

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 33/TT/2021

Coram:

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

Date of Order: 12.04.2023

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, truing up of transmission tariff for 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff for 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for **Asset-I:** Pole-I of the ± 800 kV, 3000 MW Champa Pooling Station & Kurukshetra HVDC Terminals along with ± 800 kV Champa Pooling station-Kurukshetra HVDC Transmission Line, **Asset-II:** 2 numbers 400/220 kV, 500 MVA ICTs along with associated bays at 400/220 kV GIS Sub-station at Kurukshetra, **Asset-III:** 8 numbers 220 kV Line Bays at 400/220 kV GIS Sub-station at Kurukshetra, **Asset-IV:** Pole-II of the ± 800 kV, 3000 MW Champa & Kurukshetra HVDC Terminals along with associated bays; and **Asset-V:** Kurukshetra (NR)-Jalandhar 400 kV D/C (Quad) line, one ckt. via 400/220 kV Nakodar (PSTCL) Sub-station along with associated bays (2 numbers GIS bays at Kurukshetra, 2 numbers conventional bays at Jalandhar, 2 numbers conventional bays at Nakodar, 1 number 50 MVAR Line Reactor at Nakodar and 1 number 50 MVAR Line Reactor at Jalandhar), LILO of Abdullapur-Sonepat 400 kV D/C (Triple) at Kurukshetra Sub-station along with associated bays (4 numbers GIS Bays at Kurukshetra) and 1 number 400 kV 125 MVAR Bus Reactor at Kurukshetra along with 1 number associated GIS Bay at Kurukshetra under "WR-NR HVDC interconnector for IPP projects in Chattisgarh" in the Northern Region & Western Region.

And in the matter of:

Power Grid Corporation of India Limited,
SAUDAMINI, Plot No-2,
Sector-29, Gurgaon-122001 (Haryana).

.....Petitioner

Versus

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited (RRVPL),
Vidyut Bhawan, Vidyut Marg,
Jaipur-302005.



2. Ajmer Vidyut Vitran Nigam Limited (AVVNL),
132 kV, GSS RVPNL Sub-Station Building, Caligiri Road,
Malviya Nagar, Jaipur-302017 (Rajasthan).
3. Jaipur Vidyut Vitran Nigam Limited (JVVNL),
132 kV, GSS RVPNL Sub-Station Building, Caligiri Road,
Malviya Nagar, Jaipur-302017 (Rajasthan).
4. Jodhpur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub-Station Building, Caligiri Road,
Malviya Nagar, Jaipur-302017 (Rajasthan).
5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla-171004.
6. Punjab State Electricity Board (PSEB),
The Mall, Patiala-147001.
7. Haryana Power Purchase Centre (HPPC),
Shakti Bhawan, Sector-6,
Panchkula (Haryana)-134109.
8. Power Development Department (PDD),
Government of Jammu & Kashmir,
Mini Secretariat, Jammu.
9. Uttar Pradesh Power Corporation Limited (UPPCL),
(Formerly Uttar Pradesh State Electricity Board),
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226001.
10. Delhi Transco Limited (DTL),
Shakti Sadan, Kotla Road,
New Delhi-110002.
11. BSES Yamuna Power Limited (BYPL),
BSES Bhawan, Nehru Place,
New Delhi.
12. BSES Rajdhani Power Limited (BRPL),
BSES Bhawan, Nehru Place,
New Delhi.
13. North Delhi Power Limited,
Power Trading & Load Dispatch Group, Cennet Building,
Adjacent to 66/11 kV Pitampura-Grid Building,
Near PP Jewellers, Pitampura, New Delhi-110034.



14. Chandigarh Administration,
Sector-9, Chandigarh.
15. Uttarakhand Power Corporation Limited (UPCL),
Urja Bhawan, Kanwali Road, Dehradun.
16. North Central Railway,
Allahabad.
17. New Delhi Municipal Council (NDMC),
Palika Kendra, Sansad Marg,
New Delhi-110002.
18. Madhya Pradesh Power Management Company Limited (MPPMCL),
Shakti Bhawan, Rampur,
Jabalpur-482008.
19. Maharashtra State Electricity Distribution Company Limited (MSEDCL),
Prakashgad, 4th Floor, Andheri (East),
Mumbai-400052.
20. Gujarat Urja Vikas Nigam Limited (GUVNL),
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara-390007.
21. Electricity Department,
Government of Goa, Vidyut Bhawan,
Panaji, Near Mandvi Hotel, Goa-403001
22. Electricity Department,
Administration of Daman & Diu,
Daman-396 210.
23. Electricity Department,
Administration of Dadra Nagar Haveli,
U.T., Silvassa-396 230.
24. Chhattisgarh State Electricity Board (CSEB),
P.O. Sunder Nagar, Dangania, Raipur,
Chhatisgaarh-492013.
25. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Limited,
3/54, Press Complex, Agra-Bombay Road,
Indore-452 008.
26. Korba STPS, NTPC Limited,
Western Region Head Quarter-I, 2nd Floor, Samruddhi Venture Park,
Marol, Andheri East, Mumbai-400093, Maharashtra.



27. RKM Powergen Private Limited,
No. 14, Dr. Giriappa Road,
T. Nagar, Chennai-600017.
28. Jindal Power Limited,
2nd Floor, DCM Building, Plot No. 94,
Sector-32, Gurgaon.
29. Athena Chattisgarh Power Limited,
7-1-24/1/Rt, G-1, B Block,
1st Floor, "Rexona Towers , Greenlands,
Begumpet, Hyderabad-500016.
30. SKS Power Generation Limited,
2nd Floor, DCM Building, Plot No. 94,
Sector-32, Gurgaon.
31. Korba West Power Company Limited,
6th & 7th Floor, Vatika City Point,
M.G. Road Gurgaon-122002.
32. KSK Mahanadi Power Company Limited,
8-2/293/82/A/431/A, Road No.22,
Jubilee Hills, Hyderabad-500033.
33. D.B. Power Limited,
Opp Dena Bank, C-31, G-Block,
3rd Floor, Naman Corporate Link,
Bandar – Kurla Complex, Bandra (East),
Mumbai-400051, Maharashtra.
34. Lanco Amarkantak Power Private Limited,
Plot No. 397, Udyog Vihar, Phase-III,
Gurgaon-122016, Haryana.
35. Vandana Vidyut Limited,
Vandana Bhawan, M. G. Road,
Raipur, Chhattisgarh.
36. TRN Energy Private Limited,
7th Floor, Ambience office Block, Ambience Mall, NH-8,
Gurgaon-122002, Haryana.
37. Haryana Vidyut Prasaran Nigam Limited (HVPNL),
Shakti Bhawan, C-4, Sector-6,
Panchkula-134109, Haryana.

...Respondent(s)



For Petitioner: Shri S. S. Raju, PGCIL
Shri Mukesh Khanna, PGCIL
Shri V. P. Rastogi, PGCIL
Shri B. B. Rath, PGCIL
Shri V. Chandrashekhar, PGCIL
Shri Amit Yadav, PGCIL

For Respondent: Shri Raghujeet Singh Madan, Advocate, HVPNL
Ms. Sonia Madan, Advocate, HVPNL
Shri R. B. Sharma, Advocate, BRPL
Ms. Rohini Prasad, Advocate, BSPHCL
Shri Mohd. Asifequbal, HVPNL
Shri Amit Kumar Saini, HVPNL
Ms. Megha Bajpeyi, BRPL
Shri Anindya Khare, MPPMCL

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, for truing up of transmission tariff of the period from COD 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 determination of transmission tariff 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 “WR-NR HVDC interconnector for IPP projects in Chhattisgarh” in the Northern Region & Western Region (hereinafter referred to as “the transmission project”):

- Asset-I:** Pole-I of the ± 800 kV, 3000 MW Champa Pooling Station & Kurukshetra HVDC Terminals along with ± 800 kV Champa Pooling station - Kurukshetra HVDC Transmission Line;
- Asset-II:** 2 numbers 400/220 kV, 500 MVA ICTs along with associated bays at 400/220 kV GIS Sub-station at Kurukshetra;
- Asset-III:** 8 numbers 220 kV Line Bays at 400/220 kV GIS Sub-station at Kurukshetra;



Asset-IV: Pole-II of the ± 800 kV, 3000 MW Champa & Kurukshetra HVDC Terminals along with associated bays;

Asset-V: Kurukshetra (NR)-Jalandhar 400 kV D/C (Quad) line, one circuit via 400/220 kV Nakodar (PSTCL) Sub-station along with associated bays (2 numbers GIS bays at Kurukshetra, 2 numbers conventional bays at Jalandhar, 2 numbers conventional bays at Nakodar, 1 number 50 MVAR Line Reactor at Nakodar and 1 number 50 MVAR Line Reactor at Jalandhar), LILO of Abdullapur-Sonepat 400 kV D/C (Triple) at Kurukshetra Sub-station along with associated bays (4 numbers GIS Bays at Kurukshetra) and 1 number 400 kV 125 MVAR Bus Reactor at Kurukshetra along with 1 number associated GIS Bay at Kurukshetra.

2. The Petitioner has made the following prayers vide affidavit dated 30.7.2021 in the instant petition:

“1) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered follows this petition, as per para 7 and 8 above.

2) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 7 and 8 above for respective block.

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

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

5) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.

6) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 8.10 above.

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

8) Allow the petitioner to recover FERV on the foreign loans deployed as provided follows Tariff Regulations, 2014 and Tariff Regulations, 2019.



9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

10) Condone the delay in completion of subject assets on merit of the same being out of the control of Petitioner in line with CERC Regulations 2014 12(2)(i) uncontrollable factors.

and pass such other relief as Hon'ble Commission deems fit and appropriate follows the circumstances of the case and in the interest of justice.”

Background

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

- a. The Investment Approval (IA) and expenditure sanction for the transmission project was accorded by the Board of Directors of the Petitioner in its 270th meeting held on 26.3.2012 at an estimated cost of ₹956976 lakh including IDC of ₹51177 lakh based on February, 2012 price level (communicated vide Memorandum No. C/CP/Chhattisgarh-IPP dated 27.3.2012).
- b. Further, the Revised Cost Estimate (RCE) of the transmission project was accorded by the Board of Directors of the Petitioner in its 338th meeting held on 10.3.2017 at an estimated cost of ₹929193 lakh including IDC of ₹86416 lakh based on October, 2016 price level (communicated vide Memorandum No. PA1617-03-0AF-RCE020 dated 12.4.2017).
- c. The scope of the transmission project was discussed and agreed in 28th Standing Committee Meeting (SCM) of Northern Region dated 23.2.2010, 30th SCM of Western Region dated 8.7.2010, 16th NRPC meeting dated 4.5.2010 and 14th WRPC meeting dated 19.8.2010.
- d. The scope of work covered under the transmission project is as follows:

Part A: WR-NR HVDC Interconnector for IPP Projects in Chhattisgarh

Transmission Line:

- a) ± 800 kV, 3000 MW HVDC bipole between Champa Pooling Station (WR)-Kurukshetra (NR) (with provision to upgrade HVDC Terminal to 6000 MW at a later date)

Sub-station:



- a) \pm 800 kV HVDC Station
 - HVDC Rectifier module of 3000 MW Capacity at Champa Pooling Station
 - HVDC Inverter module of 3000 MW Capacity at Kurukshetra
- b) Establishment of 2 x 500 MVA, 400/220 kV Kurukshetra Sub-station (GIS) alongwith 125 MVAR Bus Reactor
- c) Augmentation of 765/400 kV Champa Pooling Station by 2 x 200 MVA 400/132/33 kV transformation capacity.

Part B: Transmission System Strengthening in Northern Region for IPP Projects in Chhattisgarh

Transmission Lines:

- a) Kurukshetra (NR)-Jalandhar 400 kV D/C (Quad) line, One circuit via 400/220 kV Nakodar (PSTCL) Sub-station.
- b) LILO of Abdullapur-Sonepat 400 kV D/C (Triple) at Kurukshetra Sub-station.

Sub-station:

- c) Extension of 400/220 kV Nakodar (PSTCL) Sub-station alongwith 50 MVAR line reactor
- d) Extension of 400/220 kV Jalandhar Sub-station alongwith 50 MVAR line reactor

(As per RCE, Note - "Augmentation of 765/400 kV Champa Pooling Station by 2x200 MVA, 400/132/33 kV transformation capacity" was envisaged during DPR to provide auxiliary supplies to HVDC yard/ Service buildings for Bipole-1 and Bipole-2 of HVDC system at Champa end. Subsequently, it was decided that two independent auxiliary supplies for HVDC system shall be made available from tertiary of 765/400/33 kV, 2x1500 MVA transformers procured under different scheme. Accordingly, two ICTs (200 MVA, 400/132/33 kV) and its associated switchgear for auxiliary supplies for Champa terminals are deleted from the approved scope).

- e. The Commission vide technical validation letter dated 14.7.2021 directed the Petitioner to confirm whether all the assets under the transmission project have been completed and whether they are covered under the instant petition. In response, the Petitioner vide affidavit dated 30.7.2021 has submitted that all assets under the transmission project have been executed except "Augmentation of 765/400 kV Champa Pooling Station by 2x200 MVA, 400/132/33 kV transformation capacity". Initially, the 2x200 MVA, 400/132/33 kV transformers were envisaged during DPR to provide auxiliary supplies to HVDC yard/Service buildings for Bipole-1 and Bipole-



2 of HVDC system at Champa end. Subsequently, it was decided that two independent auxiliary supplies for HVDC terminals at Champa system shall be made available from tertiary of 765/400/33 kV, 2x1500 MVA transformers procured under different scheme. Accordingly, two ICTs (200 MVA, 400/132/33 kV) and its associated switchgear for auxiliary supplies for Champa terminals are deleted from the scope vide RCE dated 10.3.2017

- f. Accordingly, the complete scope of the works, as revised, has been executed and covered under the instant petition for true-up of transmission charges of 2014-19 tariff period and determination of transmission charges for 2019-24 tariff period. The details of COD of the transmission assets under the transmission project is as follows:

Name of Assets	COD	Remarks
Asset-I: Pole-I of the ± 800 kV, 3000 MW Champa Pooling Station & Kurukshetra HVDC Terminals along with ± 800 kV Champa Pooling station-Kurukshetra HVDC Transmission Line	24.3.2017	Covered under order dated 22.2.2018 in Petition No. 13/TT/2017 (tariff for 2014-19 period)
Asset-II: 2 numbers 400/220 kV, 500 MVA ICTs along with associated bays at 400/220 kV GIS Sub-station at Kurukshetra	25.3.2017*	Asset-II and Asset-III were originally covered under Petition No. 13/TT/2017 (Asset-2 & 3, therein). However, the Commission vide order dated 22.2.2018 in Petition No. 13/TT/2017 directed the Petitioner to file fresh petition.
Asset-III: 8 numbers 220 kV Line Bays at 400/220 kV GIS Sub-station at Kurukshetra	25.3.2017*	
Asset-IV: Pole-II of the ± 800 kV, 3000 MW Champa & Kurukshetra HVDC Terminals along with associated bays	16.9.2017	Covered under order dated 6.11.2018 in Pet. No. 205/TT/2017 (tariff for 2014-19 period)
Asset-V: Kurukshetra (NR)-Jalandhar 400 kV D/C (Quad) line, one ckt. via 400/220 kV Nakodar (PSTCL) Sub-station along with associated bays (2 numbers GIS bays at Kurukshetra, 2 numbers conventional bays at Jalandhar, 2 numbers conventional bays at Nakodar, 1 number 50 MVAR Line Reactor at Nakodar and 1 number 50 MVAR Line Reactor at Jalandhar), LILO of Abdullapur-Sonepat 400 kV D/C (Triple) at	3.12.2015	Covered under order dated 25.5.2016 in Petition No. 256/TT/2015 (tariff for 2014-19 period)



Name of Assets	COD	Remarks
Kurukshetra Sub-station along with associated bays (4 numbers GIS Bays at Kurukshetra) and, 1 number 400 kV 125 MVAR Bus Reactor at Kurukshetra along with 1 numbers associated GIS Bay at Kurukshetra		

* COD of Asset-II and Asset-III has been approved as 25.3.2017 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations vide order dated 31.7.2019 in Review Petition Nos. 20/RP/2018 & 3/RP/2019.

- g. As per IA dated 26.3.2012, the scheduled date of commercial operation (SCOD) of the transmission assets is 39 months from the date of IA i.e. by 26.6.2015, against which the transmission assets were put under commercial operation (COD) between 3.12.2015 to 16.9.2017 with time over-run ranging from 160 to 813 days. The details of COD and time over-run of the transmission assets covered in the instant petition are as follows:

Assets	COD	SCOD	Status of Time over-run	
			Duration	Remarks
Asset-I	24.3.2017	25.6.2015	637 days	Time over-run condoned vide order dated 22.2.2018 in Petition No. 13/TT/2017
Asset-II	25.3.2017		638 days	Initially covered under order dated 22.2.2018 in Petition no. 13/TT/2017, wherein, the Commission directed to file fresh petition for consideration. Thus, time over-run to be considered in the instant petition.
Asset-III	25.3.2017		638 days	
Asset-IV	16.9.2017		813 days	Time over-run condoned vide order dated 6.11.2018 in Petition No. 205/TT/2017
Asset-V	3.12.2015		160 days	Time over-run condoned vide order dated 25.5.2016 in Petition No. 256/TT/2015

- h. The transmission tariff for 2014-19 period for Asset-I, Asset-II and Asset-III was claimed in Petition No. 13/TT/2017 (Asset-1, Asset-2 and Asset-3, therein). The Commission allowed the tariff for Asset-I vide order dated 22.2.2018 in Petition No. 13/TT/2017, however, COD of Asset-II and Asset-III was disallowed on the grounds that the assets are not being utilised due to non-availability of downstream assets of HVPNL.



Accordingly, the Petitioner was directed to file fresh petition for claiming tariff for Asset-II and Asset-III after they were put to use and the declaration of COD of the corresponding downstream assets of HVPNL. Aggrieved by the above decision in order dated 22.2.2018, the Petitioner filed Review Petition No. 20/RP/2018. The Commission vide order dated 31.7.2019 in the said review petition allowed the COD of Asset-II and Asset-III as 25.3.2017 under proviso (ii) to Regulation 4(3) of the 2014 Tariff Regulations and Regulation 4(vi) of the Grid Code. However, no tariff was granted for Asset-II and Asset-III.

- i. The tariff for Asset-IV (Pole-II HVDC) for 2014-19 period was allowed vide order dated 6.11.2018 in Petition No. 205/TT/2017. The Commission allowed the sharing of charges under Regulation 11(4)(3)(iii) of the 2010 Sharing Regulations similar to sharing of charges allowed for Asset-I (Pole-I HVDC) in order dated 22.2.2018 in Petition No. 13/TT/2017. Aggrieved by the above decision in order dated 6.11.2018 in Petition No. 205/TT/2017, the Petitioner filed Review Petition No. 3/RP/2018 contending that sharing of transmission charges for Champa-Kurukshetra HVDC line should be in accordance with Regulation 11(4)(3)(i) of the 2010 Sharing Regulations and not under Regulation 11(4)(3)(iii) of the 2010 Sharing Regulations. Thereafter, the Commission vide order dated 31.7.2019 in Review Petition No. 3/RP/2018 decided that sharing of transmission charges for Champa-Kurukshetra HVDC line should be in accordance with Regulation 11(4)(3)(i) of the 2010 Sharing Regulations instead of Regulation 11(4)(3)(iii) of the 2010 Sharing Regulations. Further, in the said petition on the request of Petitioner and Respondent(s) that the transmission charges of Pole-I and Pole-II should be added together and billed together as one corridor of 3000 MW, the Commission directed the Petitioner to add together the annual transmission charges of Pole-I and Pole-II to arrive at monthly transmission charges and also to file one combined petition claiming tariff for all the assets covered in the transmission project at the time of truing up stage.
- j. The tariff for Asset-V for 2014-19 period was allowed vide order dated 25.5.2016 in Petition No. 256/TT/2015.



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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments/objections have been received from the general public in response to the aforesaid notice published in the newspapers by the Petitioner. Madhya Pradesh Power Management Company Limited (MPPMCL), Respondent No. 18, has submitted its reply *vide* affidavit dated 12.3.2021 wherein it has raised issues with regard to RoE, Initial Spares, ACE, cost variation and effect of GST. Uttar Pradesh Power Corporation Limited (UPPCL), Respondent No. 9, has filed its reply *vide* affidavit dated 8.6.2021 and has raised the issue of filing of revised petitions for true-up of 2014-19 period for the transmission project broken in two stages or blocks as approved by the Board of Directors and determination of tariff for 2019-24 tariff period for ease of prudence check, splitting of the transmission assets covered in the transmission project, variation in capital cost vis-à-vis FR cost, details of bids received, sharing of revenue earned, if any, prior to COD, time over-run and corresponding disallowance of IDC and IEDC etc. Haryana Vidyut Prasaran Nigam Limited (HVPNL), Respondent No. 37, has filed its reply *vide* affidavit dated 12.8.2022 and has submitted that HVPNL is not liable to bear the transmission charges on account of mismatch in execution of their downstream lines vis-à-vis the Petitioner's assets due to time over-run beyond the control of HVPNL and GST. Further, HVPNL has submitted that the transmission charges should be billed to the end user and not to HVPNL. In response, the Petitioner has filed its



rejoinder vide affidavits dated 27.8.2021 to the replies of MPPMCL and UPPCL and rejoinder dated 12.9.2022 to the reply of HVPNL. The issues raised by MPPMCL, UPPCL and HVPNL and clarifications given by the Petitioner are considered in the relevant portions of this order.

6. Hearing in this matter was held on 17.8.2022 through video conference and the order was reserved.

7. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 29.1.2020 and other affidavits dated 30.7.2021, 27.8.2021 and 9.9.2021, MPPMCL's reply filed vide affidavit dated 12.2.2021, UPPCL's reply filed vide affidavit dated 8.6.2021, HVPNL's reply filed vide affidavit dated 12.8.2022 and Petitioner's rejoinders thereto filed vide affidavit dated 27.8.2021 to the replies of MPPMCL and UPPCL and affidavit dated 12.9.2022 to the reply of HVPNL.

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

9. It is observed that MPPMCL has raised the issue of grossing up of RoE in this petition and few other petitions as well. The Commission has already considered the submissions of MPPMCL regarding grossing up of RoE and clear findings have been given rejecting the contentions of MPPMCL vide order dated 21.9.2021 in Petition No. 326/TT/2020. As MPPMCL has not challenged those findings, the same have attained finality. Accordingly, the issue of RoE raised by MPPMCL is rejected.



10. UPPCL has raised issues with respect to splitting of assets under a project, filing separate tariff petitions for separate tariff periods for prudence check, non-submission of DPR, IA, RCE, decisions of RPC/TTC, Standing Committee or CCEA and bidding details etc. The Petitioner vide affidavit dated 27.8.2021 has submitted rejoinder to the issues raised by UPPCL. It is observed UPPCL has raised similar issues in other petitions also. In this connection the Commission in a recent order dated 16.12.2022 in Petition No. 711/TT/2020 has held as follows:

“13. We have considered the submissions made by UPPCL and the clarifications submitted by the Petitioner with regard to preliminary issues like splitting of assets under a project, filing separate tariff petitions for separate tariff periods etc. Earlier, the Commission has allowed tariff for two assets of the transmission project in separate orders dated 15.12.2017 and 11.4.2019 in Petition Nos. 144/TT/2016 and 243/TT/2018 respectively. Accordingly, the Petitioner has submitted the instant petition for true-up of above orders dated 15.12.2017 and 11.4.2019 for 2014-19 period as per the relevant provisions of the 2014 Tariff Regulations. Further, as per extant practice/ Regulations, the Petitioner has also included the tariff proposal of 2019-24 period in the instant petition as per the relevant provisions of the 2019 Tariff Regulations. Thus, the clarifications submitted by the Petitioner with regard to splitting of assets as per COD and subsequent apportionment of approved cost as per FR etc. has been included in this order in the relevant paragraphs. Further, the Petitioner has submitted all the information and documents regarding the approvals pertaining to their approvals and their COD, on the basis of which COD of the assets and cost of the project was admitted by the Commission in orders dated 15.12.2017 and 11.4.2019 in Petition No. 144/TT/2016 and Petition No. 243/TT/2018 respectively.”

11. In the instant case, the Commission has allowed tariff for the transmission assets of the transmission project in separate orders dated 22.2.2018, 6.11.2018 and 25.5.2016 in Petition No. 13/TT/2017, Petition No.205/TT/2017 and Petition No.256/TT/2015 respectively. Accordingly, the Petitioner has submitted the instant petition for true-up of above orders dated 22.2.2018, 6.11.2018 and 25.5.2016 for 2014-19 period as per the relevant provisions of the 2014 Tariff Regulations. Further, as per extant practice/ Regulations, the Petitioner has also included the tariff proposal of 2019-24 period in the instant petition as per the relevant provisions of the 2019 Tariff Regulations.



12. In view of the above, the Commission has already deliberated the issues related to splitting of assets, filing separate tariff petitions for separate tariff periods etc. and our views have been crystallised in order dated 16.12.2022 in Petition No. 711/TT/2020. Therefore, we are of the view that there is no need to deliberate on these issues once again in the instant petition since the Commission's views expressed in the above order dated regarding splitting of assets, filing separate tariff petitions for separate tariff periods etc. is equally applicable in the instant matter.

13. The other issues raised by MPPMCL, UPPCL and the issues raised by HVPNL and the clarifications given by the Petitioner thereto are considered in the relevant portions of this order.

TRUING UP OF ANNUAL FIXED CHARGES FOR 2014-19 PERIOD

14. **Asset-II and Asset-III:** The Commission *vide* order dated 22.2.2018 in Petition No. 13/TT/2017 did not approve the COD in respect of Asset-II and Asset-III (Asset 2 and Asset 3 therein) and directed the Petitioner to file fresh petition for determination of tariff for the said transmission assets from COD to 31.3.2019. Subsequently, the Commission approved the COD of Asset-II and Asset-III as 25.03.2017 *vide* order dated 31.7.2019 in Review Petition No. 20/RP/2018 and Petition No. 3/RP/2018. Accordingly, the Petitioner has submitted the details of capital cost and submitted Auditor's Certificate dated 22.8.2019 in support of the same. It is observed from the Auditor's Certificate dated 22.8.2019 that the capital cost is based on audited statements of accounts of the Petitioner upto 31.3.2019. Therefore, determination of tariff for Asset-II and Asset-III from COD to 31.3.2019 shall also be considered alongwith truing-up of transmission charges for 2014-19 tariff period in the instant petition.



15. In view of the above, we are proceeding with determination of transmission charges for Asset-II and Asset-III for 2014-19 tariff period and truing up of transmission charges in respect of the Asset-I, Asset-II, Asset-III, Asset-IV and Asset-V for 2014-19 tariff period. The Petitioner has claimed combined tariff for Asset-I and Asset-IV as directed by the Commission vide order dated 31.7.2019 in Review Petition No. 20/RP/2018 and 3/RP/2019. However, the combined tariff for the 2014-19 tariff period cannot be approved as the CODs of Asset-I and Asset-IV are on two different dates. Accordingly, separate tariff is being approved for Asset-I to Asset-V for the 2014-19 tariff period. The details of the revised transmission charges claimed by the Petitioner vide affidavit dated 27.8.2021 for the transmission assets are as follows:

Asset-I

(₹ in lakh)

Particulars	2016-17 (pro-rata for 8 days)	2017-18	2018-19
Depreciation	631.37	29701.42	30931.37
Interest on Loan	516.39	23106.27	23574.15
Return on Equity	717.66	33768.49	35309.15
O&M Expenses	43.97	2124.43	2250.92
Interest on Working Capital	42.96	1998.36	2075.57
Total	1952.35	90698.97	94141.16

Asset-II

(₹ in lakh)

Particulars	2016-17 (pro-rata for 7 days)	2017-18	2018-19
Depreciation	7.23	397.97	435.52
Interest on Loan	4.27	239.45	320.51
Return on Equity	10.58	579.02	631.84
O&M Expenses	3.84	206.78	213.66
Interest on Working Capital	0.68	37.34	41.43
Total	26.60	1460.56	1642.96

Asset-III



(₹ in lakh)

Particulars	2016-17 (pro-rata for 7 days)	2017-18	2018-19
Depreciation	6.16	332.27	342.50
Interest on Loan	2.65	144.10	173.56
Return on Equity	6.68	362.11	376.70
O&M Expenses	6.88	372.40	384.80
Interest on Working Capital	0.70	37.76	39.59
Total	23.07	1248.64	1317.15

Asset-IV

(₹ in lakh)

Particulars	2017-18 (Pro-rata for 197 days)	2018-19
Depreciation	2396.09	4771.84
Interest on Loan	1123.82	2590.64
Return on Equity	2731.12	5457.51
O&M Expenses	604.36	1212.75
Interest on Working Capital	165.20	337.43
Total	7020.59	14370.17

Asset-V

(₹ in lakh)

Particulars	2015-16 (Pro-rata for 120 days)	2016-17	2017-18	2018-19
Depreciation	1654.12	5291.52	5500.10	5583.33
Interest on Loan	1102.23	3603.10	3642.14	3714.27
Return on Equity	1892.44	6054.66	6299.27	6415.13
O&M Expenses	303.26	955.51	987.30	1020.11
Interest on Working Capital	123.76	396.89	409.97	418.03
Total	5075.81	16301.68	16838.78	17150.87

16. The details of the Interest on Working Capital (IWC) claimed by the Petitioner for the transmission assets are as follows:

Asset-I

(₹ in lakh)

Particulars	2016-17 (pro-rata for 8 days)	2017-18	2018-19
O&M Expenses	167.17	177.04	187.58
Maintenance Spares	300.90	318.66	337.64
Receivables	14845.98	15116.50	15690.19
Total Working Capital	15314.05	15612.20	16215.41



Particulars	2016-17 (pro-rata for 8 days)	2017-18	2018-19
Rate of Interest (in %)	12.80	12.80	12.80
Interest on Working Capital	42.96	1998.36	2075.57

Asset-II

(₹ in lakh)

Particulars	2016-17 (pro-rata for 7 days)	2017-18	2018-19
O&M Expenses	16.68	17.23	17.81
Maintenance Spares	30.02	31.02	32.05
Receivables	231.17	243.43	273.83
Total Working Capital	277.87	291.68	323.69
Rate of Interest (in %)	12.80	12.80	12.80
Interest on Working Capital	0.68	37.34	41.43

Asset-III

(₹ in lakh)

Particulars	2016-17 (pro-rata for 7 days)	2017-18	2018-19
O&M Expenses	30.04	31.03	32.07
Maintenance Spares	54.07	55.86	57.72
Receivables	200.77	208.11	219.53
Total Working Capital	284.88	295.00	309.32
Rate of Interest (in %)	12.80	12.80	12.80
Interest on Working Capital	0.70	37.76	39.59

Asset-IV

(₹ in lakh)

Particulars	2017-18 (pro-rata for 197 days)	2018-19
O&M Expenses	93.31	101.06
Maintenance Spares	167.96	181.91
Receivables	2167.95	2395.03
Total Working Capital	2429.22	2678.00
Rate of Interest (in %)	12.60	12.60
Interest on Working Capital	165.20	337.43

Asset-V

(₹ in lakh)

Particulars	2015-16 (pro-rata for 120 days)	2016-17	2017-18	2018-19
O&M Expenses	77.08	79.63	82.28	85.01
Maintenance Spares	138.74	143.33	148.10	153.02



Particulars	2015-16 (pro-rata for 120 days)	2016-17	2017-18	2018-19
Receivables	2580.20	2716.95	2806.46	2858.48
Total Working Capital	2796.02	2939.91	3036.84	3096.51
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Interest on Working Capital	123.76	396.89	409.97	418.03

Date of Commercial operation (“COD”)

17. The Petitioner filed Petition No. 13/TT/2017, wherein the Petitioner has claimed the COD of Asset II and Asset III as 25.3.2017 under proviso (ii) to Regulation 4(3) of the 2014 Tariff Regulations. The Commission vide order dated 22.2.2018 in Petition No. 13/TT/2017 did not approved the COD of Asset-II and Asset-III under proviso(ii) of 4(3) of the 2014 Tariff Regulations. The relevant portion of the said order is as follows:

“17. The petitioner has claimed the COD of Asset-2 as 25.3.2017 and has submitted the RLDC certificate regarding the trial operation and CEA certificate for energisation of element. It is observed from the RLDC certificate that Asset-2 was charged under no-load condition. The petitioner has submitted that Asset-2 is being used for drawing the auxiliary supply from the tertiary of the 500 MVA transformer for the assets Order in Petition No. 13/TT/2017 Page 14 of 63 covered in the instant petition. The 2 nos. 500 MVA transformer were planned to cater to the demand over 220 kV feeders emanating from Kurukshetra Sub-station. We are not inclined to approve the COD of Asset-2 without ensuring the envisaged use of the transformers. In a similar situation in Petition No. 56/TT/2015, the Commission observed that installation of 315 MVA capacity transformer to meet the requirements of 2 MVA load is not a prudent decision and tariff was not allowed for the ICT of 315 MVA capacity transformer. The relevant portion of the Commission’s order dated 29.7.2016 in Petition No. 56/TT/2016 is extracted hereunder:-

“17. Further, we do not agree with the petitioner’s contention that 315 MVA transformer is the only standard product. Rather, the power transformers such as ICTs and GTs are customized products based on system requirements. The lower capacity ICTs are being used in North East and Eastern Regions by the petitioner. The petitioner should have gone for a power transformer commensurate with the requirement for meeting the auxiliary power requirement in Bhadravati back to back Sub-station

18. In the light of above decision, we are of the view that installation of ICT of 315 MVA capacity transformer to meet requirements of 2 MVA load is not a prudent decision on the part of the petitioner as almost entire capacity of the transformer would remain unutilized. Accordingly, the petitioner’s prayer for grant of tariff for 315 MVA ICT at Bhadravati back to back Sub-station is rejected. The petitioner is advised to shift the 315 MVA ICT to some other location where its capacity could be fully utilized and approach the Commission for tariff.”



“18. In view of the above, the COD of Asset-2 is not approved as almost the entire capacity of the transformer remain unutilized and it is not serving the intended purpose without the COD of the associated downstream system under the scope of HVPNL.

19. The petitioner has submitted that Asset-3 has not been put to use as the downstream assets under the scope of HVPNL have not been commissioned. Accordingly, the petitioner has claimed the COD of Asset-3 as 25.3.2017 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations. The petitioner has submitted communication made with the HVPNL regarding commissioning of the Order in Petition No. 13/TT/2017 downstream transmission system. Though the petitioner has submitted the RLDC certificate regarding trial operation on no-load condition, we are not inclined to approve the COD of Asset-3 as it has not been put to use without the COD of the downstream transmission assets under the scope of HVPNL.”

18. The Petitioner has filed Review Petition No. 20/RP/2018 against above said order. The Commission vide order dated 31.7.2019 in the said review petition allowed the COD of Asset-II and Asset-III as 25.3.2017. The relevant extract of the said order is as follows:

(i) Non-approval of COD of Asset-2 and 3

.....

“44. Thus, having held in the order dated 22.2.2018 that the said Assets-2 and 3 could not be put to regular use for no fault of the Review Petitioner and the fact that the Review Petitioner therein had invoked proviso (ii) to Regulation 4 (3) of the 2014 Tariff Regulations on account of non-readiness of downstream assets under the scope of HVPNL, disallowing the COD of Assets-2 and 3 on the ground that the assets were under no-load conditions, is in our view, an error, specifically in the present case, which is required to be rectified. We agree with the contention of Review Petitioner that impugned order is a deviation from the settled practice which was consistently followed by the Commission in various orders including order dated 24.2.2017 in Petition No. 85/TT/2017. Hence, we allow the review on this count and allow the COD of Assets-2 and 3 as 25.3.2017 taking into account the RLDC certificate regarding trial operation, CEA certificate for energization of element and the CMD Certificate stating these assets confirm to the relevant Grid Standards and Grid Code and are capable of operation to their full capacity in term of Regulation 4(vi) of the Grid Code.”

19. In view of the above decision of the Commission, we consider the COD of the Asset-II and Asset-III as 25.3.2017 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations.



Capital Cost

20. The capital cost of the transmission project has been calculated in accordance with the Regulation 9(3) of the 2014 Tariff Regulation. The Commission *vide* order dated 22.2.2018 in Petition No. 13/TT/2017 in respect of Asset-II and Asset-III directed the Petitioner to file fresh petition for determination of tariff from COD to 31.3.2019. Accordingly, the Petitioner has submitted details of capital cost and submitted Auditor's Certificate in support of the same.

21. The Commission *vide* order dated 22.2.2018 in Petition No. 13/TT/2017 in respect of Asset-I, *vide* order dated 6.11.2018 in Petition No. 205/TT/2017 in respect of Asset-IV and *vide* order dated 25.5.2016 in Petition No. 256/TT/2015 in respect of Asset-V allowed the capital cost as on COD and admitted Additional Capital Expenditure (ACE) for determination of tariff for 2014-19 period. The details of the same are as follows:

Assets	RCE apportioned approved cost	Admitted cost upto COD	Admitted ACE				Total cost as on 31.3.2019
			2015-16	2016-17	2017-18	2018-19	
Asset-I	649247.00	551254.64	-	2836.56	76941.69	4843.50	635876.39
Asset-IV	108652.00	81303.29	-	-	7848.16	10889.22	100040.67
Asset-V	152348.00	86547.72	0.00	0.00	0.00	0.00	86547.72

22. The Petitioner has submitted Auditor's Certificates dated 22.1.2020 in respect of Asset-I, dated 22.8.2019 in respect of Asset-II, Asset-III and Asset-IV and dated 19.1.2020 in respect of Asset-V in support of its claim of capital cost upto the COD along with ACE up to 31.3.2019. The Petitioner has also submitted ACE details for 2019-20 and 2020-21 in respect of the transmission assets. However, estimated ACE claimed by the Petitioner during 2019-20 and 2020-21 is not allowed as it is beyond the 2014-19 tariff period. The details of the apportioned approved capital cost, capital cost as on COD and ACE incurred up to 31.3.2019 as claimed by the



Petitioner in the instant true-up petition in respect of the transmission assets are as follows:

(₹ in lakh)

Assets	RCE apportioned approved capital cost	Cost upto COD	ACE claimed				Total cost as on 31.3.2019
			2015-16	2016-17	2017-18	2018-19	
Asset-I	649247.00	558735.45	-	2827.01	26846.53	17130.25	605539.24
Asset-II	11557.00	9346.19	-	14.18	892.73	813.21	11066.31
Asset-III	7389.00	5900.84	-	9.30	445.05	0.28	6355.47
Asset-IV	108652.00	81455.25	-	-	8431.8	4371.06	94258.11
Asset-V	152348.00	96959.49	3621.60	4370.13	3325.24	23.34	108299.80
Total	929193.00	752397.22	3621.60	7220.62	39941.35	22338.14	825518.93

23. The Petitioner vide affidavit dated 30.7.2021 has submitted the Management Certificate for Asset-III related to cost bifurcation of 220 kV line bays as per its execution of downstream network. The details of cost bifurcation of Asset-III is as follows:

(₹ in lakh)

Sl. No.	Particulars	COD	Actual date of power flow	Capital cost as on COD	ACE (2014-19 & 2019-24)	Total capital cost
1	220 kV line bay (Kaul-1)	25.3.2017	9.3.2019	1475.21	291.87	1767.08
2	220 kV line bay (Pehowa)					
3	220 kV line bay (Kaul-2)		19.9.2019	737.60	145.94	883.54
4	220 kV line bay (Bastara)		20.9.2019	737.60	145.94	883.54
5	220 kV line bay (Salempur-1)		20.7.2020	737.60	145.94	883.54
6	220 kV line bay (Salempur-2)		15.8.2020	737.60	145.94	883.54
7	220 kV line bay (Ramana Ramani-1)		2024-25	737.60	145.94	883.54
8	220 kV line bay (Ramana Ramani-2)		2024-25	737.60	145.94	883.54
Total				5900.81	1167.51	7068.32

Cost Over-run



24. The Commission, *vide* order dated 22.2.2018 in Petition No. 13/TT/2017 in respect of Asset-I, *vide* order dated 6.11.2018 in Petition No. 205/TT/2017 in respect of Asset-IV has held that the completion cost is within the respective RCE apportioned approved cost. However, the Commission *vide* order dated 25.5.2016 in Petition No. 256/TT/2015 restricted the capital cost in respect of Asset-V and has held as follows:

“22. We have considered the submissions of the petitioner and the respondent. The petitioner has not submitted any reasons for cost over-run. Accordingly, the capital cost in respect of the transmission assets is restricted to ₹86604.26 lakh. However, liberty is given to the petitioner to submit the detailed justification for cost over-run in case of the transmission assets for consideration of the Commission at the time of truing up.”

25. The Petitioner has submitted the capital cost of Asset-II, Asset-III and Asset-V afresh in the instant petition. The Petitioner has submitted that completion cost of all the assets covered in the instant petition is within the RCE apportioned approved cost. The Commission has already taken cognizance of RCE of the transmission project approved by the Board of Directors (BoD) of the Petitioner in the earlier orders dated 22.2.2018 in Petition No. 13/TT/2017 and order dated 6.11.2018 in Petition No. 205/TT/2017 in respect of Asset-I and Asset-IV respectively. Further, the completion cost of Asset-II, Asset-III and Asset-V is ₹11066.32 lakh, ₹6355.47 lakh and ₹108299.80 lakh and the same are within the RCE apportioned approved cost of ₹11557.00 lakh, ₹7389.00 lakh and ₹152348.00 lakh, respectively.

26. UPPCL has submitted that the Petitioner invites bids for the complete scope of work on overall basis and completion cost of the transmission project is discovered through competitive bidding. Therefore, the cost discovered through competitive bidding cost must be considered for determination of tariff. After discovery of the cost through bids, original IA and RCE has no relevance and the



same should not be considered for determination of tariff. UPPCL has submitted that the capital cost as on 31.3.2019 of the transmission project was ₹825518 lakh which has been reduced by ₹131428 lakh in comparison to the original approved cost of ₹956976 lakh. Further, RCE dated 10.3.2017 has been approved at a cost of ₹929193 lakh. It is observed that the completion cost of the transmission project has reduced in comparison to the IA. Therefore, the Petitioner must explain the reason of the estimate being very high. UPPCL has further submitted that the price paid by the Petitioner over and above the quoted bid price may be considered as cost over-run due to delayed execution of the transmission project.

27. In response, the Petitioner has submitted that there is no cost over-run in case of the transmission assets covered in the instant petition. The Petitioner follows a robust and time-tested system of preparing cost estimates before obtaining IA. Cost estimates are prepared based on schedule of rates and the schedule of rates is prepared based on the average of unit rates of latest three bids/ LOAs/ raw material prices in order to achieve the cost efficiency by estimating the capital cost of the transmission project. After IA, the award letters are placed on the executing agencies on the basis of tendering process as per best industry practices and due diligence is undertaken including justification of bid prices vis-à-vis estimated cost before placing the awards. Subsequently, the award for execution of the project is placed after following the transparent process of tendering, bid evaluation and award of work to lowest technical and commercially responsive bid. Further, the cost control measures are taken during execution of the project and only under unavoidable situations caused by the actual soil/ terrain conditions, crossing requirements (river, power line, railway line, forest stretches and any other compelling technical reason),



and the cost may undergo changes. The Petitioner has submitted Form-5A indicating details such as package-wise number of bids received, date of award, contractor details, award prices etc. The award prices represent the lowest responsive prices available at the time of bidding of various packages.

28. MPPMCL, with respect to Asset-V, has submitted that as per actual execution there are total 728 towers as compared to 722 in original estimate. However, the variation in cost is due to increase in number of D type towers from 80 to 147. The Petitioner has not explained any reason and has not submitted any technical justification for this huge variation in number of D type towers. MPPMCL has requested that the reason for claim of cost variation be prudently checked before allowing the claim of the Petitioner.

29. In response, the Petitioner has submitted that there is variation in the capital cost due to increase in quantity of line materials due to site conditions, price variation (PV) in awarded cost vis-à-vis FR estimate due to inflationary trend prevailing during execution of project and also market forces prevailing at the time of bidding process of various packages. The Petitioner has submitted the detailed reasons of variation in capital cost as follows:

- a. Number of Tension Towers (D-type) has increased, whereas the number of suspension towers (A-type) has decreased. Therefore, there is a minor variation in the overall number of towers. The details of towers envisaged in FR versus the actual towers installed is as follows:

Description of Tower	Quantity as per FR	Quantity as per Actual
A type Towers	527	480
B type Towers	69	47
C type Towers	46	54
D type Towers	80	147
Total	722	728



- b. The variation in quantity is mainly due to increase in number of C-type and D-type towers from 46 number to 54 number and 80 number to 147 number respectively. The increase in number of angle towers is attributed to the actual site conditions during execution of line due to coming up of new residential areas on the outskirts of villages. Further, there is about 20% increase in the quantity of tower steel in 400 kV Kurukshetra - Jalandhar Line (one circuit via Nakodar). The route alignment and tower quantity etc was finalised in FR on the basis of preliminary survey. However, at the time of detailed survey and final route alignment after award of work, it was observed that another line of PSTCL (400 kV D/C Rajpura-Nakodar line) has been constructed in the close vicinity and was crossing the proposed route of 400 kV Kurukshetra-Jalandhar line at multiple locations due to which the entire Kurukshetra-Jalandhar line had to be rerouted, due to which the number of angle towers increased substantially. The cost of tower foundation, tower erection and stringing etc. also increased proportionately due to increase in number of angle towers. Further, the quantity of various items associated with foundation such as excavation, concreting and reinforcement steel has increased from FR quantity due change in foundation type as per actual soil conditions. The awarded rate of conductor is also on higher side and the details of the same are submitted in Form-5.
- c. In case of another line under Asset-V, namely, LILO of 400 kV D/C Abdulapur- Sonipat Line at Kurukshetra, the actual line has been constructed on 48 numbers Multi-Circuits towers against the original estimate of 44 numbers of towers. Further, due to use of Multi-Circuit towers as per actual requirement, HTLS conductor was used which is costly in comparison to Snowbird conductor as a result there is variation in the conductor cost.
- d. The Petitioner has followed the open competitive bidding route and by providing equal opportunity to all eligible firms, lowest possible market prices for required product/services are obtained. Therefore, the rates for various



items are as received in competitive bidding and therefore not within the control of the Petitioner.

- e. As regards the PV from DPR to LOA, the Petitioner has submitted that the contracts for various packages under this project were awarded to the lowest evaluated and responsive bidder, on the basis of competitive bidding by the Petitioner, after publication of NITs in leading Newspapers. Thus, the award prices represent the lowest prices available at the time of bidding of various packages. The reasons for the same is attributable to inflationary trends prevalent during execution of project from March, 2012 (first OBD under the project) to March, 2015 (period of major supplies), as may be seen from the trend of variation in indices of various major raw materials as follows:

Name of Indices	February, 2012 (one month prior to first OBD)	March 2013	March 2014	March 2015	% Variation (+) Increase/ (-) decrease from first OBD
Tower Steel (Blooms 150x150 mm)	34642	35115	35186	35549	2.62%
HG Zinc	126100	132900	159200	155600	23.39%
EC Grade Al	140500	146700	143883	151833	8.07%
CRGO	176081	156590	194009	226050	28.38%
LME Copper	442852	441489	422611	393972	(-)11.04%
WPI	159.3	170.1	178.9	176.1	10.55%
WPI for Ferrous metals	153.1	154.7	156.3	151.4	(-)1.11%
WPI for Fuel & Power	176.7	191.6	212.6	187.3	6.00%
CPI	199	224	238	254	27.64%

- f. Thus, the PV under the transmission project is attributable to the inflationary trend prevailing during execution of project and also market forces prevailing at the time of bidding process of various packages.
- g. The Petitioner has submitted the element wise cost variation in Form-5 and has also submitted that the overall cost of the transmission asset is within the RCE apportioned approved cost of the transmission asset and has requested to allow cost variation in Asset-V and allow the capital cost as claimed in the instant petition.



30. The Commission *vide* Technical Validation letter dated 14.7.2021 directed the Petitioner to submit detailed justification for cost variation with respect to Asset-V. In response, the Petitioner has reiterated the submissions made in the rejoinder to the reply of MPPMCL. In addition to its submission, the Petitioner has submitted that there is increase in the liability on account of FERV since various contracts were awarded in foreign currency as well as ADB funding. The Petitioner has submitted elementwise cost variation in Form-5 *vide* affidavit dated 30.7.2021.

31. We have considered the submissions of the Petitioner, UPPCL and MPPMCL. It is observed that the major reasons for cost variation of the transmission project is towards increase in quantity of line materials due to site conditions, price variation (PV) in awarded cost vis-à-vis FR estimate due to inflationary trend prevailing during execution of the transmission project and also market forces prevailing at the time of bidding process of various packages, liability on account of FERV since various contracts were awarded in foreign currency due to ADB funding etc. The Commission in earlier orders dated 22.2.2018 and 6.11.2018 *ibid*, has already taken cognizance of cost variation and the completion cost of Asset-I and Asset-IV and the same is within the RCE cost, respectively. The total capital cost of the transmission project of ₹825518.93 lakh as on 31.3.2019, is within the RCE apportioned cost of ₹929193 lakh. Further, asset-wise capital cost is within the respective RCE apportioned cost.

32. In case of Asset-II, Asset-III and Asset-V, as against the revised apportioned approved cost of ₹11557.00 lakh, ₹7389.00 lakh, ₹152348.00 lakh, the estimated completion cost of Asset-II, Asset-III and Asset-V is reduced by an amount of ₹490.69 lakh, ₹1033.57 lakh, and ₹44048.2 lakh respectively. Accordingly, the



capital cost claimed by the Petitioner towards Asset-II, Asset-III and Asset-V is within RCE cost and the same has been allowed.

Time over-run

33. As per IA dated 26.3.2012, SCOD of the transmission project is 39 months from the date of IA i.e. by 25.6.2015, against which the transmission asset has been declared under commercial operation (COD) between 3.12.2015 to 16.9.2017 with time over-run ranging from 160 to 813 days. Time over-run with respect to Asset-I, Asset-IV and Asset-V has already been condoned by the Commission in the earlier tariff orders. Time over-run with respect to Asset-II and Asset-III is being considered in the instant order.

34. The Petitioner vide affidavit dated 30.7.2021 has submitted that Asset-II and Asset-III covered in the instant petition have been put into commercial operation on 25.3.2017 which is just after COD of Asset-I i.e. 24.3.2017. Further, the completion of Asset-II and Asset-III were planned matching with the downstream 220 kV lines, being implemented by HVPNL. However, there was delay in completion of 220 kV downstream lines of HVPNL. Hence, the Petitioner completed and put the Asset-II and Asset-III on commercial operation on 25.3.2017 i.e., immediately after COD dated 24.3.2017 of Asset-I.

35. The Petitioner has further submitted that during the 34th Standing Committee Meeting on Power System Planning of Northern Region (SCM-NR) held on 8.8.2014, HVPNL informed that the 220 kV system being implemented by HVPNL is expected to be available by December, 2015. The Petitioner has submitted the extracts of MoM dated 25.8.2014 of 34th SCM-NR vide affidavit dated 30.7.2021. Thereafter, the



Petitioner made various communications with HVPNL regarding the status of 220 kV network and early execution of their 220 kV downstream lines proposed to be terminated at Kurukshetra (PGCIL). The Petitioner has submitted the reference/copies of various coordination letters dated 20.2.2015, 2.6.2015, 14.8.2015, 28.8.2015, 24.12.2015, 23.4.2016, 3.5.2016, 16.6.2016 and minutes of meeting dated 15.9.2015 with HVPNL in support of the same. Further, Asset-II and Asset-III covered under the instant petition were successfully charged and put under commercial operation by the Petitioner on 25.3.2017 along with the execution of Asset-I. The Petitioner has prayed to condone the time over-run in case of Asset-II and Asset-III.

36. UPPCL has submitted that the transmission project has been delayed by about 27 months on overall basis. UPPCL has prayed that although the Commission has condoned the delay in case of all the transmission assets, the Commission may direct the Petitioner to submit the true-up petition for 2014-19 tariff period based on the original IA dated 26.3.2021 considering the transmission project in Part-A and Part-B and the cost discovered through the bids. UPPCL has further requested that the Petitioner may be directed to submit the time over-run in execution of Part-A and Part-B of the transmission project for reconsideration of the Commission.

37. In response, the Petitioner has filed the justification of time over-run of Asset-II and Asset-III *vide* affidavit dated 30.7.2021 and has prayed to condone the same.

38. We have considered the submission of the Petitioner and UPPCL. We have also gone through the documentary evidence placed on record by the Petitioner to justifying the time over-run. The transmission assets were scheduled to be put into



commercial operation within 39 months from the date of IA dated 26.3.2012 against which, Asset-I, Asset-II, Asset-III, Asset-IV and Asset-V have been put to commercial operation on 24.3.2017, 25.3.2017, 25.3.2017, 16.9.2017 and 3.12.2015 respectively. Accordingly, there is a time over-run of 637 days, 638 days, 638 days, 813 days and 160 days in respect of Asset-I, Asset-II, Asset-III, Asset-IV and Asset-V respectively. The Commission vide order dated 22.2.2018 in Petition No. 13/TT/2017, order dated 6.11.2018 in Petition No. 205/TT/2017 and order dated 25.5.2016 in Petition No. 256/TT/2015 has already condoned the time over-run in respect of Asset-I, Asset-IV and Asset-V, respectively.

39. The COD of the Asset-II and Asset-III is dependent on Asset-I. The Petitioner completed and put Asset-II and Asset-III into commercial operation on 25.3.2017 i.e. immediately after the COD dated 24.3.2017 of Asset-I consisting of Pole-I of the ± 800 kV, 3000 MW Champa Pooling Station & Kurukshetra HVDC Terminals along with ± 800 kV Champa Pooling station-Kurukshetra HVDC Transmission Line.

40. The Commission vide order dated 22.2.2018 in Petition No. 13/TT/2017 has condoned the time over-run of 637 days in execution of Asset-I. The relevant portion of the said order is as follows:

“35. It is observed that the petitioner submitted the proposal for forest clearance on 24.4.2012 for the forest area in Belgahna, Khodri, Pendra, Marwahi, Ratanpur, Kota and Bilaspur (referred to as Part I), on 30.7.2013 for the forest area in Damoh, Sagar, Anuppur, Shahdol, Dinduri, Jabalpur and Chhattapur district of Madhya Pradesh (referred to as Part II) and on 22.1.2013 for forest area in Jabalpur and Shahdol (referred to as Part III). The Stage II clearance was obtained on 7.9.2015, 18.9.2015 and 8.9.2016, for Stage I, II and III respectively. It took 40 months each for the petitioner to obtain forest clearance for Part I and II and 50 months in case of Part III. The total time consumed for obtaining forest clearance is from 24.4.2012 to 8.9.2016 as per the petitioner. However, it is observed that the CCF, Jabalpur granted the permission to start the work for Part III on 28.10.2015 and hence the time consumed forest clearance is from 24.4.2012 to 28.10.2015, i.e. 42 months and 4 days. Besides, this the petitioner needed additional 3 months for tree felling. As per the Forest (Conservation) Amendment Rules, 2004 notified by MoEF dated 3.2.2004, the



timeline for forest approval after submission of proposal is 210 days by State Government and 90 days by Forest Advisory Committee of Central Government i.e. total 10 months. Therefore, we are of the view that the petitioner should have factored these 10 months while arriving at the timeline of 39 months for the instant project. These 10 months are reduced from the total time over-un of 42 months. Accordingly, the remaining 32 months of time over-run cannot be attributed to the petitioner and thus, condonable. As the actual time over-run of 20 months and 26 days is less than 32 months, the said period is condoned. The IDC for the period of time over-run of 20 months and 26 days is allowed to be capitalised. As such, the time over-run on account of RoW issues and land acquisition is not dealt in this order since the entire delay has been condoned on account of delay in forest clearance.”

41. As the time over-run in case of Asset-I has already been condoned by the Commission vide order dated 22.2.2018 in Petition No. 13/TT/2017, the time over-run of 638 days in case of Asset-II and Asset-III is condoned.

Interest During Construction (“IDC”)

42. The Petitioner vide affidavit dated 30.7.2021 has claimed IDC in respect of the transmission assets and has submitted Auditor’s Certificates dated 22.1.2020 in respect of Asset-I, dated 22.8.2019 in respect of Asset-II, Asset-III and Asset-IV and dated 19.1.2020 in respect of Asset-V. The Petitioner has submitted the statement showing IDC claim, discharge of IDC liability as on COD and thereafter as follows:

(₹ in lakh)

Assets	IDC as per Auditor’s Certificate	IDC Discharged upto COD	IDC Discharged		
			2015-16	2016-17	2017-18
Asset-I	53140.71	46979.04	0.00	9.55	6152.12
Asset-II	502.80	477.91	0.00	0.00	24.89
Asset-III	315.82	301.09	0.00	0.00	14 .73
Asset-IV	4415.43	4262.58	0.00	0.00	152.85
Asset-V	8974.13	7342.00	992.58	639.55	0.00

43. The Petitioner vide affidavit dated 27.8.2021 has submitted the revised details of foreign IDC calculations. We have considered the submissions of the Petitioner. The Petitioner has submitted IDC computation statement for domestic as well as foreign currency loans which contains the name of loan, drawl date, loan amount, interest rate, exchange rate and interest claimed. IDC is worked out based on the



details given in the IDC statement. Further, the loan amount as on COD has been mentioned in Forms-6 and Form-9C. On scrutiny of these documents, certain discrepancies have been noted such as mismatch in loan amount between IDC statement and Form-6 and Form-9C. The allowable IDC has been worked out based on the information available on record and relying on loan amount as per Form-9C. The IDC claimed and considered as on COD and summary of discharge of IDC liability up to COD and thereafter for the purpose of tariff determination is as follows:

(₹ in lakh)

Assets	IDC as per Auditor certificate	IDC disallowed due to computational error	IDC allowed on accrual basis	IDC allowed on cash basis as on COD	IDC discharged during 2015-16	IDC discharge d during 2016-17	IDC discharged during 2017-18
Asset-I	53140.71	10.18	53130.53	46976.69	0.00	9.55	6144.30
Asset-II	502.80	0.59	502.21	477.91	0.00	0.00	24.30
Asset-III	315.82	0.00	315.82	301.09	0.00	0.00	14.73
Asset-IV	4415.43	0.00	4415.43	4262.58	0.00	0.00	152.85
Asset-V	8974.13	224.37	8749.76	7153.12	992.58	604.06	0.00

Incidental Expenditure During Construction (“IEDC”)

44. The Petitioner has claimed IEDC for the transmission assets as per the Auditor’s Certificate. The Petitioner has submitted that the entire IEDC mentioned in the Auditor’s Certificate is on cash basis and was paid up to the COD. As the time over-run for the transmission assets have been completely condoned, there is no disallowance of IEDC. The IEDC claimed as per Auditor’s Certificate, IEDC disallowed and IEDC allowed are as follows:

(₹ in lakh)

Assets	IEDC as per Auditor’s certificate (A)	IEDC disallowed (B)	IEDC allowed (A-B)
Asset-I	8517.43	0.00	8517.43
Asset-II	290.29	0.00	290.29
Asset-III	186.25	0.00	186.25
Asset-IV	2030.41	0.00	2030.41
Asset-V	2413.06	0.00	2413.06



Initial Spares

45. Regulation 13(d) of the 2014 Tariff Regulations provides that Initial Spares shall be capitalised as a percentage of plant and machinery cost up to cut-off date, subject to the following ceiling norms:

<i>“(d) Transmission System</i>			
(i)	<i>Transmission line</i>	-	1.00%
(ii)	<i>Transmission Sub-station (Green Field)</i>	-	4.00%
(iii)	<i>Transmission Sub-station (Brown Field)</i>	-	6.00%
(iv)	<i>Series Compensation devices and HVDC Station</i>	-	4.00
(v)	<i>Gas Insulated Sub-station</i>	-	5.00%
(vi)	<i>Communication System</i>	-	3.5%”

46. Initial Spares as claimed by the Petitioner are as follows:

Assets	Particulars	Plan & Machinery cost (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Initial Spares claimed (in %)	Ceiling limit as mentioned as per the Regulation (in %)
		A	B		C
Asset-1	Transmission Line	383750.94	5107.94	1.33	1.00
	HVDC Sub-station	147024.78	4465.00	3.03	4.00
Asset-2	HVDC Sub-station	5829.27	66.40	1.14	4.00
Asset-3	HVDC Sub-station	6301.80	177.00	2.81	4.00
Asset-4	Transmission Line	88377.46	3600.00	4.07	4.00
Asset-5	Transmission Line	77761.56	836.61	1.08	1.00
	HVDC Sub-station	14632.07	168.22	1.15	4.00
TOTAL		723677.88	14421.17		

47. MPPMCL has submitted that the Commission has deducted excess Initial Spares in its respective orders in respect of the transmission assets. The Petitioner has re-calculated the same based on completion cost as per revised Auditor’s Certificate. The Petitioner has further prayed to calculate Initial Spares on overall cost of all the transmission assets. The Petitioner has relied upon the methodology approved by the APTEL in their judgement dated 14.9.2019 in Appeal No. 74 of 2017. MPPMCL has further submitted that the conditions considered by the APTEL



were different than the present true-up petition and, therefore, the request of the Petitioner is devoid of merit and is liable to be rejected out rightly.

48. In response, the Petitioner has submitted that calculation of Initial Spares has been submitted in the instant petition and the same has been re-calculated based on completion cost as the Auditor's Certificate and as per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017. The Petitioner has prayed to allow Initial Spares on overall project basis for all the transmission assets.

49. We have considered the submissions of the Petitioner and MPPMCL. The Initial Spares allowed for the transmission assets are as percentage specified in the 2014 Tariff Regulations and the same is as follows:

Assets	Particulars	Plant and Machinery cost (excluding IDC, IEDC, land cost & cost of Civil Works) (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per 2014 Tariff Regulations (in %)	Initial Spares allowable (₹ in lakh)	Initial Spares disallowed (₹ in lakh)	Initial Spares allowed (₹ in lakh)
		A	B	C	$D=(A-B)*C/(100-C)$	B-D	
Asset-I	Transmission Line	383750.94	5107.94	1.00	3824.68	1283.26	3824.68
	HVDC station	147024.78	4465.00	4.00	5939.99	0.00	4465.00
Asset-II	HVDC station	5829.27	66.40	4.00	240.12	0.00	66.40
Asset-III	HVDC station	6301.80	177.00	4.00	255.20	0.00	177.00
Asset-IV	HVDC station	88377.46	3600.00	4.00	3532.39	67.61	3532.39
Asset-V	Transmission Line	77761.56	836.61	1.00	777.02	59.59	777.02
	HVDC station	14632.07	168.22	4.00	602.66	0.00	168.22

50. The Petitioner has submitted the details of actual Initial Spares discharged for the transmission assets as follows:

(₹ in lakh)



Assets	Particulars	Initial Spares claimed	Dis-charged upto COD	Initial Spares discharged during the year			
				2015-16	2016-17	2017-18	2018-19
Asset-I	Transmission Line	5107.94	3958.45	0.00	0.00	1141.81	7.69
	HVDC station	4465.00	669.75	0.00	0.00	147.58	857.99
Asset-II	HVDC station	66.40	49.80	0.00	0.00	0.75	0.00
Asset-III	HVDC station	177.00	132.75	0.00	0.00	0.84	0.00
Asset-IV	HVDC station	3600.00	0.00	0.00	0.00	0.00	0.00
Asset-V	Transmission Line	836.61	596.11	160.33	80.17	0.00	0.00
	HVDC station	168.22	105.48	22.90	25.22	14.64	0.00

51. Accordingly, the excess Initial Spares disallowed for Asset-I, Asset-IV and Asset-V are as follows:

(₹ in lakh)

Assets	Particulars	Total Initial Spares claimed	Initial Spares dis-allowed as on COD	Initial Spares disallowed during				
				2015-16	2016-17	2017-18	2018-19	2020-21
Asset-I	Transmission Line	5107.94	133.76	0.00	0.00	1141.81	7.69	0.00
Asset-IV	HVDC station	3600.00	0.00	0.00	0.00	0.00	0.00	67.61
Asset-V	Transmission Line	836.61	0.00	0.00	59.59	0.00	0.00	0.00

52. The excess Initial Spares of ₹67.61 lakh for Asset-IV is disallowed in 2019-24 period as per its discharge.

53. Accordingly, the capital cost of the transmission project has been calculated in accordance with Regulation 9(2) of the 2014 Tariff Regulation and the same is as follows:

(₹ in lakh)

Assets	Capital cost claimed as per Auditor's Certificate (A)	Less: IDC disallowed due to computational error (B)	Less: Undischar ged IDC as on COD (C)	Less: Excess Initial Spares disallowed as on COD (D)	Capital cost allowed as on COD on cash basis (E=A-B-C-D)
Asset-I	558735.44	10.18	6153.85	133.76	552437.65



Assets	Capital cost claimed as per Auditor's Certificate (A)	Less: IDC disallowed due to computational error (B)	Less: Undischarged IDC as on COD (C)	Less: Excess Initial Spares disallowed as on COD (D)	Capital cost allowed as on COD on cash basis (E=A-B-C-D)
Asset-II	9346.19	0.59	24.30	0.00	9321.30
Asset-III	5900.84	0.00	14.73	0.00	5886.11
Asset-IV	81455.25	0.00	152.85	0.00	81302.40
Asset-V	96959.49	224.37	1596.64	0.00	95138.48

Additional Capital Expenditure ("ACE")

54. The Commission had allowed the following ACE for the transmission assets in 2014-19 period *vide* order dated 22.2.2018 in Petition No. 13/TT/2017, order dated 6.11.2018 in Petition No. 205/TT/2017, order dated 25.5.2016 in Petition No. 256/TT/2015 and order dated 31.7.2019 in Review Petition No. 20/RP/2018 and 3/RP/2019:

(₹ in lakh)

Assets	Admitted ACE			
	2015-16	2016-17	2017-18	2018-19
Asset-I	0.00	2836.56	76941.69	4843.50
Asset-IV	0.00	0.00	7848.16	10889.22
Asset-V	0.00	0.00	0.00	0.00

55. The Petitioner has claimed following ACE based on actual expenditure:

(₹ in lakh)

Assets	ACE Claimed			
	2015-16	2016-17	2017-18	2018-19
Asset-I	0.00	2836.55	31856.85	17122.56
Asset-II	0.00	14.18	917.62	813.21
Asset-III	0.00	9.30	459.78	0.28
Asset-IV	0.00	0.00	8584.65	4371.06
Asset-V	4614.18	4950.09	3325.24	23.34

56. The cut-off dates of the transmission assets are as follows:

Assets	COD	Cut-off date
Asset-I	24.3.2017	31.3.2020
Asset-II	25.3.2017	31.3.2020
Asset-III	25.3.2017	31.3.2020
Asset-IV	16.9.2017	31.3.2020
Asset-V	3.12.2015	31.3.2018



57. The Petitioner vide affidavit dated 30.7.2021 has submitted the details of ACE incurred which is as follows:

Asset-I

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Deferred work
2016-17	368.76	Larsen & Toubro Limited, KEC International Limited, Eritech Limited, JSK Industries, Zhengzhou Xianghe Group, . Gupta Power, KPTL, EMCO Limited & Crop/Tree Compensation, etc.	Transmission Line	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	860.06	Larsen & Toubro Limited, KEC International Limited, Eritech Limited, JSK Industries, Zhengzhou Xianghe Group, M/s. Gupta Power, KPTL, EMCO Limited. GAMMON INDIA Limited, BHEL & Crop/ Tree Compensation, etc.	Transmission Line	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
	19.95	Radha Enterprises & GE T&D India Limited.	Civil & Building Work	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	763.36	KEC International Limited.	Sub-station	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	814.87	KEC International Limited.	PLCC	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
2017-18	8097.31	Larsen & Toubro Limited, KEC International Limited., Eritech Limited., JSK Industries, Zhengzhou Xianghe Group, Gupta Power, KPTL, EMCO Limited & Crop/Tree Compensation, etc.	Transmission line	Balance and Retention payment as per Regulation 14(1)(i) of 2014 Tariff Regulations



	1842.82	Larsen & Toubro Limited, KEC International Limited., Eritech Limited., JSK Industries Zhengzhou Xianghe Group, Gupta Power, KPTL, EMCO Limited. Gammon India Limited, BHEL & Crop/ Tree Compensation, etc.	Transmission line	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2216.66	Radha Enterprises & GE T&D India Limited.	Civil & Building Work	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	164.02	GE T&D India Limited.	Civil & Building Work	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
	14453.66	KEC International Limited.	Sub-station	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	15.07	GE T&D India Limited.	Sub-station	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
	56.99	KEC International Limited.	PLCC	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
2018-19	1596.31	. Larsen & Toubro Limited, KEC International Limited., Eritech Limited., JSK Industries, Zhengzhou Xianghe Group, Gupta Power, KPTL, EMCO Limited & Crop/ Tree Compensation, etc.	Transmission line	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	120.03	Larsen & Toubro Limited, KEC International Limited, Eritech Limited., JSK Industries Zhengzhou Xianghe Group, Gupta Power, KPTL, EMCO Limited, Gammon India Limited,	Transmission line	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations



		BHEL & Crop/ Tree Compensation, etc.		
	3535.83	Radha Enterprises & GE T&D India Limited.	Civil & Building Work	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	407.69	GE T&D India Limited.	Civil & Building Work	Deferred work liability as per Regulation 14(1)(ii) of 2014 the Tariff Regulations
	10206.64	KEC International Limited.	Sub-station	Balance and Retention payment as per Regulation 14(1)(i) of 2014 Tariff Regulation
	1186.92	GE T&D India Limited.	Sub-station	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
	76.85	KEC International Limited.	IT equipment	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations



Asset-II

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Deferred work
2016-17	14.18	GE T&D India Limited.	Sub-station	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
2017-18	331.11	GE T&D India Limited.	Civil & Building Work	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	42.15	GE T&D India Limited.	Civil & Building Work	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
	460.82	GE T&D India Limited.	Sub-station	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	58.66	GE T&D India Limited.	Sub-station	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
2018-19	457.17	GE T&D India Limited.	Civil & Building Work	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	355.22	GE T&D India Limited.	Sub-station	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations

Asset-III

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Deferred work
2016-17	9.30	GE T&D India Limited.	Sub-station	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
2017-18	147.37	GE T&D India Limited	Civil & Building Work	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	51.74	GE T&D India Limited	Civil & Building Work	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
	180.00	GE T&D India Limited	Sub-station	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations



	63.20	GE T&D India Limited	Sub-station	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2.03	GE T&D India Limited	PLCC	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	0.71	GE T&D India Limited	PLCC	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
2018-19	0.28	GE T&D India Limited	Civil & Building Work	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations

Asset-IV

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Deferred work
2017-18	442.24	GE T&D India Limited	Civil & Building Work	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	7989.56	GE T&D India Limited	Sub-station	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
2018-19	14.62	GE T&D India Limited	Civil & Building Work	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	528.68	GE T&D India Limited	Civil & Building Work	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
	103.02	GE T&D India Limited	Sub-station	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	3724.74	GE T&D India Limited	Sub-station	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations

Asset-V

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Deferred work
2015-16	114.21	Alstom	Civil & Building Work	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff



				Regulations
	85.52	KEC International, Larsen & Tubro & LS Cable	Transmission line	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	2966.96	KEC International, Larsen & Tubro & LS Cable	Transmission line	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
	454.91	Kalpataru & Alstom	Sub-station	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
2016-17	310.31	Alstom	Civil & Building Work	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	158.74	Alstom	Civil & Building Work	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2230.69	KEC International, Larsen & Tubro & LS Cable	Transmission line	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	1051.05	KEC International, Larsen & Tubro & LS Cable	Transmission line	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
	407.49	Kalpataru & Alstom	Sub-station	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	208.45	Kalpataru & Alstom	Sub-station	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
	2.25	Alstom	PLCC	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	1.15	Alstom	PLCC	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
2017-18	485.09	Alstom	Civil & Building Work	Balance and Retention payment as per Regulation 14(1)(i) of 2014 Tariff Regulation
	68.51	Alstom	Civil & Building Work	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff



				Regulations
	1543.51	KEC International, Larsen & Tubro & LS Cable	Transmission line	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	217.99	KEC International, Larsen & Tubro & LS Cable	Transmission line	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
	853.85	Kalpataru & Alstom	Sub-station	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	120.59	Kalpataru & Alstom	Sub-station	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
	31.28	Alstom	PLCC	Balance and Retention payment as per Regulation 14(1)(i) of the 2014 Tariff Regulations
	4.42	Alstom	PLCC	Deferred work liability as per Regulation 14(1)(ii) of the 2014 Tariff Regulations
2018-19	2.10	KEC International, Larsen & Tubro & LS Cable	Transmission line	Balance and Retention payment as per Regulation 14(3)(v) of the 2014 Tariff Regulations
	21.24	Kalpataru & Alstom	Sub-station	Balance and Retention payment as per Regulation 14(3)(v) of the 2014 Tariff Regulations

58. The Petitioner has submitted that for Asset-I to Asset-V, the admissibility of ACE incurred after COD and up to cut-off date is on account of balance and retention payments due to undischarged liability for works executed before cut-off date/ work differed for execution and has to be dealt in accordance with Regulation 14(1)(i) of the 2014 Tariff Regulations. The Petitioner has further submitted that ACE during 2018-19 for Asset-I, Asset-II, Asset-III and Asset-IV is within cut-off date and is accordingly claimed as per Regulation 14(1)(i) of the 2014 Tariff Regulations.



Further, in case of Asset-V, ACE during 2018-19 is after cut-off date and is accordingly claimed as per Regulation 14(3)(v) of the 2014 Tariff Regulations. However, ACE in case of Asset-V during 2018-19 is on account of balance and retention payments due to un-discharged liability for works executed before cut-off date/ work differed for execution.

59. We have considered the submissions made by the Petitioner. The ACE claimed by the Petitioner has been verified from the Auditor's Certificate. Accordingly, ACE within the cut-off date has been allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) the 2014 Tariff Regulations and ACE incurred after cut-off date has been allowed under Regulation 14(3)(v) of the 2014 Tariff Regulations. Further, the un-discharged IDC liability as on COD has been allowed as ACE during the year of its discharge. The excess Initial Spares are disallowed as per actual discharge for Asset-I and Asset-V. ACE allowed for 2014-19 tariff period in respect of the transmission assets is as follows:

(₹ in lakh)				
Particulars	2015-16	2016-17	2017-18	2018-19
Asset-I				
ACE as per Auditor's Certificate	0.00	2827.01	26846.54	17130.25
Less: Initial Spares disallowed	0.00	0.00	1141.81	7.69
Add: IDC Discharged	0.00	9.55	6144.30	0.00
ACE allowed in the instant order	0.00	2836.55	31849.03	17122.56
Asset-II				
ACE as per Auditor's Certificate	0.00	14.18	892.73	813.21
Add: IDC Discharged	0.00	0.00	24.30	0.00
ACE allowed in the instant order	0.00	14.18	917.03	813.21
Asset-III				
ACE as per Auditor's Certificate	0.00	9.30	445.05	0.28
Add: IDC Discharged	0.00	0.00	14.73	0.00
ACE allowed in the instant order	0.00	9.30	459.78	0.28
Asset-IV				
ACE as per Auditor's Certificate	0.00	0.00	8431.80	4371.06
Add: IDC Discharged	0.00	0.00	152.85	0.00
ACE allowed in the instant order	0.00	0.00	8584.65	4371.06
Asset-V				
ACE as per Auditor's Certificate	3621.60	4370.13	3325.24	23.34



Particulars	2015-16	2016-17	2017-18	2018-19
Less: Initial Spares disallowed	0.00	59.59	0.00	0.00
Add: IDC Discharged	992.58	604.06	0.00	0.00
ACE allowed in the instant order	4614.18	4914.60	3325.24	23.34

Capital Cost for 2014-19 tariff period

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

Assets	RCE apportioned approved capital cost	Capital Cost as on COD on cash basis	ACE allowed				Total Capital Cost as on 31.3.2019
			2015-16	2016-17	2017-18	2018-19	
Asset-I	649247.00	552437.65	0.00	2836.55	31849.03	17122.56	604245.79
Asset-II	11557.00	9321.30	0.00	14.18	917.03	813.21	11065.72
Asset-III	7389.00	5886.11	0.00	9.30	459.78	0.28	6355.47
Asset-IV	108652.00	81302.40	0.00	0.00	8584.65	4371.06	94258.11
Asset-V	152348.00	95138.48	4614.18	4914.60	3325.24	23.34	108015.84
Total	929193.00	744085.94	4614.18	7774.63	45135.73	22330.45	823940.93

Debt-Equity ratio

61. The Petitioner has claimed debt-equity ratio of 70:30 as on COD and for ACE post COD. Debt-equity ratio of 70:30 has been considered for capital cost as on COD and ACE during 2014-19 tariff period as provided in Regulation 19 of the 2014 Tariff Regulations. The details of debt-equity ratio in respect of the transmission assets as on COD and as on 31.3.2019 are as follows:

Asset-I

Particulars	Capital cost as on 1.4.2014/ COD (₹ in lakh)	(in %)	ACE during 2014-19 (₹ in lakh)	(in %)	Capital cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	386706.36	70.00	36265.70	70.00	422972.06	70.00
Equity	165731.30	30.00	15542.44	30.00	181273.74	30.00
Total	552437.65	100.00	51808.15	100.00	604245.79	100.00



Asset-II

Particulars	Capital cost as on 1.4.2014/ COD (₹ in lakh)	(in %)	ACE during 2014-19 (₹ in lakh)	(in %)	Capital cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	6524.91	70.00	1221.10	70.00	7746.01	70.00
Equity	2796.39	30.00	523.33	30.00	3319.72	30.00
Total	9321.30	100.00	1744.43	100.00	11065.73	100.00

Asset-III

Particulars	Capital cost as on 1.4.2014/COD (₹ in lakh)	(in %)	ACE during 2014-19 (₹ in lakh)	(in %)	Capital cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	4120.28	70.00	328.56	70.00	4448.84	70.00
Equity	1765.83	30.00	140.81	30.00	1906.64	30.00
Total	5886.11	100.00	469.37	100.00	6355.48	100.00

Asset-IV

Particulars	Capital cost as on 1.4.2014/COD (₹ in lakh)	(in %)	ACE during 2014-19 (₹ in lakh)	(in %)	Capital cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	56911.68	70.00	9069.00	70.00	65980.68	70.00
Equity	24390.72	30.00	3886.72	30.00	28277.44	30.00
Total	81302.40	100.00	12955.72	100.00	94258.11	100.00

Asset-V

Particulars	Capital cost as on 1.4.2014/ COD (₹ in lakh)	(in %)	ACE during 2014-19 (₹ in lakh)	(in %)	Capital cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	66596.93	70.00	9014.21	70.00	75611.15	70.00
Equity	28541.54	30.00	3863.14	30.00	32404.69	30.00
Total	95138.48	100.00	12877.36	100.00	108015.84	100.00

Depreciation

62. The Petitioner's claim towards depreciation in the instant petition was found higher than the depreciation allowed for the transmission assets in previous orders. The Petitioner has neither given any justification for claiming higher depreciation



than what was allowed earlier in order nor made any specific prayer for allowing higher depreciation in this petition. In a similar case, the Commission vide order dated 9.5.2020 in Petition No. 19/TT/2020 has already dealt with this issue. The relevant extract of the said order is as follows:

“31. We have considered the submissions of the Petitioner. The instant assets were put into commercial operation during the 2009-14 period and the tariff from the respective CODs to 31.3.2014 was allowed vide orders dated 30.8.2012 and 9.5.2013 in Petition No.343/2010 and Petition No. 147/TT/2011 respectively. Further, the tariff of the 2009-14 period was trued up and tariff for the 2014-19 period was allowed vide order dated 25.2.2016 in Petition No.10/TT/2015. The Petitioner did not claim any capital expenditure towards “IT Equipment” in the above said three petitions where tariff for the instant assets for the 2009-14 period was allowed, tariff of the 2009-14 period was trued up and tariff for 2014- 19 period was allowed even though there was a clear provision in the 2009 Tariff Regulations and 2014 Tariff Regulations providing depreciation @15% for IT Equipment. Having failed to make a claim as per the 2009 Tariff Regulations (the period during which COD of assets was achieved), the Petitioner has now, at the time of truing up of the tariff allowed for the 2014-19 period has apportioned apart of the capital expenditure to “IT Equipment”. The Petitioner has adopted similar methodology not only in this but in some of the other petitions listed along with the instant petition on 26.2.2020. It is observed that the Petitioner has for the first time apportioned a part of the capital expenditure towards IT Equipment and has claimed depreciation under the head “IT Equipment” @15% at the time of truing up of the tariff of 2014- 19 period. Regulation 8(1) of the 2014 Tariff Regulations provides for truing up of the capital expenditure including the additional capital expenditure, incurred upto 31.3.2019, admitted by the Commission after prudence check. We are of the view that scope of truing up exercise is restricted to truing up of the capital expenditure already admitted and apportionment or reapportionment of the capital expenditure cannot be allowed at the time of truing up. Therefore, we are not inclined to consider the Petitioner’s prayer for apportionment of capital expenditure towards IT Equipment and allowing depreciation @ 15% from 1.4.2014 onwards. Accordingly, the depreciation @ 5.28% has been considered for IT Equipment as part of the substation upto 31.3.2019 while truing up the capital expenditure for the 2014- 9period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @ 15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations.”

63. In line with the above order dated 9.5.2020 in Petition No. 19/TT/2020, depreciation has been considered @5.28% for IT Equipment as part of the Substation upto 31.3.2019 while truing up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @15% for the balance depreciable value of IT



equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations. The calculation of weighted average rate of depreciation (WAROD) in respect of transmission assets is placed in Annexure-I to Annexure-V. The Gross Block during the 2014-19 tariff period has been depreciated at WAROD (Annexure-I). WAROD has been worked out considering the depreciation rates of assets as prescribed in the 2014 Tariff Regulations. The asset-wise trued up depreciation allowed is as follows:

Asset-I

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 8 days)	2017-18	2018-19
Depreciation			
Opening Gross Block (A)	552437.65	555274.20	587123.23
ACE (B)	2836.55	31849.03	17122.56
Closing Gross Block (C) = A+B	555274.20	587123.23	604245.79
Average Gross Block (D) = (A+C)/2	553855.93	571198.72	595684.51
Freehold Land	1611.96	1611.96	1611.96
Weighted Average Rate of Depreciation (WAROD) (in %)	5.20	5.20	5.19
Balance useful life of the asset (Year)	33	33	32
Lapsed Life of the asset (Year)	0	0	1
Depreciable Value	497019.57	512628.08	534665.30
Combined Depreciation during the year	631.37	29701.08	30930.84
Cumulative Depreciation at the end of the year	631.37	30332.45	61263.28
Remaining Depreciable Value at the end of the year	496388.20	482295.63	473402.01

Asset-II

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Depreciation			
Opening Gross Block (A)	9321.30	9335.48	10252.51
ACE (B)	14.18	917.03	813.21
Closing Gross Block (C) = A+B	9335.48	10252.51	11065.72
Average Gross Block (D) = (A+C)/2	9328.39	9793.99	10659.11



Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Freehold Land	1216.05	1216.05	1216.05
Weighted Average Rate of Depreciation (WAROD) (in %)	4.04	4.06	4.09
Balance useful life of the asset (Year)	25	25	24
Lapsed Life of the asset (Year)	0	0	1
Depreciable Value	7301.11	7720.15	8498.75
Combined Depreciation during the year	7.23	397.95	435.49
Cumulative Depreciation at the end of the year	7.23	405.18	840.67
Remaining Depreciable Value at the end of the year	7293.87	7314.97	7658.08

Asset-III

(₹ in lakh)

Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Depreciation			
Opening Gross Block (A)	5886.11	5895.41	6355.19
ACE (B)	9.30	459.78	0.28
Closing Gross Block (C) = A+B	5895.41	6355.19	6355.47
Average Gross Block (D) = (A+C)/2	5890.76	6125.30	6355.33
Weighted Average Rate of Depreciation (WAROD) (in %)	5.46	5.42	5.39
Balance useful life of the asset (Year)	23	23	22
Lapsed Life of the asset (Year)	0	0	1
Depreciable Value	5301.68	5512.77	5719.80
Combined Depreciation during the year	6.17	332.27	342.51
Cumulative Depreciation at the end of the year	6.17	338.44	680.95
Remaining Depreciable Value at the end of the year	5295.51	5174.33	5038.85



Asset-IV

(₹ in lakh)

Particulars	2017-18 (Pro-rata 197 days)	2018-19
Depreciation		
Opening Gross Block (A)	81302.40	89887.05
ACE (B)	8584.65	4371.06
Closing Gross Block (C) = A+B	89887.05	94258.11
Average Gross Block (D) = (A+C)/2	85594.73	92072.58
Weighted Average Rate of Depreciation (WAROD) (in %)	5.19	5.18
Balance useful life of the asset (Year)	25	25
Lapsed Life of the asset (Year)	0	0
Depreciable Value	77035.25	82865.32
Combined Depreciation during the year	2396.08	4771.84
Cumulative Depreciation at the end of the year	2396.08	7167.93
Remaining Depreciable Value at the end of the year	74639.17	75697.39

Asset-V

(₹ in lakh)

Particulars	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
Depreciation				
Opening Gross Block (A)	95138.48	99752.66	104667.26	107992.50
ACE (B)	4614.18	4914.60	3325.24	23.34
Closing Gross Block (C) = A+B	99752.66	104667.26	107992.50	108015.84
Average Gross Block (D) = (A+C)/2	97445.57	102209.96	106329.88	108004.17
Freehold Land	1175.32	1175.32	1175.32	1175.32
Weighted Average Rate of Depreciation (WAROD) (in %)	5.17	5.17	5.16	5.16
Balance useful life of the asset (Year)	33	33	32	31
Lapsed Life of the asset (Year)	0	0	1	2
Depreciable Value	86643.22	90931.17	94639.10	96145.96
Combined Depreciation during the year	1650.88	5280.71	5488.38	5571.60
Cumulative Depreciation at the end of the year	1650.88	6931.59	12419.97	17991.57
Remaining Depreciable Value at the end of the year	84992.34	83999.58	82219.13	78154.39



64. The details of depreciation allowed in orders dated 22.2.2018, 6.11.2018 and 25.5.2016 in Petition Nos. 13/TT/2017, 205/TT/2017 and 256/TT/2015 in respect of Asset-I, Asset-IV and Asset-V, respectively, depreciation claimed in respect of all the transmission assets in the instant petition and true up in the instant order are as follows:

Asset-I

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 8 days)	2017-18	2018-19
Approved <i>vide</i> order dated 22.2.2018 in Petition No. 13/TT/2017	629.85	30793.40	32892.96
Claimed by Petitioner in the instant petition	631.37	29701.42	30931.37
Allowed after true-up in this order	631.37	29701.08	30930.84

Asset-II

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Claimed by Petitioner in the instant petition	7.23	397.97	435.52
Allowed after true-up in this order	7.23	397.95	435.49

Asset-III

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Claimed by Petitioner in the instant petition	6.16	332.27	342.50
Allowed after true-up in this order	6.17	332.27	342.51

Asset-IV

Particulars	(₹ in lakh)	
	2017-18 (Pro-rata 197 days)	2018-19
Approved <i>vide</i> order dated 6.11.2018 in Petition No. 205/TT/2017	2387.14	4915.70
Claimed by Petitioner in the instant petition	2396.09	4771.84
Allowed after true-up in this order	2396.08	4771.84



Asset-V

(₹ in lakh)

Particulars	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
Approved vide order dated 25.5.2016 in Petition No. 256/TT/2015	1466.21	4471.93	4471.93	4471.93
Claimed by Petitioner in the instant petition	1654.12	5291.52	5500.10	5583.33
Allowed after true-up in this order	1650.88	5280.71	5488.38	5571.60

Interest on Loan (“IoL”)

65. The Petitioner has claimed the Weighted Average Rate of IoL based on its actual loan portfolio and rate of interest. Accordingly, IoL is calculated based on actual interest rate in accordance with Regulation 26 of the 2014 Tariff Regulations.

The details of IoL allowed are as follows:

Asset-I

(₹ in lakh)

Particulars	2016-17 (Pro-rata 8 days)	2017-18	2018-19
Interest on Loan			
Gross Normative Loan	386706.36	388691.94	410986.26
Cumulative Repayments up to Previous Year	0.00	631.37	30332.45
Net Loan-Opening	386706.36	388060.58	380653.81
Additions	1985.59	22294.32	11985.80
Repayment during the year	631.37	29701.08	30930.84
Net Loan-Closing	388060.58	380653.81	361708.78
Average Loan	387383.47	384357.19	371181.29
Weighted Average Rate of Interest on Loan (in %)	6.0819	6.0117	6.3510
Interest on Loan	516.39	23106.23	23573.72

Asset-II

(₹ in lakh)

Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Interest on Loan			
Gross Normative Loan	6524.91	6534.84	7176.75
Cumulative Repayments up to Previous Year	0.00	7.23	405.18
Net Loan-Opening	6524.91	6527.60	6771.57
Additions	9.93	641.92	569.25
Repayment during the year	7.23	397.95	435.49
Net Loan-Closing	6527.60	6771.57	6905.33



Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Average Loan	6526.26	6649.59	6838.45
Weighted Average Rate of Interest on Loan (in %)	3.4155	3.6009	4.6866
Interest on Loan	4.27	239.44	320.49

Asset-III

(₹ in lakh)

Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Interest on Loan			
Gross Normative Loan	4120.28	4126.79	4448.63
Cumulative Repayments up to Previous Year	0.00	6.17	338.44
Net Loan-Opening	4120.28	4120.62	4110.19
Additions	6.51	321.85	0.20
Repayment during the year	6.17	332.27	342.51
Net Loan-Closing	4120.62	4110.19	3767.89
Average Loan	4120.45	4115.40	3939.04
Weighted Average Rate of Interest on Loan (in %)	3.3569	3.5030	4.4060
Interest on Loan	2.65	144.16	173.55

Asset-IV

(₹ in lakh)

Particulars	2017-18 (Pro-rata 197 days)	2018-19
Interest on Loan		
Gross Normative Loan	56911.68	62920.94
Cumulative Repayments up to Previous Year	0.00	2396.08
Net Loan-Opening	56911.68	60524.85
Additions	6009.26	3059.75
Repayment during the year	2396.08	4771.84
Net Loan-Closing	60524.85	58812.76
Average Loan	58718.27	59668.80
Weighted Average Rate of Interest on Loan (in %)	3.5461	4.3417
Interest on Loan	1123.83	2590.63

Asset-V

(₹ in lakh)

Particulars	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
Interest on Loan				
Gross Normative Loan	66596.93	69826.86	73267.08	75594.75
Cumulative Repayments up to Previous Year	0.00	1650.88	6931.59	12419.97



Particulars	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
Net Loan-Opening	66596.93	68175.98	66335.49	63174.77
Additions	3229.93	3440.22	2327.67	16.40
Repayment during the year	1650.88	5280.71	5488.38	5571.60
Net Loan-Closing	68175.98	66335.49	63174.77	57619.58
Average Loan	67386.46	67255.73	64755.13	60397.17
Weighted Average Rate of Interest on Loan (in %)	4.9792	5.3465	5.6126	6.1364
Interest on Loan	1100.11	3595.85	3634.44	3706.21

66. The details of IoL allowed in earlier orders dated 22.2.2018, 6.11.2018 and 25.5.2016 in Petition Nos. 13/TT/2017, 205/TT/2017 and 256/TT/2015 in respect of Asset-I, Asset-IV and Asset-V respectively, IoL claimed in respect of all the transmission assets in the instant petition and trued up in the instant order are as follows:

Asset-I

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 8 days)	2017-18	2018-19
Approved <i>vide</i> order dated 22.2.2018 in Petition No. 13/TT/2017	468.09	22101.76	21877.92
Claimed by Petitioner in the instant petition	516.39	23106.27	23574.15
Allowed after true-up in this order	516.39	23106.23	23573.72

Asset-II

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Claimed by Petitioner in the instant petition	4.27	239.45	320.51
Allowed after true-up in this order	4.27	239.44	320.49



Asset-III

(₹ in lakh)

Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Claimed by Petitioner in the instant petition	2.65	144.10	173.56
Allowed after true-up in this order	2.65	144.16	173.55

Asset-IV

(₹ in lakh)

Particulars	2017-18 (Pro-rata 197 days)	2018-19
Approved <i>vide</i> order dated 6.11.2018 in Petition No. 205/TT/2017	1020.71	1978.03
Claimed by Petitioner in the instant petition	1123.82	2590.64
Allowed after true-up in this order	1123.83	2590.63

Asset-V

(₹ in lakh)

Particulars	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 25.5.2016 in Petition No. 256/TT/2015	1032.15	3033.60	2788.47	2520.79
Claimed by Petitioner in the instant petition	1102.23	3603.10	3642.14	3714.27
Allowed after true-up in this order	1100.11	3595.85	3634.44	3706.21

Return on Equity ("RoE")

67. The Petitioner has claimed RoE for the transmission assets in terms of Regulation 24 and Regulation 25 of the 2014 Tariff Regulations. The Petitioner has submitted that the income tax assessment has been completed and assessment order has been issued by the Income Tax Department in case of 2014-15 and 2015-16 and that the income tax return have been filed with Income Tax Department for 2016-17 and 2017-18 and income tax return for 2018-19 will be filed in due course. The Petitioner has submitted that it is liable to pay income tax at MAT rates and has claimed the following effective tax rates for the 2014-19 tariff period:



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

68. The Commission *vide* order dated 27.4.2020 in Petition No. 274/TT/2019 has already arrived at the following effective tax rate for the Petitioner based on the notified MAT rate for the 2014-19 tariff period.

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Effective tax (in %)	Grossed up RoE [(Base Rate)/(1-t)] (in %)
2014-15	21.018	19.624	19.611
2015-16	21.382	19.715	19.706
2016-17	21.338	19.704	19.706
2017-18	21.337	19.704	19.706
2018-19	21.549	19.757	19.758

69. The same MAT rate approved in order dated 27.4.2020 in Petition No. 274/TT/2019 is considered are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations and the same are as follows:

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

70. Accordingly, RoE allowed in respect of the transmission assets is as follows:



Asset-I

(₹ in lakh)

Particulars	2016-17 (Pro-rata 8 days)	2017-18	2018-19
Return on Equity			
Opening Equity (A)	165731.30	166582.26	176136.97
Additions (B)	850.97	9554.71	5136.77
Closing Equity (C) = A+B	166582.26	176136.97	181273.74
Average Equity (D) = (A+C)/2	166156.78	171359.62	178705.35
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
MAT Rate for respective year (in %)	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.705	19.705	19.758
Return on Equity	717.62	33766.41	35308.60

Asset-II

(₹ in lakh)

Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Return on Equity			
Opening Equity (A)	2796.39	2800.64	3075.75
Additions (B)	4.25	275.11	243.97
Closing Equity (C) = A+B	2800.64	3075.75	3319.72
Average Equity (D) = (A+C)/2	2798.52	2938.20	3197.73
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
MAT Rate for respective year (in %)	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.705	19.705	19.758
Return on Equity	10.58	578.97	631.81

Asset-III

(₹ in lakh)

Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Return on Equity			
Opening Equity (A)	1765.83	1768.62	1906.56
Additions (B)	2.79	137.93	0.09
Closing Equity (C) = A+B	1768.62	1906.56	1906.64
Average Equity (D) = (A+C)/2	1767.23	1837.59	1906.60
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500



Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
MAT Rate for respective year (in %)	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.705	19.705	19.758
Return on Equity	6.68	362.10	376.71

Asset-IV

(₹ in lakh)

Particulars	2017-18 (Pro-rata 197 days)	2018-19
Return on Equity		
Opening Equity (A)	24390.72	26966.12
Additions (B)	2575.40	1311.32
Closing Equity (C) = A+B	26966.12	28277.44
Average Equity (D) = (A+C)/2	25678.42	27621.78
Return on Equity (Base Rate) (in %)	15.500	15.500
MAT Rate for respective year (in %)	21.342	21.549
Rate of Return on Equity (in %)	19.705	19.758
Return on Equity	2730.98	5457.51

Asset-V

(₹ in lakh)

Particulars	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
Return on Equity				
Opening Equity (A)	28541.54	29925.80	31400.18	32397.75
Additions (B)	1384.25	1474.38	997.57	6.94
Closing Equity (C) = A+B	29925.80	31400.18	32397.75	32404.69
Average Equity (D) = (A+C)/2	29233.67	30662.99	31898.96	32401.22
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	21.342	21.342	21.342	21.549
Rate of Return on Equity (%)	19.705	19.705	19.705	19.758
Return on Equity	1888.69	6042.14	6285.69	6401.83

71. The details of RoE allowed in earlier orders dated 22.2.2018, 6.11.2018 and 25.5.2016 in Petition Nos. 13/TT/2017, 205/TT/2017 and 256/TT/2015 in respect of Asset-I, Asset-IV and Asset-V respectively, RoE claimed in respect of all the



transmission assets in the instant petition and trued up in the instant order in respect of transmission assets is as follows:

Asset-I

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 8 days)	2017-18	2018-19
Approved <i>vide</i> order dated 22.2.2018 in Petition No. 13/TT/2017	712.63	34860.42	37266.13
Claimed by Petitioner in the instant petition	717.66	33768.49	35309.15
Allowed after true-up in this order	717.62	33766.41	35308.60

Asset-II

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Claimed by Petitioner in the instant petition	10.58	579.02	631.84
Allowed after true-up in this order	10.58	578.97	631.81

Asset-III

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Claimed by Petitioner in the instant petition	6.68	362.11	376.70
Allowed after true-up in this order	6.68	362.10	376.71

Asset-IV

Particulars	(₹ in lakh)	
	2017-18 (Pro-rata 197 days)	2018-19
Approved <i>vide</i> order dated 6.11.2018 in Petition No. 205/TT/2017	2706.15	5565.09
Claimed by Petitioner in the instant petition	2731.12	5457.51
Allowed after true-up in this order	2730.98	5457.51



Asset-V

Particulars	(₹ in lakh)			
	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 25.5.2016 in Petition No. 256/TT/2015	1677.50	5116.39	5116.39	5116.39
Claimed by Petitioner in the instant petition	1892.44	6054.66	6299.27	6415.13
Allowed after true-up in this order	1888.69	6042.14	6285.69	6401.83

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

72. The O&M Expenses claimed by the Petitioner in respect of the transmission assets for the 2014-19 period are as follows:

Asset-I

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 8 days)	2017-18	2018-19
Transmission Line Champa-Kurukshetra Transmission line (6 Sub-conductors) (1288.056 km)			
HVDC Terminal Kurukshetra: Champa – Pole I			
Total O&M Expenses Claimed	43.97	2124.43	2250.92

Asset-II

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 7 days)	2017-18	2018-19
400 kV GIS bays: Kurukshetra: ICT I Bay (400/220 kV) Kurukshetra: ICT II Bay (400/220 kV)			
220 kV bays: Kurukshetra: ICT I Bay (400/220 kV) Kurukshetra: ICT II Bay (400/220 kV)			
Total O&M Expenses Claimed	3.84	206.78	213.66

Asset-III

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 7 days)	2017-18	2018-19
220 kV bays: 8 Numbers Kurukshetra:220 kV Line Bays at Kurukshetra			
Total O&M Expenses Claimed	6.88	372.40	384.80



Asset-IV

(₹ in lakh)

Particulars	2017-18 (Pro-rata 197 days)	2018-19
HVDC Terminal		
Kurukshetra: Champa – Pole II		
Total O&M Expenses Claimed	604.36	1212.75

Asset-V

(₹ in lakh)

Particulars	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
7 Numbers of 400 kV GIS bays:				
Kurukshetra: (i) 125 MVAR Bus Reactor Bay, (ii) Abdullapur line bays-I&II, (iii) Jalandhar line bay, (iv) Nakodar line bay and (v) Sonipat line bays-I&II				
4 Numbers of 400 kV bays:				
Jalandhar: Kurukshetra & Nakodar line bays				
Nakodar (PSTCL): Jalandhar & Kurukshetra line bays				
Transmission Lines:				
265.5 km Double Circuit Kurukshetra (Nr)-Jalandhar 400 kV (QUAD)				
16.00 km Double Circuit LILO Of Abdullapur-Sonepat (triple sub-conductors)				
Total O&M Expenses Claimed	303.26	955.51	987.30	1020.11

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

Element	Norms for 2014-15	Norms for 2015-16	Norms for 2016-17	Norms for 2017-18	Norms for 2018-19
Single Circuit (Twin & Triple Conductor)	₹0.404 lakh/ km	₹0.418 lakh/ km	₹0.432 lakh/ km	₹0.446 lakh/ km	₹0.461 lakh/ km
Single Circuit (Bundled Conductor with six or more sub-conductors)	₹0.707 lakh/ km	₹0.731 lakh/ km	₹0.755 lakh/ km	₹0.780 lakh/ km	₹0.806 lakh/ km
Double Circuit (Bundled conductor with four or more sub-conductors)	₹1.062 lakh/ km	₹1.097 lakh/ km	₹1.133 lakh/ km	₹1.171 lakh/ km	₹1.210 lakh/ km
Double Circuit (Twin & Triple Conductor)	₹0.707 lakh/ km	₹0.731 lakh/ km	₹0.755 lakh/ km	₹0.780 lakh/ km	₹0.806 lakh/ km
Double Circuit (Single Conductor)	₹0.303 lakh/ km	₹0.313 lakh/ km	₹0.324 lakh/ km	₹0.334 lakh/ km	₹0.346 lakh/ km
220 kV Sub-station	₹42.21 lakh/bay	₹43.61 lakh/bay	₹45.06 lakh/ bay	₹46.55 lakh/ bay	₹48.10 lakh/ bay
400 kV Sub-station	₹60.30 lakh/bay	₹62.30 lakh/bay	₹64.37 lakh/ bay	₹66.51 lakh/ bay	₹68.71 lakh/ bay



Element	Norms for 2014-15	Norms for 2015-16	Norms for 2016-17	Norms for 2017-18	Norms for 2018-19
Talcher-Kolar HVDC Bi-Pole Scheme (2000 MW)	₹1173 lakh	₹1271 lakh	₹1378 lakh	₹1493 lakh	₹1617 lakh

74. We have considered the submission of the Petitioner. The O&M Expenses allowed for the transmission assets as per norms specified in the 2014 Tariff Regulations are as follows:

Asset-I

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 8 days)	2017-18	2018-19
HVDC Terminal:			
Pole-I (1500 MW) of the ±800 kV, 3000 MW Champa Pooling Station & Kurukshetra HVDC Terminals			
Units (Number)	1	1	1
Normative rate (₹ lakh/ 2000 MW)	1378	1493	1617
Normative rate computed as per Regulations (₹ lakh/1500 MW)	1033.50	1119.75	1212.75
Sub-total: O&M Expenses for Pole-I (₹ in lakh)	22.65	1119.75	1212.75
HVDC Line:			
±800 kV, 3000 MW Champa Pooling station - Kurukshetra HVDC Transmission Line (1288.056 km)			
Single Circuit (Bundled Conductor with six or more sub-conductors)	1288.056	1288.056	1288.056
Norms (₹ lakh/km)	0.755	0.780	0.806
Sub-total: O&M Expenses for HVDC line (₹ in lakh)	21.32	1004.68	1038.17
Total O&M Expenses allowed (₹ in lakh)	43.97	2124.43	2250.92

Asset-II

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Sub-station Bays:			
400 kV GIS: Kurukshetra: ICT-1&2 at Kurukshetra HVDC Station			
220 kV: Kurukshetra: ICT-1&2 at Kurukshetra HVDC Station			
220 kV (numbers)	2	2	2
Norms (₹ lakh/Bay)	45.06	46.55	48.10
Sub-total 220 kV (₹ lakh)	1.728	93.100	96.200
400 kV GIS (numbers)	2	2	2
Norms (₹ lakh/Bay)	55.02	56.84	58.73
Sub-total 400 kV GIS (₹ lakh)	2.110	113.68	117.46



Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Total O&M Expenses allowed (₹ in lakh)	3.84	206.78	213.66

Asset-III

(₹ in lakh)			
Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Sub-station Bays:			
220 kV: line bays at Kurukshetra HVDC Station			
220 kV (numbers)	8	8	8
Norms (₹ lakh/Bay)	45.06	46.55	48.10
Total O&M Expenses allowed (₹ in lakh)	6.91	372.40	384.80

Asset-IV

(₹ in lakh)		
Particulars	2017-18 (Pro-rata 197 days)	2018-19
HVDC Terminal:		
Pole-II (1500 MW) of the ±800 kV, 3000 MW Champa Pooling Station & Kurukshetra HVDC Terminals		
Units (Number)	1	1
Normative rate (₹ lakh/ 2000 MW)	1493	1617
Normative rate computed as per Regulations (₹ lakh/1500 MW)	1119.75	1212.75
Total O&M Expenses allowed (₹ in lakh)	604.36	1212.75

Asset-V

(₹ in lakh)				
Particulars	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
Sub-station Bays:				
400 kV GIS: (i) 1x125 MVAR Bus Reactor Bay and (ii) 6x400 kV GIS line bays at Kurukshetra HVDC Station				
400 kV: (i) 2x400 kV line bays at Jalandhar and (ii) 2x400 kV line bays at Nakodar (PSPTCL)				
400 kV (numbers)	4	4	4	4
Norms (₹ lakh/km)	62.30	64.37	66.51	68.71
Sub-total 400 kV (₹ lakh)	81.93	257.48	266.04	274.84
400 kV GIS (numbers)	7	7	7	7
Norms (₹ lakh/km)	53.25	55.02	56.84	58.73
Sub-total 400 kV GIS (₹ lakh)	122.55	385.14	397.88	411.11
Sub-total O&M Expenses Sub-station (₹ lakh)	204.48	642.62	663.92	685.95



Particulars	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
Transmission Lines:				
(i) Kurukshetra-Jalandhar 400 kV (Quad) D/C line (265.50 km) and (ii) LILO of Abdullapur-Sonepat 400 kV (Triple) D/C line (16.00 km)				
Double Circuit (Bundled conductor with four or more sub-conductors)	265.50	265.50	265.50	265.50
Norms (₹ lakh/km)	1.097	1.133	1.171	1.210
Double Circuit (Twin & Triple Conductor)	16.00	16.00	16.00	16.00
Norms (₹ lakh/km)	0.731	0.755	0.78	0.806
Sub-total: O&M Expenses for Transmission line (₹ in lakh)	99.60	312.89	323.38	334.16
Total O&M Expenses allowed (₹ in lakh)	303.25	955.51	987.30	1020.10

75. The details of O&M allowed in earlier orders dated 22.2.2018, 6.11.2018 and 25.5.2016 in Petition Nos. 13/TT/2017, 205/TT/2017 and 256/TT/2015 in respect of Asset-I, Asset-IV and Asset-V, respectively, O&M claimed in respect of the transmission assets in the instant petition and true up in the instant order are as follows:

Asset-I

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 8 days)	2017-18	2018-19
Approved vide order dated 22.2.2018 in Petition No. 13/TT/2017	43.14	2124.43	2250.92
Claimed by Petitioner in the instant petition	43.97	2124.43	2250.92
Allowed after true-up in this order	43.97	2124.43	2250.92

Asset-II

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Claimed by Petitioner in the instant petition	3.84	206.78	213.66
Allowed after true-up in this order	3.84	206.78	213.66

Asset-III

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 7 days)	2017-18	2018-19



Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Claimed by Petitioner in the instant petition	6.88	372.40	384.80
Allowed after true-up in this order	6.91	372.40	384.80

Asset-IV

(₹ in lakh)

Particulars	2017-18 (Pro-rata 197 days)	2018-19
Approved <i>vide</i> order dated 6.11.2018 in Petition No. 205/TT/2017	604.36	1212.75
Claimed by Petitioner in the instant petition	604.36	1212.75
Allowed after true-up in this order	604.36	1212.75

Asset-V

(₹ in lakh)

Particulars	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 25.5.2016 in Petition No. 256/TT/2015	303.25	955.51	987.30	1020.10
Claimed by Petitioner in the instant petition	303.26	955.51	987.30	1020.11
Allowed after true-up in this order	303.25	955.51	987.30	1020.10

Interest on Working Capital (“IWC”)

76. IWC has been worked out for the transmission assets as per the methodology provided in the Regulation 28 of the 2014 Tariff Regulations as follows:

Asset-I

(₹ in lakh)

Particulars	2016-17 (Pro-rata 8 days)	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	167.17	177.04	187.58
Working Capital for Maintenance Spares (15% of O&M Expenses)	300.90	318.67	337.64
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	14845.63	15116.08	15689.94
Total Working Capital	15313.70	15611.78	16215.15
Rate of Interest (in %)	12.80	12.80	12.80
Interest on Working Capital	42.96	1998.31	2075.54



Asset-II

(₹ in lakh)

Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	16.68	17.23	17.81
Working Capital for Maintenance Spares (15% of O&M Expenses)	30.02	31.02	32.05
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	231.19	243.41	273.81
Total Working Capital	277.89	291.66	323.67
Rate of Interest (in %)	12.80	12.80	12.80
Interest on Working Capital	0.68	37.33	41.43

Asset-III

(₹ in lakh)

Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	30.04	31.03	32.07
Working Capital for Maintenance Spares (15% of O&M Expenses)	54.07	55.86	57.72
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	200.88	208.11	219.53
Total Working Capital	284.99	295.01	309.31
Rate of Interest (in %)	12.80	12.80	12.80
Interest on Working Capital	0.70	37.76	39.59

Asset-IV

(₹ in lakh)

Particulars	2017-18 (Pro-rata 197 days)	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	93.31	101.06
Working Capital for Maintenance Spares (15% of O&M Expenses)	167.96	181.91
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	2167.90	2395.03
Total Working Capital	2429.18	2678.00



Particulars	2017-18 (Pro-rata 197 days)	2018-19
Rate of Interest (in %)	12.60	12.60
Interest on Working Capital	165.20	337.43

Asset-V

Particulars	(₹ in lakh)			
	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
Interest on Working Capital				
Working Capital for O&M Expenses (O&M Expenses for one month)	77.07	79.63	82.28	85.01
Working Capital for Maintenance Spares (15% of O&M Expenses)	138.73	143.33	148.10	153.02
Working Capital for Receivables (Equivalent to two months of annual fixed cost)	2575.46	2711.73	2800.84	2852.84
Total Working Capital	2791.27	2934.69	3031.21	3090.86
Rate of Interest (in %)	13.50	13.50	13.50	13.50
Interest on Working Capital	123.55	396.18	409.21	417.27

77. The details of IWC allowed in earlier orders dated 22.2.2018, 6.11.2018 and 25.5.2016 in Petition Nos. 13/TT/2017, 205/TT/2017 and 256/TT/2015 in respect of Asset-I, Asset-IV and Asset-V, respectively, IWC claimed in respect of the transmission assets in the instant petition and trued up in the instant order are as follows:

Asset-I

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 8 days)	2017-18	2018-19
Approved <i>vide</i> order dated 22.2.2018 in Petition No. 13/TT/2017	41.72	2024.07	2124.02
Claimed by Petitioner in the instant petition	42.96	1998.36	2075.57
Allowed after true-up in this order	42.96	1998.31	2075.54

Asset-II

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata 7 days)	2017-18	2018-19



Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Claimed by Petitioner in the instant petition	0.68	37.34	41.43
Allowed after true-up in this order	0.68	37.33	41.43

Asset-III

(₹ in lakh)

Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Claimed by Petitioner in the instant petition	0.70	37.76	39.59
Allowed after true-up in this order	0.70	37.76	39.59

Asset-IV

(₹ in lakh)

Particulars	2017-18 (Pro-rata 197 days)	2018-19
Approved <i>vide</i> order dated 6.11.2018 in Petition No. 205/TT/2017	164.89	335.03
Claimed by Petitioner in the instant petition	165.20	337.43
Allowed after true-up in this order	165.20	337.43

Asset-V

(₹ in lakh)

Particulars	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 25.5.2016 in Petition No. 256/TT/2015	112.87	343.32	339.43	335.08
Claimed by Petitioner in the instant petition	123.76	396.89	409.97	418.03
Allowed after true-up in this order	123.55	396.18	409.21	417.27

Approved Annual Fixed Charges for 2014-19 Period

78. The trued up Annual Fixed Charges (AFC) allowed for the transmission assets for 2014-19 period is as follows:

Asset-I

(₹ in lakh)

Particulars	2016-17 (Pro-rata 8 days)	2017-18	2018-19
Depreciation	631.37	29701.08	30930.84
Interest on Loan	516.39	23106.23	23573.72



Particulars	2016-17 (Pro-rata 8 days)	2017-18	2018-19
Return on Equity	717.62	33766.41	35308.60
O&M Expenses	43.97	2124.43	2250.92
Interest on Working Capital	42.96	1998.31	2075.54
Total	1952.31	90696.46	94139.62

Asset-II

(₹ in lakh)

Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Depreciation	7.23	397.95	435.49
Interest on Loan	4.27	239.44	320.49
Return on Equity	10.58	578.97	631.81
O&M Expenses	3.84	206.78	213.66
Interest on Working Capital	0.68	37.33	41.43
Total	26.60	1460.47	1642.88

Asset-III

(₹ in lakh)

Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Depreciation	6.17	332.27	342.51
Interest on Loan	2.65	144.16	173.55
Return on Equity	6.68	362.10	376.71
O&M Expenses	6.91	372.40	384.80
Interest on Working Capital	0.70	37.76	39.59
Total	23.11	1248.69	1317.16

Asset-IV

(₹ in lakh)

Particulars	2017-18 (Pro-rata 197 days)	2018-19
Depreciation	2396.08	4771.84
Interest on Loan	1123.83	2590.63
Return on Equity	2730.98	5457.51
O&M Expenses	604.36	1212.75
Interest on Working Capital	165.20	337.43
Total	7020.45	14370.16

Combined Asset-I and Asset-IV

(₹ in lakh)

Particulars	2016-17	2017-18	2018-19
Depreciation	631.37	32097.17	35702.68



Interest on Loan	516.39	24230.06	26164.35
Return on Equity	717.62	36497.39	40766.11
O&M Expenses	43.97	2728.79	3463.67
Interest on Working Capital	42.96	2163.51	2412.97
Total	1952.31	97716.92	108509.78

Asset-V

(₹ in lakh)

Particulars	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
Depreciation	1650.88	5280.71	5488.38	5571.60
Interest on Loan	1100.11	3595.85	3634.44	3706.21
Return on Equity	1888.69	6042.14	6285.69	6401.83
O&M Expenses	303.25	955.51	987.30	1020.10
Interest on Working Capital	123.55	396.18	409.21	417.27
Total	5066.48	16270.39	16805.02	17117.01

79. The details of Annual Transmission Charges allowed in earlier orders dated 22.2.2018, 6.11.2018 and 25.5.2016 in Petition Nos. 13/TT/2017, 205/TT/2017 and 256/TT/2015 in respect of Asset-I, Asset-IV and Asset-V respectively, Annual Transmission Charges claimed in respect of the transmission assets in the instant petition and trued up in the instant order are as follows:

Asset-I

(₹ in lakh)

Particulars	2016-17 (Pro-rata 8 days)	2017-18	2018-19
Approved <i>vide</i> order dated 22.2.2018 in Petition No. 13/TT/2017	1895.44	91904.08	96411.95
Claimed by Petitioner in the instant petition	1952.35	90698.97	94141.16
Allowed after true-up in this order	1952.31	90696.46	94139.62



Asset-II

(₹ in lakh)

Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Claimed by Petitioner in the instant petition	26.60	1460.56	1642.96
Allowed after true-up in this order	26.60	1460.47	1642.88

Asset-III

(₹ in lakh)

Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
Claimed by Petitioner in the instant petition	23.07	1248.64	1317.15
Allowed after true-up in this order	23.11	1248.69	1317.16

Asset-IV

(₹ in lakh)

Particulars	2017-18 (Pro-rata 197 days)	2018-19
Approved <i>vide</i> order dated 6.11.2018 in Petition No. 205/TT/2017	6883.25	14006.59
Claimed by Petitioner in the instant petition	7020.59	14370.17
Allowed after true-up in this order	7020.45	14370.16

Combined Asset-I and Asset-IV*

(₹ in lakh)

Particulars	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 22.2.2018 in Petition No. 13/TT/2017 and order dated 6.11.2018 in Petition No. 205/TT/2017	1895.44	105910.67	96411.95
Claimed by Petitioner in the instant petition	1952.35	105069.14	94141.16
Allowed after true-up in this order	1952.28	105066.01	94139.63

**Since, Asset-I and Asset-IV were put into commercial operation in different years of the same tariff period, the calculations for both the assets have been done separately and the Annual Transmission Charges have been allowed after combining Asset-I and Asset-IV as per the Commission's order dated 31.7.2019 in Review Petition No. 20/RP/2018 and 3/RP/2018.*



Asset-V

(₹ in lakh)

Particulars	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
Approved vide order dated 25.5.2016 in Petition No. 256/TT/2015	4591.98	13920.74	13703.51	13464.29
Claimed by Petitioner in the instant petition	5075.81	16301.68	16838.78	17150.87
Allowed after true-up in this order	5066.48	16270.39	16805.02	17117.01

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

80. Regulation 8(1) (i) of the 2019 Tariff Regulations provides as follows:

“8. Tariff determination: (1) *Tariff in respect of a generating station may be determined for the whole of the generating station or unit thereof, and tariff in respect of a transmission system may be determined for the whole of the transmission system or element thereof or associated communication system:*

Provided that:

(i) *In case of commercial operation of all the units of a generating station or all elements of a transmission system prior to 1.4.2019, the generating company or the transmission licensee, as the case may be, shall file consolidated petition in respect of the entire generating station or transmission system for the purpose of determination of tariff for the period 1.4.2019 to 31.3.2024.”*

81. The transmission assets have been put into commercial operation prior to 1.4.2019 and consists of entire scope of the transmission project. Therefore, as per Regulation 8(1)(i) of the 2019 Tariff Regulations, the Petitioner is required to file consolidated petition in respect of the entire transmission system for the purpose of determination of tariff for the period 1.4.2019 to 31.3.2024. However, it is observed that the Petitioner has submitted the tariff forms without combining all the assets into a single asset. In this connection, the Commission vide Technical Validation letter dated 14.7.2021 directed the Petitioner to clarify with reasons for not claiming the combined AFC in 2019-24 period. In response, the Petitioner vide affidavit dated 30.7.2021 has submitted that Asset-I and Asset-IV are HVDC element and the Commission has granted transmission tariff for Asset-I vide order dated 22.2.2018 in



Petition No. 13/TT/2017 and for Asset-IV vide order dated 6.11.2018 in Petition No. 205/TT/2017 and decided the sharing of transmission tariff vide order dated 31.7.2019 in Review Petition Nos. 20/RP/2018 and 3/RP/2018 as per Regulation 11(4)(3)(i) of the 2010 Sharing Regulations. The Petitioner has further submitted that in case of Asset-II and Asset-III, downstream network in the scope of HVPNL was involved and, accordingly, transmission tariff is not combined. Further, Asset-V being an AC component, the Petitioner has claimed separate transmission tariff for the same. Therefore, transmission tariff has been calculated separately for the transmission assets in the 2019-24 tariff period and the same may be allowed as claimed.

82. The Petitioner has claimed the following transmission charges in respect of the transmission assets for the 2019-24 tariff period:

Combined Asset-I and Asset-IV

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	36863.16	37457.08	37483.48	37483.48	37483.48
Interest on Loan	25441.57	23463.33	21089.87	18706.05	16307.03
Return on Equity	39999.65	40669.10	40697.27	40697.27	40697.27
O&M Expenses	4265.81	4415.06	4569.89	4730.29	4895.98
Interest on Working Capital	1724.39	1724.58	1696.36	1667.41	1634.30
Total	108294.58	107729.15	105536.87	103284.50	101018.06

Asset-II

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	456.50	459.58	459.58	459.58	459.58
Interest on Loan	344.86	325.22	302.19	278.91	254.93
Return on Equity	628.73	633.93	633.93	633.93	633.93
O&M Expenses	434.54	450.22	466.00	482.86	498.86
Interest on Working Capital	40.44	41.03	41.37	41.76	42.02
Total	1905.07	1909.98	1903.07	1897.04	1889.32



Asset-III

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	368.33	388.04	388.04	388.04	388.04
Interest on Loan	178.49	171.86	153.23	134.66	116.16
Return on Equity	378.18	398.27	398.27	398.27	398.27
O&M Expenses	202.86	209.18	215.74	222.46	229.50
Interest on Working Capital	22.75	23.57	23.58	23.59	23.57
Total	1150.61	1190.92	1178.86	1167.02	1155.54

Asset-V

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	5583.95	5583.95	5583.95	5583.95	5583.95
Interest on Loan	3458.26	3115.07	2771.80	2325.90	1855.75
Return on Equity	6098.89	6098.89	6098.89	6098.89	6098.89
O&M Expenses	651.26	674.01	697.69	722.21	747.46
Interest on Working Capital	256.08	252.56	248.41	242.76	236.17
Total	16048.44	15724.48	15400.74	14973.71	14522.22

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

Combined Asset-I and Asset-IV

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	355.48	367.92	380.82	394.19	408.00
Maintenance Spares	639.87	662.26	685.48	709.54	734.40
Receivables	13314.91	13281.68	13011.39	12733.71	12420.25
Total Working Capital	14310.26	14311.86	14077.69	13837.44	13562.65
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	1724.39	1724.58	1696.36	1667.41	1634.30

Asset-II

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	36.21	37.52	38.83	40.24	41.57
Maintenance Spares	65.18	67.53	69.90	72.43	74.83
Receivables	234.23	235.48	234.63	233.88	232.29
Total Working Capital	335.62	340.53	343.36	346.55	348.69
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	40.44	41.03	41.37	41.76	42.02

Asset-III

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	16.91	17.43	17.98	18.54	19.13
Maintenance Spares	30.43	31.38	32.36	33.37	34.43
Receivables	141.47	146.83	145.34	143.88	142.07
Total Working Capital	188.81	195.64	195.68	195.79	195.63
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	22.75	23.57	23.58	23.59	23.57

Asset-V

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	54.27	56.17	58.14	60.18	62.29
Maintenance Spares	97.69	101.10	104.65	108.33	112.12
Receivables	1973.17	1938.63	1898.72	1846.07	1785.52
Total Working Capital	2125.13	2095.90	2061.51	2014.58	1959.93
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	256.08	252.56	248.41	242.76	236.17

Effective Date of Commercial Operation (“E-COD”)

84. The Petitioner has claimed the E-COD of Combined Asset-I and Asset-IV as 17.4.2017. Based on the trued-up capital cost and COD of the individual assets, E-COD has been worked out as follows:

Assets	Admitted capital cost as on 31.3.2019 (₹ in lakh)	Actual COD	No. of days from last COD	Weight of the cost (in %)	Weighted days	E-COD (latest COD – total weighted days)
Asset-I	604245.79	24.3.2017	176	86.51	152.25	16.4.2017
Asset-IV	94258.11	16.9.2017	0	13.49	0.00	
Total	698503.90			100.00	152.25	

85. E-COD is used to determine the lapsed life of the combined assets, which works out as 1 (one) year as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD) for the Combined Asset-I and Asset-IV.



Weighted Average Life (“WAL”)

86. The life as defined in Regulation 33 of the 2019 Tariff Regulations has been considered for determination of WAL. The combined assets may have multiple elements such as land, building, transmission line, Sub-station and PLCC and each element may have different span of life. Therefore, the concept of WAL has been used as the useful life of the combined assets.

87. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as specified in the 2019 Tariff Regulations. The element-wise life as defined in the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, the WAL of all the Combined Asset-I and Asset-IV put into commercial operation during 2014-19 period has been worked out as 31 years as follows:

Admitted Capital Cost (Excluding land) as on 31.3.2019				
Particulars	Life in years (1)	Combined Asset-I & Asset-IV Cost (₹ in lakh) (2)	Weighted cost (3) = (1) x (2) (₹ in lakh) (3)	WAL of Asset (in years) (4)=(3)/(2)
Building & Civil Works	25	29992.22	749805.44	31.237 years rounded off to 31 years
Transmission Line	35	437146.95	15300143.39	
Sub-Station	25	227858.87	5696471.67	
PLCC	15	1188.44	17826.66	
IT Equipment including software	6.67	705.46	4703.06	
Total		696891.94	21768950.22	

88. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed, E-COD of the Combined



Asset-I and Asset-IV is 16.4.2017 and the lapsed life of the Combined Asset-I and Asset-IV works out as one (1) year as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 30 years.

Capital Cost

89. 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 follows Regulation 7 of these regulations;*
- (h) *Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) *Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) *Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) *Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*



- (n) *Expenditure on account of change in law and force majeure events; and*
- (o) *Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms follows Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued follows the PAT scheme with the beneficiaries.*
- (3) *The Capital cost of an existing project shall include the following:*
- (a) *Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
- (b) *Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
- (c) *Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;*
- (d) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (e) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto 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 follows Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued follows the PAT scheme with the beneficiaries.*
- (4) *The capital cost in case of existing or new hydro generating station shall also include:*
- (a) *cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and*
- (b) *cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.*
- (5) *The following shall be excluded from the capital cost of the existing and new projects:*
- (a) *The assets forming part of the project, but not in use, as declared in the tariff petition;*
- (b) *De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:*
- Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be de-capitalised only after its redeployment;*
- Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.*
- (c) *In case of hydro generating stations, any expenditure incurred or*



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

90. The trued-up capital cost as on 31.3.2019 for the Combined Asset-I and Asset-IV has been considered as capital cost as on 31.3.2019 for the Combined Asset-I and Asset-IV. The capital cost has been dealt in line with Regulation 19(3) of the 2019 Tariff Regulations. The element-wise capital cost (i.e. land, building, transmission line, sub-station and PLCC) as admitted by the Commission as on 31.3.2019 for the Combined Asset-I and Asset-IV has been considered as capital cost for the Combined Asset-I and Asset-IV as on 31.3.2019 as follows:

(₹ in lakh)			
Particulars	Asset-I	Asset-IV	Total capital cost as on 31.3.2019
Land – Freehold	1611.96	0.00	1611.96
Building Civil Works & Colony	25102.61	4889.61	29992.22
Transmission Line	437146.95	0.00	437146.95
Sub-station	138490.37	89368.50	227858.87
PLCC	1188.44	0.00	1188.44
IT Equipment (Including Software)	705.46	0.00	705.46
Total	604245.79	94258.11	698503.90

91. The trued-up capital cost of ₹698503.90 lakh for the Combined Asset-I and Asset-IV, ₹11065.72 lakh for Asset-II, ₹6355.47 lakh for Asset-III and ₹108015.84 lakh for Asset-V is considered as admitted capital cost as on 31.3.2019 for working out tariff for 2019- 24 tariff period.

Initial Spares

92. As stated above in this order, Initial Spares are allowed for 2014-19 period on the basis of the capital cost of individual assets.



93. We have observed that there was discharge of ₹3600 lakh of Initial Spares with respect to Asset-IV in 2020-21, but the Petitioner has claimed only ₹1000 lakh as ACE in 2020-21 on account of balance and retention payment. Due to the discrepancy observed, the excess Initial Spares of ₹67.61 lakh from the capital cost as on 1.4.2019 for the Combined Asset-I and Asset-IV has not been allowed. The Petitioner is directed to submit the details of actual ACE along with Initial Spares discharged in 2019-24 tariff period at the time of the truing up of the tariff of the 2019-24 tariff period for further consideration of the Commission and the same will be reviewed at the time of truing-up.

94. Accordingly, the capital cost of the transmission assets as on 1.4.2019 considered for the computation of tariff for the 2019-24 tariff period is as follows:

(₹ in lakh)

Assets	RCE apportioned approved cost	Capital cost as on 31.3.2019	Initial Spares disallowed as on 1.4.2019	Capital cost as on 1.4.2019
Combined Asset-I and Asset-IV	757899.00	698503.90	67.61	698436.30
Asset-II	11557.00	11065.72	0.00	11065.72
Asset-III	7389.00	6355.47	0.00	6355.47
Asset-V	152348.00	108015.84	0.00	108015.84

Additional Capital Expenditure (“ACE”)

95. 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.

25. Additional Capitalisation within the original scope and after the cut-off date:

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

- (a) 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;
- (b) Change in law or compliance of any existing law;
- (c) Deferred works relating to ash pond or ash handling system in the original scope of work;
- (d) Liability for works executed prior to the cut-off date;
- (e) Force Majeure events;
- (f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and
- (g) Raising of ash dyke as a part of ash disposal system.

(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

- (a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;
- (b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;
- (c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and
- (d) The replacement of such asset or equipment has otherwise been allowed by the Commission."

96. The Petitioner has claimed projected ACE during 2019-24 tariff period on account of liability for works executed prior to cut-off date. The details of the projected ACE in respect of transmission assets are as follows:



(₹ in lakh)

Assets	Projected ACE (as per Auditor's Certificate)	
	2019-20	2020-21
Combined Asset-I and Asset-IV	22762.04	1000.00
Asset-II	184.42	0.00
Asset-III	712.86	0.00
Asset-V	0.00	0.00
Total	23659.32	1000.00

97. The Petitioner *vide* affidavit dated 30.7.2021 has submitted the details of ACE incurred as follows:

Asset-I

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Deferred work
2019-20	823.71	Larsen & Toubro Limited, KEC International Limited., Eritech Limited, JSK Industries, M/s. Zhengzhou Xianghe Group, Gupta Power, KPTL, EMCO Limited & Crop/Tree Compensation, etc.	Transmission line	Balance and Retention payment as per Regulation 24(1)(a) of the 2019 Tariff Regulations
	68.22	Larsen & Toubro Limited, KEC International Limited, Eritech Limited, JSK Industries Zhengzhou Xianghe Group, Gupta Power, KPTL, EMCO Limited, Gammon India Limited, BHEL & Crop/ Tree Compensation, etc.	Transmission line	Deferred work liability as per Regulation 24(1)(b) of the 2019 Tariff Regulations
	562.12	Radha Enterprises & GE T&D India Limited.	Civil & Building Work	Balance and Retention payment as per Regulation 24(1)(a) of the 2019 Tariff Regulations
	2880.25	GE T&D India Limited.	Civil & Building Work	Deferred work liability as per Regulation 24(1)(b) of the 2019 Tariff Regulations
	12238.27	GE T&D India Limited.	Sub-station	Balance and Retention payment as per Regulation 24(1)(a) of the 2019 Tariff Regulations
	2019.13	GE T&D India Limited.	Sub-station	Deferred work liability as per Regulation 24(1)(b) of the 2019 Tariff Regulations



Asset-II

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Deferred work
2019-20	184.42	GE T&D India Limited.	Sub-station	Balance and Retention payment as per Regulation 24(1)(a) of the 2019 Tariff Regulations

Asset-III

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Deferred work
2019-20	712.86	GE T&D India Limited	Sub-station	Balance and Retention payment as per Regulation 24(1)(a) of the 2019 Tariff Regulations

Asset-IV

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Deferred work
2019-20	4148.81	GE T&D India Limited	Sub-station	Balance and Retention payment as per Regulation 24(1)(a) of the 2019 Tariff Regulations
	21.53	GE T&D India Limited	Sub-station	Deferred work liability as per Regulation 24(1)(b) of the 2019 Tariff Regulations
2020-21	1000.00	GE T&D India Limited	Sub-station	Balance and Retention payment as per Regulation 24(1)(a) of the 2019 Tariff Regulations

98. MPPMCL has submitted that the Petitioner has proposed ACE of ₹23659.32 lakh in 2019-20 and ₹1000 lakh during 2020-21. MPPMCL has further submitted that the Petitioner has not supported its contention with proper documents and details and has also not justified the same, therefore, ACE may be deferred till true up when it comes as actual.

99. In response, the Petitioner has submitted that ACE claimed during 2019-20 pertains to Asset-I, Asset-II and Asset-III. The cut-off date of these assets is 31.3.2020. The Petitioner has claimed ACE on account of liability of balance and retention payments and for works deferred for execution within cut-off date and also



for liability of payment beyond cut-off date for works executed within cut-off date. The admissibility of ACE incurred before cut-off date is to be dealt in accordance with Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations. Further, ACE in case of Asset-IV during year 2020-21 is on account of balance and retention payments due to undischarged liability for works executed before cut-off date and ACE incurred beyond cut-off date to be dealt in accordance with Regulation 25(1)(d) of the 2019 Tariff Regulations. The package wise vendor wise details of ACE with the liability flow statement have been submitted vide affidavit dated 30.7.2021. The Petitioner has prayed to consider the submissions made in the rejoinder and affidavit dated 30.7.2021 and allow ACE as claimed in the instant petition.

100. We have considered the submissions of the Petitioner and MPPMCL. The ACE claimed by the Petitioner has been allowed as per Regulation 24(1)(a), Regulation 24(1)(b) and Regulation 25(1)(d) of the 2019 Tariff Regulations. ACE allowed are as follows:

Assets	Regulation	ACE (As per Auditor's Certificate)	
		2019-20	2020-21
Combined Asset-I and Asset-IV	Regulation 24(1)(a), 24(1)(b) and 25(1)(d) of the 2019 Tariff Regulations	22762.04	1000.00
Asset-II	Regulation 24(1)(a) & 24(1)(b) of the 2019 Tariff Regulations	184.42	0.00
Asset-III		712.86	0.00
Asset-V	-	0.00	0.00

Capital Cost considered for 2019-24 tariff period

101. Accordingly, the capital cost in respect of the transmission asset considered for 2019-24 tariff period subject to truing-up is as follows:



(₹ in lakh)

Assets	RCE apportioned approved cost	Capital cost as on 1.4.2019	Admitted ACE		Capital cost as on 31.3.2024
			2019-20	2020-21	
Combined Asset-I and Asset-IV	757899.00	698436.30	22762.04	1000.00	722198.34
Asset-II	11557.00	11065.72	184.42	0.00	11250.14
Asset-III	7389.00	6355.47	712.86	0.00	7068.33
Asset-V	152348.00	108015.84	0.00	0.00	108015.84
Total	929193.00	823873.33	23659.32	1000.00	848532.65

Debt-Equity ratio

102. Regulation 18 of the 2019 Tariff Regulations provides as follows:

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

Provided that:

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

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

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

(3) In case of the generating station and the transmission system including communication system declared follows 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 follows 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.”

103. Debt-equity ratio for 2019-24 period is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. Debt-equity ratio considered for the purpose of computation of tariff for 2019-24 tariff period is as follows:

Combined Asset-I and Asset-IV

Particulars	Capital cost as on 1.4.2019 (₹ in lakh)	(in %)	ACE during 2019-24 (₹ in lakh)	(in %)	Capital cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	488905.41	70.00	16633.43	70.00	505538.84	70.00
Equity	209530.89	30.00	7128.61	30.00	216659.50	30.00
Total	698436.30	100.00	23762.04	100.00	722198.34	100.00

Asset-II

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	ACE during 2019-24 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	7746.01	70.00	129.09	70.00	7875.10	70.00
Equity	3319.71	30.00	55.33	30.00	3375.04	30.00
Total	11065.72	100.00	184.42	100.00	11250.14	100.00



Asset-III

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	ACE during 2019-24 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	4448.83	70.00	499.00	70.00	4947.83	70.00
Equity	1906.64	30.00	213.86	30.00	2120.50	30.00
Total	6355.47	100.00	712.86	100.00	7068.33	100.00

Asset-V

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	ACE during 2019-24 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	75611.15	70.00	0.00	70.00	75611.15	70.00
Equity	32404.69	30.00	0.00	30.00	32404.69	30.00
Total	108015.84	100.00	0.00	100.00	108015.84	100.00

Depreciation

104. Regulation 33 of the 2019 Tariff Regulations provides as follows:

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

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

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

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

Provided that the salvage value for IT equipment and software shall be



considered as NIL and 100% value of the assets shall be considered depreciable;

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

Provided also that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity follows 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 follows lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

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

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

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

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

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

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

(10) Depreciation of the emission control system of an existing or a new generating station or unit thereof where the date of operation of the emission control system is



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

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

105. We have considered the submissions of the Petitioner. WAROD at Annexure VI, Annexure VII, Annexure VIII and Annexure IX has been worked out after taking into account the depreciation rates of assets as prescribed in the 2019 Tariff Regulations. Depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. Depreciation allowed are as follows:

Combined Asset-I and Asset-IV

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block (A)	698436.30	721198.34	722198.34	722198.34	722198.34
Projected ACE (B)	22762.04	1000.00	0.00	0.00	0.00
Closing Gross Block (C) = A+B	721198.34	722198.34	722198.34	722198.34	722198.34
Average Gross Block (D) = (A+C)/2	709817.32	721698.34	722198.34	722198.34	722198.34
Freehold Land	1611.96	1611.96	1611.96	1611.96	1611.96
Weighted average rate of Depreciation (WAROD) (in %)	5.19	5.19	5.19	5.19	5.19
Balance useful life of the asset (Year)	30	29	28	27	26
Lapsed life at the beginning of the year (Year)	1	2	3	4	5
Aggregate Depreciable Value	637455.37	648148.28	648598.28	648598.28	648598.28
Combined Depreciation during the year	36859.05	37452.98	37479.38	37479.38	37479.38



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Aggregate Cumulative Depreciation	105290.26	142743.24	180222.62	217702.00	255181.38
Remaining Aggregate Depreciable Value	532165.10	505405.04	468375.66	430896.28	393416.90

Asset-II

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block (A)	11065.72	11250.14	11250.14	11250.14	11250.14
Projected ACE (B)	184.42	0.00	0.00	0.00	0.00
Closing Gross Block (C) = A+B	11250.14	11250.14	11250.14	11250.14	11250.14
Average Gross Block (D) = (A+C)/2	11157.93	11250.14	11250.14	11250.14	11250.14
Freehold Land	1216.05	1216.05	1216.05	1216.05	1216.05
Weighted average rate of Depreciation (WAROD) (in %)	4.09	4.08	4.08	4.08	4.08
Balance useful life of the asset (Year)	23	22	21	20	19
Lapsed life at the beginning of the year (Year)	2	3	4	5	6
Aggregate Depreciable Value	8948.58	9031.57	9031.57	9031.57	9031.57
Combined Depreciation during the year	456.47	459.55	459.55	459.55	459.55
Aggregate Cumulative Depreciation	1297.15	1756.70	2216.26	2675.81	3135.37
Remaining Aggregate Depreciable Value	7651.43	7274.86	6815.31	6355.75	5896.20

Asset-III

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block (A)	6355.47	7068.33	7068.33	7068.33	7068.33
Projected ACE (B)	712.86	0.00	0.00	0.00	0.00
Closing Gross Block (C) = A+B	7068.33	7068.33	7068.33	7068.33	7068.33
Average Gross Block (D) = (A+C)/2	6711.90	7068.33	7068.33	7068.33	7068.33
Weighted average rate of Depreciation (WAROD) (in %)	5.49	5.49	5.49	5.49	5.49
Balance useful life of the asset (Year)	21	20	19	18	17
Lapsed life at the beginning of the year (Year)	2	3	4	5	6
Aggregate Depreciable	6047.32	6368.43	6368.43	6368.43	6368.43



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Value					
Combined Depreciation during the year	368.33	388.04	388.04	388.04	388.04
Aggregate Cumulative Depreciation	1049.27	1437.31	1825.35	2213.39	2601.42
Remaining Aggregate Depreciable Value	4998.04	4931.12	4543.08	4155.04	3767.01

Asset-V

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block (A)	108015.84	108015.84	108015.84	108015.84	108015.84
Projected ACE (B)	0.00	0.00	0.00	0.00	0.00
Closing Gross Block (C) = A+B	108015.84	108015.84	108015.84	108015.84	108015.84
Average Gross Block (D) = (A+C)/2	108015.84	108015.84	108015.84	108015.84	108015.84
Freehold Land	1175.32	1175.32	1175.32	1175.32	1175.32
Weighted average rate of Depreciation (WAROD) (in %)	5.16	5.16	5.16	5.16	5.16
Balance useful life of the asset (Year)	30	29	28	27	26
Lapsed life at the beginning of the year (Year)	3	4	5	6	7
Aggregate Depreciable Value	96156.47	96156.47	96156.47	96156.47	96156.47
Combined Depreciation during the year	5572.22	5572.22	5572.22	5572.22	5572.22
Aggregate Cumulative Depreciation	23563.79	29136.01	34708.22	40280.44	45852.65
Remaining Aggregate Depreciable Value	72592.68	67020.46	61448.24	55876.03	50303.81

Interest on Loan (“IoL”)

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

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

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

(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into



account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.

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

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

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

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

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

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

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

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

108. We have considered the submissions of the Petitioner. The weighted average rate of interest of IoL has been considered on the basis of rate prevailing as on 1.4.2019. Accordingly, the floating rate of interest, if any, shall be considered at the time of true-up. In view of above, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed are as follows:



Combined Asset-I and Asset-IV

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	488905.41	504838.84	505538.84	505538.84	505538.84
Cumulative Repayments up to Previous Year	68431.21	105290.26	142743.24	180222.62	217702.00
Net Loan-Opening	420474.20	399548.57	362795.60	325316.22	287836.84
Additions	15933.43	700.00	0.00	0.00	0.00
Repayment during the year	36859.05	37452.98	37479.38	37479.38	37479.38
Net Loan-Closing	399548.57	362795.60	325316.22	287836.84	250357.46
Average Loan	410011.39	381172.08	344055.91	306576.53	269097.15
Weighted Average Rate of Interest on Loan (in %)	6.2043	6.1548	6.1290	6.1008	6.0591
Interest on Loan	25438.52	23460.46	21087.14	18703.70	16304.80

Asset-II

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	7746.01	7875.10	7875.10	7875.10	7875.10
Cumulative Repayments up to Previous Year	840.67	1297.15	1756.70	2216.26	2675.81
Net Loan-Opening	6905.34	6577.95	6118.40	5658.84	5199.29
Additions	129.09	0.00	0.00	0.00	0.00
Repayment during the year	456.47	459.55	459.55	459.55	459.55
Net Loan-Closing	6577.95	6118.40	5658.84	5199.29	4739.74
Average Loan	6741.64	6348.18	5888.62	5429.07	4969.51
Weighted Average Rate of Interest on Loan (in %)	5.1151	5.1227	5.1315	5.1370	5.1296
Interest on Loan	344.84	325.20	302.17	278.89	254.92

Asset-III

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	4448.83	4947.83	4947.83	4947.83	4947.83
Cumulative Repayments up to Previous Year	680.95	1049.27	1437.31	1825.35	2213.39
Net Loan-Opening	3767.88	3898.56	3510.52	3122.48	2734.45
Additions	499.00	0.00	0.00	0.00	0.00
Repayment during the year	368.33	388.04	388.04	388.04	388.04
Net Loan-Closing	3898.56	3510.52	3122.48	2734.45	2346.41
Average Loan	3833.22	3704.54	3316.50	2928.46	2540.43
Weighted Average Rate of Interest on Loan (in %)	4.6563	4.6391	4.6201	4.5983	4.5724
Interest on Loan	178.49	171.86	153.23	134.66	116.16

Asset-V

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
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Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	75611.15	75611.15	75611.15	75611.15	75611.15
Cumulative Repayments up to Previous Year	17991.57	23563.79	29136.01	34708.22	40280.44
Net Loan-Opening	57619.58	52047.36	46475.14	40902.93	35330.71
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	5572.22	5572.22	5572.22	5572.22	5572.22
Net Loan-Closing	52047.36	46475.14	40902.93	35330.71	29758.50
Average Loan	54833.47	49261.25	43689.04	38116.82	32544.60
Weighted Average Rate of Interest on Loan (in %)	6.2938	6.3105	6.3313	6.0895	5.6905
Interest on Loan	3451.12	3108.65	2766.07	2321.12	1851.97

Return on Equity (“RoE”)

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

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

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

Provided that return on equity in respect of additional capitalization after 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 follows 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 follows (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:
- rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;
 - 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 follows Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.

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

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

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

Illustration-

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

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

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

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



- (b) Estimated Advance Tax for the year on above is Rs 240 crore;
(c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;
(d) Rate of return on equity = $15.50 / (1-0.24) = 20.395\%$.

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

110. The Petitioner has submitted that MAT rate is applicable to it. We have considered the submissions of the Petitioner. 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 under Regulation 30 of the 2019 Tariff Regulations are as follows:

Combined Asset-I and Asset-IV

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity (A)	209530.89	216359.50	216659.50	216659.50	216659.50
Additions (B)	6828.61	300.00	0.00	0.00	0.00
Closing Equity (C) = A+B	216359.50	216659.50	216659.50	216659.50	216659.50
Average Equity (D) = (A+C)/2	212945.20	216509.50	216659.50	216659.50	216659.50
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity	39995.37	40664.81	40692.99	40692.99	40692.99

Asset-II

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity (A)	3319.71	3375.04	3375.04	3375.04	3375.04
Additions (B)	55.33	0.00	0.00	0.00	0.00



Closing Equity (C) = A+B	3375.04	3375.04	3375.04	3375.04	3375.04
Average Equity (D) = (A+C)/2	3347.37	3375.04	3375.04	3375.04	3375.04
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity	628.70	633.90	633.90	633.90	633.90

Asset-III

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity (A)	1906.64	2120.50	2120.50	2120.50	2120.50
Additions (B)	213.86	0.00	0.00	0.00	0.00
Closing Equity (C) = A+B	2120.50	2120.50	2120.50	2120.50	2120.50
Average Equity (D) = (A+C)/2	2013.57	2120.50	2120.50	2120.50	2120.50
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity	378.19	398.27	398.27	398.27	398.27

Asset-V

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity (A)	32404.69	32404.69	32404.69	32404.69	32404.69
Additions (B)	0.00	0.00	0.00	0.00	0.00
Closing Equity (C) = A+B	32404.69	32404.69	32404.69	32404.69	32404.69
Average Equity (D) = (A+C)/2	32404.69	32404.69	32404.69	32404.69	32404.69
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity	6086.25	6086.25	6086.25	6086.25	6086.25

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

111. O&M Expenses claimed by the Petitioner for the transmission assets for 2019-24 period are as follows:

Combined Asset-I and Asset-IV

(₹ in lakh)



Elements	2019-20	2020-21	2021-22	2022-23	2023-24
Transmission Line Champa-Kurukshetra Transmission line (6 Sub-conductors) (1288.056 km)					
HVDC Terminal Kurukshetra:Champa – Pole I Kurukshetra:Champa – Pole II	4265.81	4415.06	4569.89	4730.29	4895.98

Asset-II

(₹ in lakh)

Elements	2019-20	2020-21	2021-22	2022-23	2023-24
400 kV GIS bays: Kurukshetra:ICT I Bay (400/220 kV) Kurukshetra:ICT II Bay (400/220 kV)					
220 kV GIS bays: Kurukshetra:ICT I Bay (400/220 kV) Kurukshetra:ICT II Bay (400/220 kV)	434.52	450.21	466.00	482.87	498.85

Asset-III

(₹ in lakh)

Elements	2019-20	2020-21	2021-22	2022-23	2023-24
220 kV bays: 8 Numbers Kurukshetra:220 kV Line Bays at Kurukshetra	180.08	186.40	192.96	199.68	206.72
PLCC	22.78	22.78	22.78	22.78	22.78
Total O&M Expenses	202.86	209.18	215.74	222.46	229.50

Asset-V

(₹ in lakh)

Elements	2019-20	2020-21	2021-22	2022-23	2023-24
7 Numbers of 400 kV GIS bays: Kurukshetra :125 MVAR Bus Reactor Bay Kurukshetra: Abdullapur Bay I Kurukshetra: Abdullapur Bay II Kurukshetra: Jalandhar Bay Kurukshetra: Nakodar Bay Kurukshetra: Sonipat Bay I Kurukshetra: Sonipat Bay II					
4 Numbers of 400 kV bays: Jalandhar: Kurukshetra Bay Jalandhar: Nakodar Bay Nakodar (PSTCL): Jalandhar Bay Nakodar (PSTCL): Kurukshetra Bay					
265.5 km Double Circuit Kurukshetra (Nr)-Jalandhar 400 kV (Quad)	651.26	674.01	697.69	722.21	747.46



Elements	2019-20	2020-21	2021-22	2022-23	2023-24
16.00 km Double Circuit LILO Of Abdullapur-Sonepat (triple sub-conductors)					

112. Regulation 35(3)(a) of the 2019 Tariff Regulations provides as follows:

“35. Operation and Maintenance Expenses:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (Rs 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 (Rs 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 (Rs Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except	834	864	894	925	958



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>Gazuwaka BTB)</i>					
<i>Gazuwaka HVDC Back-to-Back station (Rs. Lakh per 500 MW)</i>	1,666	1,725	1,785	1,848	1,913
<i>500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)</i>	2,252	2,331	2,413	2,498	2,586
<i>±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)</i>	2,468	2,555	2,645	2,738	2,834
<i>±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)</i>	1,696	1,756	1,817	1,881	1,947
<i>±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh)(3000 MW)</i>	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

(i) the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;

(ii) the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;

(iii) the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2500 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);

(iv) the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±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.”

113. The Petitioner has claimed O&M Expenses separately for PLCC under Regulation 35(4) of the 2019 Tariff Regulations @2% of its original project cost for Asset III. The Petitioner has made similar claim in other petitions as well. Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014 Tariff Regulations and the 2019 Tariff Regulations and the norms for sub-station have been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No. 126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC follows Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication system. Therefore, the Petitioner’s claim for separate O&M Expenses for PLCC @2% is not allowed.

114. O&M Expenses allowed for transmission assets are as follows:

Combined Asset-I and Asset-IV

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses					
HVDC Terminal:					
+800 kV, 3000 MW (Pole-I and Pole-II) Champa Pooling Station & Kurukshetra HVDC Terminals					
Units (Number)	1	1	1	1	1
Norms (₹ lakh/3000 MW)	2563.00	2653.00	2746.00	2842.00	2942.00
Sub-Total O&M Expenses for HVDC Terminals (₹ in lakh)	2563.00	2653.00	2746.00	2842.00	2942.00



HVDC Line:					
±800 kV, 3000 MW Champa Pooling station - Kurukshetra HVDC Transmission Line (1288.056 km)					
Double Circuit (Bundled conductor with four or more sub-conductors)	1288.056	1288.056	1288.056	1288.056	1288.056
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
Sub-total: O&M Expenses for HVDC line (₹ in lakh)	1702.81	1762.06	1823.89	1888.29	1953.98
Total O&M Expenses allowed (₹ in lakh)	4265.81	4415.06	4569.89	4730.29	4895.98

Asset-II

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays:					
400 kV GIS: Kurukshetra: ICT-1&2 at Kurukshetra HVDC Station					
220 kV: Kurukshetra: ICT-1&2 at Kurukshetra HVDC Station					
220 kV (Numbers)	2	2	2	2	2
Norms (₹ lakh/Bay)	15.757	16.31	16.884	17.472	18.088
Sub-total 220 kV (₹ lakh)	31.51	32.62	33.77	34.94	36.18
2 Numbers of 400 kV GIS bays Kurukshetra:ICT I Bay (400/220 kV) Kurukshetra:ICT II Bay (400/220 kV)					
400 kV GIS (numbers)	2	2	2	2	2
Norms (₹ lakh/Bay)	22.505	23.296	24.115	24.962	25.837
Sub-total 400 kV GIS (₹ lakh)	45.01	46.59	48.23	49.92	51.67
Transformers:					
400 kV 500 MVA: Kurukshetra: ICT-1&2					
400 kV 2x500 MVA Transformers (MVA)	1000	1000	1000	1000	1000
Norms (₹ lakh/Bay)	0.358	0.371	0.384	0.398	0.411
Sub-total transformers O&M Expenses (₹ lakh)	358.00	371.00	384.00	398.00	411.00
Total O&M Expenses allowed (₹ in lakh)	434.52	450.21	466.00	482.87	498.85

Asset-III

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays:					
220 kV: line bays at Kurukshetra HVDC Station					
220 kV (numbers)	8	8	8	8	8
Norms (₹ lakh/Bay)	22.51	23.3	24.12	24.96	25.84
Total O&M Expenses allowed (₹ in lakh)	180.08	186.40	192.96	199.68	206.72

Asset-V

(₹ in lakh)



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays:					
400 kV GIS: (i) 1x125 MVAR Bus Reactor Bay and (ii) 6x400 kV GIS line bays at Kurukshetra HVDC Station					
400 kV: (i) 2x400 kV line bays at Jalandhar and (ii) 2x400 kV line bays at Nakodar (PSPTCL)					
400 kV (numbers)	4	4	4	4	4
Norms (₹ lakh/km)	32.15	33.28	34.45	35.66	36.91
Sub-total 400 kV (₹ lakh)	128.60	133.12	137.80	142.64	147.64
400 kV GIS (numbers)	7	7	7	7	7
Norms (₹ lakh/km)	0.358	0.371	0.384	0.398	0.411
Sub-total 400 kV GIS (₹ lakh)	157.54	163.07	168.81	174.73	180.86
Sub-total O&M Expenses for Sub-station (₹ lakh)	286.14	296.19	306.61	317.37	328.50
Transmission Lines:					
(i) Kurukshetra-Jalandhar 400 kV (Quad) D/C line (265.50 km) and					
(ii) LILO of Abdullapur-Sonepat 400 kV (Triple) D/C line (16.00 km)					
Double Circuit (Bundled conductor with four or more sub-conductors) (km)	265.50	265.50	265.50	265.50	265.50
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	16.00	16.00	16.00	16.00	16.00
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
Sub-total: O&M Expenses for Transmission line (₹ in lakh)	365.09	377.79	391.05	404.85	418.94
Total O&M Expenses allowed (₹ in lakh)	651.22	673.99	697.66	722.23	747.44

Interest on Working Capital (“IWC”)

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

“34. Interest on Working Capital: (1) 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.

(2) The cost of fuel in cases covered follows sub-clauses (a) and (b) of clause (1) of this Regulation shall be based on the landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of these regulations) by the generating station and gross calorific value of the fuel as per actual weighted



average for the third quarter of preceding financial year in case of each financial year for which tariff is to be determined:

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

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 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 follows commercial operation, whichever is later:

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

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

“3. Definitions. - *In these regulations, unless the context otherwise requires:-*

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

116. The Petitioner has submitted that it has computed IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, ROI for 2020-21 has been considered as 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) whereas, RoI for 2021-22 onwards has been considered as 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest allowed thereon are as follows:

Combined Asset-I and Asset-IV

(₹ in lakh)



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital O&M Expenses (O&M Expenses for one month)	355.48	367.92	380.82	394.19	408.00
Working Capital Maintenance Spares (15% of O&M Expenses)	639.87	662.26	685.48	709.54	734.40
Working Capital Receivables (Equivalent to 45 days of annual transmission charges)	13313.48	13265.95	12982.75	12705.58	12392.75
Total Working Capital	14308.83	14296.14	14049.06	13809.31	13535.14
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital	1724.21	1608.32	1475.15	1449.98	1421.19

Asset-II

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital O&M Expenses (O&M Expenses for one month)	36.21	37.52	38.83	40.24	41.57
Working Capital Maintenance Spares (15% of O&M Expenses)	65.18	67.53	69.90	72.43	74.83
Working Capital Receivables (Equivalent to 45 days of annual transmission charges)	234.22	235.13	233.95	233.20	231.61
Total Working Capital	335.61	340.18	342.68	345.87	348.01
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital	40.44	38.27	35.98	36.32	36.54

Asset-III

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital O&M Expenses (O&M Expenses for one month)	15.01	15.53	16.08	16.64	17.23
Working Capital Maintenance Spares (15% of O&M Expenses)	27.01	27.96	28.94	29.95	31.01
Working Capital Receivables (Equivalent to 45 days of annual transmission charges)	138.55	143.71	142.04	140.59	138.79
Total Working Capital	180.56	187.20	187.07	187.18	187.02
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital	21.76	21.06	19.64	19.65	19.64



Asset-V

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital O&M Expenses (O&M Expenses for one month)	54.27	56.17	58.14	60.19	62.29
Working Capital Maintenance Spares (15% of O&M Expenses)	97.68	101.10	104.65	108.33	112.12
Working Capital Receivables (Equivalent to 45 days of annual transmission charges)	1969.23	1932.69	1890.97	1838.53	1778.22
Total Working Capital	2121.18	2089.95	2053.75	2007.05	1952.63
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital	255.60	235.12	215.64	210.74	205.03

Annual Fixed Charges for 2019-24 Tariff Period

117. The transmission charges allowed for 2019-24 tariff period are as follows:

Combined Asset-I and Asset-IV

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	36859.05	37452.98	37479.38	37479.38	37479.38
Interest on Loan	25438.52	23460.46	21087.14	18703.70	16304.80
Return on Equity	39995.37	40664.81	40692.99	40692.99	40692.99
O&M Expenses	4265.81	4415.06	4569.89	4730.29	4895.98
Interest on Working Capital	1724.21	1608.32	1475.15	1449.98	1421.19
Total	108282.96	107601.63	105304.55	103056.34	100794.34

Asset-II

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	456.47	459.55	459.55	459.55	459.55
Interest on Loan	344.84	325.20	302.17	278.89	254.92
Return on Equity	628.70	633.90	633.90	633.90	633.90
O&M Expenses	434.52	450.21	466.00	482.87	498.85
Interest on Working Capital	40.44	38.27	35.98	36.32	36.54
Total	1904.97	1907.13	1897.60	1891.53	1883.76

Asset-III

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	368.33	388.04	388.04	388.04	388.04
Interest on Loan	178.49	171.86	153.23	134.66	116.16



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Return on Equity	378.19	398.27	398.27	398.27	398.27
O&M Expenses	180.08	186.40	192.96	199.68	206.72
Interest on Working Capital	21.76	21.06	19.64	19.65	19.64
Total	1126.85	1165.63	1152.14	1140.30	1128.83

Asset-V

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	5572.22	5572.22	5572.22	5572.22	5572.22
Interest on Loan	3451.12	3108.65	2766.07	2321.12	1851.97
Return on Equity	6086.25	6086.25	6086.25	6086.25	6086.25
O&M Expenses	651.22	673.99	697.66	722.23	747.44
Interest on Working Capital	255.60	235.12	215.64	210.74	205.03
Total	16016.41	15676.23	15337.84	14912.56	14462.91

Filing Fee and Publication Expenses

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

Licence Fee & RLDC Fees and Charges

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

Goods and Services Tax

120. The Petitioner has submitted that, if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne



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

121. MPPMCL has submitted that the demand of the Petitioner is premature and need not to be considered at this juncture. In response, the Petitioner has reiterated its submissions.

122. HVPNL has submitted that admittedly no cause of action has arisen in the favour of the Petitioner to claim GST or other levies. HVPNL has further submitted that no relief can be granted on mere apprehension of the Petitioner that such charges may be payable in the future. The claim of the Petitioner with respect to GST and/or other levies/taxes which have not accrued as on date, is liable to be rejected being premature. In response, the Petitioner has reiterated its submissions.

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

Security Expenses

124. The Petitioner has submitted that security expenses for the transmission asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC.

125. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it



on projected basis for 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The said petition has already been disposed of by the Commission vide order dated 3.8.2021. Therefore, security expenses will be shared in terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. Accordingly, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

Capital Spares

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

Sharing of Transmission Charges

127. The Petitioner has submitted that the transmission charges for 2014-19 period shall be recovered on monthly basis in accordance with Regulation 42 and shall be shared by the Respondents in accordance with Regulation 43 of the 2014 Tariff Regulations and shall be shared by the beneficiaries and long term transmission customers as per the 2010 Sharing Regulations. The Petitioner has further submitted that the transmission charges for 2019-24 tariff period shall be recovered on monthly basis in accordance with Regulation 57 of the 2019 Tariff Regulations and shall be shared by the beneficiaries and long term transmission customers as per the 2010 Sharing Regulations and 2020 Sharing Regulations.



128. The Petitioner has further submitted that the Commission vide order dated 31.7.2019 in Review Petition No. 20/RP/2018 and 3/RP/2019, regarding sharing of transmission charges for Asset-I and Asset-IV has held as follows:

“57This issue would be taken care of as we have allowed the prayer in the present Review Petitions allowing the sharing of transmission charge under Regulation 11(4)(3)(i) instead of sharing under Regulation 11(4)(3)(iii) of the 2010 Sharing Regulations....”

129. HVPNL has submitted as follows:

(a) At the time when the assets were being envisaged, HVPNL had certain apprehensions with respect to the liability of transmission charges. As such, a number of communications were made by HVPNL to the Petitioner seeking clarification regarding the liability of HVPNL, if any, towards the payment of the transmission charges. In reply to the same, the Petitioner vide letter dated 22.11.2011 stated as follows:

“The issue of land acquisition at Kurukshetra is being discussed for quite some time, and there are certain apprehensions in regard to transmission charges due to the location of HVDC terminal at Kurukshetra. In this regard, I would like to mention that as per the present CERC regulation for sharing transmission charges the Interstate transmission system including HVDC systems are included in the National Pool of transmission assets and transmission charges or computed based on zone wise withdrawal & injection charge and are on slab rate basis. In this method fifty percent of transmission charges of ISTS is shared at national level as uniform charge and balance 50% are distributed zone wise, out of which about 25% are shared by injecting generators and balance 25% by withdrawing utilities. The rate of each zone for injection & drawl has been moderated and three slabs have been worked out. A copy of the slab rates for Northern Region is enclosed as Annexure – I. From the enclosed table it may be observed that withdrawal slab for Haryana, Punjab, Uttar Pradesh and Rajasthan are same and irrespective of location of various HVDC terminals. Total transmission charges for a particular state/ beneficiary are based on total drawl/ injection. In line with the present practice, Champa – Kurukshetra HVDC system would also be included in the National Pool of transmission assets and transmission charges would depend upon the total drawl of a particular state. Thus, Haryana shall be sharing the transmission charges in proportion to the quantum of power drawl.

In view of above, I would like to emphasize that the transmission charges of a particular utility are not dependent on the location of HVDC terminal. In fact, the issue of transmission charges was discussed in a meeting taken by Member (PS), CEA held on 19/10/2011, wherein results for sharing of transmission charges for Balia - Bhiwadi HVDC of 2500 MW capacity, as computed by NLDC were deliberated. It was observed that although the



terminal location of Bhiwadi is in Rajasthan, however drawl charges of Delhi was on higher side. From the results it may be seen that the charges are not linked with location of HVDC terminal. A copy of the results for Balia – Bhiwadi HVDC bipole sharing is enclosed at Annexure-II for your reference. I hope above clarified the concern of HVPN and request to process the land acquisition at Kurukshetra, however, if any further discussion/ clarification is required, a meeting can be convened among CEA, NLDC, HVPN and POWERGRID at mutual convenient date.”

(b) Numbers of similar communication were addressed by the Petitioner to HVPNL wherein time and assurance has been given by the Petitioner to HVPNL that the total liability of transmission charges will be shared and will not be fastened solely on HVPNL. Further, HVPNL had also vide letters dated 29.7.2011 and 9.11.2011 raised concerns with respect to difficulty in utilization of proposed infrastructure owing to lesser load being envisaged in related areas. Further, the HVDC transmission system created by the Petitioner has been done under Bulk Power Transmission Agreement ('BPTA') executed among the Petitioner and IPPs set up in Chhattisgarh. As per terms and conditions of said BPTA, penalty was to be imposed on the Petitioner for delay in construction of HVDC transmission system. The transmission system has therefore, been laid down by the Petitioner in a time frame regardless of creation of downstream network. This fact is fortified from reading of DO letter of Ministry of Power dated 9.12.2011 sent to the Government of Haryana. HVPNL had proceeded with the land acquisition only when the Petitioner had provided specific clarification regarding the manner of sharing of the transmission charges. HVPNL had changed its position on the basis of the assurance given by the Petitioner. At this stage, the Petitioner cannot be permitted to take a complete U-turn from its previous undertaking and state that the liability of transmission charges would be fastened upon HVPNL for the mismatch period. HVPNL has further submitted that the doctrine of promissory estoppel is squarely applicable to the facts of the present case and the Petitioner is estopped from claiming any amount from HVPNL in contravention to its earlier assurance. No direct liability can be fastened on HVPNL as averred by the Petitioner *vide* its email dated 21.6.2022.



(c) With respect to Asset-II, HVPNL has submitted that at this stage, both the 500 MVA, 400/220/33 kV ICTs installed at 400 kV Kurukshetra are being fully utilized by Haryana. However, the supply for HVDC pole is being given through the tertiary winding of ICTs. The HVDC pole is supplying power to other states also. The instant transmission asset was envisaged for bulk power transfer from the Western Region to Northern Region which has contributed towards the reliability of power to all the beneficiaries. HVPNL has prayed that the transmission tariff for the 400/220/33 kV ICTs installed at 400 kV Kurukshetra may be shared among the beneficiaries.

(d) With respect to Asset-III, HVPNL has submitted that Asset-III consists of 8 numbers of 220 kV line bays at Kurukshetra Sub-station of the Petitioner, out of which only 6 numbers of bays are being utilised by them as follows:

2 numbers of 220 kV bays for accommodating LILO of one circuit of 220 kV D/C Bastara – Kaul line at 400/220 kV GIS Sub-station at 800 kV HVDC Bhadson; (date of power flow: 9.3.2019 & 20.9.2019)

2 numbers of 220 kV bays for accommodating LILO of one circuit of 220 kV D/C Pehowa– Kaul line at 400/220 kV GIS Sub-station at 800 kV HVDC Bhadson; (date of power flow: 9.3.2019 & 19.9.2019)

2 numbers 220 kV bays for accommodating 220 kV D/C Bhadson– Salempur line at 400/220 kV GIS substation at 800 kV HVDC Bhadson; (date of power flow: 20.7.2020 & 15.8.2020) and

2 numbers of 220 kV bays for accommodating 220 kV D/C line from 800 kV Sub-station Bhadson to 220 kV Sub-station Ramana Ramani with 0.5 sq. ACSR conductor (not yet commissioned, expected in 2024-25)

(e) HVPNL has made detailed submissions with regard to delay in putting into commercial operation of the above 220 kV lines. HVPNL has mainly contented that the delay in execution of aforesaid lines were generally due to events of *force majeure* and therefore, the delay was beyond the control of HVPNL. Accordingly, HVPNL is not liable to bear the transmission charges of Asset-II and Asset-III for the period of mismatch due to non-availability of associated downstream lines of HVPNL.



(f) HVPNL has further submitted that the remaining 2 numbers of 220 kV line bays have not been utilized till date because 2 numbers of ICTs installed at 400 kV Kurukshetra does not meet with N-1 Contingency. Accordingly, in the meeting held on 7.7.2021 for enhancement of ATC/TTC limits of Haryana State, it was decided that load management at 400 kV Kurukshetra (PGCIL) be done and SPS be explored. In this connection, the 3rd Transformer of 500 MVA at 400/220 kV Kurukshetra (PGCIL) including creation of 220 kV D/C Bhadson (800 kV Sub-station)-Ramana Ramani line with 0.5 sq” ACSR conductor on overhead arrangement in 2024-25, was approved in the 4th NRPC (TP) meeting held on 5.10.2021 and 12.10.2021.

130. In response, the Petitioner has submitted as follows:

(a) All the communications submitted along with the reply of HVPNL pertains to the communication regarding land acquisition and sharing of transmission charges as defined in the then norms/Regulation. The Petitioner has not discussed anywhere about the liability of transmission charges in case of mismatch of execution of associated assets.

(b) HVPNL has raised the concern regarding liability of transmission charges in case of PPA not getting signed with generators at Chhattisgarh. The Petitioner *vide* letter dated 20.12.2011 has clarified that transmission charges are to be shared in proportion to the quantum of power drawl.

(c) The Petitioner has put Asset-II and Asset-III into commercial operation on 25.3.2017 just after completion of Asset-I on 24.3.2017. Subsequently, the Commission *vide* order dated 31.7.2019 in Review Petition No. 20/RP/2019 and 3/RP/2019 has already approved the COD of Asset-II and Asset-III. The relevant extract of the said order is as follows:

“... Hence, we allow the review on this count and allow the COD of Assets-2 and 3 as 25.3.2017 taking into account the RLDC certificate regarding trial operation, CEA certificate for energization of element and the CMD Certificate stating these assets confirm to the relevant Grid Standards and Order in Petition No. 20/RP/2018 and Petition No. 3/RP/2019 Page 42 of 51 Grid Code.....”



(d) With regard to downstream network of Asset-II, the Petitioner has submitted that Asset-II was put into commercial operation on 25.3.2017 on no-load and it was being used for drawl of auxiliary supply only due to non-readiness of downstream assets under the scope of HVPNL. However, the power flow started on 9.3.2019 after completion of 2 numbers associated downstream line i.e., 220 kV Kurukshetra-Kaul-1 and Kurukshetra-Pehowa transmission lines. The latest status of downstream network associated with Asset-III are as follows:

Line Number	Name of Line	Date of Charging
Line 1	Kaul-1	9.3.2019
Line 2	Kaul-2	19.9.2019
Line 3	Pehowa	9.3.2019
Line 4	Bastara	20.9.2019
Line 5	Salempur-1	20.7.2020
Line 6	Salempur-2	15.8.2020
Line 7	Future	--
Line 8	Future	--

(e) HVPNL was well aware that it has to execute the associated transmission lines for the purpose of power evacuation through 220 kV bays at Kurukshetra Sub-station. The Petitioner had put all its effort to coordinate with the HVPNL and communicated intermittently directly and through NRPC forums. Details of coordination activity and associated communication are as follows:

Sl. No.	Particulars	Date	Remarks
1.	The Petitioner sent letter to HVPNL	20.2.2015 2.6.2015 14.8.2015 28.8.2015 24.12.2015	The Petitioner requested HVPNL to execute all 200 kV Lines matching with the targeted schedule
2.	The Petitioner sent letter to HVPNL	15.9.2015	Officials of Karnal, HVPNL visited Kurukshetra HVDC Sub-station. HVPNL officials informed about the status of associated 220 kV transmission lines
3.	The Petitioner sent letter to Director (Technical) HVPNL	23.4.2016 3.5.2016	The Petitioner requested HVPNL to execute all 200 kV Lines matching with the targeted schedule. Also initiated that no response received from HVPNL.



4.	The Petitioner sent letter to MD, HVPNL	16.6.2016	The Petitioner has furnished status of execution of ICTs and 220 kV bays and asked time slot for the physical meeting to get clarity about the work progress in the scope of HVPNL. Also intimated that no response received from HVPNL.
5.	The Petitioner sent letter to MD, HVPNL	2.7.2016	Meeting held at 1 st July 2016. The Petitioner requested for execution of associated transmission lines.
6.	The Petitioner sent letter to HVPNL	3.1.2017	The Petitioner has furnished status of execution of ICTs and 220 kV bays and requested for execution of associated transmission lines.
7.	The Petitioner sent letter to MD, HVPNL	18.2.2017	The Petitioner has furnished status of execution of ICTs and 220 kV bays and asked time slot for the physical meeting to get clarity about the work progress in the scope of HVPNL.
8.	The Petitioner sent letter to MD, HVPNL	8.5.2017	The Petitioner informed about the execution of ICTs and 220 kV bays at Kurukshetra Sub-station and mentioned about the recent discussion held with the site official that LILO work of Pehowa-Koul line totally stopped due to internal issues of HVPNL. Further, The Petitioner asked for the time slot for the physical meeting to get clarity about the work progress in the scope of HVPNL.
9.	The Petitioner sent letter to MD, HVPNL	7.6.2017	Meeting held on 6.7.2017. Reiterated the gist of Minute and requested to expedite the LILO work on urgent basis.
10.	The Petitioner sent letter to MD, HVPNL	23.11.2017	The Petitioner asked for the time slot for the physical meeting to get clarity about the work progress in the scope of HVPNL and requested to expedite the LILO work on urgent basis.
11.	The Petitioner sent letter to MD, HVPNL	8.1.2018	The Petitioner asked for the time slot for the physical meeting to get clarity about the work progress in the scope of HVPNL and requested to expedite the LILO work on urgent basis.
12.	The Petitioner sent letter to MD, HVPNL	8.3.2018	The Petitioner asked for the time slot for the physical meeting to get clarity about the work progress in the scope of HVPNL and requested to expedite the LILO work on urgent basis.



13.	The Petitioner sent letter to MD, HVPNL	17.3.2018	Meeting held on 14 th March 2018. Reiterated the gist of Minute and intimated about the liability which may be levied on HVPNL due to mismatch also requested to expedite the commissioning of associated transmission lines on urgent basis.
14.	The Petitioner sent letter to MD, HVPNL	9.10.2018	The Petitioner requested to expedite the execution of associated transmission lines on urgent basis.
15.	38th TCC & 41st NRPC Meetings	27 th and 28 th February, 2018	Matter of execution status of associated transmission lines of HVPNL discussed.
16.	39th TCC & 42nd NRPC Meeting	27 th and 28 th June, 2018	Matter of execution status of associated transmission lines of HVPNL discussed.
17.	40th TCC & 43rd NRPC Meetings	29 th and 30 th October, 2018	Matter of execution status of associated transmission lines of HVPNL discussed.
18.	41st TCC & 44th NRPC Meetings	18 th and 19 th March, 2019	Matter of execution status of associated transmission lines of HVPNL discussed.
19.	42 nd TCC & 45 th NRPC Meetings	7 th and 8 th June, 2019	Matter of execution status of associated transmission lines of HVPNL discussed.
20.	43 rd TCC & 46 th NRPC Meetings	23 rd and 24 th September, 2019	Matter of execution status of associated transmission lines of HVPNL discussed.

(f) The Petitioner has continuously communicated with HVPNL, and very little response was received from HVPNL. Moreover, in none of its communications HVPNL has intimated that these 220 kV Bays are not required. HVPNL was unable to execute its downstream system as per the targeted schedule despite various communications and coordination by the Petitioner.

(g) The Petitioner has submitted that HVPNL was aware of the commissioning of 220 kV bays at Kurukshetra Sub-station associated 220 kV downstream lines being implemented by HVPNL. The Petitioner made various communication regarding the status of commissioning of its assets at Kurukshetra Sub-station but HVPNL never replied to the same. The Petitioner has executed its assets in March, 2017 and Asset-II and Asset-III were not getting utilized for its intended purpose due to non-execution of associated transmission lines in the scope of HVPNL. Therefore, the Petitioner has prayed to allow the transmission charges as claimed in the instant petition and decide the sharing as deemed fit in this case.



(h) Further, with regard to non- execution of associated transmission line of remaining 2 numbers 220 kV bays, the GRID scenario is continuously changing, and planning is being done on the basis of power system studies as per the requirement. While, the Petitioner has executed Asset-II and Asset-III in March, 2017, HVPNL is discussing about the contingency that arose in 2021 i.e. after more than three years. Further, N-1 contingency of ICTs installed at Kurukshetra Sub-station has nothing to do with the execution of associated 220 kV bays at Kurukshetra Sub-station. The Petitioner further submitted that despite all the communications done with HVPNL, HVPNL has nowhere discussed and revealed these facts related to delay in execution of associated transmission lines in its scope. Therefore, the Petitioner has prayed to allow the transmission charges as claimed in the instant petition and decide the sharing as deemed fit in this case.

131. We have considered the submissions of the Petitioner and HVPNL. The asset-wise sharing of charges is discussed hereunder:

Combined Asset-I and Asset-IV

132. The tariff for 2014-19 for Asset-IV (Pole-II HVDC) was allowed *vide* order dated 6.11.2018 in Petition No. 205/TT/2017. The Commission allowed the sharing of charges under Regulation 11(4)(3)(iii) of the 2010 Sharing Regulations similar to sharing of charges allowed for Asset-I (Pole-I HVDC) in order dated 22.2.2018 in Petition No. 13/TT/2018. Aggrieved with the above decision in order dated 6.11.2018 in Petition No. 205/TT/2017, the Petitioner filed Review Petition No. 20/RP/2018 and 3/RP/2018 contending that sharing of transmission charges for Champa-Kurukshetra HVDC line should be in accordance with Regulation 11(4)(3)(i) and not under Regulation 11(4)(3)(iii) of the 2010 Sharing Regulations. Thereafter, the Commission *vide* order dated 31.7.2019 in Review Petition No. 3/RP/2018 allowed that the sharing of transmission charges for Champa-Kurukshetra HVDC line should be in



accordance with Regulation 11(4)(3)(i) and not under Regulation 11(4)(3)(iii) of the 2010 Sharing Regulations. Further, on the request of Petitioner and Respondent(s) that the transmission charges of Pole-I and Pole-II should be added together and billed together as one corridor of 3000 MW, the Commission directed the Petitioner to add together the annual transmission charges of Pole-I and Pole-II to arrive at monthly transmission charges and also to file one combined petition claiming tariff for all the assets covered in the transmission project at the time of truing up stage.

133. Accordingly, the Petitioner has filed combined tariff calculation in respect of Asset-I and Asset-IV in the instant petition. We have approved the combined transmission charges of Asset-I and Asset-IV in this order. The COD of the Asset-I and Asset-IV is approved as 24.3.2017 and 16.9.2017 respectively.

134. The Commission vide a combined order dated 31.7.2019 in Review Petition No. 20/RP/2018 in Petition No.13/TT/2017 and Review Petition No.3/RP/2019 in Petition No. 205/TT/2017, considering all the facts, held as follows:

“52. It is apparent from the above observations that the instant transmission assets were envisaged and created in order to evacuate and transfer of power from the IPP generation projects in the WR to the Northern Region on the basis of the LTA with firm PPA and the target LTA to NR. Therefore, this Commission in order dated 11.4.2017 while granting AFC under Regulation 7(7) of the 2014 Tariff Regulations, had observed that since the transmission assets were to be utilized against the LTA having firm PPA (1825 MW) and target region (to NR) (2124 MW), the transmission charges shall be shared as provided under the Regulation 11(4)(3)(i) of the 2010 Sharing Regulations.

53. Further, the observation of the Commission in the impugned orders holding that the instant transmission assets have been created for 13 generation project is also not appropriate as LTAs of these generating stations, which were the original grantee of LTAs on HCPTC-V for transfer of power from WR to NR, have been operationalized prior to COD of Champa-Kurukshetra Pole 1 and upon commissioning of Champa

Kurukshetra Pole-I, some of the generating companies such as TRN Energy, MB Power and Maruti Power who were originally granted LTA subject to commissioning of Jabalpur-Orai transmission line were upgraded to Champa-Kurukshetra Pole-1. This is also evident from interim order dated 28.10.2016 in Petition No. 84/MP/2016 and the ROP dated 14.2.2017 in Petition No. 84/MP/2016, wherein the Commission



has allowed the operationalization of LTA of such generators on account of capacity arising out of the relinquishment by the other generators.

54. In light of the above observations, we find that there is an error in the impugned orders which hold that the instant transmission assets are created only for 13 nos. of generation projects, as the instant transmissions assets are clearly envisaged for the bulk power transfer from the WR to NR in addition to the parallel existing network, which not only increases ATC between the region but also contributes to reliability of power supply to the NR beneficiaries. Further, the Commission in the impugned orders has also held that the sharing of transmission charges for the instant assets would be as per Regulation 11(4)(3)(iii) of the 2010 Sharing Regulations. This finding of the Commission was also on the basis that the instant transmission system has been developed for 13 generation projects and that the Annexure-4 of the LTA agreement and Minutes of 15th TCC and 16th NRPC meeting recognized the liability of payment of transmission charges on the generating company and/or beneficiary.

55. Admittedly, the clauses of the Agreement as well as the observations during the meeting that the generators/beneficiaries are liable to pay the transmission charges were prior to coming into effect of the 2010 Sharing Regulations. After the coming into effect of the 2010 Sharing Regulations, the provisions of the Regulations are necessarily to be applied in the present case and having come to the conclusion that the instant transmission assets are created to supply the power to Northern Region, the methodology specified for sharing of transmission charges in the orders dated 22.2.2018 and 6.11.2018 would also require modification as the applicable methodology for sharing of transmission charges would now be as per Regulation 11(4)(3)(i) of the 2010 Sharing Regulations and it would come into effect from the date of commercial operation of the instant assets.”

135. Therefore, in line with the Commission's order dated 31.7.2019 in Review Petition No. 20/RP/2018 and 3/RP/2018, the transmission charges for ±800 kV 3000 MW Champa (HVDC station)-Kurukshetra (HVDC Station) HVDC Link along ±800 kV, 3000 MW (Pole-I and Pole-II) HVDC Terminals each at Champa (HVDC station) and Kurukshetra (HVDC Station), covered in Asset-I and Asset-IV, shall be shared as per Regulation 11(4)(3)(i) of the 2010 Sharing Regulations upto 31.10.2020 and it would come into effect from the COD of the Asset-I and Asset-IV.

136. 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.



137. As per Regulation 5(3)(d) of the 2020 Sharing Regulations, 30% of the Yearly Transmission Charges (YTC) with effect from 1.11.2020 shall be part of National Component and 70% of YTC for Champa-Kurukshetra HVDC System covered in the Combined Asset-I and Asset-IV is under Regional Component.



Asset-II

138. Asset-II consists of 02 numbers 400/220 kV, 500 MVA ICTs along with associated bays at 400/220 kV GIS Sub-station at Kurukshetra and the COD of Asset-II has been approved as 25.3.2017 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations as the associated transmission system being implemented by HVPNL were not ready. HVPNL has contended that both the 500 MVA 400/220/33 kV ICTs installed at 400 kV Kurukshetra are being fully utilized by Haryana. However, the supply for HVDC pole is being given through the tertiary winding of ICTs. The HVDC pole is supplying power to other states also. The transmission asset was envisaged for bulk power transfer from the Western Region to Northern Region which has contributed towards the reliability of power to all the beneficiaries. HVPNL has submitted that the transmission tariff for the 400/220/33 kV ICTs installed at 400 kV Kurukshetra may be distributed among the beneficiaries. In response, the Petitioner has submitted that Asset-II is being used for drawing the auxiliary supply from the tertiary of the 500 MVA transformers for the assets covered in the instant petition.

139. We have considered the submissions of the Petitioner and HVPNL. The 2 numbers 500 MVA transformer were planned to cater to drawl requirement of HVPNL through 220 kV feeders emanating from Kurukshetra Sub-station. The 2 numbers 500 MVA transformer are utilised by HVPNL after commissioning of the 2 numbers associated downstream 220 kV transmission lines of Kurukshetra-Kaul-1 and Kurukshetra-Pehowa. It is observed that ICTs is partially being utilised by the Petitioner for supplying power to HVDC pole through tertiary winding of ICTs. Therefore, the transmission charges of Asset-II proportionate to drawl of auxiliary



power is included in the PoC pool from the date of COD and balance transmission charges from 25.3.2017 to 8.3.2019 shall be borne by HVPNL. The transmission charges from 9.3.2019 to 31.10.2020 shall be shared as per the applicable 2010 sharing Regulations and from 1.11.2020, transmission charges shall be shared as per the 2020 Sharing Regulations.

Asset-III

140. Asset-III consists of 8 numbers 220 kV ine Bays at 400/220 kV GIS Sub-station at Kurukshetra and the COD of Asset-III has been approved as 25.3.2017 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations as the associated transmission system being implemented by HVPNL were not ready. HVPNL has made detailed submissions with regard to delay in execution of above 220 kV lines, wherein, HVPNL has mainly contented that the delay in execution of aforesaid lines were generally due to events of *force majeure* and, therefore, beyond the control of HVPNL. Accordingly, HVPNL is not liable to bear the transmission charges of Asset-III for the period of mismatch due to non-availability of associated downstream lines of HVPNL. HVPNL also contended that 2 numbers of 220 kV bays have been not utilised till date because 2 numbers of ICTs installed at 400 kV Kurukshetra do not meet with N-1 contingency and 3rd transformer of 500 MVA at 400/220 kV Kurukshetra was approved in the 4th NRPC (TP) meeting held on 5.10.2021 and 12.10.2021. Without 3rd transformer in place, the system does not meet the N-1 contingency criteria.

141. We have considered the submissions of the Petitioner and HVPNL. The relevant extracts of the 23rd SCM wherein 8 numbers of 220 kV bays are approved are reproduced below:



“6.0 Region System Strengthening Scheme – New Proposal

6.1 It was also discussed and agreed that in view of increasing demand density the norm of providing 220 kV bays with 400/220 kV transformers would be revised as following:-

- **For 2x315 MVA - 6 nos. of line bays**
- **For 3rd 315 MVA transformer - 2 line bays**
- **For 500 MVA transformer - 4 nos. of line bays”**

142. We have perused the minutes of the 23rd SCM held on 16.2.2008. Though the details of the parties present were not found enclosed along with the minutes, and as such it is presumed that HVPNL was represented and was party to the decision taken in the 23rd SCM held on 16.2.2008. We also note that HVPNL has not raised the issue of these bays in any other subsequent meeting stating that these were not required for HVPNL.

143. The status of the Kurukshetra 2x500 MVA (400/220 kV system) was discussed in 34th SCM held on 8.8.2014. The relevant extracts of the 34th SCM is as follows:

“Item – 22: Establishment of new 400/220 kV substations in NR AGM POWERGRID stated that following new substations are under implementation, which were planned under various transmission schemes:

Sl. No	Name of the Substation	Expected to be Commissioned by
a	Kurukshetra 2x500 MVA (400/220 kV system)	March 2015

It has been observed that implementation of downstream 220 kV system, to be implemented by STUs, gets delayed. For utilization of the system it is necessary that 220 kV system is also commissioned in the matching time frame. He requested the members to intimate the status of commissioning of the downstream 220 kV network from these substations.

a) CE, HVPNL stated that the 220 kV underlying system from 400 KV Kurushetra is in progress. However, a mismatch of about 9 months is expected and the 220 kV system is expected to be available by December 2015.”

144. As per the above meeting, HVPNL has not contested about 220 kV bays at Kurukshetra and informed that 220 kV system is expected to be available by



December, 2015. Accordingly, we reject the contention of the HVPNL that COD of 2 numbers of bays associated with Ramana-Ramani line shall be considered after the COD of the 220 kV line.

145. It is further observed that HVPNL informed during the 34th Standing Committee Meeting on Power System Planning of Northern Region (SCM-NR) held on 8.8.2014 that the 220 kV system being implemented by them is expected to be available by December, 2015. Thereafter, Petitioner made various communications with HVPNL regarding the status of the 220 kV network and early execution of their 220 kV downstream lines proposed to be terminated at Kurukshetra (PGCIL Sub-station). The Petitioner also raised the issues of mismatch in several NRPC meetings. In support of the same, the Petitioner has submitted the details of coordination activity and associated communications made with HVPNL and submitted copies of letters dated 20.2.2015, 2.6.2015, 14.8.2015, 28.8.2015, 24.12.2015, 23.4.2016, 3.5.2016 and 16.6.2016 and minutes of meeting dated 15.9.2015 with HVPNL and minutes of 41st to 45th NRPC meetings held between 28.2.2018 to 24.9.2019.

146. As regards the 3rd transformer at Kurukshetra Sub-station, the relevant extracts of the Minutes of 4th meeting of Northern Regional Power Committee (Transmission Planning) held on 5.10.2021 and 12.10.2021 is as follows:

“35.0 Additional ICT at Kurukshetra (PG):

35.1 HVPNL stated that as per the information provided by Haryana SLDC, maximum loading of 830.8 MW (on 27.08.2020 at 11:31 hrs) was observed on 2x500 MVA, 400/220 kV ICTs at HVDC Kurukshetra, making the ICTs N-1 non-compliant. HVPNL further stated that there may be increase in loading of ICTs at Kurukshetra after the commissioning of proposed 220 kV substation Ramana Ramani (420 MVA) which is proposed to be connected to Kurukshetra substation through a D/c line. Therefore, HVPNL has proposed ICT augmentation at Kurukshetra.



35.2 POSOCO in its operational feedback report of Q1 (2021-22) has highlighted that loadings above 'N-1' contingency limits at Kurukshetra were observed in the month of June, 2021 on few instances.

35.3 Considering above, it was decided that a separate meeting may be convened to discuss the issue and accordingly may be incorporated in the minutes of meeting. Accordingly, a meeting was held on 21.10.2021 through video conferencing to discuss the proposal of ICT augmentation in view of the overloading observed in 400/220 kV ICTs at Kurukshetra, wherein, Powergrid confirmed that there is no space constraint for implementation of 3rd 400/220kV ICT at Kurukshetra. However, 220 kV connection to GIS hall will require a large bus duct of around 400-450 m. Generally, the bus ducts are not that long. Therefore, having a bus duct of 400-450 m long would have a significant impact on the cost.

35.4 Based on the deliberations, installation of 3rd 500 MVA, 400/220kV ICT at Kurukshetra was agreed."

147. On perusal of the above minutes, we observe that the implementation of 3rd 500 MVA, 400/220kV ICT at Kurukshetra has been agreed for N-1 contingency of the existing 2x500 MVA ICTs. Therefore, linking of COD of 2 numbers of 220 kV bays with the 3rd ICT is not relevant in the instant tariff petition.

148. The Petitioner has submitted the present status of 8 numbers 220 kV line bays and the details of the actual power flow has commenced with the completion of downstream lines of HVPNL as per following details:

Sl. No.	Particulars	Name of Line	Actual date of Power Flow
1	220 kV line bay (Kaul-1)	LILO of one circuit of 220 kV D/C Bastara – Kaul line (Kurukshetra-Kaul portion)	9.3.2019
2	220 kV line bay (Pehowa)	LILO of one circuit of 220 kV D/C Pehowa– Kaul line (Kurukshetra-Pehowa portion)	9.3.2019
3	220 kV line bay (Kaul-2)	LILO of one circuit of 220 kV D/C Pehowa– Kaul line (Kurukshetra-Kaul portion)	19.9.2019
4	220 kV line bay (Bastara)	LILO of one circuit of 220 kV D/C Bastara – Kaul line (Kurukshetra-Bastara portion)	20.9.2019
5	220 kV line bay (Salempur-1)	220 kV D/C Bhadson– Salempur line (Salempur-1)	20.7.2020
6	220 kV line bay (Salempur-2)	220 kV D/C Bhadson– Salempur line (Salempur-2)	15.8.2020
7	220 kV line bay (Ramana Ramani-1)	220 kV D/C Bhadson- Ramana Ramani line (Ramana Ramani-1)	--
8	220 kV line bay	220 kV D/C Bhadson- Ramana Ramani line	--



Sl. No.	Particulars	Name of Line	Actual date of Power Flow
	(Ramana Ramani-2)	(Ramana Ramani-2)	

149. The Petitioner vide affidavit dated 30.7.2021 has submitted the combined Auditor's Certificate for Asset-III. Further, the Petitioner has submitted Management Certificate with respect to cost bifurcation of 220 kV line bays as per its commissioning of downstream network. It is observed from the Management Certificate that the cost of Asset-III consisting of 8 bays has been bifurcated in 8 equal parts. Thus, the capital cost of each bay comes to 1/8th (one eighth) of the total capital cost of Asset-III. We direct that the proportionate transmission charges for the purpose of billing of individual 220 kV bays covered under Asset-III shall also be considered as 1/8th (one eighth) of the total transmission charges of Asset-III approved in this order for 2014-19 and 2019-24 tariff periods.

150. Therefore, the transmission charges shall be borne by HVPNL as follows:

Assets	COD approved under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations	220 kV downstream lines of HVPNL	Status of 220 kV downstream lines of HVPNL	Liability of transmission charges payable by HVPNL
Asset-III	25.3.2017	220 kV line bay (Kaul-1)	Charged on 9.3.2019	The transmission charges from 25.3.2017 to 8.3.2019 shall be payable by HVPNL and from 9.3.2019, the transmission charges of the bay shall be included in PoC Pool
		220 kV line bay (Pehowa)	Charged on 9.3.2019	The transmission charges from 25.3.2017 to 8.3.2019 shall be payable by HVPNL and from 9.3.2019,



				the transmission charges of 220 kV bay shall be included in PoC Pool
		220 kV line bay (Kaul-2)	Charged on 19.9.2019	The transmission charges from 25.3.2017 to 18.9.2019 shall be payable by HVPNL and from 19.9.2019, the transmission charges of 220 kV bay shall be included in PoC Pool
		220 kV line bay (Bastara)	Charged on 20.9.2019	The transmission charges from 25.3.2017 to 19.9.2019 shall be payable by HVPNL and from 20.9.2019, the transmission charges of 220 kV bay shall be included in PoC Pool
		220 kV line bay (Salempur-1)	Charged on 20.7.2020	The transmission charges from 25.3.2017 to 19.7.2020 shall be payable by HVPNL and from 20.7.2020, the transmission charges of 220 kV bay shall be included in PoC Pool
		220 kV line bay (Salempur-2)	Charged on 15.8.2020	The transmission charges from 25.3.2017 to 14.8.2020 shall be payable by HVPNL and from 15.8.2020, the transmission charges of 220 kV bay shall be included in PoC



				Pool
		220 kV line bay (Ramana Ramani-1)	Not commissioned yet	The transmission charges 25.3.2017 to till COD of downstream system shall be borne by HVPNL.
		220 kV line bay (Ramana Ramani-2)	Not commissioned	

Asset-V

151. The Transmission charges from the COD of Asset-V, i.e. 3.2.2015 shall be included in common pool.

152. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission system was governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010. With effect from 1.11.2020, sharing of transmission charges is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 (in short, “the 2020 Sharing Regulations”). Accordingly, the billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of the applicable Sharing Regulations as provided in Regulation 43 of the 2014 Tariff Regulations and Regulation 57 of the 2019 Tariff Regulations.

153. To summarise:



(a) The trued-up AFC allowed for the transmission assets for 2014-19 period are as follows:

Asset-I

(₹ in lakh)

Particulars	2016-17 (Pro-rata 8 days)	2017-18	2018-19
AFC	1952.31	90696.46	94139.62

Asset-II

(₹ in lakh)

Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
AFC	26.60	1460.47	1642.88

Asset-III

(₹ in lakh)

Particulars	2016-17 (Pro-rata 7 days)	2017-18	2018-19
AFC	23.11	1248.69	1317.16

Asset-IV

(₹ in lakh)

Particulars	2017-18 (Pro-rata 197 days)	2018-19
AFC	7020.45	14370.16

Combined Asset-I and Asset-IV

(₹ in lakh)

Particulars	2016-17	2017-18	2018-19
AFC	1952.31	97716.92	108509.78

Asset-V

(₹ in lakh)

Particulars	2015-16 (Pro-rata 120 days)	2016-17	2017-18	2018-19
AFC	5066.48	16270.39	16805.02	17117.01

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

(₹ in lakh)

Assets	2019-20	2020-21	2021-22	2022-23	2023-24
Combined Asset-I and Asset-IV	108282.96	107601.63	105304.55	103056.34	100794.34
Asset-II	1904.97	1907.13	1897.60	1891.53	1883.76
Asset-III	1126.85	1165.63	1152.14	1140.30	1128.83
Asset-V	16016.41	15676.23	15337.84	14912.56	14462.91



154. The Annexure given hereinafter form part of the order.

155. This order disposes of Petition No. 33/TT/2021 in terms of the above findings and discussions.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member



Annexure-I

Asset-I

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
		2016-17	2017-18	2018-19	Total			2016-17	2017-18	2018-19	
Land - Freehold	1611.96	-	-	-	-	1611.96	-	-	-	-	
Building Civil Works & Colony	18545.07	19.87	2587.49	3950.17	6557.54	25102.61	3.34%	619.74	663.28	772.46	
Transmission Line	420717.19	1236.11	13491.66	1701.99	16429.76	437146.95	0.05	487.59	22635.31	23036.43	
Sub Station	110628.68	765.68	15702.46	11393.55	27861.69	138490.37	0.05	128.47	6296.17	7011.50	
PLCC	313.09	814.88	60.48	0.00	875.36	1188.44	0.06	1.00	73.31	75.23	
IT Equipment (Incl. Software)	621.66	0.01	6.93	76.85	83.79	705.46	0.05	0.72	33.01	35.22	
Total	552437.65	2836.55	31849.03	17122.56	51808.14	604245.79	Total	1237.52	29701.08	30930.84	
								Average Gross Block (₹ in lakh)	553855.93	571198.72	595684.51
								Weighted Average Rate of Depreciation (in %)	5.20%	5.20%	5.19%



Annexure-II

Asset-II

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
		2016-17	2017-18	2018-19	Total			2016-17	2017-18	2018-19	
Land - Freehold	1216.05	-	-	-	-	1216.05	-	-	-	-	
Building Civil Works & Colony	2642.75	-	381.17	457.17	838.34	3481.10	3.34%	88.27	94.63	108.63	
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	
Sub Station	5454.43	14.18	535.83	355.22	905.23	6359.66	0.05	5.53	302.89	326.41	
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	
IT Equipment (Incl. Software)	8.07	0.00	0.02	0.82	0.84	8.91	0.05	0.01	0.43	0.45	
Total	9321.30	14.18	917.03	813.21	1744.42	11065.72	Total	93.81	397.95	435.49	
								Average Gross Block (₹ in lakh)	9328.39	9793.99	10659.11
								Weighted Average Rate of Depreciation (in %)	4.04%	4.06%	4.09%



Annexure-III**Asset-III**

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
		2016-17	2017-18	2018-19	Total			2016-17	2017-18	2018-19	
Building Civil Works & Colony	-	-	199.11	0.28	199.39	199.39	3.34%	-	3.33	6.65	
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	
Sub Station	4799.13	9.30	255.21	0.00	264.51	5063.64	0.05	4.86	260.62	267.36	
PLCC	1024.32	0.00	5.30	0.00	5.30	1029.62	0.06	1.24	65.01	65.17	
IT Equipment (Incl. Software)	62.66	0.00	0.16	0.00	0.16	62.82	0.05	0.06	3.31	3.32	
Total	5886.11	9.30	459.78	0.28	469.36	6355.47	Total	6.17	332.27	342.51	
								Average Gross Block (₹ in lakh)	5890.76	6125.30	6355.33
								Weighted Average Rate of Depreciation (in %)	5.46%	5.42%	5.39%



Asset-IV

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)	
		2017-18	2018-19	Total			2017-18	2018-19
Building Civil Works & Colony	3896.74	449.57	543.30	992.87	4889.61	3.34%	137.66	154.24
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Sub Station	77405.66	8135.08	3827.76	11962.84	89368.50	0.05	4301.78	4617.60
PLCC	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
IT Equipment (Incl. Software)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Total	81302.40	8584.65	4371.06	12955.71	94258.11	Total	4439.44	4771.84
Average Gross Block (₹ in lakh)							85594.73	92072.58
Weighted Average Rate of Depreciation (in %)							5.19%	5.18%



Annexure-V**Asset-V**

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)					Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2015-16	2016-17	2017-18	2018-19	Total			2015-16	2016-17	2017-18	2018-19	
Land - Freehold	1175.32	-	-	-	-	-	1175.32	-	-	-	-	-	
Building Civil Works & Colony	2983.73	145.73	488.23	553.60	-	1187.56	4171.29	3.34%	102.09	112.68	130.08	139.32	
Transmission Line	75217.85	3847.04	3705.70	1761.50	2.10	9316.35	84534.20	5.28%	1335.43	4272.46	4416.79	4463.35	
Sub Station	14680.02	609.98	710.31	974.44	21.24	2315.98	16996.00	5.28%	259.41	826.06	870.54	896.83	
PLCC	1081.56	11.43	10.35	35.70	-	57.48	1139.04	6.33%	22.57	69.51	70.97	72.10	
Total	95138.48	4614.18	4914.60	3325.24	23.34	12877.36	108015.84	Total	1719.50	5280.71	5488.38	5571.60	
									Average Gross Block (₹ in lakh)	97445.57	102209.96	106329.88	108004.17
									Weighted Average Rate of Depreciation (in %)	5.17%	5.17%	5.16%	5.16%



Combined Asset-I and Asset-IV

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)			Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)					
		2019-20	2020-21	Total			2019-20	2020-21	2021-22	2022-23	2023-24	
Land - Freehold	1611.96	-	-	-	1611.96	-	-	-	-	-	-	-
Building Civil Works & Colony	29992.22	3442.37	-	3442.37	33434.59	3.34%	1059.23	1116.72	1116.72	1116.72	1116.72	1116.72
Transmission Line	437146.95	891.93	-	891.93	438038.88	5.28%	23104.91	23128.45	23128.45	23128.45	23128.45	23128.45
Sub Station	227791.26	18427.74	1000.00	19427.74	247219.00	5.28%	12513.87	13026.76	13053.16	13053.16	13053.16	13053.16
PLCC	1188.44	-	-	-	1188.44	6.33%	75.23	75.23	75.23	75.23	75.23	75.23
IT Equipment (Incl. Software)	705.46	-	-	-	705.46	15.00%	105.82	105.82	105.82	105.82	105.82	105.82
Total	698436.30	22762.04	1000.00	23762.04	722198.34		36859.05	37452.98	37479.38	37479.38	37479.38	37479.38
Average Gross Block (₹ in lakh)							709817.32	721698.34	722198.34	722198.34	722198.34	722198.34
Weighted Average Rate of Depreciation (in %)							5.19%	5.19%	5.19%	5.19%	5.19%	5.19%



Annexure-VII**Asset-II**

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Land - Freehold	1216.05	-	-	1216.05	-	-	-	-	-	-
Building Civil Works & Colony	3481.10	184.42	184.42	3665.52	3.34%	119.35	122.43	122.43	122.43	122.43
Sub Station	6359.66	-	-	6359.66	5.28%	335.81	335.81	335.81	335.81	335.81
IT Equipment (Incl. Software)	8.91	-	-	8.91	15.00%	1.34	1.34	1.34	1.34	1.34
Total	11065.72	184.42	184.42	11250.14		456.50	459.58	459.58	459.58	459.58
Average Gross Block (₹ in lakh)						11158.52	11250.73	11250.73	11250.73	11250.73
Weighted Average Rate of Depreciation (in %)						4.09%	4.08%	4.08%	4.08%	4.08%



Asset-III

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)					
		2019-20	Total			2019-20	2020-21	2021-22	2022-23	2023-24	
Building Civil Works & Colony	199.39	-	-	199.39	3.34%	6.66	6.66	6.66	6.66	6.66	
Sub Station	5063.64	597.00	597.00	5660.64	5.28%	283.12	298.88	298.88	298.88	298.88	
PLCC	1029.62	109.35	109.35	1138.97	6.33%	68.64	72.10	72.10	72.10	72.10	
IT Equipment (Incl. Software)	62.82	6.51	6.51	69.33	15.00%	9.91	10.40	10.40	10.40	10.40	
Total	6355.47	712.86	712.86	7068.33		368.33	388.04	388.04	388.04	388.04	
						Average Gross Block (₹ in lakh)	6711.90	7068.33	7068.33	7068.33	7068.33
						Weighted Average Rate of Depreciation (in %)	5.49%	5.49%	5.49%	5.49%	5.49%



Asset-V

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2019- 24	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Land - Freehold	1175.32	-	-	1175.32	-	-	-	-	-	-
Building Civil Works & Colony	4171.29	-	-	4171.29	3.34%	139.32	139.32	139.32	139.32	139.32
Transmission Line	84534.20	-	-	84534.20	5.28%	4463.41	4463.41	4463.41	4463.41	4463.41
Sub Station	16996.00	-	-	16996.00	5.28%	897.39	897.39	897.39	897.39	897.39
PLCC	1139.04	-	-	1139.04	6.33%	72.10	72.10	72.10	72.10	72.10
Total	108015.84	-	-	108015.84		5572.22	5572.22	5572.22	5572.22	5572.22
Average Gross Block (₹ in lakh)						108015.84	108015.84	108015.84	108015.84	108015.84
Weighted Average Rate of Depreciation (in %)						5.16%	5.16%	5.16%	5.16%	5.16%

