

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 209/TT/2023

Coram:

**Shri Jishnu Barua, Chairperson
Shri Arun Goyal, Member
Shri P.K. Singh, Member**

Date of order: 31.03.2024

In the matt:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Busine) Regulations, 1999 and the Central Electrcity Regulatory Commission(Terms and Conditions of Tariff) Regulations, 2014 and the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for truing up of transmission tariff for the 2014-19 period and determination of transmission tariff for the 2019-24 period in respect of **Asset-1:** 3x80 MVAR Switchable Line Reactor for 765 kV S/C Gaya-Balia Transmission line along with associated bays at Gaya Sub-station, **Asset-2:** 3x80 MVAR Switchable Line Reactor for 765 kV S/C Ranchi-Dharamjaygarh Transmission Line used as Bus Reactor along with associated bays at Ranchi Sub-station, **Asset-3:** Combined Asset -1500 ICT-1 , 765/400 kV ICT-1 and Associated bays at Varanasi GIS Sub-station, 330 MVAR, 765 kV Bus Reactor-II and bay at Varanasi GIS Sub-station and 765 kV S/C Balia-Varanasi line and associated bays at both ends including 240 MVAR line reactor at Varanasi GIS Sub-station, **Asset-4:** 1500 MVA, 765/400 kV ICT-II & associated bays at Varanasi GIS Sub-station, **Asset-5:** 765 kV S/C Gaya-Varanasi Transmission Line & associated bays including 240 MVAR Line Reactor, **Asset-6:** 765 kV S/C Ranchi(New)-Dharamjaygarh line along with 3x110 MVAR Reactor at Dharamjaygarh along with associated bays, **Asset-7:** 765 kV, 3x80 MVAR Switchable line reactor for 765kV S/C Gaya-Varanasi Transmission line as Bus Reactor, along with associated bays at Gaya Sub-station, **Asset-8(A):** 1x 330 MVAR, 765 kV Bus Reactor-I and bay at 765/400 kV Varanasi GIS (reactor shifting from Sasaram Sub-station, Only associated bays) and, **Asset-8(B):** 1x330 MVAR, 765 kV Bus Reactor shifted from Sasaram under "Transmission System for Phase-I Generation Projects in Jharkhand & West Bengal-Part-A2"

And in the matter of:

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

.....Petitioner



Versus

1. Ajmer Vidyut Vitran Nigam Limited,
Corporate Office, Vidyut Bhawan,
Panchsheel Nagar, Makarwali Road,
Ajmer - 305004.
2. Jaipur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub-station Building,
Caligiri Road, Malviya Nagar,
Jaipur - 302017.
3. Jodhpur Vidyut Vitran Nigam Limited,
New Power House, Industrial Area,
Jodhpur – 342003.
4. Himachal Pradesh State Electricity Board Limited,
Vidyut Bhawan,
Kumar House Complex Building II,
Shimla - 171004.
5. Punjab State Power Corporation Limited,
The Mall, PSEB Head Office,
Patiala - 147001.
6. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula - 134109.
7. Jammu Kashmir Power Corporation Limited,
220/66/33 kV Gladni SS SLDC Building,
Narwal, Jammu.
8. Uttar Pradesh Power Corporation Limited,
Shakti Bhawan, 14, Ashok Marg,
Lucknow - 226001.
9. BSES Yamuna Power Limited,
B-Block, Shakti Kiran Bldg. (Near Karkadooma Court),
Karkadooma 2nd Floor,
New Delhi - 110092.
10. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi.



11. Tata Power Delhi Distribution Limited,
33 kV Sub-station Building,
Hudson Lane, Kingsway Camp,
North Delhi – 110009.
12. Chandigarh Administration,
Sector -9, Chandigarh.
13. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road,
Dehradun.
14. North Central Railway,
Allahabad.
15. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi – 110002.
16. Bihar State Power (Holding) Company Limited,
(Formerly Bihar State Electricity Board -BSEB),
Vidyut Bhavan, Bailey Road, Patna – 800001.
17. West Bengal State Electricity Distribution Company Limited,
Bidyut Bhawan, Bidhan Nagar,
Block DJ, Sector-II, Salt Lakecity,
Calcutta - 700091.
18. Grid Corporation of Orissa Limited,
Shahid Nagar,
Bhubaneswar - 751007.
19. Jharkhand Bijli Vitran Nigam Limited,
Engineering Building, H.E.C., Dhurwa,
Ranchi – 834004.
20. Damodar Valley Corporation,
DVC Tower, Maniktala,
Civic Centre, VIP road,
Calcutta - 700054.
21. Power Department,
Government of Sikkim,
Gangtok - 737101.

...Respondent(s)



For Petitioner: Shri B.B. Rath, PGCIL
Shri Amit Yadav, PGCIL
Ms. Supriya Singh, PGCIL
Shri Vivek Kumar Singh, PGCIL

For Respondents: None

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited for truing up of transmission tariff from the date of commercial operation (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 tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) of the 2019-24 period in respect of the following assets under “Transmission System for Phase-I Generation Projects in Jharkhand & West Bengal-Part-A2”:

Asset-1: 3x80 MVAR switchable line reactor for 765 kV S/C Gaya-Balia transmission line along with associated bays at Gaya Sub-station;

Asset-2: 3x80 MVAR switchable line reactor for 765 kV S/C Ranchi-Dharamjaygarh transmission line used as bus reactor along with associated bays at Ranchi Sub-station;

Asset-3: Combined Asset: 1500 ICT-1, 765/400 kV ICT-1 & associated bays at Varanasi GIS Sub-station, 330 MVAR, 765 kV bus reactor-II and bay at Varanasi GIS Sub-station and 765 kV S/C Balia-Varanasi line and associated bays at both ends including 240 MVAR line reactor at Varanasi GIS Sub-station

Asset-4: 1500 MVA, 765/400 kV ICT-II & associated bays at Varanasi GIS Sub-station;

Asset-5: 765 kV S/C Gaya-Varanasi transmission line & associated bays including 240 MVAR line reactor;

Asset-6: 765 kV S/C Ranchi (New)-Dharamjaygarh line along with 3x110 MVAR reactor at Dharamjaygarh along with associated bays;



Asset-7: 765 kV, 3x80 MVAR Switchable Line Reactor for 765kV S/C Gaya-Varanasi Transmission line as Bus Reactor, along with associated bays at Gaya Sub-station

Asset-8(A): 1x330 MVAR, 765 kV bus reactor-I and bay at 765/400 kV Varanasi GIS (reactor shifting from Sasaram Sub-station, only associated bays)

Asset-8(B): 1x330 MVAR, 765 kV Bus Reactor shifted from Sasaram (hereinafter referred to as the “transmission assets”).

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

“1) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition as per para 9.8 and 10.4 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 8 and 9 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 claim the overall security expenses and consequential IOWC on that security expenses separately.

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

8) Condone the delay in commissioning of the asset and Condone the delay in the filing of the instant petition.

9) Allow to bill FERV directly from the respondents.

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



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

Background

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

- a. The Board of Directors of the Petitioner's Company accorded Investment Approval (IA) for the transmission system at an estimated cost of ₹242266 lakh, including Interest During Construction (IDC) of ₹14070 lakh (at 3rd quarter, 2011 price level) vide Memorandum No C/CP/Jharkhand & West Bengal Projects (Ph-1)-Part-A2 dated 27.12.2011 with a total apportioned approved cost of ₹211152.84 lakh.
- b. Further, in the 338th meeting held on 10.3.2017, the cost of the transmission system was revised. Accordingly, the Revised Cost Estimate (RCE) for the transmission system was accorded by the Board of Directors of the Petitioner at an estimated cost of ₹264574 lakh including IDC of ₹24095 lakh (at April, 2016 price level).
- c. The original scope of work covered under the transmission system is broadly as follows:

Transmission Lines:

- 1) Ranchi New (765/400 kV Sub-station)-Dharamjaygarh/near Korba
765 kV S/C
- 2) Gaya-Varanasi 765 kV S/C
- 3) LILO of Gaya-Balia 765 kV S/C line at Varanasi

Sub-stations:

- 1) Establishment of 2x1500 MVA, 765/400 kV GIS Sub-station at
Varanasi



Reactive Compensation (Scope covered in FR):

- 1) 1 No. 765 kV, 330 MVAR Bus Reactor at 765/400 kV GIS Varanasi Sub-station
- 2) 2 Nos. 765 kV, 240 MVAR Line Reactor at 765/400 kV GIS Varanasi Sub-station
- 3) 1 No. 765 kV, 330 MVAR Line Reactor at 765/400 kV Dharamjaygarh Sub-station

d. The Revised scope of works as per RCE is given below:

Transmission Lines

- 1) Ranchi New (765/400 kV Sub-station)-Dharamjaygarh/near Korba
765 kV S/C Line
- 2) Gaya-Varanasi 765 kV S/C Line
- 3) Balia-Varanasi 765 kV S/C Line

Sub-stations

- 1) Establishment of new 2x1500 MVA, 765/400 kV GIS Sub-station at Varanasi
- 2) Extension of 765 kV Balia, 765 kV Gaya, 765 kV Ranchi (New) and 765 kV Dharamjaygarh Sub-station

Reactive Compensation

| | From end (MVAR) | To end (MVAR) |
|---------------------------------------|------------------------|----------------------|
| Ranchi New – Dharamjaygarh 765 kV S/C | 240 (switchable) | 330 (fixed) |
| Gaya – Varanasi 765 kV S/C | 240 (switchable) | 240 (fixed) |
| Balia – Varanasi 765 kV S/C | - | 240 (fixed) |
| Gaya – Balia 765 kV S/C | 240 (switchable) | - |



Bus Reactor

1) Varanasi 765 kV Sub-station: 1x330 MVAR

(Note: The 2nd 1x330 MVAR bus reactor at Varanasi would be installed by shifting 1x330 MVAR line reactor from Sasaram end of Gaya-Sasaram-Fatehpur 765 kV line)

- e. As per the IA dated 27.12.2011, the transmission system was to be executed within 32 months from the date of the IA. The details of the petitions wherein the tariff concerning the transmission assets from their respective CODs to 31.3.2019 was allowed are as follows:

| Asset number in original petition | Description | Asset-number in current petition | COD |
|---|---|----------------------------------|------------|
| Order dated 26.2.2016 in Petition No. 450/TT/2014 | | | |
| Asset-I | 3x80 MVAR Switchable Line Reactor for 765 kV S/C Gaya-Balia Transmission Line along with associated bays at Gaya Sub-station | Asset-1 | 8.1.2015 |
| Asset-II | 3x80 MVAR Switchable Line Reactor for 765 kV S/C Ranchi-Dharamjaygarh Transmission Line used as Bus Reactor along with associated bays at Ranchi Sub-station | Asset-2 | 21.12.2014 |
| Order dated 30.5.2016 in Petition No. 273/TT/2015 | | | |
| Asset-I, III, IV | Combined Asset comprising Asset-I: 1500 ICT-I, 765/400 kV ICT-I & associated bays at Varanasi GIS Sub-station Asset-III: 330 MVAR, 765 kV Bus Reactor-II and bay at Varanasi GIS Sub-station and Asset-IV: 765 kV S/C Balia-Varanasi line and associated bays at both ends including 240 MVAR Line Reactor at Varanasi GIS Sub-station | Asset-3 | 1.4.2016 |
| Asset-II | 1500 MVA, 765/400 kV ICT-II & associated bays at Varanasi GIS Sub-station | Asset-4 | 14.5.2016 |
| Asset-V | 765 kV S/C Gaya-Varanasi Transmission Line & associated bays including 240 MVAR Line Reactor | Asset-5 | 21.4.2016 |
| Asset-VI | 765 KV S/C Ranchi (New)-Dharamjaygarh line along with 3X110 MVAR Reactor at Dharamjaygarh along with associated bays | Asset-6 | 26.12.2015 |
| Order dated 14.9.2017 in Petition No. 223/TT/2016 | | | |
| Asset-I | 765 kV, 3X80 MVAR Switchable Line Reactor for 765 kV S/C Gaya-Varanasi Transmission Line as Bus Reactor, along with associated bays at Gaya Sub-station | Asset-7 | 2.1.2016 |
| Order dated 7.2.2021 in Petition No. 33/TT/2019 and order dated 20.12.2021 in Review Petition No. 18/RP/2021 | | | |



| | | | |
|------------|---|------------|--|
| Asset-I(a) | 1 X 330 MVAR, 765 kV Bus Reactor-I and bay at 765/400 kV Varanasi GIS (reactor shifting from Sasaram Sub-station, only associated bays) | Asset-8(A) | 19.4.2017 |
| Asset-I(b) | 1X330 MVAR, 765 kV Bus Reactor shifted from Sasaram | Asset-8(B) | 1.4.2012 (actual) 19.4.2017 (re- capitalization date) |

4. The complete scope of work, as per the IA, is covered in the instant petition.

5. For the purpose of determination of the transmission tariff for the 2019-24 period, all the transmission assets, namely, Assets-1 to Assets 8(A) and Asset-8(B) have been combined and are collectively referred to as the "Combined Asset" .

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

7. The Petitioner has served the petition on the Respondents, and notice of this petition has also 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 concerning the aforesaid notice published in the newspapers by the Petitioner.

8. The hearing in this matter was held on 15.12.2023 and the order was reserved.

9. This order is issued considering the submissions made by the Petitioner in the petition and *vide* affidavits dated 16.12.2022, 27.9.2023, 4.1.2024 and 2.2.2024.

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



11. The Petitioner has submitted that there is a delay in filing the instant petition and has requested to condone the same as it was beyond the control of the Petitioner.

12. We have considered the Petitioner's . The Petitioner filed Petition No. 331/MP/2019, under Regulation 76 'Power to Relax' and under Regulation 77 'Power to Remove Difficulty' of the 2019 Tariff Regulations to relax the provisions of Regulation 9(2) of the 2019 Tariff Regulations which required the Petitioner to file the tariff petitions of the existing assets by 31.10.2019. The Commission, in its order dated 28.10.2019 in Petition No. 331/MP/2019, after examination of the submissions of the Petitioner, relaxed the provisions of Regulation 9(2) of the 2019 Tariff Regulations and permitted the Petitioner to file the tariff petitions of the truing up of the existing assets for the 2014-19 period and determination of tariff for the 2019-24 period by 31.1.2020, where the final orders for the 2014-19 period had already been issued.

13. As regards the existing assets, the Commission, at the time of passing the said order for the 2014-19 period, observed that truing of the 2014-19 tariff period and determination of tariff for the 2019-24 period shall be filed by the Petitioner within three months from the date of issue of the final order for the 2014-19 period.

14. Later, NTPC and NHPC made representations seeking further extension of time. Taking into consideration the representations of NTPC and NHPC, the outbreak of the Covid-19 pandemic and the subsequent declaration of the lockdown by the Central Government, the Commission extended the date of filing of the truing up petitions of the 2014-19 period in the case of the existing generating stations and



transmission licensees up to 30.6.2020 vide suo-motu orders dated 6.7.2020 and 23.7.2020 in Petition No. 7/SM/2020. The period was further extended up to 30.9.2020 in the case of NHPC and Teesta Urja Limited, on an application filed by them, vide order dated 6.7.2020 in Petition No.7/SM/2020, and in the case of Teesta Valley, Power Transmission Limited vide order dated 23.7.2020 in Petition No.7/SM/2020.

15. Accordingly, the Commission granted an extension of time up to 30.9.2020 in the cases where tariff orders had already been issued and 90 days from the date of issue of the order where tariff orders were then to be issued. The tariff of the 2014-19 tariff period was approved vide order dated 26.2.2016 in Petition No. 450/TT/2014 for Assets-1 and 2, vide order dated 30.5.2016 in Petition No. 273/TT/2015 for Assets-3 and 6, vide order dated 14.9.2017 in Petition No. 223/TT/2016 for Asset-7 and vide order dated 7.2.2021 in Petition No. 33/TT/2019 and order dated 20.12.2021 in Review Petition No. 18/RP/2021 for Asset-8A and Asset-8B.

16. Accordingly, as per the Commission's order dated 28.10.2019 in Petition No. 331/MP/2019, the Petitioner should have filed the truing up petition by 6.5.2021 as the Commission allowed final tariff in Petition No. 33/TT/2021 vide order dated 7.2.2021. However, the Petitioner has filed the instant petition on 16.12.2022. Thus, there is a delay of 590 days in filing the instant petition. Taking into consideration the Covid-19 Pandemic and the consequent lockdown, we relax Regulation 9(2) of the 2019 Tariff Regulations and the subsequent orders issued by the Commission that requires the Petitioner to file the tariff petitions within a specific period under Regulation 76 'Power to Relax' and under Regulation 77 'Power to Remove Difficulty' of the 2019 Tariff Regulations and condone the delay of 590 days in filing of the instant petition.



TRUING UP OF ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD

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

Asset-1

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 83 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|----------------------------------|---------------|---------------|---------------|---------------|
| Depreciation | 22.81 | 126.50 | 145.06 | 151.68 | 153.22 |
| Interest on Loan | 27.75 | 145.37 | 153.65 | 147.24 | 135.03 |
| Return on Equity | 25.41 | 141.58 | 162.35 | 169.75 | 171.93 |
| Interest on Working Capital | 2.81 | 14.34 | 15.59 | 15.93 | 15.91 |
| O&M Expenses | 19.20 | 87.22 | 90.12 | 93.11 | 96.20 |
| Total | 97.98 | 515.01 | 566.77 | 577.71 | 572.29 |

Asset-2

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 101 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|-----------------------------------|---------------|---------------|---------------|---------------|
| Depreciation | 17.93 | 89.43 | 128.93 | 163.85 | 179.06 |
| Interest on Loan | 21.26 | 99.04 | 131.56 | 154.33 | 155.66 |
| Return on Equity | 19.89 | 99.66 | 143.77 | 182.87 | 200.43 |
| Interest on Working Capital | 3.94 | 16.27 | 19.26 | 21.82 | 22.95 |
| O&M Expenses | 46.72 | 174.44 | 180.24 | 186.22 | 192.40 |
| Total | 109.74 | 478.84 | 603.76 | 709.09 | 750.50 |

Asset-3

(₹ in lakh)

| Particulars | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|-----------------|-----------------|-----------------|
| Depreciation | 3573.13 | 3773.81 | 3844.45 |
| Interest on Loan | 4102.76 | 3882.66 | 3596.73 |
| Return on Equity | 4057.66 | 4282.53 | 4373.15 |
| Interest on Working Capital | 283.19 | 288.58 | 286.81 |
| O&M Expenses | 524.09 | 541.57 | 559.51 |
| Total | 12540.83 | 12769.15 | 12660.65 |

Asset-4

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 322 days) | 2017-18 | 2018-19 |
|-----------------------------|-----------------------------------|----------------|----------------|
| Depreciation | 643.91 | 777.05 | 806.14 |
| Interest on Loan | 771.58 | 814.17 | 763.60 |
| Return on Equity | 748.09 | 903.06 | 939.46 |
| Interest on Working Capital | 53.86 | 62.22 | 62.80 |
| O&M Expenses | 128.04 | 149.95 | 154.93 |
| Total | 2345.48 | 2706.45 | 2726.93 |



Asset-5

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 345 days) | 2017-18 | 2018-19 |
|-----------------------------|--------------------------------|-----------------|-----------------|
| Depreciation | 3193.16 | 3502.58 | 3531.60 |
| Interest on Loan | 3632.33 | 3621.98 | 3326.37 |
| Return on Equity | 3588.45 | 3936.37 | 3979.68 |
| Interest on Working Capital | 240.21 | 255.55 | 251.16 |
| O&M Expenses | 252.34 | 275.97 | 285.08 |
| Total | 10906.49 | 11592.45 | 11373.89 |

Asset-6

(₹ in lakh)

| Particulars | 2015-16 (Pro-rata 97 days) | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|----------------------------|-----------------|-----------------|-----------------|
| Depreciation | 1014.62 | 3965.30 | 4026.89 | 4037.58 |
| Interest on Loan | 1162.76 | 4309.65 | 3983.56 | 3633.69 |
| Return on Equity | 1138.41 | 4449.11 | 4518.34 | 4542.37 |
| Interest on Working Capital | 80.76 | 310.18 | 306.27 | 299.60 |
| O&M Expenses | 80.39 | 313.09 | 323.66 | 334.33 |
| Total | 3476.94 | 13347.33 | 13158.72 | 12847.57 |

Asset-7

(₹ in lakh)

| Particulars | 2015-16 (Pro-rata 90 days) | 2016-17 | 2017-18 | 2018-19 |
|-----------------------------|----------------------------|---------------|---------------|---------------|
| Depreciation | 31.87 | 143.87 | 164.90 | 190.30 |
| Interest on Loan | 37.02 | 157.98 | 166.47 | 178.50 |
| Return on Equity | 35.67 | 160.95 | 184.46 | 213.46 |
| Interest on Working Capital | 4.78 | 20.61 | 22.16 | 24.03 |
| O&M Expenses | 42.90 | 180.24 | 186.22 | 192.40 |
| Total | 152.24 | 663.65 | 724.21 | 798.69 |

Asset-8(A)

(₹ in lakh)

| Particulars | 2017-18 (Pro-rata 347 days) | 2018-19 |
|-----------------------------|--------------------------------|----------------|
| Depreciation | 264.23 | 285.68 |
| Interest on Loan | 292.72 | 289.35 |
| Return on Equity | 309.86 | 335.84 |
| Interest on Working Capital | 23.15 | 24.49 |
| O&M Expenses | 88.52 | 96.20 |
| Total | 978.48 | 1031.56 |

Asset-8(B)

(₹ in lakh)

| Particulars | 2017-18 (Pro-rata 347 days) | 2018-19 |
|--------------|--------------------------------|---------|
| Depreciation | 136.75 | 143.84 |



| | | |
|-----------------------------|---------------|---------------|
| Interest on Loan | 107.41 | 99.69 |
| Return on Equity | 153.11 | 161.48 |
| Interest on Working Capital | 8.52 | 8.69 |
| O&M Expenses | 0.00 | 0.00 |
| Total | 405.79 | 413.70 |

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

Asset-1

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 83 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------------------------------------|----------------------------------|---------------|---------------|---------------|---------------|
| O&M Expenses | 7.04 | 7.27 | 7.51 | 7.76 | 8.02 |
| Maintenance Spares | 12.66 | 13.08 | 13.52 | 13.96 | 14.43 |
| Receivables | 71.81 | 85.84 | 94.46 | 96.29 | 95.38 |
| Total Working Capital | 91.51 | 106.19 | 115.49 | 118.02 | 117.83 |
| Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest on Working Capital | 2.81 | 14.34 | 15.59 | 15.93 | 15.91 |

Asset-2

(₹ in lakh)

| Particulars | 2014-15 (Pro-rata 101 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|------------------------------------|-----------------------------------|---------------|---------------|---------------|---------------|
| O&M Expenses | 14.07 | 14.54 | 15.02 | 15.52 | 16.03 |
| Maintenance Spares | 25.33 | 26.17 | 27.04 | 27.93 | 28.86 |
| Receivables | 66.10 | 79.81 | 100.63 | 118.18 | 125.08 |
| Total Working Capital | 105.50 | 120.52 | 142.69 | 161.63 | 169.97 |
| Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest on Working Capital | 3.94 | 16.27 | 19.26 | 21.82 | 22.95 |

Asset-3

(₹ in lakh)

| Particulars | 2016-17 | 2017-18 | 2018-19 |
|------------------------------------|----------------|----------------|----------------|
| O&M Expenses | 43.67 | 45.13 | 46.63 |
| Maintenance Spares | 78.61 | 81.24 | 83.93 |
| Receivables | 2090.14 | 2128.19 | 2110.11 |
| Total Working Capital | 2212.42 | 2254.56 | 2240.67 |
| Rate of Interest (in %) | 12.80 | 12.80 | 12.80 |
| Interest on Working Capital | 283.19 | 288.58 | 286.81 |

Asset-4

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 322 days) | 2017-18 | 2018-19 |
|--------------|-----------------------------------|---------|---------|
| O&M Expenses | 12.10 | 12.50 | 12.91 |



| | | | |
|------------------------------------|---------------|---------------|---------------|
| Maintenance Spares | 21.77 | 22.49 | 23.24 |
| Receivables | 443.12 | 451.08 | 454.49 |
| Total Working Capital | 476.99 | 486.07 | 490.64 |
| Rate of Interest (in %) | 12.80 | 12.80 | 12.80 |
| Interest on Working Capital | 53.86 | 62.22 | 62.80 |

Asset-5

(₹ in lakh)

| Particulars | 2016-17 (Pro-rata 345 days) | 2017-18 | 2018-19 |
|------------------------------------|--------------------------------|----------------|----------------|
| O&M Expenses | 22.25 | 23.00 | 23.76 |
| Maintenance Spares | 40.05 | 41.40 | 42.76 |
| Receivables | 1923.13 | 1932.08 | 1895.65 |
| Total Working Capital | 1985.43 | 1996.48 | 1962.17 |
| Rate of Interest (in %) | 12.80 | 12.80 | 12.80 |
| Interest on Working Capital | 240.21 | 255.55 | 251.16 |

Asset-6

(₹ in lakh)

| Particulars | 2015-16 (Pro-rata 97 days) | 2016-17 | 2017-18 | 2018-19 |
|------------------------------------|-------------------------------|----------------|----------------|----------------|
| O&M Expenses | 25.28 | 26.09 | 26.97 | 27.86 |
| Maintenance Spares | 45.50 | 46.96 | 48.55 | 50.15 |
| Receivables | 2186.53 | 2224.55 | 2193.12 | 2141.26 |
| Total Working Capital | 2257.31 | 2297.60 | 2268.64 | 2219.27 |
| Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest on Working Capital | 80.76 | 310.18 | 306.27 | 299.60 |

Asset-7

(₹ in lakh)

| Particulars | 2015-16 (Pro-rata 90 days) | 2016-17 | 2017-18 | 2018-19 |
|------------------------------------|-------------------------------|---------------|---------------|---------------|
| O&M Expenses | 14.54 | 15.02 | 15.52 | 16.03 |
| Maintenance Spares | 26.17 | 27.04 | 27.93 | 28.86 |
| Receivables | 103.18 | 110.61 | 120.70 | 133.12 |
| Total Working Capital | 143.89 | 152.67 | 164.15 | 178.01 |
| Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 |
| Interest on Working Capital | 4.78 | 20.61 | 22.16 | 24.03 |

Asset-8(A)

(₹ in lakh)

| Particulars | 2017-18 (Pro-rata 347 days) | 2018-19 |
|--------------------|--------------------------------|---------|
| O&M Expenses | 7.76 | 8.02 |
| Maintenance Spares | 13.97 | 14.43 |
| Receivables | 171.54 | 171.93 |



| | | |
|------------------------------------|---------------|---------------|
| Total Working Capital | 193.27 | 194.38 |
| Rate of Interest (in %) | 12.60 | 12.60 |
| Interest on Working Capital | 23.15 | 24.49 |

Asset-8(B)

(₹ in lakh)

| Particulars | 2017-18 (Pro-rata 347 days) | 2018-19 |
|------------------------------------|--|----------------|
| O&M Expenses | 0.00 | 0.00 |
| Maintenance Spares | 0.00 | 0.00 |
| Receivables | 71.14 | 68.95 |
| Total Working Capital | 71.14 | 68.95 |
| Rate of Interest (in %) | 12.60 | 12.60 |
| Interest on Working Capital | 8.52 | 8.69 |

Date of Commercial Operation (COD)

19. The Commission, vide order dated 26.2.2016 in Petition No. 450/TT/2014, has approved the COD of Assets-1 and 2 as 8.1.2015 and 21.12.2014 respectively based on the COD certificate submitted by the Petitioner. The Petitioner did not submit RLDC and CEA energization certificates at the time of approving the COD.

20. In support of COD claim in respect of Asset-1, the Petitioner in the instant petition has submitted energization certificates issued by CEA dated 2.1.2015 and 18.9.2015 as well as RLDC charging certificate dated 24.1.2024 wherein the successful trial operation of 3X80 MVAR Line Reactor has been indicated to have been completed on 7.1.2015.

21. We have considered the Petitioner's submissions. The Commission has already approved the COD of Asset-1 as 8.1.2015 and Asset-2 as 21.12.2014 based on the COD certificates submitted by the Petitioner. However, the Petitioner was given the liberty to submit CEA Energisation Certificate and RLDC Charging Certificate at the time of truing up and the Petitioner has now submitted the same. Taking into consideration the CEA Energisation Certificate and RLDC Charging Certificate, the COD of Asset-1 is confirmed as 8.1.2015.



22. In the case of Asset-2, the Petitioner has submitted a CEA Energisation Certificate dated 18.12.2014 and a RLDC Charging Certificate dated 5.3.2015 certifying the 3X80 MVAR Line Reactor having been charged as Bus Reactor on 20.12.2014. Taking into consideration the CEA Energisation Certificate and RLDC Charging Certificate, the COD of Asset-2 is confirmed as 21.12.2014.

23. The Commission vide order dated 30.5.2016 in Petition No. 273/TT/2015 has approved the transmission tariff based on the anticipated COD of Asset-4 as 15.6.2016. The Petitioner in the instant true-up petition has claimed the actual COD of Asset-4 as 14.5.2016. In support of the COD of Asset-4, the Petitioner has submitted CEA Energisation Certificate dated 30.3.2016 and RLDC Charging Certificate dated 24.5.2016 certifying that the successful trial operation was completed on 13.5.2016.

24. Taking into consideration the CEA Energisation Certificate and RLDC Charging Certificate, the COD of Asset-4 is approved as 14.5.2016.

Capital Cost

25. The capital cost of the transmission assets has been calculated in accordance with Regulation 9(1) and 9(2) of the 2014 Tariff Regulations.

26. The Commission, vide order dated 26.2.2016 in Petition No. 450/TT/2014, allowed capital cost as on COD for Assets-1 and 2; vide order dated 30.5.2016 in Petition No. 273/TT/2015 for Assets-3 to 6; vide order dated 14.9.2017 in Petition No. 223/TT/2016 for Asset-7; vide order dated 7.2.2021 in Petition No. 33/TT/2019 followed by order dated 20.12.2021 in Review Petition No. 18/RP/2021 in Petition No. 33/TT/2019 for Asset-8A and Asset-8B and projected Additional Capital Expenditure



(ACE) for the 2014-19 period. The capital cost allowed by the Commission with respect to the transmission assets in the aforesaid orders is as follows:

(₹ in lakh)

| Asset | Capital Cost allowed as on COD | ACE | | | | | Capital Cost allowed as on 31.3.2019 |
|------------|--------------------------------|---------|---------|---------|---------|---------|--------------------------------------|
| | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | |
| Asset-1 | 1711.51 | 465.87 | 545.41 | 363.61 | 0.00 | | 3077.40 |
| Asset-2 | 951.92 | 585.02 | 1770.61 | 1180.40 | 0.00 | | 4487.95 |
| Asset-3 | 67949.76 | | | 6371.90 | 1486.31 | | 75807.97 |
| Asset-4 | 14484.76 | | | 3175.07 | 0.00 | | 17659.83 |
| Asset-5 | 64257.53 | | | 2924.30 | 2924.30 | 2924.30 | 73030.43 |
| Asset-6 | 72688.76 | | 2009.95 | 3230.25 | 647.67 | | 78576.63 |
| Asset-7 | 2498.78 | | 14.83 | 1185.44 | 550.09 | | 4249.14 |
| Asset-8(A) | 5414.11 | | | | 196.60 | 456.10 | 6066.81 |

27. The Petitioner in the instant petition has submitted the following capital cost with respect to the transmission assets for truing-up in the 2014-19 tariff period:

(₹ in lakh)

| Asset | FR Appor-tioned Approved Capital Cost | RCE Appor-tioned Approved Capital Cost | Capital cost as on COD | ACE Claimed | | | | | Total capital cost as on 31.3.2019 |
|------------|---------------------------------------|--|------------------------|-------------|---------|---------|---------|---------|------------------------------------|
| | | | | | | 2016-17 | 2017-18 | 2018-19 | |
| Asset-1 | 2211.60 | 3060.62 | 1711.97 | 456.87 | 481.13 | 192.35 | 58.24 | 0.00 | 2900.56 |
| Asset-2 | 4254.00 | 3834.29 | 951.92 | 585.02 | 311.5 | 1167.01 | 155.6 | 420.8 | 3591.85 |
| Asset-3 | 6740.146 | 81068.14 | 67949.76 | | | 3760.93 | 2340.88 | 335.37 | 74386.94 |
| Asset-4 | 13376.12 | 18377.57 | 14157.63 | | | 636.99 | 962.93 | 183.89 | 15941.44 |
| Asset-5 | 63159.29 | 68361.89 | 64257.53 | | | 1835.03 | 984.71 | 126.12 | 67203.39 |
| Asset-6 | 67215.97 | 78132.95 | 73156.46 | | 2009.95 | 1106.68 | 312.18 | 96.51 | 76681.78 |
| Asset-7 | 4318.37 | 4195.20 | 2498.78 | | 14.83 | 454.86 | 303.65 | 658.3 | 3930.42 |
| Asset-8(A) | 7034.14 | 7543.52 | 6406.49 | | | | 273.42 | 110.34 | 6790.25 |
| Asset-8(B) | - | - | 2724.23 | | | | | | 2724.23 |



Cost Over-run

28. The Petitioner has submitted the comparison of the Revised Cost Estimate (RCE) cost of ₹264574 lakh against the approved cost of ₹242266 lakh. The comparison details are summarized as follows:

| Sr. No. | Variation on account of: | Variation | |
|---------|--|------------------|----------------|
| | | (₹ in lakh) | (in %) |
| (i) | Price Variation | | |
| A | DPR to LOA (on competitive bidding while award) | (3241.00) | (-1.34) |
| B | LoA provisions (towards PV based on indices) | 13018.00 | 5.37 |
| | Sub-Total (PV) | 9777.00 | 4.04 |
| (ii) | Variation in quantities of approved Items | (890.00) | (-0.37) |
| (iii) | Addition & Deletion of scope | (3212.00) | (-1.33) |
| (iv) | Land and Compensation | 6925.00 | 2.86 |
| (v) | FERV | | |
| a | Due to LoAs awarded in foreign currency | 9453.00 | 3.90 |
| b | Due to foreign loan revaluation | 253.00 | 0.10 |
| | Sub-Total (FERV) | 9705.00 | - 4.01 |
| (vi) | Other Reasons (IEDC and IDC) | | |
| a | IEDC (including contingencies) | (10021.00) | (4.14) |
| b | IDC | 10025.00 | 4.14 |
| | Sub- Total (IEDC & IDC) | 0.04 | 0.002 |
| | Grand Total | 22308.2 | 9.21 |

Reasons for variation in cost

29. The Petitioner has attributed cost variation under the project to the inflationary trend prevailing during the execution of the project, market forces prevailing at the time of the bidding process of various packages, decrease in cost due to change in wind zone, change in the type of towers/foundations, addition and deletion of scope/items, land and compensation, foreign exchange rate variation and variation in IDC/IEDC.



30. The Petitioner has submitted that the capital cost as on 31.3.2019 is within the apportioned approved cost as per RCE. Therefore, there is no cost over-run as per RCE as on 31.3.2019. The details of element-wise cost variation are given in Form-5.

31. We have considered the Petitioner’s submissions . The capital cost of the transmission assets as on 31.3.2019, is within the revised cost estimates and as such there is no cost over-run.

Time Over-run

32. As per the IA dated 27.12.2011, the scheduled date of commercial operation of the transmission assets was 26.8.2014, However, the transmission assets were put into commercial operation as follows:

| Assets | SCOD | COD | Time over-run | Time over-run condoned |
|---------------|-------------|------------|----------------------|-------------------------------|
| Asset-1 | 26.8.2014 | 8.1.2015 | 135 days | Not condoned |
| Asset-2 | | 21.12.2014 | 117 days | Not condoned |
| Asset-3 | | 1.4.2016 | 584 days | Condoned |
| Asset-4 | | 14.5.2016 | 627 days | Condoned |
| Asset-5 | | 21.4.2016 | 604 days | Condoned |
| Asset-6 | | 26.12.2015 | 487 days | Condoned |
| Asset-7 | | 2.1.2016 | 494 days | Condoned |
| Asset-8(A) | | 19.4.2017 | 966 days | Not condoned |

33. There was a time over-run of 135 days and 117 days in the case of Assets-1 and 2 respectively. The Commission vide its order dated 26.2.2016 in Petition No. 450/TT/2014, did not condone the time over-run with respect to Assets-1 and 2. The Commission in the said order dated 26.2.2016, granted liberty to the Petitioner to justify the time over-run with respect to Assets-1 and 2 at the time of truing up. The relevant extract of the said order is as follows:

“15. We have considered the submission of the petitioner and note that in the case of Asset-I, the petitioner has not submitted any valid reasons or documentary evidence for delay of the line. In the case of Asset-II, we are of the view that the Switchable line reactor has been charged as Bus reactor to control voltage profile without the line being commissioned but the petitioner has not submitted any documentary evidence for delay. Hence, we are not inclined to condone the delay of 135 days and 117 days



in case of Asset-I and Asset-II respectively. Accordingly, IDC and IEDC for the said period is disallowed. However, the petitioner may justify the time over-run in case of the instant assets at the time of truing-up along with documentary evidence. We would like to make it clear that liberty is given in this case as an exception and it will not be quoted as a precedent. We would further like to state that the petitioner will not be eligible for any interest on the increase in the capital cost, if any, due to condonation of time over-run as the petitioner has failed to submit adequate justification for time over-run in case of the instant assets in the first instance.”

34. In the case of Assets-3, 4, 5, 6, 7 and Asset-8(A), there was a time over-run of 584 days, 627 days, 604 days, 487 days, 494 days and 966 days respectively. The Commission has condoned the time over-run in the case of Asset-3, Asset-5 and Asset-6 vide order dated 30.5.2016 in Petition No. 273/TT/2015. In the case of Asset-4, the Petitioner, vide order dated 30.5.2016 in Petition No. 273/TT/2015 had anticipated the COD to be 15.6.2016 leading to an anticipated delay of 659 days that was condoned by the Commission vide order dated 30.5.2016. However, COD of Asset-4 has been approved as 14.5.2016 in the instant petition which is before the anticipated COD of 15.6.2016.

35. The Commission had condoned the total time over-run of 494 days in the case of Asset-7 vide order dated 14.9.2017 in Petition No. 223/TT/2016. However, the Commission did not condone the time over-run for Asset-8(A) vide order dated 7.2.2021 in Petition No. 33/TT/2019 and as well as vide order dated 20.12.2021 in Review Petition No. 18/RP/2021 in Petition No. 33/TT/2019.

36. The Commission in the order dated 26.2.2016 in Petition No.450/TT/2014 granted liberty to the Petitioner to submit reasons for time over-run for Assets-1 and 2 at the time of truing up. Accordingly, the Petitioner has submitted the following reasons for the delay with respect to Assets-1 and 2:

Reasons for time over-run in the case of Asset-1

37. The Petitioner has submitted that the time over-run of 135 days in the case of Asset-1 is due to the corresponding delay in 400 kV D/C Maithon-Gaya Transmission



Line and 400 kV D/C Koderma-Gaya transmission line due to forest clearance and RoW issues which were beyond the control of the Petitioner. Since evacuation of power from a number of generating stations was required, an interim arrangement was proposed in the Standing Committee Meeting (SCM) on Power Systems on 8.2.2012. The interim arrangement was proposed to be withdrawn upon completion of the 400 kV D/C Maithon-Gaya Transmission Line and the 400 kV D/C Koderma-Gaya transmission line. The chronology of events submitted by the Petitioner justifying the time over-run in the case of Asset-1 is as follows:

| From | To | Period of hindrance (days) | Over lapping period (days) | Net hindrance (days) | Cause of Hindrance |
|--------------|------------|----------------------------|----------------------------|----------------------|--|
| 1.9.2012 | 30.12.2014 | 126 | 0 | 126 | Time over-run in case of 400 kV D/C Maithon-Gaya TL and 400 kV D/C Koderma-Gaya line |
| 30.12.2014 | 12.9.2015 | 9 | 0 | 9 | Delay in completion of the interim arrangement |
| Total | | 135 | 0 | 135 | |

38. The Petitioner has also submitted the following details for time over-run vide affidavit dated 27.9.2023:

| Activity | As per plan | | As per Actual | | Time over-run (in days) |
|---------------------------|-------------|------------|---------------|------------|-------------------------|
| | Start | Finish | Start | Finish | |
| Supplies | 16.5.2012 | 27.12.2013 | 16.5.2012 | 31.12.2013 | 135 |
| Foundation | 17.5.2012 | 15.2.2014 | 17.5.2012 | 31.8.2014 | |
| Erection | 18.3.2013 | 7.3.2014 | 18.3.2013 | 30.9.2014 | |
| Testing and Commissioning | 28.3.2014 | 26.8.2014 | 1.10.2014 | 8.1.2015 | |

Reasons for time over-run in the case of Asset-2:

39. The time over-run of 117 days in the case of Asset-2 was due to delay in achieving the COD of the associated transmission line i.e., 765 kV S/C Ranchi-



Dharamjaygarh, which was beyond the control of Petitioner. The Petitioner has submitted that Asset-2 was to be commissioned with 765 kV Ranchi-Dharamjaygarh line. However, it was delayed for reasons beyond the control of the Petitioner and time over-run of the same has been condoned by the Commission vide order dated 30.5.2016 in Petition No. 273/TT/2015. The chronology of events justifying the delay in the execution of Asset-2 is as follows

| From | To | Period of hindrance (days) | Overlapping period (days) | Net hindrance (days) | Cause of hindrance |
|--------------|------------|----------------------------|---------------------------|----------------------|--|
| 26.8.2014 | 21.12.2014 | 117 | 0 | 117 | Delay in the commissioning of associated transmission line; i.e. 765 kV S/C Ranchi-Dharamjaygarh |
| Total | | 117 | 0 | 117 | |

40. The Petitioner has also submitted the following details for time over-run vide affidavit dated 27.9.2023:

| Activity | As per plan | | As per Actual | | Delay (In days) |
|---------------------------|-------------|------------|---------------|------------|-----------------|
| | Start | Finish | Start | Finish | |
| Supplies | 16.5.2012 | 27.12.2013 | 16.5.2012 | 31.12.2013 | 117 |
| Foundation | 17.5.2012 | 15.2.2014 | 17.5.2012 | 31.6.2014 | |
| Erection | 18.3.2013 | 7.3.2014 | 18.3.2013 | 15.9.2014 | |
| Testing and Commissioning | 28.3.2014 | 26.8.2014 | 1.10.2014 | 21.12.2014 | |

Analysis and Decision

41. We have considered the Petitioner's submissions with respect to the time over-run in the case of Assets-1 and 2. As per the Investment Approval dated 27.12.2011, these assets were scheduled to be put into commercial operation by 26.8.2014, against which Assets-1 and 2 were put into commercial operation on 8.1.2015 and 21.12.2014, with a delay of 135 days and 117 days respectively.

Asset-1



42. The Petitioner installed 3X80 MVAR Switchable Line Reactors for the 765 kV S/C Balia-Gaya transmission line at Gaya Sub-station. The Petitioner was not able to charge the Gaya-Balia S/C transmission line at 765 kV and charged it at 400 kV on 1.9.2012 to facilitate the evacuation of power due to a delay in the execution of 400 kV Maithon-Gaya and Koderma-Gaya transmission lines. The Petitioner charged Gaya-Balia S/C at 400 kV level as Gaya-Biharshariff on 1.2.2012 and Sasaram-Balia on 1.3.2012 under an interim arrangement, which has been approved by 21st ERPC held on 21.4.2012. The relevant extracts of the interim arrangement are as follows:

“Item No.A4.12: PGCIL’s proposal for interim arrangement for facilitating evacuation of power from upcoming DVC generation projects in Eastern Region

A number of generation projects having a total capacity of about 5700 MW were proposed by DVC for commissioning in Eastern region with major beneficiaries in Northern region. The associated transmission systems planned to pool power at Gaya through Maithon-Gaya & Koderma-Gaya 400kV D/C quad line and thereon to Sasaram and Balia points for further transfer of power to NR are under various stages of construction.

One unit of 500 MW each at Mejia, Maithon-RB & Koderma have been commissioned and another unit of 500 MW each at Durgapur STPS and Maithon RB TPS would be commissioned shortly. Adequate transmission systems are being developed matching with the progressive commissioning of generating units.

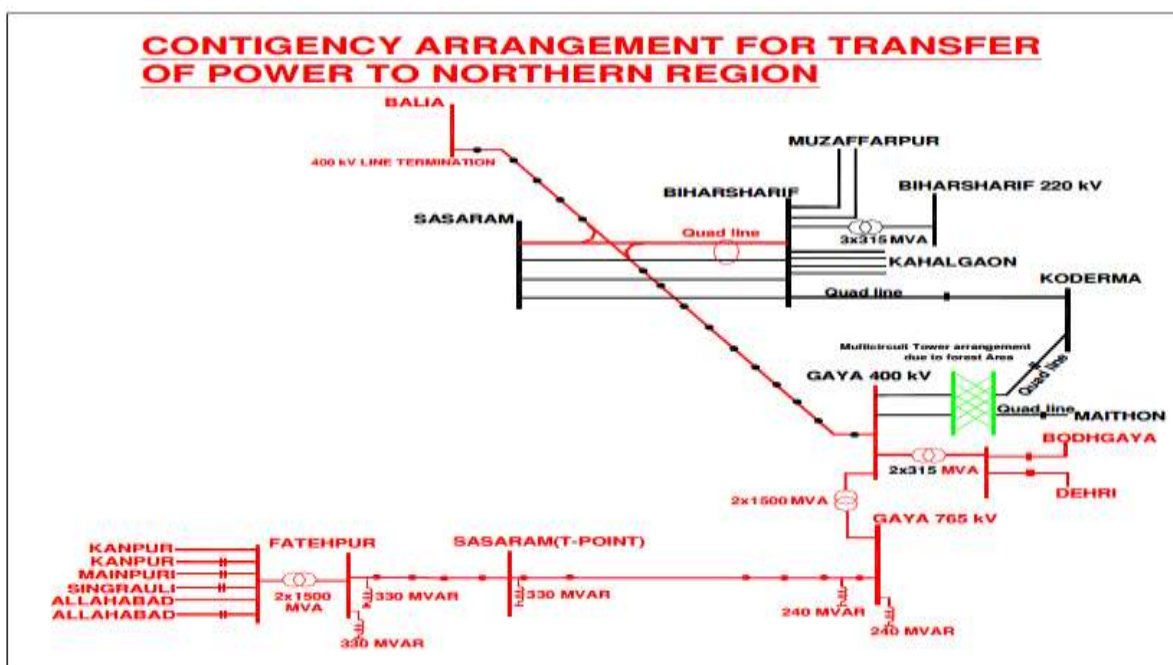
PGCIL pointed out that Koderma-Gaya and Maithon-Gaya 400 kV D/C lines would pass through dense forest stretch of about 37 kms(shown in the diagram). The forest clearances are awaited and it is anticipated to be cleared by March,2012. In order to judiciously utilize the Right of Way, POWERGRID was of the view that construction of these two D/C lines in the forest stretch would be made on one tower by using multi circuit tower configuration and after the forest clearance the lines are expected to be commissioned in six months i.e. by October,2012.

In order to avoid any evacuation constraint for generation projects, PGCIL as an interim measure proposed terminating Gaya-Balia 765 kV S/C(to be completed shortly), utilizing existing one circuit of Biharshariff-Sasaram 400 kV lines,-one section at Biharsariff and other section at Sasaram and thereby making Gaya-Biharsariff section and Balia-Sasaram section. (as shown in the diagram)

It would enable to create a 400 kV Biharsariff-Gaya S/C and Sasaram-Balia 400 kV S/C line to transfer DVC power to Fatehpur and Balia in NR. This interim arrangement would also enable Bihar to draw power from Gaya through the 400/220 kV 2x315 MVA ICTs and Dehri-Bodhgaya 220 kV line being LILoed at Gaya.

The PGCIL opined that the above interim arrangement would be withdrawn and the normal/planned transmission system would be in place upon completion on Maithon-Gaya 400 kV D/C and Koderma -Gaya 400 kV D/C lines.





Deliberation in TCC meeting

POWERGRID confirmed that 400 kV Gaya-Biharshariff and 400 kV Sasaram-Balia were charged on 31.01.2012 and 29.02.2012 respectively. PGCIL also confirmed that 765 kV Gaya-Sasaram -Fatehpur S/C line was charged on 31.03.2012 and the 765/400 kV transformers at Gaya were also charged on 30.03.2012.

After Completion of 400 kV Maithon-Gaya and Koderma-Gaya the scheme would be reverted back to original scheme, that is, 765 kV Gaya-Balia S/C.

TCC referred the above interim arrangement to ERPC for information.

Deliberation in ERPC meeting

ERPC noted.

”

43. The Commission in order dated 31.3.2016 in Petition No. 280/TT/2015 has held as follows:

“20. In case of Asset-IV, the petitioner submitted that the asset could have been commissioned only after commissioning of 400 kV D/C Maithan Gaya line and 400 kV D/C Kodarma Gaya line as per original scheme. However, the completion of 400 kV D/C Maithan Gaya line and 400 kV D/C Kodarma Gaya line got delayed due to pending forest clearance. Therefore, to commission the Asset-IV, an interim arrangement was approved and completed on 30.12.2014. Thereafter, the Asset-IV was commissioned on 8.1.2015. We are of the view that the time taken for commissioning the Asset-IV is beyond the petitioner and hence 28 months delays are condoned.”



44. The Commission, in its order dated 31.3.2016 in Petition No. 280/TT/2015, had condoned the time over-run of around 28 months in the case of 765 kV line bay at 765/400 kV Gaya Sub-station associated with 765 kV S/C Gaya Balia transmission line. The switchable line reactors at the Gaya Sub-station could not be installed without the execution of the Gaya Balia transmission line at 765 kV. The time over-run in the case of Asset-1, the line reactor, was due to the non-execution of the transmission line at a rated voltage of 765 kV. Therefore, the Commission is of the view that the time over-run of 135 days in the case of Asset-1 was beyond the control of the Petitioner and the same is condoned.

Asset-2

45. The Petitioner has charged the 3X80 MVAR switchable line reactor as a bus reactor due to a delay in achieving the commercial operation of the 765 kV S/C Ranchi – Dharamjaygarh transmission line. The charging of the line reactor as a bus reactor is approved in the 28th ERPC meeting. Accordingly, Asset-2, i.e. 3X80 MVAR SLR was charged as a bus reactor and put under commercial operation on 21.12.2014. The Commission, in its order dated 30.5.2016 in Petition No. 273/TT/2015, had condoned the time over-run of the associated transmission line i.e. 765 kV S/C Ranchi – Dharamjaygarh transmission line. The relevant extracts of the same are as follows:

“39. As regards the delay in commissioning of 765 kV S/C Ranchi - Dharamjaygarh line, it is passing through various forest stretches in Jharkhand and Chhattisgarh states. These are Naxalites affected regions, where the delay was recurring in nature. Further, in Chhattisgarh portion, rerouting of the line was necessitated due to the presence of coal block areas. On perusal of the available documents, it is observed that the delay can be attributed to the delay in obtaining forest clearance (34 months in Jharkhand and 29 months in Chhattisgarh), obstruction of work in the state of Jharkhand due to Maoist activities and rerouting of the line due to coal blocks encountered in the route of the line in Chhattisgarh. There were further hindrances due to collapse of a bridge that led to delay in completing the tree felling activities. The petitioner has submitted that the same was resolved through a letter dated 1.9.2015 requesting the Divisional Manager, Minor Forest Produce Division, Ranchi to provide another nearby depot so that the balance logs & timber transported.



40. In view of the above discussion and having perused the available documents and as discussed in the aforesaid paras, we are of the view that the time over-run in the commissioning of the instant assets is beyond the control of the petitioner and not attributable to the petitioner. The time overrun of 584 days in Asset I, III, & IV, of 604 days in Asset V, of 487 days in Asset VI and an of 659 days in Asset II is thus being condoned.”

46. The Commission had condoned the time over-run of around 584 days in the case of the 765 kV S/C Ranchi-Dharamjaygarh transmission line. Asset-2 is associated with the 765 kV S/C Ranchi-Dharamjaygarh transmission line, and it can be put into commercial operation only along with the said line. The COD of Asset-2, i.e. the line reactor, is affected by the time over-run in the case of the transmission line. As the Commission has already condoned the time over-run in the case of the 765 kV S/C Ranchi-Dharamjaygarh transmission line, we condone the time over-run in the case of the Asset-2, which was dependent on the said line. Accordingly, the time over-run of 117 days in the case of Asset-2 is condoned.

47. The details of time over-run condoned in case of Asset-1 and Asset-2 are as follows:

| Asset | SCOD as per IA | COD | Time over-run | Time over-run condoned | Time over-run not condoned |
|---------|----------------|------------|---------------|------------------------|----------------------------|
| Asset-1 | 14.10.2014 | 8.1.2015 | 135 days | 135 days | 0 days |
| Asset-2 | 14.10.2014 | 21.12.2014 | 117 days | 117 days | 0 days |

Interest During Construction (IDC) and Incidental Expenditure During Construction (IEDC)

48. As stated above, there is a time over-run in the case of all the transmission assets. We have condoned the time over-run in the case of Assets-1 to 7. The time over-run in the case of Asset-8(A) is not condoned. The Petitioner has claimed IDC for the transmission assets and has submitted the statement showing the IDC claim.

49. The discharge of IDC liability as on COD and thereafter is as follows:



| Asset | IDC as per Auditor's Certificate | IDC Discharged upto COD | IDC discharged during the year | | | | Total IDC |
|------------|----------------------------------|-------------------------|--------------------------------|---------|---------|---------|-----------|
| | | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | |
| Asset-1 | 64.46 | 11.34 | 24.16 | 28.96 | 0.00 | 0.00 | 64.46 |
| Asset-2 | 46.50 | 15.18 | 17.61 | 13.71 | 0.00 | 0.00 | 46.50 |
| Asset-3 | 5502.63 | 3930.22 | | | 1572.41 | 0.00 | 5502.63 |
| Asset-4 | 1776.44 | 1512.99 | | | 262.53 | 0.92 | 1776.44 |
| Asset-5 | 7814.35 | 5901.58 | | | 1912.77 | 0.00 | 7814.35 |
| Asset-6 | 8904.13 | 6821.74 | | 1159.40 | 922.99 | 0.00 | 8904.13 |
| Asset-7 | 182.88 | 114.31 | | 31.74 | 36.82 | 0.00 | 182.88 |
| Asset-8(A) | 1025.59 | 921.03 | | 104.56 | 0.00 | 0.00 | 1025.59 |

50. The Petitioner, vide affidavit dated 4.1.2024, submitted the details of foreign loan computations, exchange rate and other financing charges for Asset-6, which have been taken into consideration for IDC computation.

51. The Petitioner has submitted an IDC computation statement, which contains the name of the loan, drawl date, loan amount, interest rate, and interest claimed. The IDC is worked out based on the details given in the IDC statement. Further, the loan amount as on COD has been mentioned in Form-6 and Form-9C. On scrutiny of these documents, certain discrepancies have been noted such as a mismatch in the loan amount between the 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 the loan amount as per Form-9C. The IDC is considered as on COD, the summary of discharge of IDC liability up to COD and thereafter IDC for tariff determination are as follows:

| Asset | IDC as per Auditor certificate | IDC disallowed | IDC allowed | IDC discharged up to COD | IDC discharged during the year | | | |
|---------|--------------------------------|----------------|-------------|--------------------------|--------------------------------|---------|---------|---------|
| | | | | | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| Asset-1 | 64.46 | 1.19 | 63.27 | 11.34 | 24.16 | 27.77 | 0.00 | 0.00 |
| Asset-2 | 46.50 | 0.60 | 45.90 | 15.18 | 17.61 | 13.11 | 0.00 | 0.00 |



| Asset | IDC as per Auditor certificate | IDC disallowed | IDC allowed | IDC discharged up to COD | IDC discharged during the year | | | |
|----------|--------------------------------|----------------|-------------|--------------------------|--------------------------------|---------|---------|---------|
| | | | | | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| Asset-3 | 5502.63 | 0.00 | 5502.63 | 3929.37 | | | 1572.41 | 0.85 |
| Asset-4 | 1776.44 | 0.00 | 1776.44 | 1512.99 | | | 262.53 | 0.92 |
| Asset-5 | 7814.35 | 2.08 | 7812.27 | 5901.58 | | | 1910.69 | 0.00 |
| Asset-6 | 8904.13 | 39.64 | 8864.49 | 6816.72 | | 1159.40 | 888.37 | 0.00 |
| Asset-7 | 182.88 | 0.98 | 181.90 | 114.31 | | 31.74 | 35.85 | 0.00 |
| Asset-8A | 1025.59 | 819.48 | 206.11 | 206.11 | | | 0.00 | 0.00 |

52. The Petitioner has claimed IEDC for the transmission assets as per the Auditor's Certificate and also considered the IEDC disallowed due to time over-run not condoned. The Petitioner has submitted that IEDC mentioned in the Auditor's Certificate is on a cash basis and was paid up to the COD.

53. There is a disallowance of IEDC in the case of Asset-8(A) due to the delay not being condoned. The IEDC considered as on COD for tariff determination in respect of the transmission assets is as follows:

(₹ in lakh)

| Asset | IEDC as per Auditor's Certificate | IEDC disallowed due to time over-run not condoned | IEDC allowed |
|------------|-----------------------------------|---|--------------|
| Asset-1 | 33.04 | 0.00 | 33.04 |
| Asset-2 | 18.16 | 0.00 | 18.16 |
| Asset-3 | 589.02 | 0.00 | 589.02 |
| Asset-4 | 165.70 | 0.00 | 165.70 |
| Asset-5 | 1008.48 | 0.00 | 1008.48 |
| Asset-6 | 750.46 | 0.00 | 750.46 |
| Asset-7 | 56.22 | 0.00 | 56.22 |
| Asset-8(A) | 359.72 | 179.12 | 180.60 |

Initial Spares

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



“(d) Transmission System
Transmission line: 1.00%
Transmission Sub-station (Green Field): 4.00%
Transmission Sub-station (Brown Field): 6.00%
Gas Insulated Sub-station :5.00%
Communication System: 3.5%”

55. The Initial Spares claimed by the Petitioner in respect of the transmission assets are as follows:

| Asset | Particulars | Plant and Machinery Cost (excluding IDC and IEDC, land cost and cost of civil works) (₹ in lakh) (A) | Initial Spares claimed (₹ in lakh) (B) | Allowable Initial Spares (₹ in lakh) (C)=(A-B)XD/100-D | Ceiling as per Regulations in % (D) |
|------------|-------------------|--|--|--|-------------------------------------|
| Asset-1 | Sub-station | 2645.65 | 99.78 | 162.50 | 6.00% |
| Asset-2 | Sub-station | 3064.38 | 122.00 | 187.81 | 6.00% |
| Asset-3 | Sub-station | 33007.90 | 1045.49 | 1682.23 | 5.00% |
| | Transmission Line | 34176.09 | 796.53 | 337.17 | 1.00% |
| Asset-4 | Sub-station | 14278.94 | 676.00 | 715.94 | 5.00% |
| Asset-5 | Sub-station | 6808.54 | 12.74 | 357.67 | 5.00% |
| | Transmission Line | 51990.09 | 520.00 | 519.90 | 1.00% |
| Asset-6 | Sub-station | 3138.54 | 202.02 | 187.44 | 6.00% |
| | Transmission Line | 63514.68 | 616.57 | 635.33 | 1.00% |
| Asset-7 | Sub-station | 3850.68 | 152.00 | 236.09 | 6.00% |
| Asset-8(A) | Sub-station | 5694.29 | 5.73 | 299.40 | 5.00% |

56. Initial Spares discharge statement submitted by the Petitioner in respect of the transmission assets is as follows:

| (₹ in lakh) | |
|----------------------------|--------------|
| Asset-1 | |
| Particulars | Sub-station |
| Expenditure up to COD | 61.12 |
| Expenditure during 2015-16 | 23.20 |
| Expenditure during 2016-17 | 15.47 |
| Total | 99.78 |



| Asset-2 | |
|----------------------------|---------------|
| Particulars | Sub-station |
| Expenditure up to COD | 79.74 |
| Expenditure during 2015-16 | 25.01 |
| Expenditure during 2016-17 | 17.25 |
| Total | 122.00 |

(₹ in lakh)

| Asset-3 | | |
|----------------------------|-------------------|----------------|
| Particulars | Transmission Line | Sub-station |
| Expenditure up to COD | 730.01 | 806.14 |
| Expenditure during 2016-17 | 66.52 | 185.44 |
| Expenditure during 2017-18 | 0.00 | 53.91 |
| Total | 796.53 | 1045.49 |

(₹ in lakh)

| Asset-4 | |
|----------------------------|---------------|
| Particulars | Sub-station |
| Expenditure up to COD | 338.71 |
| Expenditure during 2016-17 | 96.33 |
| Expenditure during 2017-18 | 111.62 |
| Expenditure during 2018-19 | 0.00 |
| Expenditure during 2019-20 | 129.34 |
| Total | 676.00 |

(₹ in lakh)

| Asset-5 | | |
|----------------------------|-------------------|--------------|
| Particulars | Transmission Line | Sub-station |
| Expenditure up to COD | 375.70 | 12.74 |
| Expenditure during 2016-17 | 128.08 | 0.00 |
| Expenditure during 2017-18 | 16.22 | 0.00 |
| Total | 520.00 | 12.74 |

(₹ in lakh)

| Asset-6 | | |
|----------------------------|-------------------|---------------|
| Particulars | Transmission Line | Sub-station |
| Expenditure up to COD | 462.46 | 184.77 |
| Expenditure during 2015-16 | 35.50 | 0.00 |
| Expenditure during 2016-17 | 55.88 | 17.25 |
| Expenditure during 2017-18 | 62.73 | 0.00 |
| Total | 616.57 | 202.02 |

(₹ in lakh)

| Asset-7 | |
|-----------------------|-------------|
| Particulars | Sub-station |
| Expenditure up to COD | 36.09 |



| | |
|----------------------------|---------------|
| Expenditure during 2016-17 | 22.53 |
| Expenditure during 2017-18 | 93.38 |
| Total | 152.00 |

(₹ in lakh)

| Asset-8(A) | |
|-----------------------|-------------|
| Particulars | Sub-station |
| Expenditure up to COD | 5.73 |
| Total | 5.73 |

57. We have considered the submissions of the Petitioner. The Initial Spares in respect of the transmission assets are allowed as per the respective percentage of the plant and machinery cost as on the cut-off date on an individual basis. Initial Spares approved in respect of the transmission assets are as follows:

(₹ in lakh)

| Asset | Particulars | Plant and Machinery Cost (excluding IDC and IEDC, land cost and cost of civil works) | Initial Spares claimed (₹ in lakh) | Ceiling limit as per Regulations (in %) | Allowable Initial Spares (₹ in lakh) | Excess Initial Spares (₹ in lakh) | Initial Spares allowed (₹ in lakh) |
|--------------|--------------------------|--|------------------------------------|---|--------------------------------------|-----------------------------------|------------------------------------|
| Asset-1 | Sub-station | 2645.65 | 99.78 | 6.00% | 162.50 | 0.00 | 99.78 |
| Asset-2 | Sub-station | 3064.38 | 122.00 | 6.00% | 187.81 | 0.00 | 122.00 |
| Asset-3 | Sub-station | 33007.90 | 1045.49 | 5.00% | 1682.23 | 0.00 | 1045.49 |
| | Transmission Line | 34176.09 | 796.53 | 1.00% | 337.17 | 459.36 | 337.17 |
| Asset-4 | Sub-station | 14278.94 | 676.00 | 5.00% | 715.94 | 0.00 | 676.00 |
| Asset-5 | Sub-station | 6808.54 | 12.74 | 5.00% | 357.67 | 0.00 | 12.74 |
| | Transmission Line | 51990.09 | 520.00 | 1.00% | 519.90 | 0.10 | 519.90 |
| Asset-6 | Sub-station | 3138.54 | 202.02 | 6.00% | 187.44 | 14.58 | 187.44 |
| | Transmission Line | 63514.68 | 616.57 | 1.00% | 635.33 | 0.00 | 616.57 |
| Asset-7 | Sub-station | 3850.68 | 152.00 | 6.00% | 236.09 | 0.00 | 152.00 |
| Asset-8(A) | Sub-station | 5694.29 | 5.73 | 5.00% | 299.40 | 0.00 | 5.73 |
| Total | Transmission Line | | 1933.1 | | 1492.40 | 459.46 | 1473.64 |
| | Sub-station | | 2315.76 | | 3829.08 | 14.58 | 2301.18 |



58. Further, the Petitioner has submitted that the Initial Spares are included in the capital cost as on COD and additional capitalization as provided in the Auditor's certificates. Hence, a further adjustment in the capital cost on account of discharged and un-discharged Initial Spares is not required. Only excess Initial Spares are being adjusted in the year in which they were discharged.

Capital Cost as on COD

59. The details of capital cost approved as on COD in respect of the transmission assets are as follows:

(₹ in lakh)

| Asset | Capital cost claimed as on COD (A) | Disallowed as on COD (B) | | | | | Capital cost approved as on COD (C = A-B) |
|------------|------------------------------------|--------------------------|--------|-----------------------|-------------------|---------------|---|
| | | IDC | IEDC | Excess Initial Spares | Undis-charged IDC | Shifting Cost | |
| Asset-1 | 1711.97 | 1.19 | 0.00 | 0.00 | 51.93 | 0.00 | 1658.85 |
| Asset-2 | 951.92 | 0.60 | 0.00 | 0.00 | 30.72 | 0.00 | 920.60 |
| Asset-3 | 67949.76 | 0.00 | 0.00 | 392.84 | 1573.26 | 0.00 | 65983.66 |
| Asset-4 | 14157.63 | 0.00 | 0.00 | 0.00 | 263.45 | 0.00 | 13894.18 |
| Asset-5 | 64257.53 | 2.08 | 0.00 | 0.00 | 1910.69 | 0.00 | 62344.76 |
| Asset-6 | 73156.46 | 39.64 | 0.00 | 0.00 | 2047.77 | 0.00 | 71069.05 |
| Asset-7 | 2498.78 | 0.98 | 0.00 | 0.00 | 67.59 | 0.00 | 2430.21 |
| Asset-8(A) | 6406.49 | 819.48 | 179.12 | 0.00 | 0.00 | 5.68 | 5402.21 |
| Asset-8(B) | 2724.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2724.23 |

Shifting/Re-capitalisation

60. The Petitioner has submitted that Asset-8(B), i.e., 1x330 MVAR, 765 kV bus reactor shifted from Sasaram for use as a bus reactor. The said reactor has already been de-capitalized from Sasaram Sub-station at the stage of true-up of the 2014-19 tariff period in Petition No. 406/TT/2020, and re-capitalization of the shifted reactor in the instant project was allowed vide order dated 7.2.2021 in Petition No. 33/TT/2019. The details of the shifted reactor considered in Petition No. 33/TT/2019 and Petition No. 406/TT/2020 are as follows:



(₹ in lakh)

| Asset | Original COD | Date of recapitalisation in the instant petition | Date of decapitalisation in Petition No. 33/TT/2019 | Debt-Equity ratio at the time of capitalization | Original book value of the asset being recapitalised asset | Corresponding cumulative depreciation as on date of decapitalisation | Corresponding cumulative repayment as on date of decapitalisation |
|------------|--------------|--|---|---|--|--|---|
| Asset-8(B) | 1.4.2012 | 19.4.2017 | 5.3.2016 | 70:30 | 2724.23 | 649.61 | 649.61 |

Additional Capital Expenditure (ACE)

61. The Commission had allowed ACE for the transmission assets for the 2014-19 period vide order dated 26.2.2016 in Petition No. 450/TT/2014 for Assets-1 and 2; vide order dated 30.5.2016 in Petition No. 273/TT/2015 for Assets-3 to 6; vide order dated 14.9.2017 in Petition No. 223/TT/2016 for Asset-7; vide order dated 7.2.2021 in Petition No. 33/TT/2019 followed by order dated 20.12.2021 in Review Petition No. 18/RP/2021 in Petition No. 33/TT/2019 for Asset-8(A) and Asset-8(B) and projected ACE for the 2014-19 period under clause 14(1)(i) of the 2014 Tariff Regulations.

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

| Asset | COD | Cut-off date |
|------------|------------|--------------|
| Asset-1 | 8.1.2015 | 31.3.2018 |
| Asset-2 | 21.12.2014 | 31.3.2017 |
| Asset-3 | 1.4.2016 | 31.3.2019 |
| Asset-4 | 14.5.2016 | 31.3.2019 |
| Asset-5 | 21.4.2016 | 31.3.2019 |
| Asset-6 | 26.12.2015 | 31.3.2018 |
| Asset-7 | 2.1.2016 | 31.3.2019 |
| Asset-8(A) | 19.4.2017 | 31.3.2020 |

63. The asset-wise details of the ACE claimed by the Petitioner are as follows:



(₹ in lakh)

| Asset | FR Appor- tioned Approved Cost | RCE Appor- tioned Approve d Cost | Capital Cost as on COD | Actual ACE for | | | | | Total cost as on 31.3.2019 |
|------------|---|--|------------------------------|----------------|---------|---------|---------|---------|-------------------------------|
| | | | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | |
| Asset-1 | 3750.91 | 3060.62 | 1711.97 | 456.87 | 481.13 | 192.35 | 58.24 | 0.00 | 2900.56 |
| Asset-2 | 4530.42 | 3834.29 | 951.92 | 585.02 | 311.5 | 1167.01 | 155.6 | 420.8 | 3591.85 |
| Asset-3 | 67401.46 | 81068.14 | 67949.76 | | | 3760.93 | 2340.88 | 335.37 | 74386.94 |
| Asset-4 | 13376.12 | 18377.57 | 14157.63 | | | 636.99 | 962.93 | 183.89 | 15941.44 |
| Asset-5 | 63159.29 | 68361.89 | 64257.53 | | | 1835.03 | 984.71 | 126.12 | 67203.39 |
| Asset-6 | 67215.97 | 78132.95 | 73156.46 | | 2009.95 | 1106.68 | 312.18 | 96.51 | 76681.78 |
| Asset-7 | 4318.37 | 4195.20 | 2498.78 | | 14.83 | 454.86 | 303.65 | 658.3 | 3930.42 |
| Asset-8(A) | 7034.14 | 7543.52 | 6406.49 | | | | 273.42 | 110.34 | 6790.25 |
| Asset-8(B) | | | 2724.23 | | | | | | 2724.23 |

64. The Petitioner has also submitted the vendor-wise details of ACE claimed for the transmission assets.

65. We have considered the submissions of the Petitioner. The ACE claimed by the Petitioner is towards balance and retention payments, and works deferred for execution are approved under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations. The capital cost approved for the 2014-19 tariff period in respect of the transmission assets is as follows:

Asset-1

(₹ in lakh)

| Particulars | Regulation | ACE allowed | | | |
|---|------------------------|---------------|---------------|---------------|--------------|
| | | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| Balance and retention payments for liabilities other than IDC | 14(1)(i) and 14(1)(ii) | 456.87 | 481.13 | 192.35 | 58.24 |
| Add: IDC Discharged after COD | | 24.16 | 27.77 | 0.00 | 0.00 |
| Less: Excess Initial Spare | | 0.00 | 0.00 | 0.00 | 0.00 |
| Total ACE | | 481.03 | 508.90 | 192.35 | 58.24 |

Asset-2

(₹ in lakh)

| Particulars | Regulation | ACE allowed | | | | |
|-------------|--------------|-------------|---------|---------|---------|---------|
| | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Balance and | 14(1)(i) and | 585.02 | 311.50 | 1167.01 | 155.60 | 420.80 |



| | | | | | | |
|---|-----------|---------------|---------------|----------------|---------------|---------------|
| retention payments for liabilities other than IDC | 14(1)(ii) | | | | | |
| Add: IDC Discharged after COD | | 17.61 | 13.11 | 0.00 | 0.00 | 0.00 |
| Less: Excess Initial Spare | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total ACE | | 602.63 | 324.61 | 1167.01 | 155.60 | 420.80 |

Asset-3

(₹ in lakh)

| Particulars | Regulation | ACE allowed | | |
|---|------------|----------------|----------------|---------------|
| | | 2016-17 | 2017-18 | 2018-19 |
| Balance and retention payments for liabilities other than IDC | 14(1)(i) | 3760.93 | 2340.88 | 335.37 |
| Add: IDC Discharged after COD | | 1572.41 | 0.85 | 0.00 |
| Less: Excess Initial Spare (Transmission Line) | | 66.52 | 0.00 | 0.00 |
| Total ACE | | 5266.82 | 2341.72 | 335.37 |

Asset-4

(₹ in lakh)

| Particulars | Regulation | ACE allowed | | |
|---|------------|---------------|---------------|---------------|
| | | 2016-17 | 2017-18 | 2018-19 |
| Balance and retention payments for liabilities other than IDC | 14(1)(i) | 636.99 | 962.93 | 183.89 |
| Add: IDC Discharged after COD | | 262.53 | 0.92 | 0.00 |
| Less: Excess Initial Spare | | 0.00 | 0.00 | 0.00 |
| Total ACE | | 899.52 | 963.85 | 183.89 |

Asset-5

(₹ in lakh)

| Particulars | Regulation | ACE allowed | | |
|---|------------|----------------|---------------|---------------|
| | | 2016-17 | 2017-18 | 2018-19 |
| Balance and retention payments for liabilities other than IDC | 14(1)(i) | 1835.03 | 984.71 | 126.12 |
| Add: IDC Discharged after COD | | 1910.69 | 0.00 | 0.00 |
| Less: Excess Initial Spare (Transmission Line) | | 0.00 | 0.10 | 0.00 |
| Total ACE | | 3745.72 | 984.61 | 126.12 |



Asset-6

(₹ in lakh)

| Particulars | Regulation | ACE allowed | | | |
|---|------------|----------------|----------------|---------------|--------------|
| | | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Balance and retention payments for liabilities other than IDC | 14(1)(i) | 2009.95 | 1106.68 | 312.18 | 96.51 |
| Add: IDC Discharged after COD | | 1159.40 | 888.37 | 0.00 | 0.00 |
| Less: Excess Initial Spare (Sub-station) | | 0.00 | 14.58 | 0.00 | 0.00 |
| Total ACE | | 3169.35 | 1980.47 | 312.18 | 96.51 |

Asset-7

(₹ in lakh)

| Particulars | Regulation | ACE allowed | | | |
|---|------------|--------------|---------------|---------------|---------------|
| | | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Balance and retention payments for liabilities other than IDC | 14(1)(i) | 14.83 | 454.86 | 303.65 | 658.30 |
| Add: IDC Discharged after COD | | 31.74 | 35.85 | 0.00 | 0.00 |
| Less: Excess Initial Spare | | 0.00 | 0.00 | 0.00 | 0.00 |
| Total ACE | | 46.57 | 490.71 | 303.65 | 658.30 |

Asset-8(A)

(₹ in lakh)

| Particulars | Regulation | ACE allowed | |
|---|------------|---------------|---------------|
| | | 2017-18 | 2018-19 |
| Balance and retention payments for liabilities other than IDC | 14(1)(i) | 273.42 | 110.34 |
| Add: IDC Discharged after COD | | 0.00 | 0.00 |
| Less: Excess Initial Spare | | 0.00 | 0.00 |
| Less: Shifting Cost | | 78.54 | 0.00 |
| Total ACE | | 194.88 | 110.34 |

66. Accordingly, the capital cost allowed for tariff during the 2014-19 period for the transmission assets is as follows:

(₹ in lakh)

| Asset | Apportioned Approved Cost as per RCE | Capital Cost as on COD | Actual ACE | | | | | Total cost as on 31.3.2019 |
|----------------|--------------------------------------|------------------------|------------|---------|---------|---------|---------|----------------------------|
| | | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | |
| Asset-1 | 3060.62 | 1658.85 | 481.03 | 508.90 | 192.35 | 58.24 | 0.00 | 2899.37 |



| | | | | | | | | |
|-------------------|----------|----------|--------|---------|---------|---------|--------|----------|
| Asset-2 | 3834.29 | 920.60 | 602.63 | 324.61 | 1167.01 | 155.60 | 420.80 | 3591.25 |
| Asset-3 | 81068.14 | 65983.66 | | | 5266.82 | 2341.72 | 335.37 | 73927.57 |
| Asset-4 | 18377.57 | 13894.18 | | | 899.52 | 963.85 | 183.89 | 15941.44 |
| Asset-5 | 68361.89 | 62344.76 | | | 3745.72 | 984.61 | 126.12 | 67201.21 |
| Asset-6 | 78132.95 | 71069.05 | | 3169.35 | 1980.47 | 312.18 | 96.51 | 76627.55 |
| Asset-7 | 4195.20 | 2430.21 | | 46.57 | 490.71 | 303.65 | 658.30 | 3929.44 |
| Asset-8(A) | 7543.52 | 5402.21 | | | | 194.88 | 110.34 | 5707.43 |
| Asset-8(B) | - | 2724.23 | | | | | | 2724.23 |

Debt-Equity ratio

67. The Petitioner has claimed a debt-equity ratio of 70:30 as on the COD of the transmission assets. The debt-equity ratio of 70:30 is considered as provided under Regulation 19 of the 2014 Tariff Regulations. The details of the debt and equity as on the COD and as on 31.3.2019 for the transmission assets approved for tariff of the 2014-19 tariff period are as follows:

Asset-1

| Funding | Capital Cost as on COD (₹ in lakh) | (in %) | ACE in 2014-19 (₹ in lakh) | (in %) | Capital Cost as on 31.3.2019 (₹ in lakh) | (in %) |
|----------------|---|---------------|-----------------------------------|---------------|---|---------------|
| Debt | 1161.20 | 70.00 | 868.36 | 70.00 | 2029.56 | 70.00 |
| Equity | 497.66 | 30.00 | 372.16 | 30.00 | 869.81 | 30.00 |
| Total | 1658.85 | 100.00 | 1240.52 | 100.00 | 2899.37 | 100.00 |

Asset-2

| Funding | Capital Cost as on COD (₹ in lakh) | (in %) | ACE in 2014-19 (₹ in lakh) | (in %) | Capital Cost as on 31.3.2019 (₹ in lakh) | (in %) |
|----------------|---|---------------|-----------------------------------|---------------|---|---------------|
| Debt | 644.42 | 70.00 | 1869.46 | 70.00 | 2513.88 | 70.00 |
| Equity | 276.18 | 30.00 | 801.20 | 30.00 | 1077.38 | 30.00 |
| Total | 920.60 | 100.00 | 2670.65 | 100.00 | 3591.25 | 100.00 |

Asset-3

| Funding | Capital Cost as on COD (₹ in lakh) | (in %) | ACE in 2014-19 (₹ in lakh) | (in %) | Capital Cost as on 31.3.2019 (₹ in lakh) | (in %) |
|----------------|---|---------------|-----------------------------------|---------------|---|---------------|
| Debt | 46188.56 | 70.00 | 5560.74 | 70.00 | 51749.30 | 70.00 |
| Equity | 19795.10 | 30.00 | 2383.17 | 30.00 | 22178.27 | 30.00 |
| Total | 65983.66 | 100.00 | 7943.91 | 100.00 | 73927.57 | 100.00 |



Asset-4

| Funding | Capital Cost as on COD (₹ in lakh) | (in %) | ACE in 2014-19 (₹ in lakh) | (in %) | Capital Cost as on 31.3.2019 (₹ in lakh) | (in %) |
|--------------|------------------------------------|---------------|----------------------------|---------------|--|---------------|
| Debt | 9725.93 | 70.00 | 1433.08 | 70.00 | 11159.01 | 70.00 |
| Equity | 4168.25 | 30.00 | 614.18 | 30.00 | 4782.43 | 30.00 |
| Total | 13894.18 | 100.00 | 2047.26 | 100.00 | 15941.44 | 100.00 |

Asset-5

| Funding | Capital Cost as on COD (₹ in lakh) | (in %) | ACE in 2014-19 (₹ in lakh) | (in %) | Capital Cost as on 31.3.2019 (₹ in lakh) | (in %) |
|--------------|------------------------------------|---------------|----------------------------|---------------|--|---------------|
| Debt | 43641.33 | 70.00 | 3399.52 | 70.00 | 47040.85 | 70.00 |
| Equity | 18703.43 | 30.00 | 1456.94 | 30.00 | 20160.36 | 30.00 |
| Total | 62344.76 | 100.00 | 4856.45 | 100.00 | 67201.21 | 100.00 |

Asset-6

| Funding | Capital Cost as on COD (₹ in lakh) | (in %) | ACE in 2014-19 (₹ in lakh) | (in %) | Capital Cost as on 31.3.2019 (₹ in lakh) | (in %) |
|--------------|------------------------------------|---------------|----------------------------|---------------|--|---------------|
| Debt | 49748.33 | 70.00 | 3890.95 | 70.00 | 53639.29 | 70.00 |
| Equity | 21320.71 | 30.00 | 1667.55 | 30.00 | 22988.27 | 30.00 |
| Total | 71069.05 | 100.00 | 5558.51 | 100.00 | 76627.55 | 100.00 |

Asset-7

| Funding | Capital Cost as on COD (₹ in lakh) | (in %) | ACE in 2014-19 (₹ in lakh) | (in %) | Capital Cost as on 31.3.2019 (₹ in lakh) | (in %) |
|--------------|------------------------------------|---------------|----------------------------|---------------|--|---------------|
| Debt | 1701.15 | 70.00 | 1049.46 | 70.00 | 2750.61 | 70.00 |
| Equity | 729.06 | 30.00 | 449.77 | 30.00 | 1178.83 | 30.00 |
| Total | 2430.21 | 100.00 | 1499.23 | 100.00 | 3929.44 | 100.00 |

Asset-8(A)

| Funding | Capital Cost as on COD (₹ in lakh) | (in %) | ACE in 2014-19 (₹ in lakh) | (in %) | Capital Cost as on 31.3.2019 (₹ in lakh) | (in %) |
|--------------|------------------------------------|---------------|----------------------------|---------------|--|---------------|
| Debt | 3781.55 | 70.00 | 213.65 | 70.00 | 3995.20 | 70.00 |
| Equity | 1620.66 | 30.00 | 91.57 | 30.00 | 1712.23 | 30.00 |
| Total | 5402.21 | 100.00 | 305.22 | 100.00 | 5707.43 | 100.00 |

Asset-8(B)

| Funding | Capital Cost as on COD (₹ in lakh) | (in %) | ACE in 2014-19 (₹ in lakh) | (in %) | Capital Cost as on 31.3.2019 (₹ in lakh) | (in %) |
|--------------|------------------------------------|---------------|----------------------------|---------------|--|---------------|
| Debt | 1906.96 | 70.00 | 0.00 | 70.00 | 1906.96 | 70.00 |
| Equity | 817.27 | 30.00 | 0.00 | 30.00 | 817.27 | 30.00 |
| Total | 2724.23 | 100.00 | 0.00 | 100.00 | 2724.23 | 100.00 |

Depreciation

68. The Petitioner's claim towards depreciation in this petition was higher than the depreciation allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 for Asset-1, and vide order dated 30.5.2016 in Petition No. 273/TT/2015 for Assets-3 to 6. The Petitioner has neither given any justification for claiming higher depreciation nor has he made any specific prayer for allowing higher depreciation in this petition. A similar issue has been dealt with in order dated 9.5.2020 in Petition No. 19/TT/2020. The relevant portion of the order dated 9.5.2020 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 a part 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 sub-station 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”

69. In line with the said order dated 9.5.2020 in Petition No. 19/TT/2020, depreciation @5.28% has been considered for IT equipment as part of the Sub-station up to 31.3.2019 while truing up the capital expenditure for the 2014-19 tariff 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 of the 2019 Tariff Regulations. The Gross Block during the 2014-19 tariff period has been depreciated at the weighted average rate of depreciation (WAROD). WAROD at Annexure-I has been worked out after taking into account the depreciation rates of assets as specified in the 2014 Tariff Regulations. The depreciation allowed during the 2014-19 tariff period in respect of the transmission assets is as follows:

(₹ in lakh)

| | | Asset-1 | | | | |
|---|--|---------------------------------------|----------------|----------------|----------------|----------------|
| | Particulars | 2014-15 (Pro-rata 83 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| | Depreciation | | | | | |
| A | Opening Gross Block | 1658.85 | 2139.88 | 2648.78 | 2841.13 | 2899.37 |
| B | ACE | 481.03 | 508.90 | 192.35 | 58.24 | 0.00 |
| C | Closing Gross Block (A+B) | 2139.88 | 2648.78 | 2841.13 | 2899.37 | 2899.37 |
| D | Average Gross Block (A+C)/2 | 1899.37 | 2394.33 | 2744.95 | 2870.25 | 2899.37 |
| E | Weighted Average Rate of Depreciation (in %) | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| F | Balance useful life of the asset | 25 | 25 | 24 | 23 | 22 |
| G | Elapsed life at the beginning of the year (Year) | 0 | 0 | 1 | 2 | 3 |
| H | Aggregate Depreciable Value | 1709.43 | 2154.90 | 2470.46 | 2583.22 | 2609.43 |
| I | Combined Depreciation during the year | 22.81 | 126.47 | 145.00 | 151.62 | 153.15 |
| J | Aggregate Cumulative Depreciation | 22.81 | 149.29 | 294.29 | 445.90 | 599.06 |
| K | Remaining Depreciable Value (H-J) | 1686.62 | 2005.61 | 2176.17 | 2137.32 | 2010.37 |



(₹ in lakh)

| Asset-2 | | | | | | |
|---------|--|--------------------------------|--------------|---------------|---------------|---------------|
| | Particulars | 2014-15 (Pro-rata 101 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| | Depreciation | | | | | |
| A | Opening Gross Block | 920.60 | 1523.23 | 1847.84 | 3014.85 | 3170.45 |
| B | ACE | 602.63 | 324.61 | 1167.01 | 155.60 | 420.80 |
| C | Closing Gross Block (A+B) | 1523.23 | 1847.84 | 3014.85 | 3170.45 | 3591.25 |
| D | Average Gross Block (A+C)/2 | 1221.92 | 1685.54 | 2431.35 | 3092.65 | 3380.85 |
| E | Weighted Average Rate of Depreciation (in %) | 5.31 | 5.30 | 5.30 | 5.30 | 5.30 |
| F | Balance useful life of the asset | 24 | 24 | 23 | 22 | 21 |
| G | Elapsed life at the beginning of the year (Year) | 0 | 0 | 1 | 2 | 3 |
| H | Aggregate Depreciable Value | 1099.72 | 1516.98 | 2188.21 | 2783.39 | 3042.77 |
| I | Combined Depreciation during the year | 17.94 | 89.41 | 128.90 | 163.81 | 179.03 |
| J | Aggregate Cumulative Depreciation | 17.94 | 107.35 | 236.25 | 400.06 | 579.09 |
| K | Remaining Depreciable Value (H-J) | 1081.78 | 1409.63 | 1951.96 | 2383.32 | 2463.67 |

(₹ in lakh)

| Asset-3 | | | | |
|---------|--|----------------|----------------|----------------|
| | Particulars | 2016-17 | 2017-18 | 2018-19 |
| | Depreciation | | | |
| A | Opening Gross Block | 65983.66 | 71250.48 | 73592.20 |
| B | ACE | 5266.82 | 2341.72 | 335.37 |
| C | Closing Gross Block (A+B) | 71250.48 | 73592.20 | 73927.57 |
| D | Average Gross Block (A+C)/2 | 68617.07 | 72421.34 | 73759.89 |
| E | Weighted Average Rate of Depreciation (in %) | 5.21 | 5.21 | 5.21 |
| F | Balance useful life of the asset | 30 | 29 | 28 |
| G | Elapsed life at the beginning of the year (Year) | 0 | 1 | 2 |
| H | Aggregate Depreciable Value | 60898.81 | 64322.65 | 65527.34 |
| I | Combined Depreciation during the year | 3572.09 | 3772.81 | 3843.46 |
| J | Aggregate Cumulative Depreciation | 3572.09 | 7344.90 | 11188.36 |
| K | Remaining Depreciable Value (H-J) | 57326.71 | 56977.75 | 54338.98 |



(₹ in lakh)

| Asset-4 | | | | |
|---------|--|--------------------------------|---------------|---------------|
| | Particulars | 2016-17 (Pro-rata 322 days) | 2017-18 | 2018-19 |
| | Depreciation | | | |
| A | Opening Gross Block | 13894.18 | 14793.70 | 15757.55 |
| B | ACE | 899.52 | 963.85 | 183.89 |
| C | Closing Gross Block (A+B) | 14793.70 | 15757.55 | 15941.44 |
| D | Average Gross Block (A+C)/2 | 14343.94 | 15275.63 | 15849.50 |
| E | Weighted Average Rate of Depreciation (in %) | 5.09 | 5.09 | 5.09 |
| F | Balance useful life of the asset | 25 | 25 | 24 |
| G | Elapsed life at the beginning of the year (Year) | 0 | 0 | 1 |
| H | Aggregate Depreciable Value | 12481.27 | 13319.79 | 13836.27 |
| I | Combined Depreciation during the year | 643.90 | 777.05 | 806.14 |
| J | Aggregate Cumulative Depreciation | 643.90 | 1420.96 | 2227.09 |
| K | Remaining Depreciable Value (H-J) | 11837.37 | 11898.83 | 11609.18 |

(₹ in lakh)

| Asset-5 | | | | |
|---------|--|--------------------------------|----------------|----------------|
| | Particulars | 2016-17 (Pro-rata 345 days) | 2017-18 | 2018-19 |
| | Depreciation | | | |
| A | Opening Gross Block | 62344.76 | 66090.48 | 67075.09 |
| B | ACE | 3745.72 | 984.61 | 126.12 |
| C | Closing Gross Block (A+B) | 66090.48 | 67075.09 | 67201.21 |
| D | Average Gross Block (A+C)/2 | 64217.62 | 66582.79 | 67138.15 |
| E | Weighted Average Rate of Depreciation (in %) | 5.26 | 5.26 | 5.26 |
| F | Balance useful life of the asset | 34 | 34 | 33 |
| G | Elapsed life at the beginning of the year (Year) | 0 | 0 | 1 |
| H | Aggregate Depreciable Value | 57581.72 | 59710.37 | 60210.20 |
| I | Combined Depreciation during the year | 3193.10 | 3502.48 | 3531.48 |
| J | Aggregate Cumulative Depreciation | 3193.10 | 6695.58 | 10227.06 |
| K | Remaining Depreciable Value (H-J) | 54388.62 | 53014.80 | 49983.15 |

(₹ in lakh)

| Asset-6 | | | | | |
|---------|---------------------|-------------------------------|----------|----------|----------|
| | Particulars | 2015-16 (Pro-rata 97 days) | 2016-17 | 2017-18 | 2018-19 |
| | Depreciation | | | | |
| A | Opening Gross Block | 71069.05 | 74238.40 | 76218.86 | 76531.04 |

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| Asset-6 | | | | | |
|----------------|--|---|----------------|----------------|----------------|
| | Particulars | 2015-16 (Pro-rata 97 days) | 2016-17 | 2017-18 | 2018-19 |
| B | ACE | 3169.35 | 1980.47 | 312.18 | 96.51 |
| C | Closing Gross Block (A+B) | 74238.40 | 76218.86 | 76531.04 | 76627.55 |
| D | Average Gross Block (A+C)/2 | 72653.72 | 75228.63 | 76374.95 | 76579.30 |
| E | Weighted Average Rate of Depreciation (in %) | 5.27 | 5.27 | 5.27 | 5.27 |
| F | Balance useful life of the asset | 34 | 34 | 33 | 32 |
| G | Elapsed life at the beginning of the year (Year) | 0 | 0 | 1 | 2 |
| H | Aggregate Depreciable Value | 65388.35 | 67705.77 | 68737.46 | 68921.37 |
| I | Combined Depreciation during the year | 1014.55 | 3963.76 | 4024.02 | 4034.72 |
| J | Aggregate Cumulative Depreciation | 1014.55 | 4978.31 | 9002.33 | 13037.06 |
| K | Remaining Depreciable Value (H-J) | 64373.80 | 62727.46 | 59735.13 | 55884.31 |

(₹ in lakh)

| Asset-7 | | | | | |
|----------------|--|---|----------------|----------------|----------------|
| | Particulars | 2015-16 (Pro-rata 90 days) | 2016-17 | 2017-18 | 2018-19 |
| | Depreciation | | | | |
| A | Opening Gross Block | 2430.21 | 2476.78 | 2967.49 | 3271.14 |
| B | ACE | 46.57 | 490.71 | 303.65 | 658.30 |
| C | Closing Gross Block (A+B) | 2476.78 | 2967.49 | 3271.14 | 3929.44 |
| D | Average Gross Block (A+C)/2 | 2453.50 | 2722.14 | 3119.32 | 3600.29 |
| E | Weighted Average Rate of Depreciation (in %) | 5.28 | 5.28 | 5.28 | 5.28 |
| F | Balance useful life of the asset | 24 | 24 | 23 | 22 |
| G | Elapsed life at the beginning of the year | 0 | 0 | 1 | 2 |
| H | Aggregate Depreciable Value | 2208.15 | 2449.92 | 2807.39 | 3240.26 |
| I | Combined Depreciation during the year | 31.88 | 143.84 | 164.84 | 190.24 |
| J | Aggregate Cumulative Depreciation | 31.88 | 175.72 | 340.56 | 530.80 |
| K | Remaining Depreciable Value (H-J) | 2176.27 | 2274.21 | 2466.83 | 2709.46 |

(₹ in lakh)

| Asset-8(A) | | | |
|-------------------|---------------------|--|----------------|
| | Particulars | 2017-18 (Pro-rata 347 days) | 2018-19 |
| | Depreciation | | |
| A | Opening Gross Block | 5402.21 | 5597.09 |

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| Asset-8(A) | | | |
|-------------------|--|--|----------------|
| | Particulars | 2017-18 (Pro-rata 347 days) | 2018-19 |
| B | ACE | 194.88 | 110.34 |
| C | Closing Gross Block (A+B) | 5597.09 | 5707.43 |
| D | Average Gross Block (A+C)/2 | 5499.65 | 5652.26 |
| E | Weighted Average Rate of Depreciation (in %) | 5.04 | 5.04 |
| F | Balance useful life of the asset | 25 | 25 |
| G | Elapsed life at the beginning of the year (Year) | 0 | 0 |
| H | Aggregate Depreciable Value | 4735.55 | 4872.90 |
| I | Combined Depreciation during the year | 263.55 | 284.97 |
| J | Aggregate Cumulative Depreciation | 263.55 | 548.52 |
| K | Remaining Depreciable Value (H-J) | 4472.00 | 4324.38 |

(₹ in lakh)

| Asset-8(B) | | | |
|-------------------|--|--|----------------|
| | Particulars | 2017-18 (Pro-rata 347 days) | 2018-19 |
| | Depreciation | | |
| A | Opening Gross Block | 2724.23 | 2724.23 |
| B | ACE | 0.00 | 0.00 |
| C | Closing Gross Block (A+B) | 2724.23 | 2724.23 |
| D | Average Gross Block (A+C)/2 | 2724.23 | 2724.23 |
| E | Weighted Average Rate of Depreciation (in %) | 5.28 | 5.28 |
| F | Balance useful life of the asset | 25 | 25 |
| G | Elapsed life at the beginning of the year (Year) | 0 | 0 |
| H | Aggregate Depreciable Value | 2451.81 | 2451.81 |
| I | Combined Depreciation during the year | 136.75 | 143.84 |
| J | Aggregate Cumulative Depreciation | 786.36 | 930.20 |
| K | Remaining Depreciable Value (H-J) | 1665.45 | 1521.61 |

70. The details of depreciation allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 for Assets-1 and 2; vide order dated 30.5.2016 in Petition No. 273/TT/2015 for Assets-3 to 6; vide order dated 14.9.2017 in Petition No. 223/TT/2016 for Asset-7 and vide order dated 7.2.2021 in Petition No. 33/TT/2019 followed by order dated 20.12.2021 in Review Petition No. 18/RP/2021 in Petition No. 33/TT/2019 for Asset-8(A) and Asset-8(B), depreciation claimed by the Petitioner in



the instant petition and true-up depreciation with respect to the transmission assets in the instant order is as follows:

| (₹ in lakh) | | | | | |
|--|---------|---------|---------|---------|----------|
| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Asset-1 | | | | | |
| Allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 | 22.59 | 114.12 | 116.82 | 116.82 | 116.82 |
| Claimed by the Petitioner in the instant petition | 22.81 | 126.50 | 145.06 | 151.68 | 153.22 |
| Approved after true-up in this order | 22.81 | 126.47 | 145.00 | 151.62 | 153.15 |
| Asset-2 | | | | | |
| Allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 | 17.41 | 125.16 | 198.51 | 225.06 | 225.06 |
| Claimed by the Petitioner in the instant petition | 17.93 | 89.43 | 128.93 | 163.85 | 179.06 |
| Approved after true-up in this order | 17.94 | 89.41 | 128.90 | 163.81 | 179.03 |
| Asset-3 | | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 3456.64 | 6939.27 | 10421.89 |
| Claimed by the Petitioner in the instant petition | | | 3573.13 | 3773.81 | 3844.45 |
| Approved after true-up in this order | | | 3572.09 | 3772.81 | 3843.46 |
| Asset-4 | | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 539.73 | 1219.05 | 1898.38 |
| Claimed by the Petitioner in the instant petition | | | 643.91 | 777.05 | 806.14 |
| Approved after true-up in this order | | | 643.90 | 777.05 | 806.14 |
| Asset-5 | | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 3140.56 | 6463.18 | 9785.80 |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|-------------------|----------------|----------------|----------------|----------------|
| Claimed by the Petitioner in the instant petition | | | 3193.16 | 3502.58 | 3531.60 |
| Approved after true-up in this order | | | 3193.10 | 3502.48 | 3531.48 |
| | Asset-6 | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | 938.02 | 4477.36 | 8016.71 | 11556.05 |
| Claimed by the Petitioner in the instant petition | | 1014.62 | 3965.30 | 4026.89 | 4037.58 |
| Approved after true-up in this order | | 1014.55 | 3963.76 | 4024.02 | 4034.72 |
| | Asset-7 | | | | |
| Allowed vide order dated 14.9.2017 in Petition No. 223/TT/2016 | | 32.02 | 163.49 | 209.96 | 224.48 |
| Claimed by the Petitioner in the instant petition | | 31.87 | 143.87 | 164.90 | 190.30 |
| Approved after true-up in this order | | 31.88 | 143.84 | 164.84 | 190.24 |
| | Asset-8(A) | | | | |
| Allowed vide order dated 7.2.2021 in Petition No. 33/TT/2019 | | | | 264.58 | 294.74 |
| Claimed by the Petitioner in the instant petition | | | | 264.23 | 285.68 |
| Approved after true-up in this order | | | | 263.55 | 284.97 |
| | Asset-8(B) | | | | |
| Allowed vide order dated 7.2.2021 in Petition No. 33/TT/2019 | | | | 136.75 | 143.84 |
| Claimed by the Petitioner in the instant petition | | | | 136.75 | 143.84 |
| Approved after true-up in this order | | | | 136.75 | 143.84 |



Interest on Loan (IoL)

71. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. We have considered the submissions of the Petitioner. IoL has been calculated based on the actual interest rate submitted by the Petitioner in accordance with Regulation 26 of the 2014 Tariff Regulations. The trued-up IoL allowed in respect of the transmission assets is as follows:

(₹ in lakh)

| | Particulars | Asset-1 | | | | |
|---|--|----------------------------------|---------------|---------------|---------------|---------------|
| | | 2014-15 (Pro-rata 83 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| | Interest on Loan | | | | | |
| A | Gross Normative Loan | 1161.20 | 1497.92 | 1854.15 | 1988.79 | 2029.56 |
| B | Cumulative Repayments upto Previous Year | 0.00 | 22.81 | 149.29 | 294.29 | 445.90 |
| C | Net Loan-Opening (A-B) | 1161.20 | 1475.10 | 1704.86 | 1694.50 | 1583.65 |
| D | Additions | 336.72 | 356.23 | 134.65 | 40.77 | 0.00 |
| E | Repayment during the year | 22.81 | 126.47 | 145.00 | 151.62 | 153.15 |
| F | Net Loan-Closing (C+D-E) | 1475.10 | 1704.86 | 1694.50 | 1583.65 | 1430.50 |
| G | Average Loan (C+F)/2 | 1318.15 | 1589.98 | 1699.68 | 1639.08 | 1507.08 |
| H | Weighted Average Rate of Interest on Loan (in %) | 9.2577 | 9.1408 | 9.0357 | 8.9788 | 8.9561 |
| I | Interest on Loan (G*H) | 27.75 | 145.34 | 153.58 | 147.17 | 134.97 |

(₹ in lakh)

| | Particulars | Asset-2 | | | | |
|---|--|-----------------------------------|---------|---------|---------|---------|
| | | 2014-15 (Pro-rata 101 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| | Interest on Loan | | | | | |
| A | Gross Normative Loan | 644.42 | 1066.26 | 1293.49 | 2110.40 | 2219.32 |
| B | Cumulative Repayments upto Previous Year | 0.00 | 17.94 | 107.35 | 236.25 | 400.06 |
| C | Net Loan-Opening (A-B) | 644.42 | 1048.32 | 1186.13 | 1874.15 | 1819.25 |



| | Particulars | Asset-2 | | | | |
|---|--|-----------------------------------|--------------|---------------|---------------|---------------|
| | | 2014-15 (Pro-rata 101 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| D | Additions | 421.84 | 227.23 | 816.91 | 108.92 | 294.56 |
| E | Repayment during the year | 17.94 | 89.41 | 128.90 | 163.81 | 179.03 |
| F | Net Loan-Closing (C+D-E) | 1048.32 | 1186.13 | 1874.15 | 1819.25 | 1934.78 |
| G | Average Loan (C+F)/2 | 846.37 | 1117.23 | 1530.14 | 1846.70 | 1877.02 |
| H | Weighted Average Rate of Interest on Loan (in %) | 9.0767 | 8.8635 | 8.5956 | 8.3553 | 8.2915 |
| I | Interest on Loan (G*H) | 21.26 | 99.03 | 131.52 | 154.30 | 155.63 |

(₹ in lakh)

| | Particulars | Asset-3 | | |
|---|--|----------------|----------------|----------------|
| | | 2016-17 | 2017-18 | 2018-19 |
| | Interest on Loan | | | |
| A | Gross Normative Loan | 46188.56 | 49875.34 | 51514.54 |
| B | Cumulative Repayments upto Previous Year | 0.00 | 3572.09 | 7344.90 |
| C | Net Loan-Opening (A-B) | 46188.56 | 46303.24 | 44169.64 |
| D | Additions | 3686.77 | 1639.21 | 234.76 |
| E | Repayment during the year | 3572.09 | 3772.81 | 3843.46 |
| F | Net Loan-Closing (C+D-E) | 46303.24 | 44169.64 | 40560.94 |
| G | Average Loan (C+F)/2 | 46245.90 | 45236.44 | 42365.29 |
| H | Weighted Average Rate of Interest on Loan (in %) | 8.8691 | 8.5807 | 8.4876 |
| I | Interest on Loan (G*H) | 4101.61 | 3881.62 | 3595.81 |

(₹ in lakh)

| | Particulars | Asset-4 | | |
|---|---|--------------------------------|----------|----------|
| | | 2016-17 (Pro-rata 322 days) | 2017-18 | 2018-19 |
| | Interest on Loan | | | |
| A | Gross Normative Loan | 9725.93 | 10355.59 | 11030.29 |
| B | Cumulative Repayments upto Previous Year | 0.00 | 643.90 | 1420.96 |
| C | Net Loan-Opening (A-B) | 9725.93 | 9711.69 | 9609.33 |
| D | Additions | 629.66 | 674.70 | 128.72 |
| E | Repayment during the year | 643.90 | 777.05 | 806.14 |
| F | Net Loan-Closing (C+D-E) | 9711.69 | 9609.33 | 8931.92 |
| G | Average Loan (C+F)/2 | 9718.81 | 9660.51 | 9270.62 |
| H | Weighted Average Rate of Interest on Loan (in | 8.9992 | 8.4278 | 8.2368 |



| | Particulars | Asset-4 | | |
|----------|-------------------------------|--------------------------------|---------------|---------------|
| | | 2016-17 (Pro-rata 322 days) | 2017-18 | 2018-19 |
| | (%) | | | |
| I | Interest on Loan (G*H) | 771.58 | 814.17 | 763.60 |

(₹ in lakh)

| | Particulars | Asset-5 | | |
|--|--|--------------------------------|----------------|----------------|
| | | 2016-17 (Pro-rata 345 days) | 2017-18 | 2018-19 |
| | Interest on Loan | | | |
| | Gross Normative Loan | 43641.33 | 46263.34 | 46952.57 |
| | Cumulative Repayments upto Previous Year | 0.00 | 3193.10 | 6695.58 |
| | Net Loan-Opening (A-B) | 43641.33 | 43070.24 | 40256.99 |
| | Additions | 2622.01 | 689.23 | 88.28 |
| | Repayment during the year | 3193.10 | 3502.48 | 3531.48 |
| | Net Loan-Closing (C+D-E) | 43070.24 | 40256.99 | 36813.79 |
| | Average Loan (C+F)/2 | 43355.79 | 41663.61 | 38535.39 |
| | Weighted Average Rate of Interest on Loan (in %) | 8.8635 | 8.6931 | 8.6317 |
| | Interest on Loan (G*H) | 3632.28 | 3621.86 | 3326.28 |

(₹ in lakh)

| | Particulars | Asset-6 | | | |
|--|--|----------------------------|----------------|----------------|----------------|
| | | 2015-16 (Pro-rata 97 days) | 2016-17 | 2017-18 | 2018-19 |
| | Interest on Loan | | | | |
| | Gross Normative Loan | 49748.33 | 51966.88 | 53353.20 | 53571.73 |
| | Cumulative Repayments upto Previous Year | 0.00 | 1014.55 | 4978.31 | 9002.33 |
| | Net Loan-Opening (A-B) | 49748.33 | 50952.33 | 48374.90 | 44569.40 |
| | Additions | 2218.55 | 1386.33 | 218.53 | 67.56 |
| | Repayment during the year | 1014.55 | 3963.76 | 4024.02 | 4034.72 |
| | Net Loan-Closing (C+D-E) | 50952.33 | 48374.90 | 44569.40 | 40602.23 |
| | Average Loan (C+F)/2 | 50350.33 | 49663.61 | 46472.15 | 42585.82 |
| | Weighted Average Rate of Interest on Loan (in %) | 8.7130 | 8.6742 | 8.5655 | 8.5261 |
| | Interest on Loan (G*H) | 1162.68 | 4307.94 | 3980.56 | 3630.92 |



(₹ in lakh)

| Particulars | Asset-7 | | | |
|--|----------------------------|---------------|---------------|---------------|
| | 2015-16 (Pro-rata 90 days) | 2016-17 | 2017-18 | 2018-19 |
| Interest on Loan | | | | |
| Gross Normative Loan | 1701.15 | 1733.75 | 2077.25 | 2289.80 |
| Cumulative Repayments upto Previous Year | 0.00 | 31.88 | 175.72 | 340.56 |
| Net Loan-Opening (A-B) | 1701.15 | 1701.87 | 1901.53 | 1949.24 |
| Additions | 32.60 | 343.50 | 212.56 | 460.81 |
| Repayment during the year | 31.88 | 143.84 | 164.84 | 190.24 |
| Net Loan-Closing (C+D-E) | 1701.87 | 1901.53 | 1949.24 | 2219.81 |
| Average Loan (C+F)/2 | 1701.51 | 1801.70 | 1925.38 | 2084.53 |
| Weighted Average Rate of Interest on Loan (in %) | 8.8488 | 8.7668 | 8.6431 | 8.5607 |
| Interest on Loan (G*H) | 37.02 | 157.95 | 166.41 | 178.45 |

(₹ in lakh)

| Particulars | Asset-8(A) | |
|--|-----------------------------|---------------|
| | 2017-18 (Pro-rata 347 days) | 2018-19 |
| Interest on Loan | | |
| Gross Normative Loan | 3781.55 | 3917.97 |
| Cumulative Repayments upto Previous Year | 0.00 | 263.55 |
| Net Loan-Opening (A-B) | 3781.55 | 3654.41 |
| Additions | 136.42 | 77.24 |
| Repayment during the year | 263.55 | 284.97 |
| Net Loan-Closing (C+D-E) | 3654.41 | 3446.68 |
| Average Loan (C+F)/2 | 3717.98 | 3550.55 |
| Weighted Average Rate of Interest on Loan (in %) | 8.2609 | 8.1299 |
| Interest on Loan (G*H) | 291.99 | 288.65 |

(₹ in lakh)

| Particulars | Asset-8(B) | |
|--|-----------------------------|---------|
| | 2017-18 (Pro-rata 347 days) | 2018-19 |
| Interest on Loan | | |
| Gross Normative Loan | 1906.96 | 1906.96 |
| Cumulative Repayments upto Previous Year | 649.61 | 786.36 |
| Net Loan-Opening (A-B) | 1257.35 | 1120.61 |
| Additions | 0.00 | 0.00 |
| Repayment during the year | 136.75 | 143.84 |

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| Particulars | Asset-8(B) | |
|--|-----------------------------|--------------|
| | 2017-18 (Pro-rata 347 days) | 2018-19 |
| Net Loan-Closing (C+D-E) | 1120.61 | 976.77 |
| Average Loan (C+F)/2 | 1188.98 | 1048.69 |
| Weighted Average Rate of Interest on Loan (in %) | 9.5023 | 9.5058 |
| Interest on Loan (G*H) | 107.41 | 99.69 |

72. The details of interest on loan allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 for Assets-1 and 2; vide order dated 30.5.2016 in Petition No. 273/TT/2015 for Asset-3 to 6; vide order dated 14.9.2017 in Petition No. 223/TT/2016 for Asset-7 and vide order dated 7.2.2021 in Petition No. 33/TT/2019 followed by order dated 20.12.2021 in Review Petition No. 18/RP/2021 in Petition No. 33/TT/2019 for Asset-8(A) and Asset-8(B), interest on loan claimed by the Petitioner in the instant petition and trued-up interest on loan in the instant order in respect of the transmission assets is as follows:

| Particulars | (₹ in lakh) | | | | |
|--|-------------|---------|---------|---------|---------|
| | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Asset-1 | | | | | |
| Allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 | 27.48 | 132.13 | 124.77 | 114.97 | 103.19 |
| Claimed by the Petitioner in the instant petition | 27.75 | 145.37 | 153.65 | 147.24 | 135.03 |
| Approved after true-up in this order | 27.75 | 145.34 | 153.58 | 147.17 | 134.97 |
| Asset-2 | | | | | |
| Allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 | 20.64 | 140.33 | 212.47 | 224.75 | 204.42 |
| Claimed by the Petitioner in the instant petition | 21.26 | 99.04 | 131.56 | 154.33 | 155.66 |
| Approved after true-up in this order | 21.26 | 99.03 | 131.52 | 154.30 | 155.63 |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|---------|----------------|----------------|----------------|----------------|
| Asset-3 | | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 4010.30 | 3730.48 | 3419.30 |
| Claimed by the Petitioner in the instant petition | | | 4102.76 | 3882.66 | 3596.73 |
| Approved after true-up in this order | | | 4101.61 | 3881.62 | 3595.81 |
| Asset-4 | | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 660.28 | 774.89 | 713.62 |
| Claimed by the Petitioner in the instant petition | | | 771.58 | 814.17 | 763.60 |
| Approved after true-up in this order | | | 771.58 | 814.17 | 763.60 |
| Asset-5 | | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 3589.03 | 3514.00 | 3225.92 |
| Claimed by the Petitioner in the instant petition | | | 3632.33 | 3621.98 | 3326.37 |
| Approved after true-up in this order | | | 3632.28 | 3621.86 | 3326.28 |
| Asset-6 | | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | 1082.89 | 3891.45 | 3577.73 | 3263.91 |
| Claimed by the Petitioner in the instant petition | | 1162.76 | 4309.65 | 3983.56 | 3633.69 |
| Approved after true-up in this order | | 1162.68 | 4307.94 | 3980.56 | 3630.92 |
| Asset-7 | | | | | |
| Allowed vide order dated 14.9.2017 in Petition No. 223/TT/2016 | | 37.25 | 181.86 | 219.80 | 217.46 |
| Claimed by the Petitioner in the instant petition | | 37.02 | 157.98 | 166.47 | 178.50 |
| Approved after true-up in this order | | 37.02 | 157.95 | 166.41 | 178.45 |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|-------------------|---------|---------|---------|---------|
| | Asset-8(A) | | | | |
| Allowed vide order dated 7.2.2021 in Petition No. 33/TT/2019 | | | | 297.49 | 307.47 |
| Claimed by the Petitioner in the instant petition | | | | 292.72 | 289.35 |
| Approved after true-up in this order | | | | 291.99 | 288.65 |
| | Asset-8(B) | | | | |
| Allowed vide order dated 7.2.2021 in Petition No. 33/TT/2019 | | | | 107.53 | 99.82 |
| Claimed by the Petitioner in the instant petition | | | | 107.41 | 99.69 |
| Approved after true-up in this order | | | | 107.41 | 99.69 |

Return on Equity (RoE)

73. The Petitioner has claimed RoE for the transmission assets in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at the MAT rates and has claimed the following effective tax rates for the 2014-19 tariff period:

| Year | Notified MAT rates (inclusive of surcharge & cess) | Claimed effective tax rate (in %) | Grossed-up RoE [(Base Rate)/(1-t)] (in %) |
|---------|--|--------------------------------------|---|
| 2014-15 | 20.961 | 20.961 | 19.611 |
| 2015-16 | 21.342 | 21.342 | 19.706 |
| 2016-17 | 21.342 | 21.342 | 19.706 |
| 2017-18 | 21.342 | 21.342 | 19.706 |
| 2018-19 | 21.549 | 21.549 | 19.758 |

74. Further, the Petitioner has submitted that the trued-up tariff of 2014-19 has been granted by the Commission vide tariff order dated 18.4.2020 in Petition No. 247/TT/2019; vide order dated 27.4.2020 in Petition No. 274/TT/2019; vide order



dated 23.4.2019 in Petition No. 245/TT/2019 and order dated 16.4.2020 in Petition No. 307/TT/2019 wherein following effective tax rate based (for 2014-19 period) on notified MAT rates have been considered for the purpose of grossing-up of rate of RoE;

| Year | Notified MAT rates (in %) (inclusive of surcharge & cess) | Effective tax (in %) | Grossed-up RoE [(Base Rate)/(1-t)] (in %) |
|---------|---|----------------------|---|
| 2014-15 | 20.961 | 20.961 | 19.611 |
| 2015-16 | 21.342 | 21.342 | 19.706 |
| 2016-17 | 21.342 | 21.342 | 19.706 |
| 2017-18 | 21.342 | 21.342 | 19.706 |
| 2018-19 | 21.549 | 21.549 | 19.758 |

75. The Petitioner has further submitted that the tariff for each year of the 2014-19 tariff period is being determined by the Commission considering the above effective tax rates to arrive at the grossed-up RoE. In view of the above, the Petitioner has submitted that the grossed-up RoE (in %) and effective tax rate for the 2014-19 period has already been determined by the Commission.

76. We have considered the Petitioner's submissions. The Commission, vide order dated 27.4.2020 in Petition No. 274/TT/2019, had arrived at the effective tax rate for the Petitioner based on the notified MAT rates and the same is given in the table below. The relevant portion of the order dated 27.4.2020 is as follows:

"26. We are conscious that the entities covered under MAT regime are paying Income Tax as per MAT rate notified for respective financial year under IT Act, 1961, which is levied on the book profit of the entity computed as per the Section 115JB of the IT Act, 1961. The Section 115JB(2) defines book profit as net profit in the statement of Profit & Loss prepared in accordance with Schedule-III of the Companies Act, 2013, subject to some additions and deductions as mentioned in the IT Act, 1961. Since the Petitioner has been paying income tax on income computed under Section 115JB of the IT Act, 1961 as per the MAT rates of the respective financial year, the notified MAT rate for respective financial year shall be considered as effective tax rate for the purpose of grossing up of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations. Interest imposed on any additional income tax demand as per the Assessment Order of the Income Tax authorities shall be considered on actual payment. However, penalty (for default on the part of the Assessee) if any imposed shall not be taken into account for the purpose of grossing up of rate of return on equity. Any under-recovery or over-recovery of grossed up rate



on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term transmission customers/ DICs as the case may be on year to year basis.

27. Accordingly, following effective tax rates based on notified MAT rates are considered for the purpose of grossing up of rate of return on equity:

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

77. The same MAT rates as considered in the above-mentioned order in Petition No. 274/TT/2019 are considered for grossing up of the rate of RoE for truing up of the tariff of the 2014-19 period in terms of the provisions of the 2014 Tariff Regulations.

| 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 |

78. The Petitioner has claimed RoE for the 2014-19 tariff period after grossing up the RoE @15.50% with Effective Tax rates (based on MAT rates) each year as per the above-said Regulation. The RoE is trued-up based on MAT rates applicable in the respective years and is allowed for the transmission assets as follows:

(₹ in lakh)

| | Particulars | Asset-1 | | | | |
|---|-------------------------|----------------------------|---------|---------|---------|---------|
| | | 2014-15 (Pro-rata 83 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| | Return on Equity | | | | | |
| A | Opening Equity | 497.66 | 641.96 | 794.63 | 852.34 | 869.81 |
| B | Additions | 144.31 | 152.67 | 57.71 | 17.47 | 0.00 |
| C | Closing Equity (A+B) | 641.96 | 794.63 | 852.34 | 869.81 | 869.81 |



| | Particulars | Asset-1 | | | | |
|---|-------------------------------------|----------------------------------|---------------|---------------|---------------|---------------|
| | | 2014-15 (Pro-rata 83 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| D | Average Equity (A+C)/2 | 569.81 | 718.30 | 823.49 | 861.07 | 869.81 |
| E | Return on Equity (Base Rate) (in %) | 15.500 | 15.500 | 15.500 | 15.500 | 15.500 |
| F | MAT Rate for respective year (in %) | 20.961 | 21.342 | 21.342 | 21.342 | 21.549 |
| G | Rate of Return on Equity (in %) | 19.610 | 19.705 | 19.705 | 19.705 | 19.758 |
| H | Return on Equity (D*G) | 25.41 | 141.54 | 162.27 | 169.67 | 171.86 |

(₹ in lakh)

| | Particulars | Asset-2 | | | | |
|---|-------------------------------------|-----------------------------------|--------------|---------------|---------------|---------------|
| | | 2014-15 (Pro-rata 101 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| | Return on Equity | | | | | |
| A | Opening Equity | 276.18 | 456.97 | 554.35 | 904.46 | 951.14 |
| B | Additions | 180.79 | 97.38 | 350.10 | 46.68 | 126.24 |
| C | Closing Equity (A+B) | 456.97 | 554.35 | 904.46 | 951.14 | 1077.38 |
| D | Average Equity (A+C)/2 | 366.57 | 505.66 | 729.40 | 927.80 | 1014.26 |
| E | Return on Equity (Base Rate) (in %) | 15.500 | 15.500 | 15.500 | 15.500 | 15.500 |
| F | MAT Rate for respective year (in %) | 20.961 | 21.342 | 21.342 | 21.342 | 21.549 |
| G | Rate of Return on Equity (in %) | 19.610 | 19.705 | 19.705 | 19.705 | 19.758 |
| H | Return on Equity (D*G) | 19.89 | 99.64 | 143.73 | 182.82 | 200.40 |

(₹ in lakh)

| | Particulars | Asset-3 | | |
|---|-------------------------------------|----------|----------|----------|
| | | 2016-17 | 2017-18 | 2018-19 |
| | Return on Equity | | | |
| A | Opening Equity | 19795.10 | 21375.14 | 22077.66 |
| B | Additions | 1580.05 | 702.52 | 100.61 |
| C | Closing Equity (A+B) | 21375.14 | 22077.66 | 22178.27 |
| D | Average Equity (A+C)/2 | 20585.12 | 21726.40 | 22127.97 |
| E | Return on Equity (Base Rate) (in %) | 15.500 | 15.500 | 15.500 |
| F | MAT Rate for respective | 21.342 | 21.342 | 21.549 |



| | Particulars | Asset-3 | | |
|---|---------------------------------|----------------|----------------|----------------|
| | | 2016-17 | 2017-18 | 2018-19 |
| | year (in %) | | | |
| G | Rate of Return on Equity (in %) | 19.705 | 19.705 | 19.758 |
| H | Return on Equity (D*G) | 4056.30 | 4281.19 | 4372.04 |

(₹ in lakh)

| | Particulars | Asset-4 | | |
|---|-------------------------------------|--------------------------------|---------------|---------------|
| | | 2016-17 (Pro-rata 322 days) | 2017-18 | 2018-19 |
| | Return on Equity | | | |
| A | Opening Equity | 4168.25 | 4438.11 | 4727.27 |
| B | Additions | 269.86 | 289.16 | 55.17 |
| C | Closing Equity (A+B) | 4438.11 | 4727.27 | 4782.43 |
| D | Average Equity (A+C)/2 | 4303.18 | 4582.69 | 4754.85 |
| E | Return on Equity (Base Rate) (in %) | 15.500 | 15.500 | 15.500 |
| F | MAT Rate for respective year (in %) | 21.342 | 21.342 | 21.549 |
| G | Rate of Return on Equity (in %) | 19.705 | 19.705 | 19.758 |
| H | Return on Equity (D*G) | 748.05 | 903.02 | 939.46 |

(₹ in lakh)

| | Particulars | Asset-5 | | |
|---|-------------------------------------|--------------------------------|----------------|----------------|
| | | 2016-17 (Pro-rata 345 days) | 2017-18 | 2018-19 |
| | Return on Equity | | | |
| A | Opening Equity | 18703.43 | 19827.15 | 20122.53 |
| B | Additions | 1123.72 | 295.38 | 37.84 |
| C | Closing Equity (A+B) | 19827.15 | 20122.53 | 20160.36 |
| D | Average Equity (A+C)/2 | 19265.29 | 19974.84 | 20141.45 |
| E | Return on Equity (Base Rate) (in %) | 15.500 | 15.500 | 15.500 |
| F | MAT Rate for respective year (in %) | 21.342 | 21.342 | 21.549 |
| G | Rate of Return on Equity (in %) | 19.705 | 19.705 | 19.758 |
| H | Return on Equity (D*G) | 3588.21 | 3936.04 | 3979.55 |

(₹ in lakh)

| | Particulars | Asset-6 | | | |
|---|-------------------------|-------------------------------|----------|----------|----------|
| | | 2015-16 (Pro-rata 97 days) | 2016-17 | 2017-18 | 2018-19 |
| | Return on Equity | | | | |
| A | Opening Equity | 21320.71 | 22271.52 | 22865.66 | 22959.31 |
| B | Additions | 950.81 | 594.14 | 93.65 | 28.95 |



| | Particulars | Asset-6 | | | |
|----------|-------------------------------------|-------------------------------|----------------|----------------|----------------|
| | | 2015-16 (Pro-rata 97 days) | 2016-17 | 2017-18 | 2018-19 |
| C | Closing Equity (A+B) | 22271.52 | 22865.66 | 22959.31 | 22988.27 |
| D | Average Equity (A+C)/2 | 21796.12 | 22568.59 | 22912.49 | 22973.79 |
| E | Return on Equity (Base Rate) (in %) | 15.500 | 15.500 | 15.500 | 15.500 |
| F | MAT Rate for respective year (in %) | 21.342 | 21.342 | 21.342 | 21.549 |
| G | Rate of Return on Equity (in %) | 19.705 | 19.705 | 19.705 | 19.758 |
| H | Return on Equity (D*G) | 1138.27 | 4447.14 | 4514.91 | 4539.16 |

(₹ in lakh)

| | Particulars | Asset-7 | | | |
|----------|-------------------------------------|-------------------------------|---------------|---------------|---------------|
| | | 2015-16 (Pro-rata 90 days) | 2016-17 | 2017-18 | 2018-19 |
| | Return on Equity | | | | |
| A | Opening Equity | 729.06 | 743.03 | 890.25 | 981.34 |
| B | Additions | 13.97 | 147.21 | 91.10 | 197.49 |
| C | Closing Equity (A+B) | 743.03 | 890.25 | 981.34 | 1178.83 |
| D | Average Equity (A+C)/2 | 736.05 | 816.64 | 935.80 | 1080.09 |
| E | Return on Equity (Base Rate) (in %) | 15.500 | 15.500 | 15.500 | 15.500 |
| F | MAT Rate for respective year (in %) | 21.342 | 21.342 | 21.342 | 21.549 |
| G | Rate of Return on Equity (in %) | 19.705 | 19.705 | 19.705 | 19.758 |
| H | Return on Equity (D*G) | 35.67 | 160.92 | 184.40 | 213.40 |

(₹ in lakh)

| | Particulars | Asset-8(A) | |
|----------|-------------------------------------|-----------------------------|---------------|
| | | 2017-18 (Pro-rata 347 days) | 2018-19 |
| | Return on Equity | | |
| A | Opening Equity | 1620.66 | 1679.13 |
| B | Additions | 58.46 | 33.10 |
| C | Closing Equity (A+B) | 1679.13 | 1712.23 |
| D | Average Equity (A+C)/2 | 1649.90 | 1695.68 |
| E | Return on Equity (Base Rate) (in %) | 15.500 | 15.500 |
| F | MAT Rate for respective year (in %) | 21.342 | 21.549 |
| G | Rate of Return on Equity (in %) | 19.705 | 19.758 |
| H | Return on Equity (D*G) | 309.08 | 335.03 |



(₹ in lakh)

| | Particulars | Asset-8(B) | |
|---|-------------------------------------|-----------------------------|---------------|
| | | 2017-18 (Pro-rata 347 days) | 2018-19 |
| | Return on Equity | | |
| A | Opening Equity | 817.27 | 817.27 |
| B | Additions | 0.00 | 0.00 |
| C | Closing Equity (A+B) | 817.27 | 817.27 |
| D | Average Equity (A+C)/2 | 817.27 | 817.27 |
| E | Return on Equity (Base Rate) (in %) | 15.500 | 15.500 |
| F | MAT Rate for respective year (in %) | 21.342 | 21.549 |
| G | Rate of Return on Equity (in %) | 19.705 | 19.758 |
| H | Return on Equity (D*G) | 153.10 | 161.48 |

79. The details of RoE allowed, vide order dated 26.2.2016 in Petition No. 450/TT/2014, for Assets-1 and 2; vide order dated 30.5.2016 in Petition No. 273/TT/2015 for Assets-3 to 6; vide order dated 14.9.2017 in Petition No. 223/TT/2016 for Asset-7 and vide order dated 7.2.2021 in Petition No. 33/TT/2019 followed by order dated 20.12.2021 in Review Petition No. 18/RP/2021 in Petition No. 33/TT/2019 for Asset-8(A) and Asset-8(B), return on equity claimed by the Petitioner in the instant petition and trued-up return on equity allowed in the instant order with respect to the transmission assets are as follows:

(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|----------------|---------|---------|---------|---------|
| | Asset-1 | | | | |
| Allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 | 25.16 | 127.11 | 130.11 | 130.11 | 130.11 |
| Claimed by the Petitioner in the instant petition | 25.41 | 141.58 | 162.35 | 169.75 | 171.93 |
| Approved after true-up in this order | 25.41 | 141.54 | 162.27 | 169.67 | 171.86 |
| | Asset-2 | | | | |
| Allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 | 19.30 | 139.05 | 220.70 | 250.26 | 250.26 |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|----------------|----------------|----------------|----------------|----------------|
| Claimed by the Petitioner in the instant petition | 19.89 | 99.66 | 143.77 | 182.87 | 200.43 |
| Approved after true-up in this order | 19.89 | 99.64 | 143.73 | 182.82 | 200.40 |
| | Asset-3 | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 3927.06 | 3956.15 | 3956.15 |
| Claimed by the Petitioner in the instant petition | | | 4057.66 | 4282.53 | 4373.15 |
| Approved after true-up in this order | | | 4056.30 | 4281.19 | 4372.04 |
| | Asset-4 | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 628.27 | 790.75 | 790.75 |
| Claimed by the Petitioner in the instant petition | | | 748.09 | 903.06 | 939.46 |
| Approved after true-up in this order | | | 748.05 | 903.02 | 939.46 |
| | Asset-5 | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 3471.91 | 3673.18 | 3673.18 |
| Claimed by the Petitioner in the instant petition | | | 3588.45 | 3936.37 | 3979.68 |
| Approved after true-up in this order | | | 3588.21 | 3936.04 | 3979.55 |
| | Asset-6 | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | 1052.43 | 3971.02 | 3971.02 | 3971.02 |
| Claimed by the Petitioner in the instant petition | | 1138.41 | 4449.11 | 4518.34 | 4542.37 |
| Approved after true-up in this order | | 1138.27 | 4447.14 | 4514.91 | 4539.16 |
| | Asset-7 | | | | |
| Allowed vide order dated 14.9.2017 in Petition No. 223/TT/2016 | | 35.66 | 182.05 | 233.80 | 249.98 |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|---------|---------|---------|---------|---------|
| Claimed by the Petitioner in the instant petition | | 35.67 | 160.95 | 184.46 | 213.46 |
| Approved after true-up in this order | | 35.67 | 160.92 | 184.40 | 213.40 |
| Asset-8(A) | | | | | |
| Allowed vide order dated 7.2.2021 in Petition No. 33/TT/2019 | | | | 307.76 | 343.94 |
| Claimed by the Petitioner in the instant petition | | | | 309.86 | 335.84 |
| Approved after true-up in this order | | | | 309.08 | 335.03 |
| Asset-8(B) | | | | | |
| Allowed vide order dated 7.2.2021 in Petition No. 33/TT/2019 | | | | 152.85 | 161.21 |
| Claimed by the Petitioner in the instant petition | | | | 153.11 | 161.48 |
| Approved after true-up in this order | | | | 153.10 | 161.48 |

Operation & Maintenance Expenses (O&M Expenses)

80. The Petitioner has not claimed any O&M Expense for Asset-8(B). The O&M Expenses claimed by the Petitioner for the remaining transmission assets are as follows:

| Particulars | Asset-1 | | | | |
|--|----------------------------------|--------------|--------------|--------------|--------------|
| | 2014-15 (Pro-rata 83 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Bays: | | | | | |
| (i) 3x80 MVAR Switchable line reactor for 765 kV S/C Gaya-Balia Transmission line along with associated bays at Gaya Sub-station | | | | | |
| 765kV Bays | 1 | 1 | 1 | 1 | 1 |
| Norms (₹ lakh/Bay) | 84.42 | 87.22 | 90.12 | 93.11 | 96.20 |
| Total O&M Expense (₹ in lakh) | 19.20 | 87.22 | 90.12 | 93.11 | 96.20 |

| Particulars | Asset-2 |
|-------------|---------|
|-------------|---------|



| | 2014-15 (Pro-rata 101 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|-----------------------------------|---------------|---------------|---------------|---------------|
| Bays: 3x80 MVAR Switchable line reactor for 765 kV S/C Ranchi-Dharamjaygarh Transmission line used as Bus reactor along with associated bays at Ranchi Sub-station | | | | | |
| 765kV Bays | 2 | 2 | 2 | 2 | 2 |
| Norms (₹ lakh/Bay) | 84.42 | 87.22 | 90.12 | 93.11 | 96.20 |
| Total O&M Expense (₹ in lakh) | 46.72 | 174.44 | 180.24 | 186.22 | 192.40 |

| Particulars | Asset-3 | | |
|---|---------------|---------------|---------------|
| | 2016-17 | 2017-18 | 2018-19 |
| Bays: 1500 ICT-I, 765/400 kV ICT-I & Associated bays at Varanasi GIS Sub-station 330 MVAR, 765 kV Bus Reactor-II and bay at Varanasi GIS Sub-station | | | |
| Transmission Line: 765 kV S/C Balia-Varanasi line and associated bays at both ends, including 240 MVAR Line Reactor at Varanasi GIS Sub-station | | | |
| 765 kV Bays | 4 | 4 | 4 |
| Norms (₹ lakh/Bay) | 90.12 | 93.11 | 96.20 |
| 400 kV GIS Bays | 1 | 1 | 1 |
| Norms (₹ lakh/Bay) | 55.02 | 56.84 | 58.73 |
| SC (Bundle Conductor-6 or more sub-conductor) | 163.341 | 163.341 | 163.341 |
| Norms (₹ lakh/km) | 0.755 | 0.78 | 0.806 |
| DC Bundled Conductor (4 or more sub-conductor) | 2.569 | 2.569 | 2.569 |
| Norms (₹ lakh/km) | 1.133 | 1.171 | 1.21 |
| Total O&M Expense (₹ in lakh) | 524.09 | 541.57 | 559.51 |

| Particulars | Asset-4 | | |
|---|-----------------------------|---------------|---------------|
| | 2016-17 (Pro-rata 322 days) | 2017-18 | 2018-19 |
| Bays: 1500 MVA, 765/400 kV ICT-II & Associated bays at Varanasi GIS Sub-station | | | |
| 400 kV GIS Bays | 1 | 1 | 1 |
| Norms (₹ lakh/Bay) | 55.02 | 56.84 | 58.73 |
| 765 kV Bays | 1 | 1 | 1 |
| Norms (₹ lakh/Bay) | 90.12 | 93.11 | 96.2 |
| Total O&M Expense (₹ in lakh) | 128.04 | 149.95 | 154.93 |



| Particulars | Asset-5 | | |
|--|-----------------------------|---------------|---------------|
| | 2016-17 (Pro-rata 345 days) | 2017-18 | 2018-19 |
| Bays: 765 kV S/C Gaya-Varanasi Associated bays including 240 MVAR Line Reactor | | | |
| Transmission Line: 765 kV S/C Gaya-Varanasi transmission line | | | |
| 765 kV Bays | 1 | 1 | 1 |
| Norms (₹ lakh/Bay) | 90.12 | 93.11 | 96.20 |
| SC (Bundle Conductor-4 or more sub-conductor) | 273.337 | 273.337 | 273.337 |
| Norms (₹ lakh/km) | 0.647 | 0.669 | 0.691 |
| Total O&M Expense (₹ in lakh) | 252.34 | 275.97 | 285.08 |

| Particulars | Asset-6 | | | |
|--|----------------------------|---------------|---------------|---------------|
| | 2015-16 (Pro-rata 97 days) | 2016-17 | 2017-18 | 2018-19 |
| Transmission Line: 765 kV S/C Ranchi (New)-Dharamjaygarh line | | | | |
| Bays: 3X110 MVAR Reactor at Dharamjaygarh along with associated bays | | | | |
| 765 kV Bays | 1 | 1 | 1 | 1 |
| Norms (₹ lakh/Bay) | 87.22 | 90.12 | 93.11 | 96.20 |
| SC (Bundle Conductor-4 sub-conductor) | 344.621 | 344.621 | 344.621 | 344.621 |
| Norms (₹ lakh/km) | 0.627 | 0.647 | 0.669 | 0.691 |
| Total O&M Expense (₹ in lakh) | 80.39 | 313.09 | 323.66 | 334.33 |

| Particulars | Asset-7 | | | |
|---|----------------------------|---------------|---------------|---------------|
| | 2015-16 (Pro-rata 90 days) | 2016-17 | 2017-18 | 2018-19 |
| Bays: 765 kV, 3X80 MVAR Switchable line reactor for 765 kV S/C Gaya-Varanasi Transmission line as Bus reactor, along with associated bays at Gaya Sub-station | | | | |
| 765 kV Bays | 2 | 2 | 2 | 2 |
| Norms (₹ lakh/Bay) | 87.22 | 90.12 | 93.11 | 96.2 |
| Total O&M Expense (₹ in lakh) | 42.90 | 180.24 | 186.22 | 192.40 |

| Particulars | Asset-8(A) | |
|---|-----------------------------|---------|
| | 2017-18 (Pro-rata 347 days) | 2018-19 |
| Bays: 1*330 MVAR, 765 kV Bus Reactor-I and bay at 765/400 kV Varanasi GIS (reactor shifting from Sasaram Sub-station, Only associated bays) | | |
| 765 kV Bays | 1 | 1 |



| Particulars | Asset-8(A) | |
|--|-----------------------------|--------------|
| | 2017-18 (Pro-rata 347 days) | 2018-19 |
| Norms (₹ lakh/Bay) | 93.11 | 96.20 |
| Total O&M Expense (₹ in lakh) | 88.52 | 96.20 |

81. We have considered the Petitioner's submissions . The O&M Expenses approved for the transmission assets, as per the norms specified in the 2014 Tariff Regulations, are as follows:

| Particulars | Asset-1 | | | | |
|--|----------------------------|--------------|--------------|--------------|--------------|
| | 2014-15 (Pro-rata 83 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Bays: 3x80 MVAR Switchable line reactor for 765 kV S/C Gaya-Balia Transmission line along with associated bays at Gaya Sub-station | | | | | |
| 765kV Bays | 1 | 1 | 1 | 1 | 1 |
| Norms (₹ lakh/Bay) | 84.42 | 87.22 | 90.12 | 93.11 | 96.20 |
| Total O&M Expense (₹ in lakh) | 19.20 | 87.22 | 90.12 | 93.11 | 96.20 |

| Particulars | Asset-2 | | | | |
|--|-----------------------------|---------------|---------------|---------------|---------------|
| | 2014-15 (Pro-rata 101 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Bays: 3x80 MVAR Switchable line reactor for 765 kV S/C Ranchi-Dharamjaygarh Transmission line used as Bus reactor along with associated bays at Ranchi Sub-station | | | | | |
| 765kV Bays | 2 | 2 | 2 | 2 | 2 |
| Norms (₹ lakh/Bay) | 84.42 | 87.22 | 90.12 | 93.11 | 96.20 |
| Total O&M Expense (₹ in lakh) | 46.72 | 174.44 | 180.24 | 186.22 | 192.40 |

| Particulars | Asset-3 | | |
|--|---------|---------|---------|
| | 2016-17 | 2017-18 | 2018-19 |
| Bays: (i) 1500 ICT-I, 765/400 kV ICT-I & Associated bays at Varanasi GIS Sub-station (ii) 330 MVAR, 765 kV Bus Reactor-II and bay at Varanasi GIS Sub-station | | | |
| Transmission Line: (iii) 765 kV S/C Balia-Varanasi line and associated bays at both ends including 240 MVAR Line Reactor at Varanasi GIS Sub-station | | | |
| 765 kV Bays | 4 | 4 | 4 |
| Norms (₹ lakh/Bay) | 90.12 | 93.11 | 96.20 |
| 400 kV GIS Bays | 1 | 1 | 1 |
| Norms (₹ lakh/Bay) | 55.02 | 56.84 | 58.73 |



| Particulars | Asset-3 | | |
|--|---------------|---------------|---------------|
| | 2016-17 | 2017-18 | 2018-19 |
| SC (Bundle Conductor-6 or more sub-conductor) | 163.341 | 163.34 1 | 163.34 1 |
| Norms (₹ lakh/km) | 0.755 | 0.78 | 0.806 |
| DC Bundled Conductor (4 or more sub-conductor) | 2.569 | 2.569 | 2.569 |
| Norms (₹ lakh/km) | 1.133 | 1.171 | 1.21 |
| Total O&M Expense (₹ in lakh) | 524.09 | 541.56 | 559.51 |

| Particulars | Asset-4 | | |
|---|-----------------------------|---------------|---------------|
| | 2016-17 (Pro-rata 322 days) | 2017-18 | 2018-19 |
| Bays: | | | |
| (i) 1500 MVA, 765/400 kV ICT-II & Associated bays at Varanasi GIS Sub-station | | | |
| 400 kV GIS Bays | 1 | 1 | 1 |
| Norms (₹ lakh/Bay) | 55.02 | 56.84 | 58.73 |
| 765 kV Bays | 1 | 1 | 1 |
| Norms (₹ lakh/Bay) | 90.12 | 93.11 | 96.2 |
| Total O&M Expense (₹ in lakh) | 128.04 | 149.95 | 154.93 |

| Particulars | Asset-5 | | |
|--|-----------------------------|---------------|---------------|
| | 2016-17 (Pro-rata 345 days) | 2017-18 | 2018-19 |
| Bays: | | | |
| (i) 765 kV S/C Gaya-Varanasi Associated bays including 240 MVAR Line Reactor | | | |
| Transmission Line: | | | |
| (ii) 765 kV S/C Gaya-Varanasi transmission line | | | |
| 765 kV Bays | 1 | 1 | 1 |
| Norms (₹ lakh/Bay) | 90.12 | 93.11 | 96.20 |
| SC (Bundle Conductor-6 or more sub-conductor) | 273.33 7 | 273.33 7 | 273.337 |
| Norms (₹ lakh/km) | 0.647 | 0.669 | 0.691 |
| Total O&M Expense (₹ in lakh) | 252.34 | 275.97 | 285.08 |

| Particulars | Asset-6 | | | |
|---|----------------------------|---------|---------|---------|
| | 2015-16 (Pro-rata 97 days) | 2016-17 | 2017-18 | 2018-19 |
| Transmission Line: | | | | |
| (i) 765 kV S/C Ranchi (New)-Dharamjaygarh line | | | | |
| Bays: | | | | |
| (ii) 3X110 MVAR Reactor at Dharamjaygarh along with associated bays | | | | |
| 765 kV Bays | 1 | 1 | 1 | 1 |



| Particulars | Asset-6 | | | |
|--|----------------------------------|---------------|---------------|---------------|
| | 2015-16 (Pro-rata 97 days) | 2016-17 | 2017-18 | 2018-19 |
| Norms (₹ lakh/Bay) | 87.22 | 90.12 | 93.11 | 96.20 |
| SC (Bundle Conductor-4 sub-conductor) | 344.621 | 344.621 | 344.621 | 344.621 |
| Norms (₹ lakh/km) | 0.627 | 0.647 | 0.669 | 0.691 |
| Total O&M Expense (₹ in lakh) | 80.38 | 313.09 | 323.66 | 334.33 |

| Particulars | Asset-7 | | | |
|---|----------------------------------|---------------|---------------|---------------|
| | 2015-16 (Pro-rata 90 days) | 2016-17 | 2017-18 | 2018-19 |
| Bays: | | | | |
| (i) 765 kV, 3X80 MVAR Switchable line reactor for 765 kV S/C Gaya-Varanasi Transmission line as Bus reactor, along with associated bays at Gaya Sub-station | | | | |
| 765 kV Bays | 2 | 2 | 2 | 2 |
| Norms (₹ lakh/Bay) | 87.22 | 90.12 | 93.11 | 96.2 |
| Total O&M Expense (₹ in lakh) | 42.90 | 180.24 | 186.22 | 192.40 |

| Particulars | Asset-8(A) | |
|---|----------------------------|--------------|
| | 2017-18(Pro-rata 347 days) | 2018-19 |
| Bays: | | |
| (i) 1*330 MVAR, 765 kV Bus Reactor-I and bay at 765/400 kV Varanasi GIS (reactor shifting from Sasaram Sub-station, Only associated bays) | | |
| 765 kV Bays | 1 | 1 |
| Norms (₹ lakh/Bay) | 93.11 | 96.20 |
| Total O&M Expense (₹ in lakh) | 88.52 | 96.20 |

82. The details of O&M Expenses allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 for Assets-1 and 2; vide order dated 30.5.2016 in Petition No. 273/TT/2015 for Assets-3 to 6; vide order dated 14.9.2017 in Petition No. 223/TT/2016 for Asset-7 and vide order dated 7.2.2021 in Petition No. 33/TT/2019 followed by order dated 20.12.2021 in Review Petition No. 18/RP/2021 in Petition No. 33/TT/2019 for Asset-8(A) and Asset-8(B), O&M Expenses claimed by the Petitioner in the instant petition and trued-up O&M Expenses allowed in the instant order with respect to the transmission assets are as follows:



(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|---------|---------|---------|---------|---------|
| Asset-1 | | | | | |
| Allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 | 19.62 | 87.22 | 90.12 | 93.11 | 96.20 |
| Claimed by the Petitioner in the instant petition | 19.20 | 87.22 | 90.12 | 93.11 | 96.20 |
| Approved after true-up in this order | 19.20 | 87.22 | 90.12 | 93.11 | 96.20 |
| Asset-2 | | | | | |
| Allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 | 47.30 | 174.44 | 180.24 | 186.22 | 192.40 |
| Claimed by the Petitioner in the instant petition | 46.72 | 174.44 | 180.24 | 186.22 | 192.40 |
| Approved after true-up in this order | 46.72 | 174.44 | 180.24 | 186.22 | 192.40 |
| Asset-3 | | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 524.09 | 541.56 | 559.51 |
| Claimed by the Petitioner in the instant petition | | | 524.09 | 541.57 | 559.51 |
| Approved after true-up in this order | | | 524.09 | 541.56 | 559.51 |
| Asset-4 | | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 115.32 | 149.95 | 154.93 |
| Claimed by the Petitioner in the instant petition | | | 128.04 | 149.95 | 154.93 |
| Approved after true-up in this order | | | 128.04 | 149.95 | 154.93 |
| Asset-5 | | | | | |
| Allowed vide order dated | | | 252.34 | 275.97 | 285.08 |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|-------------------|----------------|----------------|----------------|----------------|
| 30.5.2016 in Petition No. 273/TT/2015 | | | | | |
| Claimed by the Petitioner in the instant petition | | | 252.34 | 275.97 | 285.08 |
| Approved after true-up in this order | | | 252.34 | 275.97 | 285.08 |
| | Asset-6 | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | 80.38 | 313.09 | 323.66 | 334.33 |
| Claimed by the Petitioner in the instant petition | | 80.39 | 313.09 | 323.66 | 334.33 |
| Approved after true-up in this order | | 80.38 | 313.09 | 323.66 | 334.33 |
| | Asset-7 | | | | |
| Allowed vide order dated 14.9.2017 in Petition No. 223/TT/2016 | | 42.89 | 180.24 | 186.22 | 192.40 |
| Claimed by the Petitioner in the instant petition | | 42.90 | 180.24 | 186.22 | 192.40 |
| Approved after true-up in this order | | 42.90 | 180.24 | 186.22 | 192.40 |
| | Asset-8(A) | | | | |
| Allowed vide order dated 7.2.2021 in Petition No. 33/TT/2019 | | | | 88.45 | 96.20 |
| Claimed by the Petitioner in the instant petition | | | | 88.52 | 96.20 |
| Approved after true-up in this order | | | | 88.52 | 96.20 |



Interest on Working Capital (IWC)

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

(₹ in lakh)

| | Particulars | Asset-1 | | | | |
|----------|--|----------------------------------|---------------|---------------|---------------|---------------|
| | | 2014-15 (Pro-rata 83 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| | Interest on Working Capital | | | | | |
| A | O & M Expenses | 7.04 | 7.27 | 7.51 | 7.76 | 8.02 |
| B | Maintenance Spares | 12.66 | 13.08 | 13.52 | 13.97 | 14.43 |
| C | Receivables | 71.81 | 85.82 | 94.43 | 96.25 | 95.35 |
| D | Total Working Capital (A+B+C) | 91.51 | 106.17 | 115.45 | 117.98 | 117.79 |
| E | Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| F | Interest of working capital (D*E) | 2.81 | 14.33 | 15.59 | 15.93 | 15.90 |

(₹ in lakh)

| | Particulars | Asset-2 | | | | |
|----------|--|-----------------------------------|---------------|---------------|---------------|---------------|
| | | 2014-15 (Pro-rata 101 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| | Interest on Working Capital | | | | | |
| A | O & M Expenses | 14.07 | 14.54 | 15.02 | 15.52 | 16.03 |
| B | Maintenance Spares | 25.33 | 26.17 | 27.04 | 27.93 | 28.86 |
| C | Receivables | 66.10 | 79.80 | 100.61 | 118.16 | 125.07 |
| D | Total Working Capital (A+B+C) | 105.50 | 120.50 | 142.66 | 161.61 | 169.96 |
| E | Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| F | Interest of working capital (D*E) | 3.94 | 16.27 | 19.26 | 21.82 | 22.94 |

(₹ in lakh)

| | Particulars | Asset-3 | | |
|----------|--|----------------|----------------|----------------|
| | | 2016-17 | 2017-18 | 2018-19 |
| | Interest on Working Capital | | | |
| A | O & M Expenses | 43.67 | 45.13 | 46.63 |
| B | Maintenance Spares | 78.61 | 81.23 | 83.93 |
| C | Receivables | 2089.53 | 2127.61 | 2109.59 |
| D | Total Working Capital (A+B+C) | 2211.82 | 2253.98 | 2240.15 |
| E | Rate of Interest (in %) | 12.80 | 12.80 | 12.80 |
| F | Interest of working capital (D*E) | 283.11 | 288.51 | 286.74 |



(₹ in lakh)

| | Particulars | Asset-4 | | |
|----------|--|--------------------------------|---------------|---------------|
| | | 2016-17 (Pro-rata 322 days) | 2017-18 | 2018-19 |
| | Interest on Working Capital | | | |
| A | O & M Expenses | 12.10 | 12.50 | 12.91 |
| B | Maintenance Spares | 21.77 | 22.49 | 23.24 |
| C | Receivables | 443.11 | 451.07 | 454.49 |
| D | Total Working Capital (A+B+C) | 476.97 | 486.06 | 490.64 |
| E | Rate of Interest (in %) | 12.80 | 12.80 | 12.80 |
| F | Interest of working capital (D*E) | 53.86 | 62.22 | 62.80 |

(₹ in lakh)

| | Particulars | Asset-5 | | |
|----------|--|--------------------------------|----------------|----------------|
| | | 2016-17 (Pro-rata 345 days) | 2017-18 | 2018-19 |
| | Interest on Working Capital | | | |
| A | O & M Expenses | 22.25 | 23.00 | 23.76 |
| B | Maintenance Spares | 40.05 | 41.40 | 42.76 |
| C | Receivables | 1923.06 | 1931.98 | 1895.59 |
| D | Total Working Capital (A+B+C) | 1985.35 | 1996.37 | 1962.11 |
| E | Rate of Interest (in %) | 12.80 | 12.80 | 12.80 |
| F | Interest of working capital (D*E) | 240.20 | 255.54 | 251.15 |

(₹ in lakh)

| | Particulars | Asset-6 | | | |
|----------|--|-------------------------------|----------------|----------------|----------------|
| | | 2015-16 (Pro-rata 97 days) | 2016-17 | 2017-18 | 2018-19 |
| | Interest on Working Capital | | | | |
| A | O & M Expenses | 25.27 | 26.09 | 26.97 | 27.86 |
| B | Maintenance Spares | 45.49 | 46.96 | 48.55 | 50.15 |
| C | Receivables | 2186.34 | 2223.66 | 2191.53 | 2139.76 |
| D | Total Working Capital (A+B+C) | 2257.11 | 2296.72 | 2267.05 | 2217.77 |
| E | Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 |
| F | Interest of working capital (D*E) | 80.76 | 310.06 | 306.05 | 299.40 |

(₹ in lakh)

| | Particulars | Asset-7 | | | |
|----------|--------------------------------------|-------------------------------|---------------|---------------|---------------|
| | | 2015-16 (Pro-rata 90 days) | 2016-17 | 2017-18 | 2018-19 |
| | Interest on Working Capital | | | | |
| A | O & M Expenses | 14.54 | 15.02 | 15.52 | 16.03 |
| B | Maintenance Spares | 26.17 | 27.04 | 27.93 | 28.86 |
| C | Receivables | 103.18 | 110.59 | 120.67 | 133.09 |
| D | Total Working Capital (A+B+C) | 143.88 | 152.65 | 164.12 | 177.98 |
| E | Rate of Interest (in %) | 13.50 | 13.50 | 13.50 | 13.50 |

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| | Particulars | Asset-7 | | | |
|----------|--|----------------------------------|--------------|--------------|--------------|
| | | 2015-16 (Pro-rata 90 days) | 2016-17 | 2017-18 | 2018-19 |
| F | Interest of working capital (D*E) | 4.78 | 20.61 | 22.16 | 24.03 |

(₹ in lakh)

| | Particulars | Asset-8(A) | |
|----------|--|--------------------------------|---------------|
| | | 2017-18 (Pro-rata 347 days) | 2018-19 |
| | Interest on Working Capital | | |
| A | O & M Expenses | 7.76 | 8.02 |
| B | Maintenance Spares | 13.97 | 14.43 |
| C | Receivables | 171.15 | 171.55 |
| D | Total Working Capital (A+B+C) | 192.87 | 194.00 |
| E | Rate of Interest (in %) | 12.60 | 12.60 |
| F | Interest of working capital (D*E) | 23.10 | 24.44 |

(₹ in lakh)

| | Particulars | Asset-8(B) | |
|----------|--|--------------------------------|--------------|
| | | 2017-18 (Pro-rata 347 days) | 2018-19 |
| | Interest on Working Capital | | |
| A | O & M Expenses | 0.00 | 0.00 |
| B | Maintenance Spares | 0.00 | 0.00 |
| C | Receivables | 71.14 | 68.95 |
| D | Total Working Capital (A+B+C) | 71.14 | 68.95 |
| E | Rate of Interest (in %) | 12.60 | 12.60 |
| F | Interest of working capital (D*E) | 8.52 | 8.69 |

84. The details of interest on working capital allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 for Assets-1 and 2; vide order dated 30.5.2016 in Petition No. 273/TT/2015 for Assets-3 to 6; vide order dated 14.9.2017 in Petition No. 223/TT/2016 for Asset-7 and vide order dated 7.2.2021 in Petition No. 33/TT/2019 followed by order dated 20.12.2021 in Review Petition No.18/RP/2021 in Petition No. 33/TT/2019 for Asset-8(A) and Asset-8(B); interest on working capital as claimed by the Petitioner in the instant petition and trued-up interest on working capital allowed in the instant order with respect to the transmission assets is as follows:



(₹ in lakh)

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|---------|---------|---------|---------|---------|
| Asset-1 | | | | | |
| Allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 | 2.82 | 13.14 | 13.53 | 13.45 | 13.37 |
| Claimed by the Petitioner in the instant petition | 2.81 | 14.34 | 15.59 | 15.93 | 15.91 |
| Approved after true-up in this order | 2.81 | 14.33 | 15.59 | 15.93 | 15.90 |
| Asset-2 | | | | | |
| Allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 | 3.93 | 18.95 | 24.50 | 26.40 | 26.27 |
| Claimed by the Petitioner in the instant petition | 3.94 | 16.27 | 19.26 | 21.82 | 22.95 |
| Approved after true-up in this order | 3.94 | 16.27 | 19.26 | 21.82 | 22.94 |
| Asset-3 | | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 291.22 | 287.01 | 280.84 |
| Claimed by the Petitioner in the instant petition | | | 283.19 | 288.58 | 286.81 |
| Approved after true-up in this order | | | 283.11 | 288.51 | 286.74 |
| Asset-4 | | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 48.45 | 59.96 | 58.82 |
| Claimed by the Petitioner in the instant petition | | | 53.86 | 62.22 | 62.80 |
| Approved after true-up in this order | | | 53.86 | 62.22 | 62.80 |
| Asset-5 | | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 248.76 | 257.16 | 251.03 |
| Claimed by the Petitioner in the instant petition | | | 240.21 | 255.55 | 251.16 |
| Approved after true-up in this order | | | 240.20 | 255.54 | 251.15 |
| Asset-6 | | | | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | 75.18 | 279.74 | 273.10 | 266.47 |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|---------|---------|---------|---------|---------|
| Claimed by the Petitioner in the instant petition | | 80.76 | 310.18 | 306.27 | 299.60 |
| Approved after true-up in this order | | 80.76 | 310.06 | 306.05 | 299.40 |
| Asset-7 | | | | | |
| Allowed vide order dated 14.9.2017 in Petition No. 223/TT/2016 | | 4.78 | 22.10 | 25.56 | 26.56 |
| Claimed by the Petitioner in the instant petition | | 4.78 | 20.61 | 22.16 | 24.03 |
| Approved after true-up in this order | | 4.78 | 20.61 | 22.16 | 24.03 |
| Asset-8(A) | | | | | |
| Allowed vide order dated 7.2.2021 in Petition No. 33/TT/2019 | | | | 23.21 | 25.25 |
| Claimed by the Petitioner in the instant petition | | | | 23.15 | 24.49 |
| Approved after true-up in this order | | | | 23.10 | 24.44 |
| Asset-8(B) | | | | | |
| Allowed vide order dated 7.2.2021 in Petition No. 33/TT/2019 | | | | 8.52 | 8.68 |
| Claimed by the Petitioner in the instant petition | | | | 8.52 | 8.69 |
| Approved after true-up in this order | | | | 8.52 | 8.69 |

Approved Annual Fixed Charges for 2014-19 Tariff Period

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

(₹ in lakh)

| | Particulars | Asset-1 | | | | |
|---|------------------------------------|-------------------------------|---------|---------|---------|---------|
| | | 2014-15 (Pro-rata 83 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| | Annual Transmission Charges | | | | | |
| A | Depreciation | 22.81 | 126.47 | 145.00 | 151.62 | 153.15 |
| B | Interest on Loan | 27.75 | 145.34 | 153.58 | 147.17 | 134.97 |
| C | Return on Equity | 25.41 | 141.54 | 162.27 | 169.67 | 171.86 |

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| | Particulars | Asset-1 | | | | |
|----------|-----------------------------|-------------------------------|---------------|---------------|---------------|---------------|
| | | 2014-15 (Pro-rata 83 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| D | O & M Expenses | 19.20 | 87.22 | 90.12 | 93.11 | 96.20 |
| E | Interest on Working Capital | 2.81 | 14.33 | 15.59 | 15.93 | 15.90 |
| F | Total (A+B+C+D+E) | 97.98 | 514.90 | 566.56 | 577.50 | 572.08 |

(₹ in lakh)

| | Particulars | Asset-2 | | | | |
|----------|------------------------------------|--------------------------------|---------------|---------------|---------------|---------------|
| | | 2014-15 (Pro-rata 101 days) | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| | Annual Transmission Charges | | | | | |
| A | Depreciation | 17.94 | 89.41 | 128.90 | 163.81 | 179.03 |
| B | Interest on Loan | 21.26 | 99.03 | 131.52 | 154.30 | 155.63 |
| C | Return on Equity | 19.89 | 99.64 | 143.73 | 182.82 | 200.40 |
| D | O & M Expenses | 46.72 | 174.44 | 180.24 | 186.22 | 192.40 |
| E | Interest on Working Capital | 3.94 | 16.27 | 19.26 | 21.82 | 22.94 |
| F | Total (A+B+C+D+E) | 109.75 | 478.79 | 603.65 | 708.97 | 750.40 |

(₹ in lakh)

| | Particulars | Asset-3 | | |
|----------|------------------------------------|-----------------|-----------------|-----------------|
| | | 2016-17 | 2017-18 | 2018-19 |
| | Annual Transmission Charges | | | |
| A | Depreciation | 3572.09 | 3772.81 | 3843.46 |
| B | Interest on Loan | 4101.61 | 3881.62 | 3595.81 |
| C | Return on Equity | 4056.30 | 4281.19 | 4372.04 |
| D | O & M Expenses | 524.09 | 541.56 | 559.51 |
| E | Interest on Working Capital | 283.11 | 288.51 | 286.74 |
| F | Total (A+B+C+D+E) | 12537.20 | 12765.69 | 12657.56 |

(₹ in lakh)

| | Particulars | Asset-4 | | |
|----------|------------------------------------|--------------------------------|----------------|----------------|
| | | 2016-17 (Pro-rata 322 days) | 2017-18 | 2018-19 |
| | Annual Transmission Charges | | | |
| A | Depreciation | 643.90 | 777.05 | 806.14 |
| B | Interest on Loan | 771.58 | 814.17 | 763.60 |
| C | Return on Equity | 748.05 | 903.02 | 939.46 |
| D | O & M Expenses | 128.04 | 149.95 | 154.93 |
| E | Interest on Working Capital | 53.86 | 62.22 | 62.80 |
| F | Total (A+B+C+D+E) | 2345.43 | 2706.41 | 2726.93 |

(₹ in lakh)



| | Particulars | Asset-5 | | |
|----------|------------------------------------|--------------------------------|-----------------|-----------------|
| | | 2016-17 (Pro-rata 345 days) | 2017-18 | 2018-19 |
| | Annual Transmission Charges | | | |
| A | Depreciation | 3193.10 | 3502.48 | 3531.48 |
| B | Interest on Loan | 3632.28 | 3621.86 | 3326.28 |
| C | Return on Equity | 3588.21 | 3936.04 | 3979.55 |
| D | O & M Expenses | 252.34 | 275.97 | 285.08 |
| E | Interest on Working Capital | 240.20 | 255.54 | 251.15 |
| F | Total (A+B+C+D+E) | 10906.13 | 11591.89 | 11373.54 |

(₹ in lakh)

| | Particulars | Asset-6 | | | |
|----------|------------------------------------|-------------------------------|-----------------|-----------------|-----------------|
| | | 2015-16 (Pro-rata 97 days) | 2016-17 | 2017-18 | 2018-19 |
| | Annual Transmission Charges | | | | |
| A | Depreciation | 1014.55 | 3963.76 | 4024.02 | 4034.72 |
| B | Interest on Loan | 1162.68 | 4307.94 | 3980.56 | 3630.92 |
| C | Return on Equity | 1138.27 | 4447.14 | 4514.91 | 4539.16 |
| D | O & M Expenses | 80.38 | 313.09 | 323.66 | 334.33 |
| E | Interest on Working Capital | 80.76 | 310.06 | 306.05 | 299.40 |
| F | Total (A+B+C+D+E) | 3476.64 | 13341.98 | 13149.20 | 12838.53 |

(₹ in lakh)

| | Particulars | Asset-7 | | | |
|----------|------------------------------------|-------------------------------|---------------|---------------|---------------|
| | | 2015-16 (Pro-rata 90 days) | 2016-17 | 2017-18 | 2018-19 |
| | Annual Transmission Charges | | | | |
| A | Depreciation | 31.88 | 143.84 | 164.84 | 190.24 |
| B | Interest on Loan | 37.02 | 157.95 | 166.41 | 178.45 |
| C | Return on Equity | 35.67 | 160.92 | 184.40 | 213.40 |
| D | O & M Expenses | 42.90 | 180.24 | 186.22 | 192.40 |
| E | Interest on Working Capital | 4.78 | 20.61 | 22.16 | 24.03 |
| F | Total (A+B+C+D+E) | 152.25 | 663.56 | 724.03 | 798.52 |

(₹ in lakh)

| | Particulars | Asset-8(A) | |
|---|------------------------------------|-----------------------------|---------|
| | | 2017-18 (Pro-rata 347 days) | 2018-19 |
| | Annual Transmission Charges | | |
| A | Depreciation | 263.55 | 284.97 |
| B | Interest on Loan | 291.99 | 288.65 |
| C | Return on Equity | 309.08 | 335.03 |
| D | O & M Expenses | 88.52 | 96.20 |
| E | Interest on Working Capital | 23.10 | 24.44 |



| | Particulars | Asset-8(A) | |
|----------|--------------------------|-----------------------------|----------------|
| | | 2017-18 (Pro-rata 347 days) | 2018-19 |
| F | Total (A+B+C+D+E) | 976.24 | 1029.29 |

(₹ in lakh)

| | Particulars | Asset-8(B) | |
|----------|------------------------------------|-----------------------------|---------------|
| | | 2017-18 (Pro-rata 347 days) | 2018-19 |
| | Annual Transmission Charges | | |
| A | Depreciation | 136.75 | 143.84 |
| B | Interest on Loan | 107.41 | 99.69 |
| C | Return on Equity | 153.10 | 161.48 |
| D | O & M Expenses | 0.00 | 0.00 |
| E | Interest on Working Capital | 8.52 | 8.69 |
| F | Total (A+B+C+D+E) | 405.78 | 413.70 |

86. The details of AFC allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 for Assets-1 and 2, vide order dated 30.5.2016 in Petition No. 273/TT/2015 for Assets-3 to 6; vide order dated 14.9.2017 in Petition No. 223/TT/2016 for Asset-7; vide order dated 7.2.2021 in Petition No. 33/TT/2019 and vide order dated 20.12.2021 in Review Petition No. 18/RP/2021 in Petition No. 33/TT/2019 for Asset-8(A) and Asset-8(B), AFC claimed by the Petitioner in the instant petition and true-up AFC allowed in the instant order with respect to the transmission assets are as follows:

| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|----------------|---------|---------|---------|---------|
| | Asset-1 | | | | |
| Allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 | 97.67 | 473.98 | 475.35 | 467.46 | 459.69 |
| Claimed by the Petitioner in the instant petition | 97.98 | 515.01 | 566.77 | 577.71 | 572.29 |
| Approved after true-up in this order | 97.98 | 514.90 | 566.56 | 577.50 | 572.08 |
| | Asset-2 | | | | |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|----------------|----------------|-----------------|-----------------|-----------------|
| Allowed vide order dated 26.2.2016 in Petition No. 450/TT/2014 | 108.58 | 597.92 | 836.42 | 912.70 | 898.42 |
| Claimed by the Petitioner in the instant petition | 109.74 | 478.84 | 603.76 | 709.09 | 750.50 |
| Approved after true-up in this order | 109.75 | 478.79 | 603.65 | 708.97 | 750.40 |
| | | | Asset-3 | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 12209.31 | 11997.83 | 11698.43 |
| Claimed by the Petitioner in the instant petition | | | 12540.83 | 12769.15 | 12660.65 |
| Approved after true-up in this order | | | 12537.20 | 12765.69 | 12657.56 |
| | | | Asset-4 | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 1992.05 | 2454.86 | 2397.44 |
| Claimed by the Petitioner in the instant petition | | | 2345.48 | 2706.45 | 2726.93 |
| Approved after true-up in this order | | | 2345.43 | 2706.41 | 2726.93 |
| | | | Asset-5 | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | | 10702.60 | 11042.93 | 10757.83 |
| Claimed by the Petitioner in the instant petition | | | 10906.49 | 11592.45 | 11373.89 |
| Approved after true-up in this order | | | 10906.13 | 11591.89 | 11373.54 |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--|---------|----------------|-------------------|-----------------|-----------------|
| | | | Asset-6 | | |
| Allowed vide order dated 30.5.2016 in Petition No. 273/TT/2015 | | 3228.90 | 11994.64 | 11684.86 | 11375.07 |
| Claimed by the Petitioner in the instant petition | | 3476.94 | 13347.33 | 13158.72 | 12847.57 |
| Approved after true-up in this order | | 3476.64 | 13341.98 | 13149.20 | 12838.53 |
| | | | Asset-7 | | |
| Allowed vide order dated 14.9.2017 in Petition No. 223/TT/2016 | | 152.60 | 729.74 | 875.33 | 910.88 |
| Claimed by the Petitioner in the instant petition | | 152.24 | 663.65 | 724.21 | 798.69 |
| Approved after true-up in this order | | 152.25 | 663.56 | 724.03 | 798.52 |
| | | | Asset-8(A) | | |
| Allowed vide order dated 7.2.2021 in Petition No. 33/TT/2019 | | | | 981.50 | 1067.59 |
| Claimed by the Petitioner in the instant petition | | | | 978.48 | 1031.56 |
| Approved after true-up in this order | | | | 976.24 | 1029.29 |
| | | | Asset-8(B) | | |
| Allowed vide order dated 7.2.2021 in Petition No. 33/TT/2019 | | | | 405.64 | 413.55 |
| Claimed by the Petitioner in the instant petition | | | | 405.79 | 413.70 |



| Particulars | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|--------------------------------------|---------|---------|---------|---------|---------|
| Approved after true-up in this order | | | | 405.78 | 413.70 |

DETERMINATION OF ANNUAL FIXED CHARGES FOR THE 2019-24 TARIFF PERIOD

87. The Petitioner has combined all the transmission assets covered in the transmission project into one Combined Asset and has filed a consolidated petition claiming tariff for the Combined Asset for the 2019-24 tariff period as provided in Regulation 8(1) of the 2019 Tariff Regulations.

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

| Particulars | (₹ in lakh) | | | | |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Depreciation | 13291.95 | 13364.01 | 13408.84 | 13413.47 | 13417.64 |
| Interest on Loan | 11169.90 | 10092.34 | 8998.90 | 7877.41 | 6747.87 |
| Return on Equity | 14266.14 | 14342.94 | 14390.79 | 14395.72 | 14400.17 |
| Interest on Working Capital | 696.38 | 688.07 | 677.16 | 664.74 | 650.71 |
| O&M Expenses | 2615.43 | 2706.23 | 2802.12 | 2901.85 | 3003.81 |
| Total | 42039.80 | 41193.59 | 40277.81 | 39253.19 | 38220.20 |

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

| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|
| O&M Expenses | 217.95 | 225.52 | 233.51 | 241.82 | 250.32 |
| Maintenance Spares | 392.31 | 405.93 | 420.32 | 435.25 | 450.57 |
| Receivables | 5168.83 | 5078.66 | 4965.76 | 4839.43 | 4699.21 |
| Total Working Capital | 5779.09 | 5710.11 | 5619.59 | 5516.53 | 5400.10 |
| Rate of Interest (in %) | 12.05 | 12.05 | 12.05 | 12.05 | 12.05 |
| Interest on Working Capital | 696.38 | 688.07 | 677.16 | 664.74 | 650.71 |



Effective Date of Commercial Operation (E-COD)

90. The Petitioner has claimed that E-COD of the Combined Asset works out to be 10.3.2016. Based on the trued-up admitted capital cost as on 31.3.2019 and actual COD of all the transmission assets, E-COD has been worked out as follows:

| Assets | Capital Cost as on 31.3.2019 (₹ in lakh) | COD | Number of days from last COD | Weightage of Cost (in %) | Weighted days | Effective COD (latest COD – weighted days) |
|---------------|---|------------|-------------------------------------|---------------------------------|----------------------|---|
| Asset-1 | 2899.37 | 8.1.2015 | 832.00 | 1.15% | 9.55 | 10.3.2016 |
| Asset-2 | 3591.25 | 21.12.2014 | 850.00 | 1.42% | 12.09 | |
| Asset-3 | 73927.57 | 1.4.2016 | 383.00 | 29.27% | 112.11 | |
| Asset-4 | 15941.44 | 14.5.2016 | 340.00 | 6.31% | 21.46 | |
| Asset-5 | 67201.21 | 21.4.2016 | 363.00 | 26.61% | 96.59 | |
| Asset-6 | 76627.55 | 26.12.2015 | 480.00 | 30.34% | 145.64 | |
| Asset-7 | 3929.44 | 2.1.2016 | 473.00 | 1.56% | 7.36 | |
| Asset-8(A) | 5707.43 | 19.4.2017 | 0.00 | 2.26% | 0.00 | |
| Asset-8(B) | 2724.23 | 19.4.2017 | 0.00 | 1.08% | 0.00 | |
| Total | 252549.51 | | | 1.00 | 404.80 | |

91. E-COD is used to determine the lapsed life of the project as a whole which works out as 3 (three) years as on 1.4.2019 (i.e. the number of years completed as on 1.4.2019 from E-COD).

Weighted Average Life (WAL) of the Assets

92. The life, as defined in Regulation 33 of the 2019 Tariff Regulations, has been considered for determination of the Weighted Average Life.

93. The Combined Asset may have multiple elements such as land, building, transmission line, sub-station and PLCC, and each element may have a different span of life. Therefore, the concept of WAL has been used as the useful life of the project as a whole.



94. The 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 life as defined in the 2019 Tariff Regulations has been considered for the determination of WAL. Accordingly, the WAL of all the transmission assets put into commercial operation in the 2014-19 period has been worked out as 32 years as follows:

| Particulars | Life (in years) (1) | Capital Cost as on 31.3.2019 (₹ in lakh) (2) | Weighted Cost (₹ in lakh) (3) = (1) * (2) | Weighted Avg. Life of Asset (in years) (4) = (3) / (2) |
|-------------------------------|---------------------|--|---|--|
| Building Civil Works & Colony | 25 | 1038.49 | 25962.19 | 32 years (approx..) |
| Transmission Line | 35 | 169372.40 | 5928034.17 | |
| Sub Station | 25 | 79431.45 | 1985786.27 | |
| PLCC | 15 | 392.04 | 5880.57 | |
| I.T. Equipment | 6.67 | 411.68 | 2744.51 | |
| Total | | 250646.06 | 7948407.72 | |

95. The WAL as on 1.4.2019, as determined above, is applicable prospectively (i.e. for the 2019-24 tariff period onwards), and no retrospective adjustment of depreciation in the previous tariff period is required to be done. As discussed above, the E-COD of the assets is 10.3.2016, and the elapsed life of the project as a whole works out as 3 years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 32 years.

Capital Cost

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

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

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

(a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*



- (b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;
- (c) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;
- (d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;
- (e) Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;
- (f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;
- (g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;
- (h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;
- (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;
- (n) Expenditure on account of change in law and force majeure events; and
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

(3) The Capital cost of an existing project shall include the following:

- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;
- (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;
- (c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the



Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.”

(4) The capital cost in case of existing or new hydro generating station shall also include:

- (a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and*
- (b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.*

(5) The following shall be excluded from the capital cost of the existing and new projects:

- (a) The assets forming part of the project, but not in use, as declared in the tariff petition;*
- (b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:*

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

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

(c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;

(d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and

(e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”

97. Against the overall apportioned approved capital cost (as per RCE) of ₹264574 lakh, the estimated completion cost is ₹255595.20 lakh. The individual capital cost of each asset is also within the respective RCE apportioned capital cost. Therefore, there is no cost over-run in respect of the Combined Asset.

98. We have considered the submissions of the Petitioner. 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, substation and PLCC) as admitted by the Commission as on 31.3.2019 for the transmission assets are clubbed



together, and the capital cost has been considered as a capital cost for Combined Assets as on 31.3.2019 as follows:

(₹ in lakh)

| Element | Asset-1 | Asset-2 | Asset-3 | Asset-4 | Asset-5 | Asset-6 | Asset-7 | Asset-8(A) | Asset-8(B) | Capital cost for Combined Asset as on 31.3.2019 |
|-------------------------------|---------|---------|----------|----------|----------|----------|---------|------------|------------|---|
| Freehold Land | 0.00 | 0.00 | 951.73 | 475.86 | 237.93 | 0.00 | 0.00 | 237.93 | 0.00 | 1903.45 |
| Leasehold Land | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Building Civil Works & Colony | 0.00 | 0.00 | 159.57 | 288.17 | 85.48 | 458.31 | 0.00 | 46.96 | 0.00 | 1038.49 |
| Transmission Line | 0.00 | 0.00 | 36916.49 | 0.00 | 59983.22 | 72472.69 | 0.00 | 0.00 | 0.00 | 169372.40 |
| Sub-station | 2892.89 | 3497.98 | 35517.09 | 15116.70 | 6803.33 | 3630.27 | 3850.31 | 5398.65 | 2724.23 | 79431.45 |
| PLCC | 6.48 | 49.58 | 222.77 | 0.00 | 77.91 | 21.64 | 13.67 | 0.00 | 0.00 | 392.04 |
| IT Equipment (Incl. Software) | 0.00 | 43.69 | 159.93 | 60.71 | 13.34 | 44.65 | 65.46 | 23.90 | 0.00 | 411.68 |
| Total | 2899.37 | 3591.25 | 73927.57 | 15941.44 | 67201.21 | 76627.55 | 3929.44 | 5707.43 | 2724.23 | 252549.51 |

99. The trued-up capital cost of ₹252549.51 lakh for Combined Assets is considered as admitted capital cost as on 31.3.2019 for working out the tariff for the 2019-24 tariff period.

Initial Spares

100. As discussed above, the transmission assets covered under the project have been combined, and the overall project cost is arrived at in the 2019-24 tariff period .Therefore, Initial Spares are allowed during the 2019-24 tariff period on the basis of the overall project cost as per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017. Accordingly, Initial Spares allowed in the 2019-24 tariff period are as follows:



Transmission Line

| Asset | Capital Cost/Plant & Machinery cost considered as on cut-off date (₹ in lakh) | Initial Spares claimed (₹ in lakh) | Norms as per 2014 Tariff Regulations | Initial Spares allowable as per 2014 Tariff Regulations (₹ in lakh) | Excess initial spares claimed (₹ in lakh) | Initial spares allowed during 2014-19 period (₹ in lakh) | Initial Spares allowed on Combined Asset (₹ in lakh) | Additional Initial Spares allowed (₹ in lakh) |
|-----------------------|---|------------------------------------|--------------------------------------|---|---|--|--|---|
| | A | B | C | $D = (A - B) * C / (100 - C)$ | B-D | E | F | G=E-F |
| Asset-3 | 34176.09 | 796.53 | 1.00% | 337.17 | 459.46 | 1473.64 | 1492.40 | 18.76 |
| Asset-5 | 51990.09 | 520.00 | 1.00% | 519.90 | | | | |
| Asset-6 | 63514.68 | 616.57 | 1.00% | 635.33 | | | | |
| Combined Asset | | 1933.1 | | 1492.40 | | | | |

Sub-station

| Asset | Capital Cost/Plant & Machinery cost considered as on cut-off date (₹ in lakh) | Initial Spares claimed (₹ in lakh) | Norms as per 2014 Tariff Regulations | Initial Spares allowable as per 2014 Tariff Regulations (₹ in lakh) | Initial spares allowed during 2014-19 period (₹ in lakh) | Initial Spares allowed on Combined Asset (₹ in lakh) | Additional Initial Spares allowed (₹ in lakh) |
|-----------------------|---|------------------------------------|--------------------------------------|---|--|--|---|
| | A | B | C | $D = (A - B) * C / (100 - C)$ | E | F | G=E-F |
| Asset-1 | 2645.65 | 99.78 | 6.00% | 162.5 | 2301.17 | 2315.76 | 14.58 |
| Asset-2 | 3064.38 | 122.00 | 6.00% | 187.81 | | | |
| Asset-3 | 3138.54 | 1045.49 | 5.00% | 187.44 | | | |
| Asset-4 | 3850.68 | 676.00 | 5.00% | 236.09 | | | |
| Asset-5 | 33007.9 | 12.74 | 5.00% | 1682.23 | | | |
| Asset-6 | 14278.94 | 202.02 | 6.00% | 715.94 | | | |
| Asset-7 | 6808.54 | 152.00 | 6.00% | 357.67 | | | |
| Asset-8(A) | 5694.29 | 5.73 | 5.00% | 299.4 | | | |
| Combined Asset | | 2315.76 | | 3829.08 | | | |

101. Thus, in line with APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, additional Initial Spares of ₹33.34 lakh is admissible. Capital cost as on 1.4.2019 for the Combined Asset allowed after adding Initial Spares is as follows:

(₹ in lakh)



| Capital Cost as on 31.3.2019 | Additional Initial Spares as per APTEL's Judgment dated 14.9.2019 | Capital Cost as on 1.4.2019 |
|------------------------------|---|-----------------------------|
| 252549.51 | 33.34 | 252582.85 |

Additional Capital Expenditure (ACE)

102. Regulations 24 and 25 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 additional capital expenditure 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;*
- (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.”

103. The Petitioner has claimed ACE of ₹ 2951.28 lakh for the 2019-24 period under Regulations 25(1)(a) of the 2019 Tariff Regulations on account of undischarged liability towards final payment after the cut-off date for works executed prior to the cut-off date/ works deferred for execution. The same is summarised as follows:

| Asset | ACE Claimed | | | | |
|--------------|----------------|----------------|--------------|---------------|--------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Asset-1 | 63.80 | 24.85 | 0.00 | 0.00 | 0.00 |
| Asset-2 | 84.66 | 63.19 | 0.00 | 57.96 | 0.00 |
| Asset-3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Asset-4 | 328.58 | 715.09 | 0.00 | 0.00 | 0.00 |
| Asset-5 | 255.30 | 486.18 | 0.00 | 0.00 | 0.00 |
| Asset-6 | 35.34 | 0.00 | 0.00 | 50.00 | 50.00 |
| Asset-7 | 159.36 | 0.00 | 0.00 | 0.00 | 0.00 |
| Asset-8(A) | 168.11 | 341.54 | 67.32 | 0.00 | 0.00 |
| Asset-8(B) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 1095.15 | 1630.85 | 67.32 | 107.96 | 50.00 |

104. We have considered the submissions of the Petitioner. The ACE claimed by the Petitioner has been allowed for Assets-1 to 7 and Asset-8(A) under Regulation 24(1)(a), Regulation 24(1)(b) and Regulation 25(1)(d) of the 2019 Tariff Regulations, as they are towards undischarged liabilities discharged after the cut-off date for works executed prior to the cut-off date. Accordingly, ACE allowed in the 2019-24 tariff period is as follows:



(₹ in lakh)

| Asset | Regulations | ACE Allowed | | | | |
|--------------|---|----------------|----------------|--------------|---------------|--------------|
| | | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Asset-1 | Regulation 24(1)(a), Regulation 24(1)(b) and Regulation 25(1)(d) of the 2019 Tariff Regulations | 63.80 | 24.85 | 0.00 | 0.00 | 0.00 |
| Asset-2 | Regulation 24(1)(a), Regulation 24(1)(b) and Regulation 25(1)(d) of the 2019 Tariff Regulations | 84.66 | 63.19 | 0.00 | 57.96 | 0.00 |
| Asset-3 | Regulation 24(1)(a), Regulation 24(1)(b) and Regulation 25(1)(d) of the 2019 Tariff Regulations | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Asset-4 | Regulation 24(1)(a), Regulation 24(1)(b) and Regulation 25(1)(d) of the 2019 Tariff Regulations | 328.58 | 715.09 | 0.00 | 0.00 | 0.00 |
| Asset-5 | Regulation 24(1)(a), Regulation 24(1)(b) and Regulation 25(1)(d) of the 2019 Tariff Regulations | 255.30 | 486.18 | 0.00 | 0.00 | 0.00 |
| Asset-6 | Regulation 24(1)(a), Regulation 24(1)(b) and Regulation 25(1)(d) of the 2019 Tariff Regulations | 35.34 | 0.00 | 0.00 | 50.00 | 50.00 |
| Asset-7 | Regulation 24(1)(a), Regulation 24(1)(b) and Regulation 25(1)(d) of the 2019 Tariff Regulations | 159.36 | 0.00 | 0.00 | 0.00 | 0.00 |
| Asset-8(A) | Regulation 24(1)(a), Regulation 24(1)(b) and Regulation 25(1)(d) of the 2019 Tariff Regulations | 168.11 | 341.54 | 67.32 | 0.00 | 0.00 |
| Total | | 1095.15 | 1630.85 | 67.32 | 107.96 | 50.00 |

105. The total capital expenditure as on 31.3.2024 is within the apportioned approved cost. Accordingly, ACE for the 2019-24 tariff period and capital cost as on 31.3.2024 for the Combined Asset considered are as follows:

(₹ in lakh)

| Asset | Capital Cost admitted as on 1.4.2019 (A) | ACE allowed for 2019-24 (B) | Capital Cost allowed as on 31.3.2024 (C)=(A)+(B) |
|----------|--|-----------------------------|--|
| Combined | 252582.85 | 2951.28 | |



| Asset | Capital Cost admitted as on 1.4.2019 (A) | ACE allowed for 2019-24 (B) | Capital Cost allowed as on 31.3.2024 (C)=(A)+(B) |
|-------|--|-----------------------------|--|
| Asset | | | 255534.13 |

Debt-Equity ratio

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

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

Provided that:

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

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

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

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

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



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

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

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

(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.”

107. The debt-equity considered for the purpose of computation of tariff for the 2019-24 tariff period is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. The debt-equity considered for the computation of tariff for the Combined Asset for the 2019-24 tariff period is as follows:

| Funding | Capital Cost as on 1.4.2019 (₹ in lakh) | (In %) | ACE in 2019-24 (₹ in lakh) | (In %) | Capital Cost as on 31.3.2024 (₹ in lakh) | (In%) |
|----------------|--|---------------|-----------------------------------|---------------|---|---------------|
| Debt | 176808.00 | 70.00 | 2065.90 | 70.00 | 178873.90 | 70.00 |
| Equity | 75774.85 | 30.00 | 885.38 | 30.00 | 76660.23 | 30.00 |
| Total | 252582.85 | 100.00 | 2951.28 | 100.00 | 255534.13 | 100.00 |

Depreciation

108. 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 under long-term power purchase agreement at regulated tariff:

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

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

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

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

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

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



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

109. The IT equipment has been considered as part of the Gross Block and depreciated using WAROD. WAROD at Annexure-II has been worked out after taking into account the depreciation rates of IT and non-IT assets as specified in the 2019 Tariff Regulations. The salvage value of IT equipment has been considered as NIL, i.e. IT assets have been considered 100 per cent depreciable. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The depreciation allowed for the Combined Asset is as follows:

| | Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|---------------------|----------------|----------------|----------------|----------------|----------------|
| | Depreciation | | | | | |
| A | Opening Gross Block | 252582.85 | 253678.00 | 255308.85 | 255376.17 | 255484.13 |
| B | ACE | 1095.15 | 1630.85 | 67.32 | 107.96 | 50.00 |



| | Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| C | Closing Gross Block (A+B) | 253678.00 | 255308.85 | 255376.17 | 255484.13 | 255534.13 |
| D | Average Gross Block (A+C)/2 | 253130.42 | 254493.42 | 255342.51 | 255430.15 | 255509.13 |
| E | Freehold Land | 1903.45 | 1903.45 | 1903.45 | 1903.45 | 1903.45 |
| F | Weighted average rate of Depreciation (WAROD) (in %) | 5.25 | 5.25 | 5.25 | 5.25 | 5.25 |
| G | Balance useful life of the asset | 29 | 28 | 27 | 26 | 25 |
| H | Elapsed life at the beginning of the year (Year) | 3 | 4 | 5 | 6 | 7 |
| I | Aggregate Depreciable Value | 226145.44 | 227372.14 | 228136.32 | 228215.20 | 228286.28 |
| J | Depreciation during the year | 13288.87 | 13361.28 | 13406.44 | 13411.07 | 13415.24 |
| K | Remaining Depreciable Value (I-J) | 53156.11 | 66517.38 | 79923.83 | 93334.90 | 106750.14 |

Interest on Loan (IoL)

110. 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.”

111. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during the 2019-24 tariff period may be adjusted.

112. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. Accordingly, the floating rate of interest, if any, will be considered at the time of true-up. IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for the 2019-24 tariff period in respect of the Combined Asset is as follows:

(₹ in lakh)

| | Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|---|--|-----------------|-----------------|----------------|----------------|----------------|
| | Interest on Loan | | | | | |
| A | Gross Normative Loan | 176808.00 | 177574.61 | 178716.20 | 178763.32 | 178838.90 |
| B | Cumulative Repayments upto Previous Year | 39867.23 | 53156.11 | 66517.38 | 79923.83 | 93334.90 |
| C | Net Loan-Opening (A-B) | 136940.77 | 124418.50 | 112198.82 | 98839.50 | 85504.00 |
| D | Additions | 766.61 | 1141.60 | 47.12 | 75.57 | 35.00 |
| E | Repayment during the year | 13288.87 | 13361.28 | 13406.44 | 13411.07 | 13415.24 |
| F | Net Loan-Closing (C+D-E) | 124418.50 | 112198.82 | 98839.50 | 85504.00 | 72123.76 |
| G | Average Loan (C+F)/2 | 130679.63 | 118308.66 | 105519.16 | 92171.75 | 78813.88 |
| H | Weighted Average Rate of Interest on Loan (in %) | 8.5458 | 8.5288 | 8.5265 | 8.5447 | 8.5601 |
| I | Interest on Loan (G*H) | 11167.60 | 10090.35 | 8997.08 | 7875.80 | 6746.52 |



Return on Equity (RoE)

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

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

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

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope, excluding additional capitalization on account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

Provided further that:

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

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

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

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

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

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

(3) *The return on equity in respect of additional capitalization on account of emission control system shall be computed at the base rate of one-year marginal cost of lending rate (MCLR) of the State Bank of India as on 1st April of the year in*



which the date of operation (ODe) occurs plus 350 basis point, subject to ceiling of 14%.”

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

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

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

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

Illustration-

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

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

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

- (a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;
- (b) Estimated Advance Tax for the year on above is Rs 240 crore;
- (c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;
- (d) Rate of return on equity = $15.50 / (1 - 0.24) = 20.395\%$.

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



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

| (₹ in lakh) | | | | | | |
|-------------|-------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| | Return on Equity | | | | | |
| A | Opening Equity | 75774.85 | 76103.40 | 76592.65 | 76612.85 | 76645.23 |
| B | Additions | 328.55 | 489.26 | 20.20 | 32.39 | 15.00 |
| C | Closing Equity (A+B) | 76103.40 | 76592.65 | 76612.85 | 76645.23 | 76660.23 |
| D | Average Equity (A+C)/2 | 75939.12 | 76348.02 | 76602.75 | 76629.04 | 76652.73 |
| E | Return on Equity (Base Rate) (in %) | 15.500 | 15.500 | 15.500 | 15.500 | 15.500 |
| F | MAT Rate for respective year (in %) | 17.472 | 17.472 | 17.472 | 17.472 | 17.472 |
| G | Rate of Return on Equity (in %) | 18.782 | 18.782 | 18.782 | 18.782 | 18.782 |
| H | Return on Equity (D*G) | 14262.89 | 14339.69 | 14387.53 | 14392.47 | 14396.92 |

Operation & Maintenance Expenses (O&M Expenses)

115. The O&M Expenses claimed by the Petitioner for various elements included in the Combined Asset for the 2019-24 tariff period are as follows:

| Particulars | Combined Asset | | | | |
|---|----------------|---------|---------|---------|---------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Transmission Line: | | | | | |
| (i) 765 kV S/C Balia-Varanasi line and associated bays at both ends including 240 MVAR Line Reactor at Varanasi GIS Sub-station | | | | | |
| (ii) 765 kV S/C Gaya-Varanasi transmission line | | | | | |
| (iii) 765 kV S/C Ranchi (New)-Dharamjaygarh line | | | | | |
| (iv) 765 kV S/C Balia-Varanasi line and associated bays at both ends including 240 MVAR Line Reactor at Varanasi GIS Sub-station | | | | | |
| (v) 765 kV S/C Gaya-Varanasi transmission line | | | | | |
| (vi) 765 kV S/C Ranchi (New)-Dharamjaygarh line | | | | | |
| Bays: | | | | | |
| (i) 3x80 MVAR Switchable line reactor for 765 kV S/C Gaya-Balia Transmission line along with associated bays at Gaya Sub-station | | | | | |
| (ii) 3x80 MVAR Switchable line reactor for 765 kV S/C Ranchi-Dharamjaygarh Transmission line used as Bus reactor along with associated bays at Ranchi Sub-station | | | | | |
| (iii) 1500 ICT-I, 765/400 kV ICT-I & Associated bays at Varanasi GIS Sub-station | | | | | |
| (iv) 330 MVAR, 765 kV Bus Reactor-II and bay at Varanasi GIS Sub-station | | | | | |
| (v) 1500 MVA, 765/400 kV ICT-II & Associated bays at Varanasi GIS Sub-station | | | | | |
| (vi) 765 kV S/C Gaya-Varanasi Associated bays including 240 MVAR Line Reactor | | | | | |



| Particulars | Combined Asset | | | | |
|--|----------------|----------------|----------------|----------------|----------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| (vii) 3X110 MVAR Reactor at Dharamjaygarh along with associated bays | | | | | |
| (viii) 765 kV, 3X80 MVAR Switchable line reactor for 765 kV S/C Gaya-Varanasi Transmission line as Bus reactor, along with associated bays at Gaya Sub-station | | | | | |
| (ix) 1*330 MVAR, 765 kV Bus Reactor-I and bay at 765/400 kV Varanasi GIS (reactor shifting from Sasaram Sub-station, Only associated bays) | | | | | |
| 765 kV Sub-station | 7 | 7 | 7 | 7 | 7 |
| Norms (₹ lakh/Bay) | 45.01 | 46.60 | 48.23 | 49.93 | 51.68 |
| 400 kV GIS Sub-station | 2 | 2 | 2 | 2 | 2 |
| Norms (₹ lakh/Bay) | 22.505 | 23.296 | 24.115 | 24.962 | 25.837 |
| 765 kV GIS Sub-station | 6 | 6 | 6 | 6 | 6 |
| Norms (₹ lakh/Bay) | 31.51 | 32.62 | 33.76 | 34.95 | 36.18 |
| Transformers: | | | | | |
| 765 kV | | | | | |
| (i) Varanasi : ICT I and II | | | | | |
| 765 kV (2*1500 MVA) | 2 | 2 | 2 | 2 | 2 |
| Norms (₹ lakh/MVA) | 0.491 | 0.508 | 0.526 | 0.545 | 0.564 |
| SC (Bundle Conductor-4 or more sub-conductor) | 781.299 | 781.299 | 781.299 | 781.299 | 781.299 |
| Norms (₹ lakh/km) | 0.755 | 0.781 | 0.809 | 0.837 | 0.867 |
| DC Bundled Conductor (4 or more sub-conductor) | 2.569 | 2.569 | 2.569 | 2.569 | 2.569 |
| Norms (₹ lakh/km) | 1.322 | 1.368 | 1.416 | 1.466 | 1.517 |
| Total O&M Expense (₹ in lakh) | 2615.40 | 2706.22 | 2802.11 | 2901.85 | 3003.77 |

116. Regulation 35(3)(a) and Regulation 33(4) of the 2019 Tariff Regulations provide 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 (₹ Lakh per bay) | | | | | |
| 765 kV | 45.0 | 46.6 | 48.2 | 49.9 | 51.6 |
| 400 kV | 32.1 | 33.2 | 34.4 | 35.6 | 36.9 |
| 220 kV | 22.5 | 23.3 | 24.1 | 24.9 | 25.8 |
| 132 kV and below | 16.0 | 16.6 | 17.2 | 17.8 | 18.4 |
| Norms for Transformers (₹ Lakh per MVA) | | | | | |
| 765 kV | 0.49 | 0.50 | 0.52 | 0.54 | 0.56 |
| 400 kV | 0.35 | 0.37 | 0.38 | 0.39 | 0.41 |
| 220 kV | 0.24 | 0.25 | 0.26 | 0.27 | 0.28 |
| 132 kV and below | 0.24 | 0.25 | 0.26 | 0.27 | 0.28 |
| Norms for AC and HVDC lines (₹ Lakh per km) | | | | | |
| Single Circuit (Bundled Conductor with six or more sub- | 0.881 | 0.912 | 0.944 | 0.977 | 1.011 |



| | | | | | |
|--|-------|-------|-------|-------|-------|
| Single Circuit (Bundled conductor with four sub- | 0.755 | 0.781 | 0.809 | 0.837 | 0.867 |
| Single Circuit (Twin & | 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 | 1.322 | 1.368 | 1.416 | 1.466 | 1.517 |
| Double Circuit (Twin & | 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 | 2.319 | 2.401 | 2.485 | 2.572 | 2.662 |
| Multi Circuit (Twin & | 1.544 | 1.598 | 1.654 | 1.713 | 1.773 |
| Norms for HVDC | | | | | |
| HVDC Back-to- Back stations (Rs Lakh per 500 MW) (Except Gazuwaka | 834 | 864 | 894 | 925 | 958 |
| Gazuwaka HVDC Back-to-Back station (₹ Lakh per | 1,666 | 1,725 | 1,785 | 1,848 | 1,913 |
| 500 kV Rihand- Dadri HVDC bipole scheme | 2,252 | 2,331 | 2,413 | 2,498 | 2,586 |
| ±500 kV Talcher- Kolar HVDC bipole scheme (Rs | 2,468 | 2,555 | 2,645 | 2,738 | 2,834 |
| ±500 kV Bhiwadi- Balua HVDC bipole scheme (Rs Lakh) (3000 | 1,696 | 1,756 | 1,817 | 1,881 | 1,947 |
| ±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 | 2,563 | 2,653 | 2,746 | 2,842 | 2,942 |

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

Provided further that:



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

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

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

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

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

117. The O&M Expenses have been worked out for the Combined Asset as per the norms specified in the 2019 Tariff Regulations, and the same are as follows:

| Particulars | Combined Asset | | | | |
|------------------------|----------------|---------|---------|---------|---------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| 765 kV Sub-station | 7 | 7 | 7 | 7 | 7 |
| Norms (₹ lakh/Bay) | 45.01 | 46.60 | 48.23 | 49.93 | 51.68 |
| 400 kV GIS Sub-station | 2 | 2 | 2 | 2 | 2 |
| Norms (₹ lakh/Bay) | 22.505 | 23.296 | 24.115 | 24.962 | 25.837 |



| Particulars | Combined Asset | | | | |
|--|----------------|----------------|----------------|----------------|----------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| 765 kV GIS Sub-station | 6 | 6 | 6 | 6 | 6 |
| Norms (₹ lakh/Bay) | 189.06 | 195.72 | 202.56 | 209.70 | 217.08 |
| Transformers: 765 kV | | | | | |
| (ii) Varanasi : ICT I and II | | | | | |
| 765 kV (2*1500 MVA) | 2 | 2 | 2 | 2 | 2 |
| Norms (₹ lakh/MVA) | 0.491 | 0.508 | 0.526 | 0.545 | 0.564 |
| SC (Bundle Conductor-4 or more sub-conductor) | 781.299 | 781.299 | 781.299 | 781.299 | 781.299 |
| Norms (₹ lakh/km) | 0.755 | 0.781 | 0.809 | 0.837 | 0.867 |
| DC Bundled Conductor (4 or more sub-conductor) | 2.569 | 2.569 | 2.569 | 2.569 | 2.569 |
| Norms (₹ lakh/km) | 1.322 | 1.368 | 1.416 | 1.466 | 1.517 |
| Total O&M Expense (₹ in lakh) | 2615.40 | 2706.22 | 2802.11 | 2901.85 | 3003.77 |

Interest on Working Capital (IWC)

118. 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.

.....

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

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

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

“3. Definitions. - 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;”

119. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of 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, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and for 2021-22 and 2022-23 has been considered as 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) while for 2023-24 it has been considered as 12.00% (SBI 1-year MCLR applicable as on 1.4.2023 of 8.50% plus 350 basis points). The components of the working capital and interest thereon allowed in respect of the Combined Asset are as follows:

| (₹ in lakh) | | | | | |
|--|----------------|----------------|----------------|----------------|----------------|
| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Interest on Working Capital | | | | | |
| O & M Expenses | 217.95 | 225.52 | 233.51 | 241.82 | 250.31 |
| Maintenance Spares | 392.31 | 405.93 | 420.32 | 435.28 | 450.57 |
| Receivables | 5167.75 | 5071.95 | 4953.94 | 4827.85 | 4697.99 |
| Total Working Capital (A+B+C) | 5778.01 | 5703.40 | 5607.77 | 5504.95 | 5398.87 |
| Rate of Interest (in %) | 12.05 | 11.25 | 10.50 | 10.50 | 12.00 |
| Interest on working capital (D*E) | 696.25 | 641.63 | 588.82 | 578.02 | 647.86 |

Annual Fixed Charges of the 2019-24 Tariff Period

120. The transmission charges allowed in respect of Combined Asset for the 2019-24 tariff period are as follows:

| (₹ in lakh) | | | | | |
|------------------|----------|----------|----------|----------|----------|
| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Depreciation | 13288.87 | 13361.28 | 13406.44 | 13411.07 | 13415.24 |
| Interest on Loan | 11167.60 | 10090.35 | 8997.08 | 7875.80 | 6746.52 |
| Return on Equity | 14262.89 | 14339.69 | 14387.53 | 14392.47 | 14396.92 |



| Particulars | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| O & M Expenses | 2615.40 | 2706.22 | 2802.11 | 2901.85 | 3003.77 |
| Interest on Working Capital | 696.25 | 641.63 | 588.82 | 578.02 | 647.86 |
| Total | 42031.01 | 41139.17 | 40181.98 | 39159.21 | 38210.31 |

Filing Fee and Publication Expenses

121. The Petitioner has sought reimbursement of fees paid by it for filing the Petition and publication expenses.

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

License Fee and Publication Expenses

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

Goods and Services Tax

124. The Petitioner has submitted that if GST is levied at any rate and at any point of time in the 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, and the same may be allowed to be recovered from the beneficiaries.



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

Security Expenses

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

127. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses on a projected basis for the 2019-24 tariff period based on actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The Commission vide order dated 3.8.2021 in Petition No. 260/MP/2020 approved security expenses from 1.4.2019 to 31.3.2024. 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

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

Sharing of Transmission Charges

129. With effect from 1.7.2011, the sharing of transmission charges for inter-State transmission systems was governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010. With effect from



1.11.2020, the sharing of transmission charges is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020. 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.

130. To summarise:

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

| Assets | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
|---------------|----------------|----------------|----------------|----------------|----------------|
| Asset-1 | 97.98 | 514.90 | 566.55 | 577.50 | 572.09 |
| Asset-2 | 109.75 | 478.79 | 603.65 | 708.97 | 750.40 |
| Asset-3 | | | 12537.20 | 12765.69 | 12657.56 |
| Asset-4 | | | 2345.43 | 2706.40 | 2726.94 |
| Asset-5 | | | 10906.13 | 11591.89 | 11373.53 |
| Asset-6 | | 3476.64 | 13341.98 | 13149.20 | 12838.53 |
| Asset-7 | | 152.24 | 663.56 | 724.03 | 798.52 |
| Asset-8(A) | | | | 976.24 | 1029.29 |
| Asset-8(B) | | | | 405.78 | 413.69 |

- b. Annual Fixed Charges allowed in respect of the Combined Asset for the 2019-24 tariff period in this order are as follows:

| Particulars | (₹ in lakh) | | | | |
|--------------------|--------------------|----------------|----------------|----------------|----------------|
| | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Combined Asset | 42031.01 | 41139.17 | 40181.98 | 39159.21 | 38210.31 |



131. Annexures-I and II given hereinafter shall form part of the instant order.

132. This order disposes of Petition No. 209/TT/2023 in terms of the above discussions and findings.

sd/-
(P.K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(Jishnu Barua)
Chairperson



Asset-1

| 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 Deprecia-tion as per Regulations | Annual Depreciation as per Regulations (₹ in lakh) | | | | |
|--|---|--------------------|---------------|---------------|--------------|----------------|---|---|---|----------------|----------------|----------------|----------------|
| | | 2014-15 | 2015-16 | 2016- 17 | 2017- 18 | Total | | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Sub-station | 1655.45 | 480.98 | 505.87 | 192.35 | 58.24 | 1237.44 | 2892.89 | 5.28% | 100.11 | 126.16 | 144.59 | 151.21 | 152.74 |
| PLCC | 3.40 | 0.05 | 3.03 | - | - | 3.08 | 6.48 | 6.33% | 0.22 | 0.31 | 0.41 | 0.41 | 0.41 |
| Total | 1658.85 | 481.03 | 508.90 | 192.35 | 58.24 | 1240.52 | 2899.37 | | 100.32 | 126.47 | 145.00 | 151.62 | 153.15 |
| Average Gross Block (₹ in lakh) | | | | | | | | | 1899.37 | 2394.33 | 2744.95 | 2870.25 | 2899.37 |
| Weighted Average Rate of Depreciation | | | | | | | | | 5.28% | 5.28% | 5.28% | 5.28% | 5.28% |



Asset-2

| 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) | | | | |
|--|--|--------------------|---------------|----------------|---------------|---------------|----------------|--|--|---|----------------|----------------|----------------|----------------|
| | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | Total | | | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Sub-station | 848.75 | 601.26 | 304.56 | 1167.01 | 155.60 | 420.80 | 2649.22 | 3497.98 | 5.28% | 60.69 | 84.60 | 123.45 | 158.37 | 173.58 |
| PLCC | 29.56 | 0.57 | 19.45 | - | - | - | 20.02 | 49.58 | 6.33% | 1.89 | 2.52 | 3.14 | 3.14 | 3.14 |
| IT Equipmen (Incl. Software) | 42.28 | 0.81 | 0.60 | - | - | - | 1.41 | 43.69 | 5.28% | 2.25 | 2.29 | 2.31 | 2.31 | 2.31 |
| Total | 920.60 | 602.63 | 324.61 | 1167.01 | 155.60 | 420.80 | 2670.65 | 3591.25 | | 64.83 | 89.41 | 128.90 | 163.81 | 179.03 |
| Average Gross Block (₹ in lakh) | | | | | | | | | | 1221.92 | 1685.54 | 2431.35 | 3092.65 | 3380.85 |
| Weighted Average Rate of Depreciation | | | | | | | | | | 5.31% | 5.30% | 5.30% | 5.30% | 5.30% |



| Asset-3 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 | 951.73 | - | - | - | - | 951.73 | - | - | - | - | |
| Building Civil Works & Colony | 80.14 | 36.63 | 42.80 | - | 79.43 | 159.57 | 3.34% | 3.29 | 4.61 | 5.33 | |
| Transmission Line | 33930.73 | 2784.38 | 201.38 | - | 2985.75 | 36916.49 | 5.28% | 1865.05 | 1943.87 | 1949 .19 | |
| Sub-station | 30789.24 | 2380.46 | 2023.81 | 323.58 | 4727.85 | 35517.09 | 5.28% | 1688.52 | 1804.79 | 1866 .76 | |
| PLCC | 93.99 | 54.31 | 64.20 | 10.27 | 128.78 | 222.77 | 6.33% | 7.67 | 11.42 | 13.7 8 | |
| IT Equipment (Incl. Software) | 137.83 | 11.04 | 9.54 | 1.52 | 22.10 | 159.93 | 5.28% | 7.57 | 8.11 | 8.40 | |
| Total | 65983.66 | 5266.82 | 2341.72 | 335.37 | 7943.91 | 73927.57 | Total | 3572.09 | 3772.81 | 3843 .46 | |
| | | | | | | | | Average Gross Block (₹ in lakh) | 68617.07 | 72421.34 | 7375 9.89 |
| | | | | | | | | Weighted Average Rate of Depreciation | 5.21% | 5.21% | 5.21% |



Asset-4

| 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 | 475.86 | - | - | - | - | 475.86 | - | - | - | - |
| Building Civil Works & Colony | 78.64 | 84.35 | 125.19 | - | 209.53 | 288.17 | 3.34% | 4.04 | 7.53 | 9.62 |
| Sub-station | 13287.12 | 811.64 | 834.88 | 183.06 | 1829.58 | 15116.70 | 5.28% | 722.99 | 766.46 | 793.33 |
| IT Equipment (Incl. Software) | 52.57 | 3.53 | 3.78 | 0.83 | 8.14 | 60.71 | 5.28% | 2.87 | 3.06 | 3.18 |
| Total | 13894.18 | 899.52 | 963.85 | 183.89 | 2047.26 | 15941.44 | Total | 729.89 | 777.05 | 806.14 |
| Average Gross Block (₹ in lakh) | | | | | | | | 14343.94 | 15275.63 | 15849.50 |
| Weighted Average Rate of Depreciation | | | | | | | | 5.09% | 5.09% | 5.09% |



| Asset- 52014-19 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 | | | 2016-17 | 2017-18 | 2018-19 | |
| Building Civil Works & Colony | 13.63 | - | 33.51 | 38.34 | - | 71.85 | 85.48 | 3.34% | 1.01 | 2.21 | 2.86 | |
| Transmission Line | 56128.28 | - | 3230.90 | 601.19 | 22.86 | 3854.95 | 59983.22 | 5.28% | 3048.87 | 3150.0 4 | 3166.5 1 | |
| Sub-station | 5893.84 | - | 471.86 | 336.66 | 100.97 | 909.49 | 6803.33 | 5.28% | 323.65 | 345.00 | 356.55 | |
| PLCC | 59.50 | - | 8.45 | 7.67 | 2.29 | 18.41 | 77.91 | 6.33% | 4.03 | 4.54 | 4.86 | |
| IT Equipment (Incl. Software) | 11.58 | - | 1.01 | 0.75 | - | 1.76 | 13.34 | 5.28% | 0.64 | 0.68 | 0.70 | |
| Total | 62344.76 | - | 3745.72 | 984.61 | 126.12 | 4856.45 | 67201.21 | Total | 3378.21 | 3502.48 | 3531.48 | |
| | | | | | | | | | Average Gross Block (₹ in lakh) | 64217.62 | 66582.79 | 67138.15 |
| | | | | | | | | | Weighted Average Rate of Depreciation | 5.26% | 5.26% | 5.26% |



| Asset-6 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 Deprecia- tion 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 | |
| Building Civil Works & Colony | 409.08 | 14.80 | 25.05 | 9.37 | - | 49.23 | 458.31 | 3.34% | 13.91 | 14.58 | 15.15 | 15.31 | |
| Transmis- sion Line | 67506.25 | 3100.18 | 1514.21 | 294.24 | 57.81 | 4966.44 | 72472.69 | 5.28% | 3646.17 | 3767.99 | 3815.74 | 3825.03 | |
| Sub-station | 3103.53 | 53.55 | 425.91 | 8.57 | 38.70 | 526.73 | 3630.27 | 5.28% | 165.28 | 177.94 | 189.41 | 190.66 | |
| PLCC | 6.78 | 0.11 | 14.74 | - | - | 14.86 | 21.64 | 6.33% | 0.43 | 0.90 | 1.37 | 1.37 | |
| IT Equipment (Incl. Software) | 43.40 | 0.71 | 0.54 | - | - | 1.25 | 44.65 | 5.28% | 2.31 | 2.34 | 2.36 | 2.36 | |
| Total | 71069.05 | 3169.35 | 1980.47 | 312.18 | 96.51 | 5558.51 | 76627.55 | Total | 3828.11 | 3963.76 | 4024.02 | 4034.72 | |
| | | | | | | | | | Average Gross Block (₹ in lakh) | 72653.72 | 75228.63 | 76374.95 | 7657 9.30 |
| | | | | | | | | | Weighted Average Rate of Depreciation | 5.27% | 5.27% | 5.27% | 5.27% |



| Asset-7 2014-19 | 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 |
| Sub-station | 2358.84 | 45.64 | 483.88 | 303.65 | 658.30 | 1491.47 | 3850.31 | 5.28% | 125.75 | 139.73 | 160.52 | 185.92 |
| PLCC | 7.67 | 0.10 | 5.89 | - | - | 5.99 | 13.67 | 6.33% | 0.49 | 0.68 | 0.87 | 0.87 |
| IT Equipment (Incl. Software) | 63.69 | 0.83 | 0.94 | - | - | 1.77 | 65.46 | 5.28% | 3.38 | 3.43 | 3.46 | 3.46 |
| Total | 2430.21 | 46.57 | 490.71 | 303.65 | 658.30 | 1499.23 | 3929.44 | Total | 129.63 | 143.84 | 164.84 | 190.24 |
| Average Gross Block (₹ in lakh) | | | | | | | | | 2453.50 | 2722.14 | 3119.32 | 3600.29 |
| Weighted Average Rate of Depreciation | | | | | | | | | 5.28% | 5.28% | 5.28% | 5.28% |



| Asset-8(A) 2014-19 | 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 |
| Land - Freehold | 237.93 | - | - | - | 237.93 | - | - | - |
| Building Civil Works & Colony | 14.15 | 32.81 | - | 32.81 | 46.96 | 3.34% | 1.02 | 1.57 |
| Transmission Line | - | - | - | - | - | 5.28% | - | - |
| Sub-station | 5127.96 | 160.35 | 110.34 | 270.69 | 5398.65 | 5.28% | 274.99 | 282.14 |
| IT Equipment (Incl. Software) | 22.18 | 1.72 | - | 1.72 | 23.90 | 5.28% | 1.22 | 1.26 |
| Total | 5402.21 | 194.88 | 110.34 | 305.22 | 5707.43 | Total | 277.23 | 284.97 |
| Average Gross Block (₹ in lakh) | | | | | | | 5499.65 | 5652.26 |
| Weighted Average Rate of Depreciation | | | | | | | 5.04% | 5.04% |



Asset-8(B)

| 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 | Total | | | 2017-18 | 2018-19 |
| Sub- station | 2724.23 | - | - | - | - | 2724.23 | 5.28 % | 143.84 | 143.84 |
| Total | 2724.23 | - | - | - | - | 2724.23 | Total | 143.84 | 143.84 |
| Average Gross Block (₹ in lakh) | | | | | | | | 2724.23 | 2724.23 |
| Weighted Average Rate of Depreciation | | | | | | | | 5.28% | 5.28% |



Combined Asset

| 2019-24 Capital Expenditure | Admitted Capital Cost as on 1.4.2019 (₹ in lakh) | Projected ACE (₹ in lakh) | | | | | | Admitted Capital Cost as on 31.3.2024 (₹ in lakh) | Rate of Depreciation as per Regulations | Annual Depreciation as per Regulations (₹ in lakh) | | | | |
|--------------------------------|--|---------------------------|----------------|--------------|---------------|--------------|----------------|---|---|--|------------------|------------------|------------------|------------------|
| | | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 | Total | | | 2019-20 | 2020-21 | 2021-22 | 2022-23 | 2023-24 |
| Land - Freehold | 1903.45 | - | - | - | - | - | - | 1903.45 | - | - | - | - | - | - |
| Land - Leasehold | - | - | - | - | - | - | - | - | 3.34% | - | - | - | - | - |
| Building Civil Works & Colony | 1038.49 | - | - | - | - | - | - | 1038.49 | 3.34% | 34.69 | 34.69 | 34.69 | 34.69 | 34.69 |
| Transmission Line | 169391.16 | 51.33 | - | - | 50.00 | 50.00 | 151.33 | 169542.49 | 5.28% | 8945.21 | 8946.56 | 8946.56 | 8947.88 | 8950.52 |
| Sub-station | 79446.03 | 1023.67 | 1567.66 | 67.32 | 57.96 | - | 2716.61 | 82162.64 | 5.28% | 4221.78 | 4290.19 | 4333.35 | 4336.66 | 4338.19 |
| PLCC | 392.04 | 20.15 | 63.19 | - | - | - | 83.34 | 475.38 | 6.33% | 25.45 | 28.09 | 30.09 | 30.09 | 30.09 |
| IT Equipment (Incl. Software) | 411.68 | - | - | - | - | - | - | 411.68 | 15.00% | 61.75 | 61.75 | 61.75 | 61.75 | 61.75 |
| Total | 252582.85 | 1095.15 | 1630.85 | 67.32 | 107.96 | 50.00 | 2951.28 | 255534.13 | | 13288.87 | 13361.28 | 13406.44 | 13411.07 | 13415.24 |
| | | | | | | | | | | Average Gross Block (₹ in lakh) | | | | |
| | | | | | | | | | | 253130.42 | 254493.42 | 255342.51 | 255430.15 | 255509.13 |
| | | | | | | | | | | Weighted Average Rate of Depreciation | | | | |
| | | | | | | | | | | 5.25% | 5.25% | 5.25% | 5.25% | 5.25% |

