges of the transmission assets:

> *"Sharing of Transmission Charges*
>
> *95. The transmission charges determined through this order shall be recovered through POC mechanism in accordance with the Sharing Regulations with effect from 1.10.2013. However, for calculating the incentive and target availability during 2009-14 tariff period, the relevant provision of the 2009 Tariff Regulations in respect of HVAC and HVDC shall be kept in view. Since the tariff of Asset-I has been worked out on consolidated basis the calculation of incentive in respect of HVAC and HVDC shall be in proportion to the capital cost of HVAC and HVDC as allowed in this order."*

132. The Petitioner in the instant true up petition has again not submitted separate capital cost of HVAC and HVDC portion of Asset-I. Therefore, the proportion considered by CTU may be adopted for the calculation of incentive in respect of HVAC and HVDC in proportion to the capital cost of HVAC and HVDC

availability.

133. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the provisions of the 2010 Sharing Regulations. However, with effect from 1.11.2020, the 2010 Sharing Regulations has been repealed and sharing of transmission charges is governed by the provisions of the 2020 Sharing Regulations. Accordingly, the liabilities of 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. Billing, collection and disbursement of transmission charges for subsequent period shall be recovered in terms of provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

134. To summarise:

(a) The trued-up Annual Fixed Charges allowed for the transmission assets for the 2014-19 tariff period are as follows:

(₹ in lakh)

Asset	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	75728.37	74122.59	71974.50	69740.94	67584.53
Asset-II	10673.38	10243.21	9936.46	9631.21	9336.16

(b) The Annual Fixed Charges allowed for the transmission assets for the 2019-24 tariff period in this order are as follows:

(₹ in lakh)

Asset	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-I	63206.84	60859.83	58511.96	56234.98	53959.84
Asset-II	8236.07	7911.37	5721.79	5651.85	5582.80

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

136. As there is no necessity to revise the tariff granted vide order dated 18.3.2016 in Petition No.184/TT/2013 and tariff trued up vide order dated 3.11.2017 in Petition No.146/TT/2016 for the period 2013-14, the Petition No. 184/TT/2013 and Petition No.146/TT/2016 remain disposed of as per their respective order.

137. This order disposes of Petition No. 216/TT/2020 in terms of the above discussion and findings.

sd/-	sd/-	sd/-	sd/-
(P.K. Singh)	**(Arun Goyal)**	**(I.S. Jha)**	**(P.K. Pujari)**
Member	**Member**	**Member**	**Chairperson**

Asset-I **Annexure- I**

2014-19	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
Capital Expenditure		2014-15	2015-16			2014-15 (₹ in lakh)	2015-16 (₹ in lakh)	2016-17 (₹ in lakh)	2017-18 (₹ in lakh)	2018-19 (₹ in lakh)
Freehold Land	6070.00	-	-	6070.00	-	-	-	-	-	-
Leasehold Land	1030.15	-	-	1030.15	3.34%	34.41	34.41	34.41	34.41	34.41
Building & Other Civil Works	20141.40	934.00	385.00	21460.40	3.34%	688.32	710.35	716.78	716.78	716.78
Transmission Line	142761.37	6669.00	140.00	149570.37	5.28%	7713.86	7893.62	7897.32	7897.32	7897.32
Sub-Station Equipment	197495.27	8742.00	484.00	206721.27	5.28%	10658.54	10902.11	10914.88	10914.88	10914.88
PLCC	2584.87		-	2584.87	6.33%	163.62	163.62	163.62	163.62	163.62
IT and Software			-	-	15.00%	-				
TOTAL	**370083.06**	**16345.00**	**1009.00**	**387437.06**		**19258.75**	**19704.10**	**19727.01**	**19727.01**	**19727.01**
				Average Gross Block (₹ in lakh)		**378255.56**	**386932.56**	**387437.06**	**387437.06**	**387437.06**
				Weighted Average Rate of Depreciation (WAROD)		5.09%	5.09%	5.09%	5.09%	5.09%

Asset-II **Annexure-I**

2014-19	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
Capital Expenditure		**2014-15**	**2015-19**			**2014-15 (₹ in lakh)**	**2015-16 (₹ in lakh)**	**2016-17 (₹ in lakh)**	**2017-18 (₹ in lakh)**	**2018-19 (₹ in lakh)**
Freehold Land	742.00			742.00	-	-	-	-	-	-
Leasehold Land	328.09			328.09	3.34%	10.96	10.96	10.96	10.96	10.96
Building & Other Civil Works	922.44			922.44	3.34%	30.81	30.81	30.81	30.81	30.81
Transmission Line	40122.46			40122.46	5.28%	2118.47	2118.47	2118.47	2118.47	2118.47
Sub-Station Equipment	11895.93			11895.93	5.28%	628.11	628.11	628.11	628.11	628.11
PLCC	78.78			78.78	6.33%	4.99	4.99	4.99	4.99	4.99
IT and Software	-			-	15.00%	-				
TOTAL	**54089.69**	**-**	**-**	**54089.69**		**2793.33**	**2793.33**	**2793.33**	**2793.33**	**2793.33**
				Average Gross Block (₹ in lakh)		**54089.69**	**54089.69**	**54089.69**	**54089.69**	**54089.69**
				Weighted Average Rate of Depreciation (WAROD)		5.16%	5.16%	5.16%	5.16%	5.16%

Asset-I **Annexure- II**

2019-24	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
Capital Expenditure		**2019-20**	**2020-24**			**2019-20 (₹ in lakh)**	**2020-21 (₹ in lakh)**	**2021-22 (₹ in lakh)**	**2022-23 (₹ in lakh)**	**2023-24 (₹ in lakh)**
Freehold Land	6070.00			6070.00	-	-	-	-	-	-
Leasehold Land	1030.15			1030.15	3.34%	34.41	34.41	34.41	34.41	34.41
Building & Other Civil Works	21460.40			21460.40	3.34%	716.78	716.78	716.78	716.78	716.78
Transmission Line	149570.37	120.00		149570.37	5.28%	7897.32	7897.32	7897.32	7897.32	7897.32
Sub-Station Equipment	206721.27			206841.27	5.28%	10918.05	10921.22	10921.22	10921.22	10921.22
PLCC	2584.87			2584.87	6.33%	163.62	163.62	163.62	163.62	163.62
IT and Software	-			-	15.00%	-	-	-	-	-
TOTAL	**387437.06**	**120.00**	-	**3,87,557.06**		**19730.17**	**19733.34**	**19733.34**	**19733.34**	**19733.34**
				Average Gross Block (₹ in lakh)		**387497.06**	**387557.06**	**387557.06**	**387557.06**	**387557.06**
				Weighted Average Rate of Depreciation (WAROD)		5.09%	5.09%	5.09%	5.09%	5.09%

Asset-II **Annexure- II**

2019-24	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
Capital Expenditure		**2019-20**	**2020-24**			**2019-20 (₹ in lakh)**	**2020-21 (₹ in lakh)**	**2021-22 (₹ in lakh)**	**2022-23 (₹ in lakh)**	**2023-24 (₹ in lakh)**
Freehold Land	742.00	-	-	742.00	-	-	-			
Leasehold Land	328.09	-	-	328.09	3.34%	10.96	10.96			
Building & Other Civil Works	922.44	-	-	922.44	3.34%	30.81	30.81			
Transmission Line	40122.46	-	-	40122.46	5.28%	2118.47	2118.47		Spreading	
Sub-Station Equipment	11895.93	-	-	11895.93	5.28%	628.11	628.11			
PLCC	78.78	-	-	78.78	6.33%	4.99	4.99			
IT and Software	-	-	-	-	15.00%	-	-			
TOTAL	**54089.69**	**120.00**	-	**54089.69**		**2793.33**	**2793.33**			
				Average Gross Block (₹ in lakh)		**54089.69**	**54089.69**			
				Weighted Average Rate of Depreciation (WAROD)		**5.16%**	**5.16%**			