

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 273/TT/2022

Coram:

**Shri I. S. Jha, Member
Shri Arun Goyal, Member**

Date of order: 22.06.2023

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for truing up of transmission tariff of 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff for the 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of **Asset-A:** 400 kV 125 MVA Bus Reactor at Bina Sub-station, **Asset-B1:** 500 MVA, 400/220 kV ICT3 at Damoh Sub-station with associated bays, **Asset-B2:** 02 Numbers Line bays at Damoh Sub-station, **Asset-C:** 63 MVA SLR along with associated bays at Rajgarh Sub-station for Rajgarh-Sardar Sarovar Line-I, **Asset-D:** 63 MVA SLR along with associated bays at Rajgarh Sub-station for Rajgarh-Sardar Sarovar Line-II, **Asset-E:** 500 MVA 400/220 kV ICT-1 & ICT-2 at Vadodara GIS with associated bays, **Asset-F:** 4 Numbers 220 kV Line bays at Vadodara GIS and **Asset-G:** 1500 MVA 765/400 kV ICT-2 at Raipur PS & 1500 MVA 765/400 kV ICT-4 at Raigarh (Tamnar) Pooling Station along with associated bays under "Installation of Bus Reactor and ICT in Western Region" in the Western Region.

And in the matter of:

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

.....Petitioner

Vs

1. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Rampur,
Jabalpur-482008.
2. Madhya Pradesh Power Transmission Company Limited,
Shakti Bhawan, Rampur,
Jabalpur-482008.
3. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Limited,
3/54, Press Complex, Agra-Bombay Road,

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Indore-452008.

4. Maharashtra State Electricity Distribution Company Limited,
Hongkong Bank Building, 3rd Floor,
M.G. Road, Fort, Mumbai-400001.
5. Maharashtra State Electricity Transmission Company Limited,
Prakashganga, 6th Floor, Plot No. C-19, E-Block,
Bandra Kurla Complex, Bandra (East) Mumbai-400051.
6. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara-390007.
7. Electricity Department,
Government of Goa, Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa-403001.
8. Electricity Department,
Administration of Daman & Diu,
Daman-396210.
9. DNH Power Distribution Corporation Limited,
Vidyut Bhawan, 66 kV Road, Near Secretariat Amli,
Silvassa-396230.
10. Chhattisgarh State Power Transmission Company Limited,
Office of the Executive Director (C&P),
State Load Despach Building,
Dangania, Raipur-492013.
11. Chhattisgarh State Power Distribution Company Limited,
P.O. Sunder Nagar, Dangania, Raipur,
Chhattisgarh-492013.
12. Gujarat Energy Transmission Corporation Limited (GETCO),
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara-390007.
13. Electricity Department,
Administration of Dadra Nagar Haveli U.T.,
Silvassa-396230.

...Respondent(s)

For Petitioner : Shri Zafrul Hasan, PGCIL
Shri Mukesh Khanna, PGCIL
Shri D.K. Biswal, PGCIL
Shri Ashish Alankar, PGCIL
Shri Pankaj Khanna, PGCIL



For Respondents : Shri Ravi Sharma, MPPMCL
Shri Kashif Khan, MPPMCL

ORDER

The Petitioner, Power Grid Corporation of India Limited, has filed the instant petition for truing up of transmission tariff of the period from 1.4.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and determination of transmission 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 tariff period in respect of the following transmission assets (hereinafter referred to as “transmission assets”) under Installation of Bus Reactor and ICT in Western Region (hereinafter referred to as “the transmission project”) the Western Region:

Asset-A: 400 kV 125 MVAr Bus Reactor at Bina Sub-station;

Asset-B1: 500 MVA, 400/220 kV ICT3 at Damoh Sub-station with associated bays;

Asset-B2: 02 Numbers Line bays at Damoh Sub-station;

Asset-C: 63 MVAr SLR along with associated bays at Rajgarh Sub-station for Rajgarh-Sardar Sarovar Line-I;

Asset-D: 63 MVAr SLR along with associated bays at Rajgarh Sub-station for Rajgarh-Sardar Sarovar Line-II;

Asset-E: 500 MVA 400/220 kV ICT-1 & ICT-2 at Vadodara GIS with associated bays;

Asset-F: 4 Numbers 220 kV Line bays at Vadodara GIS; and

Asset-G: 1500 MVA 765/400 kV ICT-2 at Raipur Pooling Station & 1500 MVA 765/400 kV ICT-4 at Raigarh (Tamnar) Pooling Station along with associated bays.



2. The Petitioner has submitted that in case of Asset-B2 and Asset-F, the Commission has directed for bilateral billing of transmission tariff from approved COD to COD of associated downstream line and afterwards under common pool mechanism.

The details of the COD of the associated downstream line are as follows:

Assets	Description	Approved COD	Date of commissioning of downstream-line	Line description
Asset-B2	02 Numbers Line bays at Damoh Sub-station	18.11.2016	28.8.2017	220 kV Damoh-Damoh 3 and Damoh-Sagar 2
Asset-F	4 Numbers 220 kV Line bays at Vadodara GIS	20.5.2017	14.4.2018	220 kV Vadodara-Venkatpura 1 and 2
			17.12.2020	220 kV Vadodara-Jambuva 1 and 2

3. As mentioned above, the downstream associated lines were put into commercial operation on different dates. Accordingly, segregated transmission tariff of bays, which are associated with downstream line has been claimed in the instant petition. Asset-A, Asset-B1, Asset-B2, Asset-C, Asset-D, Asset-E, Asset-F1 and Asset-G have been combined as on 1.4.2019 and have been collectively referred to as "Combined Asset" in the 2019-24 tariff period. The tariff for Asset-F2 is calculated separately.

4. The Petitioner has made the following prayers in the instant Petition:

- “1) Admit the capital cost as claimed in the Petition and approve the Additional Capitalisation incurred / projected to be incurred.
- 2) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 7 & 8 above.
- 3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 7 & 8 above for respective block.



- 4) *Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of petition.*
- 5) *Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*
- 6) *Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.*
- 7) *Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 9 above.*
- 8) *Allow the petitioner to claim the capital spares at the end of tariff block as per actual.*
- 9) *Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.*
- 10) *Allow interim tariff in accordance with Regulation 10 (3) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for purpose of inclusion in the PoC charges.*
- 11) *Allow Final tariff in accordance with Regulation 10 (5) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for purpose of inclusion in the PoC charges.*

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

5. The facts of the case succinctly stated as follows:

- a) The Investment Approval (IA) of the transmission project was accorded by the Board of Directors (BoD) of the Petitioner's Company vide Memorandum No. C/CP/ICT&Rctr/WR-415 dated 19.5.2014 for ₹30307 lakh including IDC of ₹1745 lakh based on February, 2014 price level. The Revised Cost Estimate



(RCE) for the transmission project has been approved and accorded by BoD of the Petitioner's Company vide Memorandum No. C/CP/ Rctr&ICT dated 21.4.2017 at an estimated cost of ₹38970 lakh including an IDC of ₹1472 lakh based on October, 2016 price level.

b) Elements under the transmission project have been discussed and agreed upon in various Standing Committee Meetings of Power System Planning in Western Region and WRPC meetings as per following details which, later on, have been put together as a single scheme covered under the IA dated 19.5.2014 under the name "Installation of Bus reactor & ICT in Western Region"

Element	Discussed and Agreed	Ratified
400 kV, 125 MVA Bus Reactor at Bina	35 th SCM of Power System Planning in WR	22 nd WRPC Meeting
400 kV, 63 MVA Switchable Line Reactors for 400 kV D/C Rajgarh-Sardar Sarovar transmission line at Rajgarh	36 th SCM of Power System Planning in WR	24 th WRPC Meeting
765/400 kV, 1500 MVA ICT 2 at Raipur Pooling Station	36 th SCM of Power System Planning in WR	24 th WRPC Meeting
765/400 kV, 1500 MVA ICT 4 at Raigarh (Tamnar) Pooling Station	36 th SCM of Power System Planning in WR	24 th WRPC Meeting
400/220 kV, 500 MVA ICT at 400/220 kV Damoh Sub-station	36 th SCM of Power System Planning in WR	24 th WRPC Meeting
400/220 kV, 500 MVA ICT-1 at 765/400 kV GIS at Vadodara	36 th SCM of Power System Planning in WR	24 th WRPC Meeting

c) The scope of the work covered under the transmission project is as follows:

1	Extension of 765/400 kV Raigarh Pooling Station (Tamnar)	1 Number 1500 MVA, 765/400 kV ICT along with associated Bays
2	Extension of 400/220 kV Bina Sub-station	1 Number 125 MVAR Bus Reactor with associated Bay (Existing 63 MVAR Bus Reactor to be replaced with 125 MVAR reactor. The replaced reactor will be kept as regional spare)
3	Extension of 400/220 kV Damoh Sub-station	1 Number 500 MVA, 400/220 kV ICT along with associated Bays and 2 number 220 kV Line Bays
4	Extension of 765/400 kV Raipur Pooling Station	1 Number 1500 MVA, 765/400 kV ICT along with associated Bays
5	Extension of 765/400 kV Vadodara GIS	2 Number 500 MVA, 400/220 kV ICTs along with associated Bays and 4 number 220 kV Line Bays



6	Extension of 400/220 kV Rajgarh Sub-station	2 number 63 MVAr Switchable Line Reactors with associated bays for 400 kV D/C Rajgarh-Sardar Sarovar Transmission Line
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d) The Petitioner had initially filed the instant petition claiming transmission tariff for five assets on the basis of their respective actual COD and had submitted that the entire scope of the transmission project is covered in the instant petition. However, the Petitioner, vide affidavits dated 30.1.2017 and 21.6.2017 has split Asset-2 into Asset-2A and Asset-2B and Asset-5 into Asset-5A and Asset-5B respectively. The details of the transmission assets are as follows:

Assets nomenclature in instant petition	Previous Order	Asset nomenclature in previous petition	COD
Asset-A	Order dated 22.11.2017 in Petition No. 208/TT/2016 Order dated 1.11.2019 in Petition No. 182/TT/2018	Asset-1	16.3.2016
Asset-B1	Order dated 22.11.2017 in Petition No. 208/TT/2016	Asset-3	18.11.2016
Asset-B2	Order dated 22.11.2017 in Petition No. 208/TT/2016 Order dated 5.2.2020 in Petition No. 28/TT/2019 (fresh Petition for Asset-B2)		18.11.2016
Asset-C	Order dated 22.11.2017 in Petition No. 208/TT/2016	Asset-2A	20.10.2016
Asset-D	Order dated 22.11.2017 in Petition No. 208/TT/2016	Asset-2B	23.10.2016
Asset-E	Order dated 22.11.2017 in Petition No. 208/TT/2016 Order dated 5.2.2020 in Petition No. 28/TT/2019	Asset-5A	24.3.2017
Asset-F (bifurcated into Asset-F1 & Asset-F2)	Order dated 22.11.2017 in Petition No. 208/TT/2016 Order dated 5.2.2020 in Petition No. 28/TT/2019	Asset-5B	20.5.2017
Asset-G	Order dated 22.11.2017 in Petition No. 208/TT/2016	Asset-4	1.4.2017

6. The details of the transmission assets covered under the instant petition along with impact of the previous order are as follows:



Assets	Description	SCOD	COD	Petition No. and date of order
Asset-A	400 kV 125 MVAr Bus Reactor at Bina Sub-station	12.7.2016	16.3.2016	<p>Initially tariff for instant asset was claimed in Petition No. 208/TT/2016. However, the tariff was not approved by the Commission and the Petitioner was directed vide Order dated 22.11.2017 in Petition No. 208/TT/2016, to file a separate petition along with the details of decapitalization of replaced reactor.</p> <p>Accordingly, Petition No. 182/TT/2018 was filed along with details of decapitalization of replaced reactor. The Commission, vide order dated 1.11.2019 in Petition No. 182/TT/2018, approved the transmission tariff for 2014-19 tariff period considering capital cost after deducting the gross opening cost amounting to ₹293 lakh of replaced 63 MVAR, 400 kV Bus Reactor (commissioned under Sipat II transmission system).</p> <p>Subsequently, Review Petition No. 2/RP/2020 was filed against the order with request to allow the decap amount of replaced reactor (being used as regional spare), which has been disposed of vide order dated 10.5.2022 in Review Petition No. 2/RP/2020.</p> <p>In the instant petition, actual expenditure (without decapitalisation) has been considered while calculating the truing up tariff for 2014-19 period, as directed by the Commission vide order dated 10.5.2022 in Review Petition No. 2/RP/2020.</p>
Asset-B1	500 MV, 400/220 kV ICT3 at Damoh Sub-station with associated bays	12.7.2016	18.11.2016	<p>Initially tariff for this asset was claimed in Petition No. 208/TT/2016. The Commission vide order dated 22.11.2017 in Petition No. 208/TT/2016 approved the transmission tariff for ICT only on pro-rata basis (80% of tariff claimed) as the ICT was put to use with existing system. However, 2 Numbers of line bays) 220 kV Damoh (PGCIL)-Damoh (MPPTCL) and 220 kV Damoh (PGCIL)-Sagar (MPPTCL) were not in use because transmission line were under scope of MPPTCL.</p>
Asset-B2	02 number of line bays at Damoh Sub-station	12.7.2016	18.11.2016	



				<p>Subsequently, a Review Petition No. 6/RP/2018 was filed. In order dated 4.7.2018 in Review Petition No. 6/RP/2018, the Commission directed to file separate petition for remaining 2 numbers of 220 kV line bays at Damoh. (refer as Asset-B2)</p> <p>Accordingly, Petition No. 28/TT/2019 was filed. In order dated 5.2.2020 in the Petition No. 28/TT/2019, the Commission has approved the COD w.e.f. 18.11.2016 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations and disallowed time over-run of 128 days. The provisional tariff was allowed subject to truing up. Further, the Commission has also held that the transmission charges in the instant asset from its COD, upto COD of downstream transmission system under the scope of MPPTCL shall be borne by MPPTCL and, thereafter, under common pool, as per provisions of the 2010 sharing regulations.</p> <p>In the instant petition, the corresponding IEDC and IDC against the disallowed time over-run has been calculated on pro-rata basis and deducted from capital cost while calculating the truing up tariff for 2014-19 period based on latest Auditor certificate with approved COD as 18.11.2016.</p>
Asset-C	63 MVA SLR along with associated bays at Rajgarh Sub-station for Rajgarh-Sardar Sarovar Line - I	12.7.2016	20.10.2016	<p>The tariff was allowed for the asset vide order dated 22.11.2017 in Petition No. 208/TT/2016 and disallowed the time over-run of 3 months and 8 days.</p> <p>In the instant petition, the amount of IEDC and IDC corresponding to the disallowed time over-run has been deducted from capital cost while calculating the tariff for 2014-19 period.</p>
Asset-D	63 MVA SLR along with associated bays at Rajgarh Sub-station for Rajgarh-Sardar Sarovar Line - II	12.7.2016	23.10.2016	<p>In order dated 22.11.2017 in Petition No. 208/TT/2016, the Commission approved the transmission tariff for instant asset and disallowed the time over-run of 3 months and 11 days. In the instant petition, the amount of IEDC and IDC corresponding to the time over-run has been deducted from capital cost while calculating the tariff for 2014-19 period.</p>
Asset-E	500 MVA 400/220 kV ICT-1 & ICT-2 at Vadodara GIS			<p>Initially the tariff for the asset was claimed in Petition No. 208/TT/2016. In order dated 22.11.2017 in Petition No.</p>



	with associated bays			208/TT/2016, the Commission did not approve the transmission tariff of the assets. Subsequently, a Review Petition No. 6/RP/2018 was filed. In order dated 4.7.2018 in Review Petition No. 6/RP/2018, the Commission directed to file separate petition. Accordingly, Petition No. 28/TT/2019 was filed. In order dated 5.2.2020 in Petition No. 28/TT/2019, the Commission approved the COD as 24.3.2017 for ICTs and 20.5.2017 for downstream line bays under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations, as claimed in earlier Petition No. 208/TT/2016 and disallowed entire time over-run. Further, the Commission directed that the tariff of the respective asset will be approved at the time of truing up. In order dated 5.2.2020 in Petition No. 28/TT/2019, it was held that the transmission charges in case of Asset-E and Asset-F from their COD, i.e. 24.3.2017 and 20.5.2017 respectively upto COD of downstream transmission system under the scope of GETCO should be borne by GETCO and thereafter under common pool, as per provisions of the 2010 sharing regulations. In the instant petition, the IEDC and IDC corresponding to the disallowed time over-run has been deducted from capital cost while calculating the truing up tariff for 2014-19 period based on latest Auditor certificate.
Asset-F	4 number 220 kV Line bays at Vadodara GIS	12.7.2016	24.3.2017	
Asset-G	1500 MVA 765/400 kV ICT-2 at Raipur PS & 1500 MVA 765/400 kV ICT-4 at Raigarh (Tamnar) PS along with associated bays	12.7.2016	1.4.2017	In order dated 22.11.2017 in Petition No. 208/TT/2016, the Commission approved the transmission tariff for the instant asset and disallowed the time over-run of 8 months and 19 days. In the instant petition, the amount of IEDC and IDC corresponding to the disallowed time over-run has been deducted from capital cost while calculating the tariff for 2014-19 period.

7. The observations made by the Commission in previous orders in respect of the assets A, B, E and F are as follows:



i) Asset-A: - 400 kV 125 MVAR Bus Reactor at Bina Sub-station.

The tariff for this asset was claimed initially in Petition No. 208/TT/2016. However, the tariff was not allowed and the Commission vide order dated 22.11.2017 in Petition No. 208/TT/2016 directed to file a separate petition along with the details of decapitalization of replaced reactor. The relevant extracts of the order is as follows:

“11. Allowing tariff for 125 MVAR Bus reactor at Bina without de-capitalisation of the existing 63 MVAR Bus reactor at Bina would tantamount to servicing two assets for the same purpose. Therefore, tariff for Asset-1 shall be allowed only after de-capitalisation of old asset i.e. 63 MVAR Bus reactor at Bina and associated cost of bays and adjustment of cumulative depreciation etc. The petitioner is directed to file a separate petition claiming tariff for 125 MVAR Bus reactor at Bina along with the details of de-capitalisation within three months of issue of this order.”

Accordingly, Petition No. 182/TT/2018 was filed along with indicative details of replaced 63 MVAR Bus Reactor with prayer for continuation of tariff for replaced asset as the same was agreed in 35th Meeting of Standing Committee on Power System Planning to keep as regional spare. The Commission, vide order dated 1.11.2019 in Petition No. 182/TT/2018, has approved the transmission tariff for 2014-19 tariff period considering capital cost after deducting the gross opening cost amounting to ₹293 lakh of replaced 63 MVAR, 400 kV Bus reactor (commissioned under Sipat-II transmission system).

In the instant petition, actual expenditure (without decapitalisation) has been considered while calculating the trueing up tariff for 2014-19 period, as directed by the Commission vide order dated 10.5.2022 in Review Petition No. 2/RP/2020.



ii) **Asset-B1 (500 MV, 400/220 kV ICT3 at Damoh Sub-station with associated bays) and Asset-B2 (02 numbers Line bays at Damoh Sub-station)**

The tariff for this asset (consisting of ICT and two line bays at Damoh Sub-station) was initially claimed by the Petitioner in Petition No. 208/TT/2016. The Commission, vide order dated 22.11.2017 in Petition No. 208/TT/2016, approved the transmission tariff for ICT 3 only on pro-rata basis (80% of tariff claimed) as it was put to use with existing transmission system. However, 2 Numbers of line bays were not put to use because 220 kV Damoh (PGCIL)-Damoh (MPPTCL) and 220 kV Damoh (PGCIL)-Sagar (MPPTCL) line were under the scope of MPPTCL was not ready. The relevant extract of the order is as follows:

“14.....It is observed from the charging certificate that the 500 MVA ICT and associated ICT bays (400 kV ICT bay and 220 kV ICT bay are commissioned) and the associated 2 Nos. 220 kV line bays (220 kV Damoh (MPPTCL) bay and Sagar bay) under the scope of the petitioner have not been commissioned due to non-commissioning of downstream transmission system of MPPTCL. The petitioner has submitted the correspondence carried out with MPPTCL from 6.10.2015 to 30.6.2017. It is observed from the Single line diagram (at Annexure-I), submitted by the petitioner, that the 500 MVA ICT is connected to the existing transmission system and power is flowing through existing transmission system. Therefore, the COD of 500 MVA ICT is considered as 18.11.2016. However, COD of the 2 nos. of 220 kV line bays shall be declared once associated downstream is commissioned. The cost break-up of the ICT at Damoh Sub-station and the line bays is not available. Therefore, it is not possible to work out the final tariff for ICT Damoh Substation based on the available capital cost. Accordingly, taking into consideration the commercial interest of the petitioner, 80% of the tariff claimed by the petitioner for Asset 3 is allowed on provisional basis as given below. The same will be reconsidered at the time of truing up on submission of the break-up of the cost of the 500 MVA ICT and the bays at Damoh Sub-station.....”.

Thereafter, Review Petition No. 6/RP/2018 was filed by the Petitioner. The Commission vide order dated 4.7.2018 in Review Petition No. 6/RP/2018, directed to file separate petition w.r.t. the 2 numbers of 220 kV line bays at Damoh Sub-station. The relevant extract of the order is as follows:



“8. Without going into the merit of the grounds raised by the Review Petitioner, we are of the view that the Review Petition needs to be allowed by permitting the Review Petitioner to file a fresh petition for approval of the COD not linking with the approval of COD of Assets 3, 5A and 5B with the COD or downstream assets, but under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations duly supported by all documents including the certificate from the CMD (which was not submitted earlier).....”

Accordingly, the Petitioner filed Petition No. 28/TT/2019. The Commission vide order dated 5.2.2020 in Petition No. 28/TT/2019 approved the COD as 18.11.2016 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations and disallowed time over-run of 128 days and approved provisional tariff subject to truing up. The relevant extract of the order is as follows:

“39. The COD of Asset-1 is approved as 18.11.2016 under the provisions of proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations. However, the Petitioner has Order in Petition No.28/TT/2019 Page 23 of 27 provided the tariff forms and Auditor’s certificate based on the COD of 29.8.2017 as claimed in this petition. Therefore, computation of transmission charges in respect of Asset-1 at this stage is not possible. It is also noted that the Commission, vide order dated 30.4.2019, had already allowed provisional tariff in respect of Asset-1. Therefore, we are of the view that the provisional tariff as allowed vide Order dated 30.4.2019 should continue and the final tariff will be allowed at the time of truing up on submission of Auditor’s certificate alongwith tariff forms based on the approved COD of 18.11.2016”.

In order dated 5.2.2020 in the said Petition No. 28/TT/2019, the Commission further held that the transmission charges for the period of mismatch will be borne by MPPTCL. The relevant portion of the order is as follows:

“38. The transmission charges in case of Asset-1 from 18.11.2016 (COD) to 28.8.2017 (one day before actual charging of downstream system) shall be on account of MPPTCL and thereafter, from 29.8.2017 (Actual Charging of downstream system), it will be shared under PoC mechanism, as per provisions of the 2010 sharing regulations”.

In the instant petition, IEDC and IDC against the disallowed time over-run has been calculated on pro-rata basis and deducted from capital cost while calculating the truing up tariff for 2014-19 period based on latest Auditor certificate with COD as 18.11.2016.



iii) Asset-E (500 MVA 400/220 kV ICT-1 & ICT-2 at Vadodara GIS with associated bays) and Asset-F (4 numbers 220 kV Line bays at Vadodara GIS)

The Petitioner claimed the tariff initially for this transmission assets in Petition No.208/TT/2016. The Commission did not approve the COD and tariff of the asset and directed the Petitioner, vide order dated 22.11.2017 in Petition No. 208/TT/2016, to approach the Commission after COD of the downstream system.

The relevant portion of the order is as follows:

“16.....In the instant case, the downstream assets under the scope of GETCO have not been put into commercial operation and the petitioner has not produced any document to show that the instant assets are put to any alternative use. Since assets have not been put to regular use, we are not inclined to approved the COD of Assets-5A and 5B under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations as prayed by the petitioner. As such, the tariff of Assets-5A and 5B is not allowed in the instant order. The petitioner may approach the Commission for tariff for these assets after the COD of the downstream system”.

Aggrieved by the above said order, the Petitioner filed Review Petition No. 6/RP/2018 and the Commission vide order dated 4.7.2018 in directed the Petitioner to file separate petition. The relevant portion of the order dated 4.7.2018 is as follows:

“8. Without going into the merit of the grounds raised by the Review Petitioner, we are of the view that the Review Petition needs to be allowed by permitting the Review Petitioner to file a fresh petition for approval of the COD not linking with the approval of COD of Assets 3, 5A and 5B with the COD or downstream assets, but under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations duly supported by all documents including the certificate from the CMD (which was not submitted earlier).....”.

Accordingly, the Petitioner filed Petition No. 28/TT/2019 and the Commission vide order dated 5.2.2020 approved the COD of the ICTs. 24.3.2017 and the bays as 20.5.2017 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations however, disallowed the entire time over-run. The relevant portion of the order dated 5.2.2020 in Petition No. 28/TT/2019 is as follows:



“44. As per the investment approval dated 13.5.2014, the assets were scheduled to be put into commercial operation on 13.7.2016. The COD of Asset-2 and Asset-3 has been approved as 24.3.2017 and 20.5.2017 respectively. Therefore, there is a time over-run of 254 days (from SCOD i.e. 13.7.2016 to 23.3.2017) and 311 days (from SCOD i.e. 13.7.2016 to 19.5.2017) in respect of Asset-2 and Asset-3 respectively. We are of the view that the time over-run of 254 days and 311 days in respect of Asset-2 and Asset-3 on account of matching with the downstream assets of GETCO was a decision of the Petitioner and hence same is not condoned”.

The Commission, vide order dated 5.2.2020 in Petition No. 28/TT/2019, observed that the transmission charges in case of Asset-E and Asset-F from their COD, i.e. 24.3.2017 and 20.5.2017 respectively, upto COD of downstream transmission system under the scope of GETCO should be borne by GETCO and thereafter will be recovered from the common pool as per provisions of the 2010 Sharing Regulations. The relevant portion of the order is as follows:

“45. The transmission charges in case of Asset-2 and Asset-3 from their COD, i.e. 24.3.2017 and 20.5.2017 respectively upto COD of downstream transmission system under the scope of GETCO shall be borne by GETCO and thereafter, the transmission charges allowed in this order, as provided in Regulation 43 of the 2014 Tariff Regulations, shall be shared by the beneficiaries and long term transmission customers in terms of the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 as amended from time to time”.

In the instant petition, IEDC and IDC against the disallowed time over-run has been calculated on pro-rata basis and deducted from capital cost while calculating the truing up tariff for 2014-19 period based on latest Auditor certificate. Further, in case of Asset-B and Asset-F, the Commission has directed for bilateral billing of transmission tariff from approved COD to commissioning of associated downstream line and afterwards from the common pool. The status of the associated downstream line are as follows:



Assets	Description	Approved COD	Commission date of downstream line	Line description
Asset-B2	2 numbers Line bays at Damoh Sub-station	18.11.2016	28.8.2017	220 kV Damoh-Damoh 3 and Damoh-Sagar 2
Asset-F	4 numbers 220 kV Line bays at Vadodara GIS	20.5.2017	14.4.2018	220 kV Vadodara-Venkatpura#1 and 2
			17.12.2020	220 kV Vadodara-Jambuva#1 and 2

As mentioned above, the downstream associated line has been put into commercial operation on different dates. Accordingly, separate tariff for bays, which are associated with downstream line has been claimed in the instant petition.

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

9. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments/ objections have been received from the general public in response to the aforesaid notice published in the newspapers by the Petitioner. Madhya Pradesh Power Corporation Limited (MPPMCL), Respondent No. 1, vide affidavit dated 2.11.2022 has filed its reply and mainly raised the issue of grossing up Return on Equity (RoE) with effective tax rates and effects of CGST. In addition to this MPPMCL has mainly raised the issues with respect to time overrun and that the Petitioner has not submitted the price variation formula and no proper documents supporting the details on undischarged ACE in the 2019-24 period.



10. This order is issued considering the submissions made by the Petitioner vide affidavit dated 1.4.2022 and affidavit dated 20.9.2022, and MPPCL's reply filed vide affidavit dated 2.11.2022.

11. The hearing in this matter was held on 27.10.2022 and the order was reserved.

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

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

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

Asset-A

Particulars	(₹ in lakh)			
	2015-16 (pro-rata for 16 days)	2016-17	2017-18	2018-19
Depreciation	0.95	24.23	28.32	29.82
Interest on Loan	1.05	25.75	27.94	27.10
Return on Equity	1.06	27.14	31.70	33.47
O&M Expenses	0.00	0.00	0.00	0.00
Interest on Working Capital	0.07	1.78	2.03	2.08
Total	3.13	78.90	89.99	92.47

Asset-B1

Particulars	(₹ in lakh)		
	2016-17 (pro-rata for 134 days)	2017-18	2018-19
Depreciation	38.96	118.36	128.47
Interest on Loan	40.21	115.83	116.53
Return on Equity	43.62	132.52	144.50
O&M Expenses	40.17	113.06	116.81
Interest on Working Capital	4.78	13.91	14.60
Total	167.74	493.68	520.91



Asset-B2

(₹ in lakh)

Particulars	2016-17 (pro-rata for 134 days)	2017-18	2018-19
Depreciation	5.62	23.69	26.38
Interest on Loan	6.16	24.20	24.49
Return on Equity	6.29	26.38	29.38
O&M Expenses	33.08	93.10	96.20
Interest on Working Capital	2.13	6.49	6.78
Total	53.28	173.86	183.23

Asset-C

(₹ in lakh)

Particulars	2016-17 (pro-rata for 163 days)	2017-18	2018-19
Depreciation	14.26	44.80	51.79
Interest on Loan	15.19	45.27	48.24
Return on Equity	15.96	50.16	58.14
O&M Expenses	28.75	66.52	68.71
Interest on Working Capital	2.49	6.54	7.04
Total	76.65	213.28	233.92

Asset-D

(₹ in lakh)

Particulars	2016-17 (pro-rata for 160 days)	2017-18	2018-19
Depreciation	13.93	44.77	51.87
Interest on Loan	14.81	45.16	48.24
Return on Equity	15.60	50.13	58.23
O&M Expenses	28.22	66.51	68.71
Interest on Working Capital	2.44	6.53	7.05
Total	75.00	213.10	234.10

Asset-E

(₹ in lakh)

Particulars	2016-17 (pro-rata for 8 days)	2017-18	2018-19
Depreciation	7.45	379.03	419.00
Interest on Loan	7.68	374.82	389.11
Return on Equity	8.35	424.38	470.69
O&M Expenses	4.80	226.12	233.62
Interest on Working Capital	0.76	37.51	40.10
Total	29.04	1441.86	1552.52



Asset-F1

(₹ in lakh)

Particulars	2017-18 (pro-rata for 316 days)	2018-19
Depreciation	54.49	65.95
Interest on Loan	52.71	59.34
Return on Equity	60.91	73.77
O&M Expenses	80.60	96.20
Interest on Working Capital	7.76	9.22
Total	256.47	304.48

Asset-F2

(₹ in lakh)

Particulars	2017-18 (pro-rata for 316 days)	2018-19
Depreciation	54.49	65.95
Interest on Loan	52.71	59.34
Return on Equity	60.91	73.77
O&M Expenses	80.60	96.20
Interest on Working Capital	7.76	9.22
Total	256.47	304.48

Asset-G

(₹ in lakh)

Particulars	2017-18	2018-19
Depreciation	669.77	760.02
Interest on Loan	689.49	723.78
Return on Equity	779.01	889.59
O&M Expenses	319.24	329.82
Interest on Working Capital	62.30	67.89
Total	2519.81	2771.10

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

Asset-A

(₹ in lakh)

Particulars	2015-16 (pro-rata for 16 days)	2016-17	2017-18	2018-19
O&M Expenses	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00
Receivables	11.94	13.15	15.00	15.41
Total Working Capital	11.94	13.15	15.00	15.41



Rate of Interest (in %)	13.50	13.50	13.50	13.50
Interest on Working Capital	0.07	1.78	2.03	2.08

Asset-B1

(₹ in lakh)

Particulars	2016-17 (pro-rata for 134 days)	2017-18	2018-19
O&M Expenses	9.12	9.42	9.73
Maintenance Spares	16.41	16.96	17.52
Receivables	76.15	82.28	86.82
Total Working Capital	101.68	108.66	114.07
Rate of Interest (in %)	12.80	12.80	12.80
Interest on Working Capital	4.78	13.91	14.60

Asset-B2

(₹ in lakh)

Particulars	2016-17 (pro-rata for 134 days)	2017-18	2018-19
O&M Expenses	7.51	7.76	8.02
Maintenance Spares	13.52	13.97	14.43
Receivables	24.19	28.98	30.54
Total Working Capital	45.22	50.71	52.99
Rate of Interest (in %)	12.80	12.80	12.80
Interest on Working Capital	2.13	6.49	6.78

Asset-C

(₹ in lakh)

Particulars	2016-17 (pro-rata for 163 days)	2017-18	2018-19
O&M Expenses	5.36	5.54	5.73
Maintenance Spares	9.66	9.98	10.31
Receivables	28.61	35.55	38.99
Total Working Capital	43.63	51.07	55.03
Rate of Interest (in %)	12.80	12.80	12.80
Interest on Working Capital	2.49	6.54	7.04

Asset-D

(₹ in lakh)

Particulars	2016-17 (pro-rata for 160 days)	2017-18	2018-19
O&M Expenses	5.36	5.54	5.73
Maintenance Spares	9.66	9.98	10.31
Receivables	28.52	35.52	39.02
Total Working Capital	43.54	51.04	55.06



Rate of Interest (in %)	12.80	12.80	12.80
Interest on Working Capital	2.44	6.53	7.05

Asset-E

(₹ in lakh)

Particulars	2016-17 (pro-rata for 8 days)	2017-18	2018-19
O&M Expenses	18.24	18.84	19.47
Maintenance Spares	32.83	33.92	35.04
Receivables	220.83	240.31	258.75
Total Working Capital	271.90	293.07	313.26
Rate of Interest (in %)	12.80	12.80	12.80
Interest on Working Capital	0.76	37.51	40.10

Asset-F1

(₹ in lakh)

Particulars	2017-18 (pro-rata for 316 days)	2018-19
O&M Expenses	7.76	8.02
Maintenance Spares	13.97	14.43
Receivables	49.37	50.75
Total Working Capital	71.10	73.20
Rate of Interest (in %)	12.60	12.60
Interest on Working Capital	7.76	9.22

Asset-F2

(₹ in lakh)

Particulars	2017-18 (pro-rata for 316 days)	2018-19
O&M Expenses	7.76	8.02
Maintenance Spares	13.97	14.43
Receivables	49.37	50.75
Total Working Capital	71.10	73.20
Rate of Interest (in %)	12.60	12.60
Interest on Working Capital	7.76	9.22

Asset-G

(₹ in lakh)

Particulars	2017-18	2018-19
O&M Expenses	26.60	27.49
Maintenance Spares	47.89	49.47
Receivables	419.97	461.85
Total Working Capital	494.46	538.81
Rate of Interest (in %)	12.60	12.60
Interest on Working Capital	62.30	67.89



Capital cost

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

16. The details of the capital cost approved earlier by the Commission are as follows:

Asset name in previous petition	FR appor- tioned approved cost	RCE appor- tioned approved cost	Capital cost claimed as on COD	Capital cost allowed as on COD	Add Cap 2014-2019 (as admitted by the Commission)			Estimated completion cost (as allowed)
					2016-17	2017-18	2018-19	
Asset-A	780.52	809.78	422.60	116.31(#)	176.43	88.61	-	381.35
Asset-B	2662.37	3483.63	1976.77	The estimated completion cost will be finalized at the time of truing up (80% of claimed tariff has been allowed provisionally vide order dated 22.11.2017 in Petition No. 208/TT/2016) and provisional tariff for Asset-B2 is allowed vide order dated 30.4.2019 in Petition No. 28/TT/2019.				
Asset-C	854.23	1097.23	500.66	492.50(*)	193.74	242.18	46.44	974.86
Asset-D	854.23	1097.23	500.77	489.84(*)	193.74	246.27	48.92	978.77
Asset-E	9249.44	9368.40	The estimated completion cost and tariff would be finalized at the time of truing up (vide order dated 5.2.2020 in Petition No. 28/TT/2019)					
Asset-F		3196.96						
Asset-G	15906.06	19917.11	12192.48	11868.67(*)	-	5619.60	1577.37	19065.64

(#) COD cost reduced due to decapitalization of replaced reactor. (Vide order dated 1.11.2019 in Petition No. 182/TT/2018)

(*) COD cost reduced due to non-condonation of time over-run (Petition No. 208/TT/2016)

17. The Petitioner in the instant true-up petition has claimed the following capital cost for truing-up in the 2014-19 tariff period:

Assets	FR appor- tioned approved 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-A	780.52	809.78	422.60	85.27	56.83	0.00	564.7
Asset-B1	2662.37	3483.63	1966.22	159.96	276.76	88.90	2491.84
Asset-B2			184.45	218.72	90.53	3.88	497.58
Asset-C	854.23	1097.23	500.66	222.86	264.81	0.00	988.33
Asset-D	854.23	1097.23	500.77	222.86	264.81	0.00	988.44
Asset-E	9249.44	9368.40	6606.83		1379.57	50.40	8036.80
Asset-F1		1598.48	1165.39		94.505	0.44	1260.34
Asset-F2		1598.48	1165.39		94.505	0.44	1260.34
Asset-G	15906.06	19917.11	12192.48		2610.57	1044.62	15847.67
Total	30306.85	38970.34	24704.79	909.67	5132.89	1188.68	31936.04



Cost over-run

18. The Petitioner has submitted the following with respect to cost over-run:

(a) As against the RCE approved cost of ₹38970.34 lakh, the cost as on 31.3.2019 is ₹31936.04 lakh. Therefore, there is no cost over-run w.r.t. RCE as on 31.3.2019.

Reasons for cost variation

The estimated completion cost of the transmission project is more than the FR cost by ₹1629.19 lakh. The RCE cost is more than the FR approved cost by ₹8663.49 lakh. The major variation in cost is attributable to the following:

Price variation	28.07%
New Addition	3.98%
FERV	(-) 0.55%
Decrease in IDC & IEDC	(-) 2.92%

The head wise variation in cost as follows:

(i) Price Variation (PV) (Net Increase of ₹8508 lakh: 28.07 %)

There has been an increase in the cost of the project by ₹8508 lakh on this account, which works out to 28.07% of the approved cost. Out of a total price variation, a variation of ₹7113 lakh has been incurred from the time of approval of transmission project till award of various contracts (DPR to LOA) based on prices received as per competitive bidding and a variation of ₹1396 lakh has been incurred/ likely to be incurred on the basis of PV based on indices as per provision of respective contracts. In regard to PV from DPR to LOA, the contracts for various packages under this project were awarded to the lowest evaluated and responsive bidder, on the basis of competitive bidding by the Petitioner, after publication of NITs in leading newspapers.



Thus, the award prices represent the lowest prices available at the time of bidding of various packages.

(ii) New Addition (Net increase of ₹1206 lakh: 3.98 %)

Due to space constraint at Raigarh (Tamnar) Sub-station, double gantry structure has been used which was not envisaged during DPR. This has resulted in increase in the cost of the project by ₹306 lakh. Presently, Raigarh (Tamnar) Sub-station is a remotely operated from Raigarh (Kotra) Sub-station of the Petitioner. As the Raigarh (Tamnar) Sub-station is a critical sub-station as a number of generation projects are directly connected to it, it was decided to deploy Operation & Maintenance (O&M) personnel at the sub-station itself to minimize the outage of the sub-station. About 12 dwelling units along with related infrastructure will be constructed at the sub-station for O&M personnel. This has resulted in increase in the cost of the project by ₹900 lakh. Accordingly, there has been increase of ₹1206 lakh (3.98 %) in the cost of the project due to above reasons.

(iii) Foreign Exchange Rate Variation (Net decrease of ₹166 Lakh : (-) 0.55 %)

The project involves payment in foreign currency towards the contract awarded for extension of Vadodara GIS Sub-station. There is a decrease in liability on account of FERV which works out to ₹166 lakh, (-) 0.55 % as per following details:

Foreign currency (in INR)		
	Approved DPR (February, 2014 PL)	RCE
1 USD	62.44	Varied from 59.99 to 68.69



1 CHF	70.35	Varied from 61.39 to 70.95
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(iv) Variation in IDC and IEDC (Net decrease of ₹885 lakh : (-) 2.92 %)

The total IDC and IEDC under the project has decreased by ₹885 lakh in comparison to approved cost, which works out to (-) 2.92 % as per the following break-up:

(v) Decrease in IEDC

As per IA, IEDC including contingencies for the project was estimated at ₹3397 lakh on normative basis whereas in the RCE, on the basis of actual/ anticipated expenditure incurred, this works out to ₹2785 lakh resulting in a decrease of ₹612 lakh.

(vi) Decrease in IDC

Interest during construction (IDC) for the project as per approved DPR cost was estimated at ₹1745 lakh whereas based on the actual and anticipated funds flow, the IDC for the project in the RCE works out to ₹1472 lakh. Thus, there is a decrease of ₹273 lakh in IDC.

19. MPPMCL in its reply has submitted that the Petitioner has claimed that the Price Variation has an impact on the time over-run but they have not shared the PV formula, or the amount of PV paid after SCOD. The time over-run has been observed in Asset-B1, Asset-B2, Asset-C and Asset-D. Also due to space constrain at Raigarh (Tamnar) Sub-station, double gantry structure has been used which was not envisaged during preparation of DPR. It seems that the DPR has not been formulated with actual survey. MPPMCL has requested to make a prudence check of same. The additional burden



due to “Price Variation (PV)” and “New addition” is on the part of the Petitioner and the burden should not be passed on the Respondents and should be disallowed.

20. We have considered the rival submissions. The details of the capital cost of the transmission project approved by the BoD of the Petitioner Company are as follows:

Date	Project cost
IA dated 19.5.2014	₹30307 lakh including IDC of ₹1745 lakh
RCE dated 21.4.2017	₹38970 lakh including IDC of ₹1472 lakh

21. As compared with FR cost of ₹30306.85 lakh, the estimated completion cost as on 31.3.2019 is ₹31936.04 lakh which is more by ₹1629.19 lakh. The Petitioner has submitted that the main reasons for the variation of the capital cost of the transmission project are due to Price Variation (PV), new addition at Tanmar Sub-station and foreign exchange rate variation. It is observed that the completion cost of Asset-A, Asset-B1, Asset-B2, Asset-C, Asset-D, Asset-E, Asset-F1, Asset-F2 and Asset-G is within RCE cost. Based on the estimated completion cost of the transmission assets covered in the instant petition, the Petitioner has submitted RCE duly approved by the BoD in its 339th meeting held on 29.3.2017. As per RCE, the estimated completion of cost of transmission assets is within in RCE cost. Therefore, the there is no cost variation of the transmission assets covered in the instant petition.

Time Over-run

22. As per IA dated 19.5.2014, the scheduled date of COD of the transmission assets was 12.7.2016. However, the transmission assets under the scope of the transmission project were put into commercial operation as follows:



Assets	SCOD	Actual COD	Time over-run	Time over-run condoned/not condoned
Asset-A	12.7.2016	16.3.2016	NIL	-
Asset-B1		18.11.2016	129 days	Not Condoned
Asset-B2		18.11.2016	129 days	Not Condoned
Asset-C		20.10.2016	100 days	Not Condoned
Asset-D		23.10.2016	103 days	Not Condoned
Asset-E		24.3.2017	255 days	Not Condoned
Asset-F		20.5.2017	312 days	Not Condoned
Asset-G		1.4.2017	263 days	Not Condoned

23. With respect to Asset-A, there was no time over-run. With respect to Asset-B1, Asset-B2, Asset-C, Asset-D, Asset-E, Asset-F and Asset-G, there was a time over-run of 129 days, 129 days, 100 days, 103 days, 255 day, 312 days and 263 days respectively. The Commission has not condoned the time over-run for Asset-B1, Asset-B2 vide order dated 5.2.2020 in Petition No. 28/TT/2019, for Asset-C, Asset-D and Asset-G vide order dated 22.11.2017 in Petition No. 208/TT/2016 and for Asset-E and Asset-F vide order dated 5.2.2020 in Petition No. 28/TT/2019.

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

24. As stated above, there is time over-run in all the transmission assets except Asset-A. The Commission has not condoned the delay in transmission assets (Asset-C, Asset-D and Asset-G) in order dated 22.11.2017 in Petition No. 208/TT/2016 and the transmission assets (Asset-B1, Asset-B2, Asset-E and Asset-F) in order dated 5.2.2020 in Petition No. 28/TT/2019.

25. The Petitioner has claimed IDC for the transmission assets covered in the instant petition and has submitted the statement showing IDC claim wherein the IDC claim for Asset-F1 and Asset-F2 is combined.



26. The Petitioner has submitted the discharge of IDC liability as on COD and thereafter as follows:

(₹ in lakh)

Assets	IDC as per auditor certificate	IDC discharged upto COD	IDC discharged during the year			Total IDC
			2016-17	2017-18	2018-19	
Asset-A	12.49	0.00	12.49	0.00	0.00	12.49
Asset-B1	35.60	2.99	0.10	32.51	0.00	35.60
Asset-B2	5.11	0.84	0.00	4.27	0.00	5.11
Asset-C	7.55	0.15	0.00	7.40	0.00	7.55
Asset-D	10.16	0.00	0.00	10.16	0.00	10.16
Asset-E	178.26	40.14	0.00	138.12	0.00	178.26
Asset-F1	41.30	1.23	0.00	40.07	0.00	41.30
Asset-F2						
Asset-G	451.35	241.35		181.18	27.82	451.35

27. The Petitioner has submitted IDC computation statement which contains the name of 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 mismatch in loan amount between IDC statement and Form-6 and Form-9C. The allowable IDC has been worked out based on the information available on record and relying on loan amount as per Form-9C. The IDC considered as on COD and summary of discharge of IDC liability up to COD and thereafter for the purpose of tariff determination is as follows:

(₹ in lakh)

Assets	IDC as per auditor certificate	IDC disallowed due to time over-run not condoned	IDC disallowed due to computational error	IDC allowed	IDC discharged upto COD	IDC discharged during the year	
						2016-17	2017-18
1	2	3	4	5=2-3-4	6	8	9
Asset-A	12.49	0.00	0.33	12.16	0.00	12.16	0.00
Asset-B1	35.60	27.42	0.00	8.18	2.02	0.10	6.06
Asset-B2	5.11	3.32	0.00	1.79	0.70	0.00	1.09
Asset-C	7.55	7.42	0.00	0.13	0.13	0.00	0.00
Asset-D	10.16	6.07	0.00	4.09	0.00	0.00	4.09



Asset-E	178.26	136.10	0.00	42.16	33.15	0.00	9.01
Asset-F	41.30	41.30	0.00	0.00	0.00	0.00	0.00
Asset-G	451.35	351.78	0.00	99.57	86.63	12.94	0.00

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

29. There is disallowance of IEDC for Asset-B1, Asset-B2, Asset-C, Asset-D, Asset-E, Asset-F and Asset-G due to time over-run not condoned. The IEDC considered as on COD for the purpose of tariff determination is as follows:

(₹ in lakh)

Assets	IEDC as per auditor's certificate	IEDC disallowed due to time over-run not condoned	IEDC allowed
Asset-A	5.71	0.00	5.71
Asset-B1	21.15	2.94	18.21
Asset-B2	6.30	0.88	5.42
Asset-C	6.76	0.75	6.01
Asset-D	6.73	0.77	5.96
Asset-E	112.58	27.34	85.24
Asset-F	68.13	19.21	48.92
Asset-G	-119.70	-29.75	-89.95

30. In case of Asset-G, the Petitioner vide Auditor Certificate dated 20.8.2019 has submitted that the IEDC as on COD (1.4.2017) was ₹-119.70 lakh. Since the IEDC claimed is negative, there is no disallowance on account of time over-run not condoned.

Initial Spares

31. Regulation 23 (d) of the 2014 Tariff Regulations provides that Initial Spares shall be capitalized as a percentage of plant and machinery cost up to cut-off date, subject to the following ceiling norms:



“(d) Transmission System

(i) Transmission line:	1.00%
(ii) Transmission sub-station	
- Green Field:	4.00%
- Brown Field:	6.00%
(iii) Series Compensation devices and HVDC Station:	4.00%
(iv) Gas Insulated Sub-station (GIS)	
- Green Field:	5.00%
- Brown Field:	7.00%
(v) Communication System:	3.50%
(vi) Static Synchronous Compensator:	6.00%

32. The Initial Spares claimed by the Petitioner are as follows:

Assets	Particulars	Plant and Machinery cost (excluding IDC and IEDC, land cost and cost of civil works) (₹ in lakh)	Initial spares claimed (₹ in lakh)	Initial spares claimed as of capital cost (in %)	Initial spares ceiling as per regulation (in %)
Asset-A	Sub-station	546.50	30.49	5.91	6.00
Asset-B1	Sub-station	2408.72	143.07		6.00
Asset-B2	Sub-station	494.43	16.95		6.00
Asset-C	Sub-station	974.03	41.20	4.42	6.00
Asset-D	Sub-station	971.55	41.20	4.43	6.00
Asset-E	Sub-station	7716.21	410.51	5.62	6.00
Asset-F1	Sub-station	1205.63	68.95		6.00
Asset-F2	Sub-station	1205.63	68.95		6.00
Asset-G	Sub-station	14671.59	699.34	5.01	6.00

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



(₹ in lakh)

Assets	Particulars	Plant and Machinery cost (excluding IDC and IEDC, land cost & cost of civil works) upto cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per the 2014 Tariff Regulations (in %)	Initial Spares allowable (₹ in lakh)	Excess Initial Spares (₹ in lakh)	Initial Spares allowed (₹ in lakh)
		A	B	C	$D = (A - B) * C / (100 - C)$	E-B	
Asset-A	Sub-station	546.50	30.49	6.00	32.94	NIL	30.49
Asset-B1	Sub-station	2408.72	143.07	6.00	144.62	NIL	143.07
Asset-B2	Sub-station	494.43	16.95	6.00	30.48	NIL	16.95
Asset-C	Sub-station	974.03	41.20	6.00	59.54	NIL	41.20
Asset-D	Sub-station	971.55	41.20	6.00	59.38	NIL	41.20
Asset-E	Sub-station	7716.21	410.51	6.00	466.32	NIL	410.51
Asset-F1	Sub-station	1205.63	68.95	6.00	72.55	NIL	68.95
Asset-F2	Sub-station	1205.63	68.95	6.00	72.55	NIL	68.95
Asset-G	Sub-station	14671.59	699.34	6.00	891.85	NIL	699.34

Capital Cost as on COD

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

(₹ in lakh)

Assets	Capital Cost claimed as on COD (A)	Disallowed as on COD (B)			Items corresponding to admitted capital cost as on COD (C)	Capital Cost allowed as on COD (D = A-B-C)
		IDC due to time over-run not condoned	IDC due to computational error	IEDC disallowed due to time over-run not condoned		
Asset-A	422.60	0.00	0.33		12.16	410.11
Asset-B1	1966.22	27.42	0.00	2.94	6.16	1929.70
Asset-B2	184.45	3.32	0.00	0.88	1.09	179.16
Asset-C	500.66	7.42	0.00	0.75	0.00	492.49
Asset-D	500.77	6.07	0.00	0.77	4.09	489.84
Asset-E	6606.83	136.10	0.00	27.34	9.01	6434.38
Asset-F1	1165.39	20.65	0.00	9.61	0.00	1135.13
Asset-F2	1165.39	20.65	0.00	9.61	0.00	1135.13
Asset-G	12192.48	351.78	0.00	0.00	12.94	11827.76
	24704.79	573.41	0.33	51.90	45.45	24033.70



Additional Capital Expenditure (ACE)

35. The cut-off dates of the transmission assets is as follows:

Assets	Description	COD	Cut-off date
Asset-A	25 MVAr Bus Reactor at Bina Sub-station	16.03.2016	31.3.2019
Asset-B1	500 MV, 400/220 kV ICT3 at Damoh Sub-station with associated bays	18.11.2016	31.3.2019
Asset-B2	02 numbers Line bays at Damoh Sub-station	18.11.2016	31.3.2019
Asset-C	63 MVAr SLR along with associated bays at Rajgarh sub-station for Rajgarh-Sardar Sarovar Line-I	20.10.2016	31.3.2019
Asset-D	63 MVAr SLR along with associated bays at Rajgarh Sub-station for Rajgarh-Sardar Sarovar Line-II	23.10.2016	31.3.2019
Asset-E	500 MVA 400/220 kV ICT-1 & ICT-2 at Vadodara GIS with associated bays	24.03.2017	31.3.2020
Asset-F1	2 numbers 220kV Line bays at Vadodara GIS	20.05.2017	31.3.2020
Asset-F2	2 numbers 220kV Line bays at Vadodara GIS	20.05.2017	31.3.2020
Asset-G	1500 MVA 765/400 kV ICT-2 at Raipur PS & 1500 MVA 765/400 kV ICT-4 at Raigarh (Tamnar) PS along with associated bays	1.04.2017	31.3.2020

36. The Petitioner has submitted that ACE within the cut-off date has been claimed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations and ACE incurred after the cut-off date has been claimed under Regulation 14(2)(iv) of the 2014 Tariff Regulations in respective transmission assets.

37. MPPMCL has submitted that the Petitioner has not given any details of such undischarged liability, reasons of withholding of payment and release of payments etc., details of work deferred.

38. ACE claimed by the Petitioner has been verified from the Auditor Certificate. Accordingly, the ACE within the cut-off date has been allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations and ACE incurred after cut-off date has been allowed under Regulation 14(2)(i) and Regulation 14(2)(iv) of the 2014 Tariff Regulations, as applicable. The ACE allowed for the 2014-19 tariff period is as follows:



(₹ in lakh)

Assets	ACE (including IDC discharge)		
	2016-17	2017-18	2018-19
Asset-A	97.43	56.83	0.00
Asset-B1	160.06	282.82	88.90
Asset-B2	218.72	91.62	3.88
Asset-C	222.86	264.81	0.00
Asset-D	222.86	268.90	0.00
Asset-E	0.00	1388.58	50.40
Asset-F1	0.00	94.51	0.44
Asset-F2	0.00	94.51	0.44
Asset-G	0.00	2623.51	1044.62

39. The un-discharged IDC and Initial Spares as on COD have been allowed as ACE during the year of its discharge. Accordingly, the capital cost considered for truing up of transmission tariff for the 2014-19 period is as follows:

(₹ in lakh)

Assets	Apportioned approved capital cost	Revised apportioned approved capital cost (as per RCE)	Actual capital cost as on COD	ACE allowed			Capital Cost as on 31.3.2019
				2016-17	2017-18	2018-19	
Asset-A	780.52	809.78	410.11	97.43	56.83	0.00	564.37
Asset-B1	2662.37	3483.63	1929.70	160.06	282.82	88.90	2461.48
Asset-B2			179.16	218.72	91.62	3.88	493.38
Asset-C	854.23	1097.23	492.49	222.86	264.81	0.00	980.16
Asset-D	854.23	1097.23	489.84	222.86	268.90	0.00	981.61
Asset-E	9249.44	9368.40	6434.38	0.00	1388.58	50.40	7873.36
Asset-F1		1598.48	1135.13		94.51	0.44	1230.08
Asset-F2		1598.48	1135.13		94.51	0.44	1230.08
Asset-G	15906.06	19917.11	11827.76		2623.51	1044.62	15495.89

Debt-Equity ratio

40. The Petitioner has claimed debt-equity ratio of 70:30 as on COD of the transmission assets. 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 considered for the purpose of tariff of the 2014-19 period are as follows:

Asset-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	287.08	70.00	107.98	70.00	395.06	70.00
Equity	123.03	30.00	46.28	30.00	169.31	30.00
Total	410.11	100.00	154.26	100.00	564.37	100.00

Asset-B1

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	1350.79	70.00	372.25	70.00	1723.04	70.00
Equity	578.91	30.00	159.53	30.00	738.44	30.00
Total	1929.70	100.00	531.78	100.00	2461.48	100.00

Asset-B2

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	125.41	70.00	219.95	70.00	345.37	70.00
Equity	53.75	30.00	94.27	30.00	148.01	30.00
Total	179.16	100.00	314.22	100.00	493.38	100.00

Asset-C

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	344.74	70.00	341.37	70.00	686.11	70.00
Equity	147.75	30.00	146.30	30.00	294.05	30.00
Total	492.49	100.00	487.67	100.00	980.16	100.00



Asset-D

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	342.89	70.00	344.23	70.00	687.12	70.00
Equity	146.95	30.00	147.53	30.00	294.48	30.00
Total	489.84	100.00	491.76	100.00	981.61	100.00

Asset-E

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	4504.07	70.00	1007.29	70.00	5511.35	70.00
Equity	1930.31	30.00	431.69	30.00	2362.01	30.00
Total	6434.38	100.00	1438.98	100.00	7873.36	100.00

Asset-F1

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	794.59	70.00	66.47	70.00	861.05	70.00
Equity	340.54	30.00	28.49	30.00	369.02	30.00
Total	1135.13	100.00	94.95	100.00	1230.08	100.00

Asset-F2

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	794.59	70.00	66.47	70.00	861.06	70.00
Equity	340.54	30.00	28.49	30.00	369.02	30.00
Total	1135.13	100.00	94.95	100.00	1230.08	100.00

Asset-G

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	8279.43	70.00	2567.69	70.00	10847.12	70.00
Equity	3548.33	30.00	1100.44	30.00	4648.77	30.00
Total	11827.76	100.00	3668.13	100.00	15495.89	100.00



Depreciation

41. The Petitioner's claim towards depreciation in the instant petition was found to be higher than the depreciation allowed vide order dated 1.11.2019 in Petition No. 182/TT/2018 for Asset-A, and order dated 22.11.2017 in Petition No. 208/TT/2016 for Assets C, D & G. The Petitioner has neither given any justification for claiming higher depreciation than what was allowed in previous orders nor has made any specific prayer for allowing higher depreciation in this petition. Similar issue was dealt vide order dated 9.5.2020 Petition No. 19/TT/2020.

42. In line with the above decision in order dated 9.5.2020 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 weighted average rate of depreciation (WAROD). WAROD at Annexure-I has been worked out after taking into account the depreciation rates of asset as specified in the 2014 Tariff Regulations and depreciation allowed during the 2014-19 tariff period is as follows :

(₹ in lakh)

Asset-A					
	Particulars	2015-16 (pro-rata for 16 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	410.11	410.11	507.54	564.37
B	ACE	0.00	97.43	56.83	0.00
C	Closing Gross Block (A+B)	410.11	507.54	564.37	564.37
D	Average Gross Block (A+C)/2	410.11	458.82	535.95	564.37
E	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28	5.28

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Asset-A					
	Particulars	2015-16 (pro-rata for 16 days)	2016-17	2017-18	2018-19
F	Balance useful life of the asset	25	25	24	23
G	Elapsed life at the beginning of the year (Year)	0	0	1	2
H	Aggregate Depreciable Value	369.10	412.94	482.36	507.93
I	Combined Depreciation during the year	0.95	24.23	28.30	29.80
J	Aggregate Cumulative Depreciation	0.95	25.17	53.47	83.27
K	Remaining Depreciable Value (H-J)	368.15	387.77	428.89	424.66

(₹ in lakh)

Asset-B1				
	Particulars	2016-17 (pro-rata for 134 days)	2017-18	2018-19
	Depreciation			
A	Opening Gross Block	1929.70	2089.76	2372.58
B	ACE	160.06	282.82	88.90
C	Closing Gross Block (A+B)	2089.76	2372.58	2461.48
D	Average Gross Block (A+C)/2	2009.73	2231.17	2417.03
E	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.27
F	Balance useful life of the asset	25	24	23
G	Elapsed life at the beginning of the year (Year)	0.00	1.00	2.00
H	Aggregate Depreciable Value	1808.76	2008.05	2175.33
I	Combined Depreciation during the year	38.96	117.81	127.36
J	Aggregate Cumulative Depreciation	38.96	156.76	284.13
K	Remaining Depreciable Value (H-J)	1769.80	1851.29	1891.20

(₹ in lakh)

Asset-B2				
	Particulars	2016-17 (pro-rata for 134 days)	2017-18	2018-19
	Depreciation			
A	Opening Gross Block	179.16	397.88	489.50
B	ACE	218.72	91.62	3.88
C	Closing Gross Block (A+B)	397.88	489.50	493.38
D	Average Gross Block (A+C)/2	288.52	443.69	491.44
E	Weighted Average Rate of Depreciation (in %)	5.29	5.31	5.32
F	Balance useful life of the asset	25.00	24.00	23.00
G	Elapsed life at the beginning of the year (Year)	0.00	1.00	2.00

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Asset-B2				
	Particulars	2016-17 (pro-rata for 134 days)	2017-18	2018-19
H	Aggregate Depreciable Value	259.67	399.32	442.30
I	Combined Depreciation during the year	5.60	23.55	26.15
J	Aggregate Cumulative Depreciation	5.60	29.15	55.30
K	Remaining Depreciable Value (H-J)	254.07	370.17	386.99

(₹ in lakh)

Asset-C				
	Particulars	2016-17 (pro-rata for 163 days)	2017-18	2018-19
	Depreciation			
A	Opening Gross Block	492.49	715.35	980.16
B	ACE	222.86	264.81	0.00
C	Closing Gross Block (A+B)	715.35	980.16	980.16
D	Average Gross Block (A+C)/2	603.92	847.75	980.16
E	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28
F	Balance useful life of the asset	25	24	23
G	Elapsed life at the beginning of the year (Year)	0.00	1.00	2.00
H	Aggregate Depreciable Value	543.52	762.98	882.14
I	Combined Depreciation during the year	14.24	44.76	51.75
J	Aggregate Cumulative Depreciation	14.24	59.00	110.75
K	Remaining Depreciable Value (H-J)	529.28	703.97	771.39

(₹ in lakh)

Asset-D				
	Particulars	2016-17 (pro-rata for 160 days)	2017-18	2018-19
	Depreciation			
A	Opening Gross Block	489.84	712.70	981.61
B	ACE	222.86	268.90	0.00
C	Closing Gross Block (A+B)	712.70	981.61	981.61
D	Average Gross Block (A+C)/2	601.27	847.15	981.61
E	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28
F	Balance useful life of the asset	25	24	23
G	Elapsed life at the beginning of the year (Year)	0.00	1.00	2.00
H	Aggregate Depreciable Value	541.14	762.44	883.44
I	Combined Depreciation during the year	13.92	44.73	51.83

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Asset-D				
	Particulars	2016-17 (pro-rata for 160 days)	2017-18	2018-19
J	Aggregate Cumulative Depreciation	13.92	58.65	110.48
K	Remaining Depreciable Value (H-J)	527.23	703.79	772.97

(₹ in lakh)

Asset-E				
	Particulars	2016-17 (pro-rata 8 for days)	2017-18	2018-19
	Depreciation			
A	Opening Gross Block	6434.38	6434.38	7822.96
B	ACE	0.00	1388.58	50.40
C	Closing Gross Block (A+B)	6434.38	7822.96	7873.36
D	Average Gross Block (A+C)/2	6434.38	7128.67	7848.16
E	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28
F	Balance useful life of the asset	25	25	24
G	Elapsed life at the beginning of the year (Year)	0.00	0.00	1.00
H	Aggregate Depreciable Value	5790.94	6415.80	7063.34
I	Combined Depreciation during the year	7.45	376.39	414.09
J	Aggregate Cumulative Depreciation	7.45	383.84	797.93
K	Remaining Depreciable Value (H-J)	5783.50	6031.96	6265.41

(₹ in lakh)

Asset-F1			
	Particulars	2017-18 (pro-rata for 316 days)	2018-19
	Depreciation		
A	Opening Gross Block	1135.13	1229.64
B	ACE	94.51	0.44
C	Closing Gross Block (A+B)	1229.64	1230.08
D	Average Gross Block (A+C)/2	1182.38	1229.86
E	Weighted Average Rate of Depreciation (in %)	5.29%	5.30%
F	Balance useful life of the asset	25.00	25.00
G	Elapsed life at the beginning of the year (Year)	0.00	0.00
H	Aggregate Depreciable Value	1064.14	1106.87
I	Combined Depreciation during the year	54.15	65.17
J	Aggregate Cumulative Depreciation	54.15	119.32
K	Remaining Depreciable Value (H-J)	1009.99	987.55



(₹ in lakh)

Asset-F2			
	Particulars	2017-18 (pro-rata for 316 days)	2018-19
	Depreciation		
A	Opening Gross Block	1135.13	1229.64
B	ACE	94.51	0.44
C	Closing Gross Block (A+B)	1229.64	1230.08
D	Average Gross Block (A+C)/2	1182.38	1229.86
E	Weighted Average Rate of Depreciation (in %)	5.29%	5.30%
F	Balance useful life of the asset	25.00	25.00
G	Elapsed life at the beginning of the year (Year)	0.00	0.00
H	Aggregate Depreciable Value	1064.14	1106.87
I	Combined Depreciation during the year	54.15	65.17
J	Aggregate Cumulative Depreciation	54.15	119.32
K	Remaining Depreciable Value (H-J)	1009.99	987.55

(₹ in lakh)

Asset-G			
	Particulars	2017-18	2018-19
	Depreciation		
A	Opening Gross Block	11827.76	14451.27
B	ACE	2623.51	1044.62
C	Closing Gross Block (A+B)	14451.27	15495.89
D	Average Gross Block (A+C)/2	13139.51	14973.58
E	Weighted Average Rate of Depreciation (in %)	5.08%	5.06%
F	Balance useful life of the asset	25	24
G	Elapsed life at the beginning of the year (Year)	0	1
H	Aggregate Depreciable Value	11825.56	13476.22
I	Combined Depreciation during the year	667.85	758.27
J	Aggregate Cumulative Depreciation	667.85	1426.12
K	Remaining Depreciable Value (I-K)	11157.71	12050.10

43. The depreciation claimed by the Petitioner in the instant petition and trued-up depreciation allowed in the instant order are as follows:



(₹ in lakh)

Particulars	2015-16	2016-17	2017-18	2018-19
Asset-A				
Approved in order dated 1.11.2019 in Petition no. 182/TT/2018	0.27	10.80	17.80	20.14
Claimed by the Petitioner in the instant petition	0.95	24.23	28.32	29.82
Allowed after true-up in this order	0.95	24.23	28.30	29.80
Asset-B1				
Claimed by the Petitioner in the instant petition		38.96	118.36	128.47
Allowed after true-up in this order		38.96	117.81	127.36
Asset-B2				
Claimed by the Petitioner in the instant petition		5.62	23.69	26.38
Allowed after true-up in this order		5.60	23.55	26.15
Asset-C				
Approved in order dated 22.11.2017 in Petition no. 208/TT/2016		13.90	42.63	50.25
Claimed by the Petitioner in the instant petition		14.26	44.80	51.79
Allowed after true-up in this order		14.24	44.76	51.75
Asset-D				
Approved in order dated 22.11.2017 in Petition no. 208/TT/2016		13.58	42.59	50.39
Claimed by the Petitioner in the instant petition		13.93	44.77	51.87
Allowed after true-up in this order		13.92	44.73	51.83
Asset-E				
Claimed by the Petitioner in the instant petition		7.45	379.03	419.00
Allowed after true-up in this order		7.45	376.39	414.09
Asset-F1				
Claimed by the Petitioner in the instant petition			54.49	65.95
Allowed after true-up in this order			54.15	65.17



Particulars	2015-16	2016-17	2017-18	2018-19
Asset-F2				
Claimed by the Petitioner in the instant petition			54.49	65.95
Allowed after true-up in this order			54.15	65.17
Asset-G				
Approved in order dated 22.11.2017 in Petition no. 208/TT/2016			729.29	888.07
Claimed by the Petitioner in the instant petition			669.77	760.02
Allowed after true-up in this order			667.85	758.27

Interest on Loan (IoL)

44. 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 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-A			
		2015-16 (pro-rata for 16 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	287.08	287.08	355.28	395.06
B	Cumulative Repayments upto Previous Year	0.00	0.95	25.17	53.47
C	Net Loan-Opening (A-B)	287.08	286.13	330.10	341.59
D	Additions	0.00	68.20	39.78	0.00
E	Repayment during the year	0.95	24.23	28.30	29.80
F	Net Loan-Closing (C+D-E)	286.13	330.10	341.59	311.79
G	Average Loan (C+F)/2	286.60	308.12	335.84	326.69
H	Weighted Average Rate of Interest on Loan (in %)	8.4000	8.3526	8.3152	8.2890



	Particulars	Asset-A			
		2015-16 (pro-rata for 16 days)	2016-17	2017-18	2018-19
I	Interest on Loan (G*H)	1.05	25.74	27.93	27.08

(₹ in lakh)

	Particulars	Asset-B1		
		2015-16 (pro-rata for 134 days)	2016-17	2017-18
	Interest on Loan			
A	Gross Normative Loan	1350.79	1462.83	1660.81
B	Cumulative Repayments upto Previous Year	0.00	38.96	156.76
C	Net Loan-Opening (A-B)	1350.79	1423.87	1504.04
D	Additions	112.04	197.98	62.23
E	Repayment during the year	38.96	117.81	127.36
F	Net Loan-Closing (C+D-E)	1423.87	1504.04	1438.91
G	Average Loan (C+F)/2	1387.33	1463.96	1471.48
H	Weighted Average Rate of Interest on Loan (in %)	7.8954	7.8739	7.8473
I	Interest on Loan (G*H)	40.21	115.27	115.47

(₹ in lakh)

	Particulars	Asset-B2		
		2015-16 (pro-rata for 134 days)	2016-17	2017-18
	Interest on Loan			
A	Gross Normative Loan	125.41	278.52	342.65
B	Cumulative Repayments upto Previous Year	0.00	5.60	29.15
C	Net Loan-Opening (A-B)	125.41	272.92	313.50
D	Additions	153.10	64.13	2.72
E	Repayment during the year	5.60	23.55	26.15
F	Net Loan-Closing (C+D-E)	272.92	313.50	290.06
G	Average Loan (C+F)/2	199.16	293.21	301.78
H	Weighted Average Rate of Interest on Loan (in %)	8.3973	8.2042	8.0448



	Particulars	Asset-B2		
		2015-16 (pro-rata for 134 days)	2016-17	2017-18
I	Interest on Loan (G*H)	6.14	24.06	24.28

(₹ in lakh)

	Particulars	Asset-C		
		2015-16 (pro-rata for 163 days)	2016-17	2017-18
	Interest on Loan			
A	Gross Normative Loan	344.74	500.74	686.11
B	Cumulative Repayments upto Previous Year	0.00	14.24	59.00
C	Net Loan-Opening (A- B)	344.74	486.50	627.11
D	Additions	156.00	185.37	0.00
E	Repayment during the year	14.24	44.76	51.75
F	Net Loan-Closing (C+D- E)	486.50	627.11	575.36
G	Average Loan (C+F)/2	415.62	556.81	601.23
H	Weighted Average Rate of Interest on Loan (in %)	8.1736	8.1222	8.0169
I	Interest on Loan (G*H)	15.17	45.22	48.20

(₹ in lakh)

	Particulars	Asset-D		
		2015-16 (pro-rata for 160 days)	2016-17	2017-18
	Interest on Loan			
A	Gross Normative Loan	342.89	498.89	687.12
B	Cumulative Repayments upto Previous Year	0.00	13.92	58.65
C	Net Loan-Opening (A- B)	342.89	484.97	628.48
D	Additions	156.00	188.23	0.00
E	Repayment during the year	13.92	44.73	51.83
F	Net Loan-Closing (C+D- E)	484.97	628.48	576.65
G	Average Loan (C+F)/2	413.93	556.73	602.56
H	Weighted Average Rate of Interest on Loan (in %)	8.1495	8.1042	8.0004

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	Particulars	Asset-D		
		2015-16 (pro-rata for 160 days)	2016-17	2017-18
I	Interest on Loan (G*H)	14.79	45.12	48.21

(₹ in lakh)

	Particulars	Asset-E		
		2015-16 (pro-rata for 8 days)	2016-17	2017-18
	Interest on Loan			
A	Gross Normative Loan	4504.07	4504.07	5476.07
B	Cumulative Repayments upto Previous Year	0.00	7.45	383.84
C	Net Loan-Opening (A-B)	4504.07	4496.62	5092.23
D	Additions	0.00	972.01	35.28
E	Repayment during the year	7.45	376.39	414.09
F	Net Loan-Closing (C+D-E)	4496.62	5092.23	4713.42
G	Average Loan (C+F)/2	4500.34	4794.43	4902.83
H	Weighted Average Rate of Interest on Loan (in %)	7.7800	7.7633	7.8406
I	Interest on Loan (G*H)	7.67	372.21	384.41

(₹ in lakh)

	Particulars	Asset-F1	
		2015-16 (pro-rata for 316 days)	2016-17
	Interest on Loan		
A	Gross Normative Loan	794.60	860.75
B	Cumulative Repayments upto Previous Year	0.00	54.15
C	Net Loan-Opening (A-B)	794.60	806.60
D	Additions	66.16	0.31
E	Repayment during the year	54.15	65.17
F	Net Loan-Closing (C+D-E)	806.59	741.74
G	Average Loan (C+F)/2	800.59	774.17
H	Weighted Average Rate of Interest on Loan (in %)	7.5553	7.5700
I	Interest on Loan (G*H)	52.37	58.60



(₹ in lakh)

	Particulars	Asset-F2	
		2015-16 (pro-rata for 316 days)	2016-17
	Interest on Loan		
A	Gross Normative Loan	794.60	860.75
B	Cumulative Repayments upto Previous Year	0.00	54.15
C	Net Loan-Opening (A-B)	794.60	806.60
D	Additions	66.16	0.31
E	Repayment during the year	54.15	65.17
F	Net Loan-Closing (C+D-E)	806.60	741.73
G	Average Loan (C+F)/2	800.60	774.16
H	Weighted Average Rate of Interest on Loan (in %)	7.5553	7.5700
I	Interest on Loan (G*H)	52.37	58.60

(₹ in lakh)

	Particulars	Asset-G	
		2015-16	2016-17
	Interest on Loan		
A	Gross Normative Loan	8279.43	10115.89
B	Cumulative Repayments upto Previous Year	0.00	667.85
C	Net Loan-Opening (A-B)	8279.43	9448.04
D	Additions	1836.45	731.23
E	Repayment during the year	667.85	758.27
F	Net Loan-Closing (C+D-E)	9448.04	9421.00
G	Average Loan (C+F)/2	8863.74	9434.52
H	Weighted Average Rate of Interest on Loan (in %)	7.7565	7.6543
I	Interest on Loan (G*H)	687.52	722.15

45. The details of IoL allowed vide order dated 1.11.2019 in Petition No. 182/TT/2018 for Asset-A, and order dated 22.11.2017 in Petition no. 208/TT/2016 for Assets C, D & G and claimed by the Petitioner in the instant petition and trued-up IoL in the instant order are as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-A					
Approved <i>vide</i> order dated 1.11.2019 in Petition No. 182/TT/2018		0.30	11.55	18.14	19.15
Claimed by the Petitioner in the instant petition		1.05	25.75	27.94	27.10
Allowed after true-up in this order		1.05	25.74	27.93	27.08
Asset-B1					
Claimed by the Petitioner in the instant petition			40.21	115.83	116.53
Allowed after true-up in this order			40.21	115.27	115.47
Asset-B2					
Claimed by the Petitioner in the instant petition			6.16	24.20	24.49
Allowed after true-up in this order			6.14	24.06	24.28
Asset-C					
Approved <i>vide</i> order dated 22.11.2017 in Petition no. 208/TT/2016			14.44	42.25	46.60
Claimed by the Petitioner in the instant petition			15.19	45.27	48.24
Allowed after true-up in this order			15.17	45.22	48.20
Asset-D					
Approved <i>vide</i> order dated 22.11.2017 in Petition no. 208/TT/2016			14.06	42.06	46.55
Claimed by the Petitioner in the instant petition			14.81	45.16	48.24
Allowed after true-up in this order			14.79	45.12	48.21
Asset-E					
Claimed by the Petitioner in the instant petition			7.68	374.82	389.11
Allowed after true-up in this order			7.67	372.21	384.41
Asset-F1					
Claimed by the Petitioner in the instant petition				52.71	59.34
Allowed after true-up in this order				52.37	58.60

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Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-F2					
Claimed by the Petitioner in the instant petition				52.71	59.34
Allowed after true-up in this order				52.37	58.60
Asset-G					
Approved <i>vide</i> order dated 22.11.2017 in Petition no. 208/TT/2016				791.77	929.20
Claimed by the Petitioner in the instant petition				689.49	723.78
Allowed after true-up in this order				687.52	722.15

Return on Equity (RoE)

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

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

47. MPPMCL has submitted that the Petitioner has grossed up RoE on the basis of actual taxes paid during 2016-17 and 2017-18. For 2018-19, it has been grossed up on the basis of applicable rate of MAT, surcharge and cess. MPPMCL has submitted that the petitioner has not placed on record the assessment order for the relevant financial years.

48. MPPMCL has submitted further that the Petitioner has not submitted copy of assessment order for the 2014-15 and 2015-16. Similarly, the audited accounts in



respect of actual taxes paid for 2016-17 and 2017-18 has also not been enclosed with the current petition. In absence of these essential documents, it is not possible to scrutinize the claim of the Petitioner in a proper way.

49. In response, the Petitioner has submitted that effective rate of tax considered for 2014-15, 2015-16 and 2016-17 are based on assessment orders issued by income tax authorities for the purpose of grossing up of RoE rate. Further, the effective rates of tax considered for 2017-18 and 2018-19 are based on the income tax returns filed, for the purpose of grossing up of RoE rate of the respective years.

50. Further, the Petitioner has submitted that the Petitioner has been granted trued-up tariff of 2014-19 by the Commission *vide* tariff order dated 18.4.2020 in Petition No. 247/TT/2019, order dated 27.4.2020 in Petition No. 274/TT/2019, order dated 23.4.2020 in Petition No. 245/TT/2019 order dated 16.4.2020 in Petition No. 307/TT/2019 for transmission assets, where following effective tax rate based (for 2014-19 period) on notified MAT rates are 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

51. 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 grossed up RoE. In view of the above, the Petitioner has submitted that grossed up RoE (in %) and effective tax rate for 2014-19 period has already been determined by the Commission.



52. We have considered the submissions of MPPCL and the Petitioner. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate for the Petitioner based on the notified MAT rates as follows:

Year	Notified MAT rates (in %) (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

53. The same MAT rates as considered in the above-mentioned order in Petition No. 274/TT/2019 are considered for the purpose of grossing up of 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

54. The Petitioner has claimed RoE for 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. 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-A			
		2015-16 (pro-rata 16 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	123.03	123.03	152.26	169.31



	Particulars	Asset-A			
		2015-16 (pro-rata 16 days)	2016-17	2017-18	2018-19
B	Additions	0.00	29.23	17.05	0.00
C	Closing Equity (A+B)	123.03	152.26	169.31	169.31
D	Average Equity (A+C)/2	123.03	137.65	160.79	169.31
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)	1.06	27.12	31.68	33.45

(₹ in lakh)

	Particulars	Asset-B1		
		2016-17 (pro-rata 134 days)	2017-18	2018-19
	Return on Equity			
A	Opening Equity	578.91	626.93	711.77
B	Additions	48.02	84.85	26.67
C	Closing Equity (A+B)	626.93	711.77	738.44
D	Average Equity (A+C)/2	602.92	669.35	725.11
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)	43.62	131.90	143.27

(₹ in lakh)

	Particulars	Asset-B2		
		2016-17 (pro-rata 134 days)	2017-18	2018-19
	Return on Equity			
A	Opening Equity	53.75	119.36	146.85
B	Additions	65.62	27.49	1.16
C	Closing Equity (A+B)	119.36	146.85	148.01
D	Average Equity (A+C)/2	86.56	133.11	147.43
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)	6.26	26.23	29.13



(₹ in lakh)

	Particulars	Asset-C		
		2016-17 (pro-rata 163 days)	2017-18	2018-19
	Return on Equity			
A	Opening Equity	147.75	214.60	294.05
B	Additions	66.86	79.44	0.00
C	Closing Equity (A+B)	214.60	294.05	294.05
D	Average Equity (A+C)/2	181.17	254.33	294.05
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)	15.94	50.11	58.10

(₹ in lakh)

	Particulars	Asset-D		
		2016-17 (pro-rata 160 days)	2017-18	2018-19
	Return on Equity			
A	Opening Equity	146.95	213.81	294.48
B	Additions	66.86	80.67	0.00
C	Closing Equity (A+B)	213.81	294.48	294.48
D	Average Equity (A+C)/2	180.38	254.15	294.48
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)	15.58	50.08	58.18

(₹ in lakh)

	Particulars	Asset-E		
		2016-17 (pro-rata 8 days)	2017-18	2018-19
	Return on Equity			
A	Opening Equity	1930.31	1930.31	2346.89
B	Additions	0.00	416.57	15.12
C	Closing Equity (A+B)	1930.31	2346.89	2362.01
D	Average Equity (A+C)/2	1930.31	2138.60	2354.45
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

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	Particulars	Asset-E		
		2016-17 (pro-rata 8 days)	2017-18	2018-19
G	Rate of Return on Equity (in %)	19.705	19.705	19.758
H	Return on Equity (D*G)	8.34	421.41	465.19

(₹ in lakh)

	Particulars	Asset-F1	
		2017-18 (pro-rata 316 days)	2018-19
	Return on Equity		
A	Opening Equity	340.54	368.89
B	Additions	28.35	0.13
C	Closing Equity (A+B)	368.89	369.02
D	Average Equity (A+C)/2	354.71	368.96
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)	60.51	72.90

(₹ in lakh)

	Particulars	Asset-F2	
		2017-18 (pro-rata 316 days)	2018-19
	Return on Equity		
A	Opening Equity	340.54	368.89
B	Additions	28.35	0.13
C	Closing Equity (A+B)	368.89	369.02
D	Average Equity (A+C)/2	354.71	368.96
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)	60.51	72.90

(₹ in lakh)

	Particulars	Asset-G	
		2017-18	2018-19
	Return on Equity		
A	Opening Equity	3548.33	4335.38
B	Additions	787.05	313.39
C	Closing Equity (A+B)	4335.38	4648.77
D	Average Equity (A+C)/2	3941.85	4492.07

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	Particulars	Asset-G	
		2017-18	2018-19
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)	776.74	887.54

55. The details of return on equity allowed vide order dated 1.11.2019 in Petition No. 182/TT/2018 for Asset-A, and order dated 22.11.2017 in Petition No. 208/TT/2016 for Assets C, D & G and claimed by the Petitioner in the instant petition and true-up RoE in the instant order are as follows:

Particulars	(₹ in lakh)			
	2015-16	2016-17	2017-18	2018-19
Asset-A				
Approved <i>vide</i> order dated 1.11.2019 in Petition No. 182/TT/2018	0.30	12.03	19.83	22.43
Claimed by the Petitioner in the instant petition	1.06	27.14	31.70	33.47
Allowed after true-up in this order	1.06	27.12	31.68	33.45
Asset-B1				
Claimed by the Petitioner in the instant petition		43.62	132.52	144.50
Allowed after true-up in this order		43.62	131.90	143.27
Asset-B2				
Claimed by the Petitioner in the instant petition		6.29	26.38	29.38
Allowed after true-up in this order		6.26	26.23	29.13
Asset-C				
Approved <i>in</i> order dated 22.11.2017 in Petition No. 208/TT/2016		15.48	47.50	55.99
Claimed by the Petitioner in the instant petition		15.96	50.16	58.14
Allowed after true-up in this order		15.94	50.11	58.10



Particulars	2015-16	2016-17	2017-18	2018-19
Asset-D				
Approved <i>in</i> order dated 22.11.2017 in Petition No. 208/TT/2016		15.13	47.46	56.14
Claimed by the Petitioner in the instant petition		15.60	50.13	58.23
Allowed after true-up in this order		15.58	50.08	58.18
Asset-E				
Claimed by the Petitioner in the instant petition		8.35	424.38	470.69
Allowed after true-up in this order		8.34	421.41	465.19
Asset-F1				
Claimed by the Petitioner in the instant petition			60.91	73.77
Allowed after true-up in this order			60.51	72.90
Asset-F2				
Claimed by the Petitioner in the instant petition			60.91	73.77
Allowed after true-up in this order			60.51	72.90
Asset-G				
Approved <i>in</i> order dated 22.11.2017 in Petition No. 208/TT/2016			863.58	1075.29
Claimed by the Petitioner in the instant petition			779.01	889.59
Allowed after true-up in this order			776.74	887.54

Operation & Maintenance Expenses (O&M Expenses)

56. The O&M expenses claimed by the Petitioner for the transmission assets are as follows:



Particulars	Asset-B1		
	2016-17	2017-18	2018-19
400 kV bays of:			
(i) Damoh ICT Bay			
220 kV bays of:			
(ii) Damoh ICT Bay			
400/220 kV 500 MVA ICT Damoh			
400 kV Bays	1	1	1
Norms (₹ lakh/Bay)	64.37	66.51	68.71
220 kV Bays	1	1	1
Norms (₹ lakh/Bay)	45.06	46.55	48.10
Total O&M Expense (₹ in lakh)	40.17	113.06	116.81

Particulars	Asset-B2		
	2016-17	2017-18	2018-19
220 kV bays of:			
(i) Damoh MPPTCL Bay			
(ii) Damoh Sagar Bay			
220 kV Bays	2	2	2
Norms (₹ lakh/Bay)	45.06	46.55	48.1
Total O&M Expense (₹ in lakh)	33.09	93.10	96.20

Particulars	Asset-C		
	2016-17	2017-18	2018-19
400 kV bays of:			
(i) Rajgarh:63 MVAR SLR Bay			
400 kV Bays	1	1	1
Norms (₹ lakh/Bay)	64.37	66.51	68.71
Total O&M Expense (₹ in lakh)	28.75	66.51	68.71

Particulars	Asset-D		
	2016-17	2017-18	2018-19
400 kV bays of:			
(i) Rajgarh:63 MVAR SLR Bay			
400 kV Bays	1	1	1
Norms (₹ lakh/Bay)	64.37	66.51	68.71
Total O&M Expense (₹ in lakh)	28.22	66.51	68.71

Particulars	Asset-E		
	2016-17	2017-18	2018-19
220 kV GIS bays of:			
(i) Vadodara Bays for ICT 1&2			
400 kV GIS bays of:			
(ii) Vadodara Bays for ICT 1&2			
400 kV Bays (GIS)	2	2	2
Norms (₹ lakh/Bay)	55.02	56.84	58.73



Particulars	Asset-E		
	2016-17	2017-18	2018-19
220 kV Bays (GIS)	2	2	2
Norms (₹ lakh/Bay)	45.06	46.55	48.1
Total O&M Expense (₹ in lakh)	4.39	206.78	213.66

Particulars	Asset-F1	
	2017-18	2018-19
220 kV GIS bays of:		
(i) Vadodara: 220 kV Downstream Bays		
220 kV GIS Bays	2	2
Norms (₹ lakh/Bay)	46.55	48.10
Total O&M Expense (₹ in lakh)	80.60	96.20

Particulars	Asset-F2	
	2017-18	2018-19
220 kV GIS bays of:		
(i) Vadodara: 220 kV Downstream Bays		
220 kV GIS Bays	2	2
Norms (₹ lakh/Bay)	46.55	48.10
Total O&M Expense (₹ in lakh)	80.60	96.20

Particulars	Asset-G	
	2017-18	2018-19
765 kV bays of:		
(i) Raipur: ICT 2 Bay		
(ii) Raipur: 1500 MVA 765/400 kV ICT 2		
(iii) Tamnar: ICT 4 Bay		
(iv) Tamnar: 1500 MVA 765/400 kV ICT 4		
400 kV bays of:		
(v) Raipur: ICT 2 Bay		
(vi) Tamnar: ICT 4 Bay		
765 kV Bays	2	2
Norms (₹ lakh/Bay)	93.11	96.20
400 kV Bays	2	2
Norms (₹ lakh/Bay)	56.84	58.73
Total O&M Expense (₹ in lakh)	319.24	329.82

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



Particulars	Asset-B1		
	2016-17	2017-18	2018-19
400 kV bays of:			
(i) Damoh ICT Bay			
220 kV bays of:			
(ii) Damoh ICT Bay			
400/220 kV 500 MVA ICT Damoh			
400 kV Bays	1	1	1
Norms (₹ lakh/Bay)	64.37	66.51	68.71
220 kV Bays	1	1	1
Norms (₹ lakh/Bay)	45.06	46.55	48.10
Total O&M Expense (₹ in lakh)	40.17	113.06	116.81

Particulars	Asset-B2		
	2016-17	2017-18	2018-19
220 kV bays of:			
(i) Damoh MPPTCL Bay			
(ii) Damoh Sagar Bay			
220 kV Bays	2	2	2
Norms (₹ lakh/Bay)	90.12	93.10	96.20
Total O&M Expense (₹ in lakh)	33.09	93.10	96.20

Particulars	Asset-C		
	2016-17	2017-18	2018-19
400 kV bays of:			
(i) Rajgarh:63 MVAR SLR Bay			
400 kV Bays	1	1	1
Norms (₹ lakh/Bay)	64.37	66.51	68.71
Total O&M Expense (₹ in lakh)	28.75	66.51	68.71

Particulars	Asset-D		
	2016-17	2017-18	2018-19
400 kV bays of:			
(i) Rajgarh:63 MVAR SLR Bay			
400 kV Bays	1	1	1
Norms (₹ lakh/Bay)	64.37	66.51	68.71
Total O&M Expense (₹ in lakh)	28.22	66.51	68.71

Particulars	Asset-E		
	2016-17	2017-18	2018-19
220 kV GIS bays of:			
(i) Vadodara Bays for ICT 1&2			
400 kV GIS bays of:			
(ii) Vadodara Bays for ICT 1&2			
400 kV Bays (GIS)	2	2	2



Particulars	Asset-E		
	2016-17	2017-18	2018-19
Norms (₹ lakh/Bay)	55.02	56.84	58.73
220 kV Bays (GIS)	2	2	2
Norms (₹ lakh/Bay)	200.16	206.78	213.66
Total O&M Expense (₹ in lakh)	4.39	206.78	213.66

Particulars	Asset-F1	
	2017-18	2018-19
220 kV GIS bays of:		
(i) Vadodara: 220 kV Downstream Bays		
220 kV GIS Bays	2	2
Norms (₹ lakh/Bay)	93.10	96.20
Total O&M Expense (₹ in lakh)	80.60	96.20

Particulars	Asset-F2	
	2017-18	2018-19
220 kV GIS bays of:		
(i) Vadodara: 220 kV Downstream Bays		
220 kV GIS Bays	2	2
Norms (₹ lakh/Bay)	93.10	96.20
Total O&M Expense (₹ in lakh)	80.60	96.20

Particulars	Asset-G	
	2017-18	2018-19
765 kV bays of:		
(i) Raipur: ICT 2 Bay		
(ii) Raipur: 1500 MVA 765/400 kV ICT 2		
(iii) Tamnar: ICT 4 Bay		
(iv) Tamnar: 1500 MVA 765/400 kV ICT 4		
400 kV bays of:		
(v) Raipur: ICT 2 Bay		
(vi) Tamnar: ICT 4 Bay		
765 kV Bays	2	2
Norms (₹ lakh/Bay)	93.11	96.20
400 kV Bays	2	2
Norms (₹ lakh/Bay)	319.24	329.82
Total O&M Expense (₹ in lakh)	319.24	329.82

58. The details of O&M Expenses allowed vide order dated 1.11.2019 in Petition No. 182/TT/2018 for Asset-A, and order dated 22.11.2017 in Petition no. 208/TT/2016 for



Assets C, D & G and claimed by the Petitioner in the instant petition and true-up O&M expenses in the instant order are as follows:

(₹ in lakh)				
Particulars	2015-16	2016-17	2017-18	2018-19
Asset-A				
Approved <i>vide</i> order dated 1.11.2019 in Petition No. 182/TT/2018	0.00	0.00	0.00	0.00
Claimed by the Petitioner in the instant petition	0.00	0.00	0.00	0.00
Allowed after true-up in this order	0.00	0.00	0.00	0.00
Asset-B1				
Claimed by the Petitioner in the instant petition		40.17	113.06	116.81
Allowed after true-up in this order		40.17	113.06	116.81
Asset-B2				
Claimed by the Petitioner in the instant petition		33.08	93.10	96.20
Allowed after true-up in this order		33.09	93.10	96.20
Asset-C				
Approved <i>in</i> order dated 22.11.2017 in Petition No. 208/TT/2016		28.74	66.51	68.71
Claimed by the Petitioner in the instant petition		28.75	66.51	68.71
Allowed after true-up in this order		28.75	66.51	68.71
Asset-D				
Approved <i>in</i> order dated 22.11.2017 in Petition No. 208/TT/2016		28.21	66.51	68.71
Claimed by the Petitioner in the instant petition		28.22	66.51	68.71
Allowed after true-up in this order		28.22	66.51	68.71
Asset-E				
Claimed by the Petitioner in the instant petition		4.80	226.12	233.62
Allowed after true-up in this order		4.39	206.78	213.66
Asset-F1				



Particulars	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition			80.60	96.20
Allowed after true-up in this order			80.60	96.20
Asset-F2				
Claimed by the Petitioner in the instant petition			80.60	96.20
Allowed after true-up in this order			80.60	96.20
Asset-G				
Approved in order dated 22.11.2017 in Petition No. 208/TT/2016			319.24	329.82
Claimed by the Petitioner in the instant petition			319.24	329.82
Allowed after true-up in this order			319.24	329.82

Interest on Working Capital (IWC)

59. 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-A			
		2015-16 (pro-rata 16 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	O & M Expenses	0.00	0.00	0.00	0.00
B	Maintenance Spares	0.00	0.00	0.00	0.00
C	Receivables	11.93	13.14	14.99	15.40
D	Total Working Capital (A+B+C)	11.93	13.14	14.99	15.40
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	0.07	1.77	2.02	2.08

(₹ in lakh)

	Particulars	Asset-B1		
		2016-17 (pro-rata 134 days)	2017-18	2018-19
	Interest on Working Capital			
A	O & M Expenses	9.12	9.42	9.73
B	Maintenance Spares	16.41	16.96	17.52
C	Receivables	76.15	81.98	86.24
D	Total Working Capital (A+B+C)	101.68	108.36	113.50
E	Rate of Interest (in %)	12.80	12.80	12.80



	Particulars	Asset-B1		
		2016-17 (pro-rata 134 days)	2017-18	2018-19
F	Interest of working capital (D*E)	4.78	13.87	14.53

(₹ in lakh)

	Particulars	Asset-B2		
		2016-17 (pro-rata 134 days)	2017-18	2018-19
	Interest on Working Capital			
A	O & M Expenses	7.51	7.76	8.02
B	Maintenance Spares	13.52	13.97	14.43
C	Receivables	24.16	28.90	30.42
D	Total Working Capital (A+B+C)	45.18	50.63	52.87
E	Rate of Interest (in %)	12.80	12.80	12.80
F	Interest of working capital (D*E)	2.12	6.48	6.77

(₹ in lakh)

	Particulars	Asset-C		
		2016-17 (pro-rata 163 days)	2017-18	2018-19
	Interest on Working Capital			
A	O & M Expenses	5.36	5.54	5.73
B	Maintenance Spares	9.66	9.98	10.31
C	Receivables	28.58	35.52	38.97
D	Total Working Capital (A+B+C)	43.60	51.04	55.00
E	Rate of Interest (in %)	12.80	12.80	12.80
F	Interest of working capital (D*E)	2.49	6.53	7.04

(₹ in lakh)

	Particulars	Asset-D		
		2016-17 (pro-rata 160 days)	2017-18	2018-19
	Interest on Working Capital			
A	O & M Expenses	5.36	5.54	5.73
B	Maintenance Spares	9.66	9.98	10.31
C	Receivables	28.49	35.49	39.00
D	Total Working Capital (A+B+C)	43.51	51.01	55.03
E	Rate of Interest (in %)	12.80	12.80	12.80
F	Interest of working capital (D*E)	2.44	6.53	7.04

(₹ in lakh)

	Particulars	Asset-E		
		2016-17 (pro-rata 8 days)	2017-18	2018-19
	Interest on Working Capital			
A	O & M Expenses	16.68	17.23	17.81
B	Maintenance Spares	30.02	31.02	32.05

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	Particulars	Asset-E		
		2016-17 (pro-rata 8 days)	2017-18	2018-19
C	Receivables	217.37	235.52	252.68
D	Total Working Capital (A+B+C)	264.07	283.77	302.53
E	Rate of Interest (in %)	12.80	12.80	12.80
F	Interest of working capital (D*E)	0.74	36.32	38.72

(₹ in lakh)

	Particulars	Asset-F1	
		2017-18 (pro-rata 316 days)	2018-19
	Interest on Working Capital		
A	O & M Expenses	7.76	8.02
B	Maintenance Spares	13.97	14.43
C	Receivables	49.16	50.34
D	Total Working Capital (A+B+C)	70.88	72.79
E	Rate of Interest (in %)	12.60	12.60
F	Interest of working capital (D*E)	7.73	9.17

(₹ in lakh)

	Particulars	Asset-F2	
		2017-18 (pro-rata 316 days)	2018-19
	Interest on Working Capital		
A	O & M Expenses	7.76	8.02
B	Maintenance Spares	13.97	14.43
C	Receivables	49.16	50.34
D	Total Working Capital (A+B+C)	70.88	72.79
E	Rate of Interest (in %)	12.60	12.60
F	Interest of working capital (D*E)	7.73	9.17

(₹ in lakh)

	Particulars	Asset-G	
		2017-18	2018-19
	Interest on Working Capital		
A	O & M Expenses	26.60	27.49
B	Maintenance Spares	47.89	49.47
C	Receivables	418.92	460.93
D	Total Working Capital (A+B+C)	493.41	537.88
E	Rate of Interest (in %)	12.60	12.60
F	Interest of working capital (D*E)	62.17	67.77

60. The details of interest on working capital (IWC) allowed vide order dated 1.11.2019 in Petition No. 182/TT/2018 for Asset-A, and order dated 22.11.2017 in



Petition No. 208/TT/2016 for Assets C, D and G and claimed by the Petitioner in the instant petition and true-up IWC in the instant order are as follows:

(₹ in lakh)				
Particulars	2015-16	2016-17	2017-18	2018-19
Asset-A				
Approved <i>vide</i> order dated 1.11.2019 in Petition No. 182/TT/2018	0.02	0.79	1.28	1.42
Claimed by the Petitioner in the instant petition	0.07	1.78	2.03	2.08
Allowed after true-up in this order	0.07	1.77	2.02	2.08
Asset-B1				
Claimed by the Petitioner in the instant petition		4.78	13.91	14.60
Allowed after true-up in this order		4.78	13.87	14.53
Asset-B2				
Claimed by the Petitioner in the instant petition		2.13	6.49	6.78
Allowed after true-up in this order		2.12	6.48	6.77
Asset-C				
Approved <i>vide</i> order dated 22.11.2017 in Petition No. 208/TT/2016		2.46	6.36	6.93
Claimed by the Petitioner in the instant petition		2.49	6.54	7.04
Allowed after true-up in this order		2.49	6.53	7.04
Asset-D				
Approved <i>vide</i> order dated 22.11.2017 in Petition No. 208/TT/2016		2.41	6.36	6.93
Claimed by the Petitioner in the instant petition		2.44	6.53	7.05
Allowed after true-up in this order		2.44	6.53	7.04
Asset-E				
Claimed by the Petitioner in the instant petition		0.76	37.51	40.10
Allowed after true-up in this order		0.74	36.32	38.72



Particulars	2015-16	2016-17	2017-18	2018-19
Asset-F1				
Claimed by the Petitioner in the instant petition			7.76	9.22
Allowed after true-up in this order			7.73	9.17
Asset-F2				
Claimed by the Petitioner in the instant petition			7.76	9.22
Allowed after true-up in this order			7.73	9.17
Asset-G				
Approved vide order dated 22.11.2017 in Petition No. 208/TT/2016			68.68	80.31
Claimed by the Petitioner in the instant petition			62.30	67.89
Allowed after true-up in this order			62.17	67.77

Approved Annual Fixed Charges for 2014-19 Tariff Period

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

		(₹ in lakh)			
Particulars	Asset-A				
	2015-16 (pro-rata for 16 days)	2016-17	2017-18	2018-19	
Annual Transmission Charges					
A Depreciation	0.95	24.23	28.30	29.80	
B Interest on Loan	1.05	25.74	27.93	27.08	
C Return on Equity	1.06	27.12	31.68	33.45	
D O & M Expenses	0.00	0.00	0.00	0.00	
E Interest on Working Capital	0.07	1.77	2.02	2.08	
F Total (A+B+C+D+E)	3.13	78.86	89.93	92.41	

		(₹ in lakh)		
Particulars	Asset-B1			
	2016-17 (pro-rata for 134 days)	2017-18	2018-19	
Annual Transmission Charges				
A Depreciation	38.96	117.81	127.36	
B Interest on Loan	40.21	115.27	115.47	



	Particulars	Asset-B1		
		2016-17 (pro-rata for 134 days)	2017-18	2018-19
C	Return on Equity	43.62	131.90	143.27
D	O & M Expenses	40.17	113.06	116.81
E	Interest on Working Capital	4.78	13.87	14.53
F	Total (A+B+C+D+E)	167.74	491.90	517.44

(₹ in lakh)

	Particulars	Asset-B2		
		2016-17 (pro-rata for 134 days)	2017-18	2018-19
	Annual Transmission Charges			
A	Depreciation	5.60	23.55	26.15
B	Interest on Loan	6.14	24.06	24.28
C	Return on Equity	6.26	26.23	29.13
D	O & M Expenses	33.09	93.10	96.20
E	Interest on Working Capital	2.12	6.48	6.77
F	Total (A+B+C+D+E)	53.21	173.41	182.53

(₹ in lakh)

	Particulars	Asset-C		
		2016-17 (pro-rata for 163 days)	2017-18	2018-19
	Annual Transmission Charges			
A	Depreciation	14.24	44.76	51.75
B	Interest on Loan	15.17	45.22	48.20
C	Return on Equity	15.94	50.11	58.10
D	O & M Expenses	28.75	66.51	68.71
E	Interest on Working Capital	2.49	6.53	7.04
F	Total (A+B+C+D+E)	76.59	213.14	233.80

(₹ in lakh)

	Particulars	Asset-D		
		2016-17 (pro-rata for 160 days)	2017-18	2018-19
	Annual Transmission Charges			
A	Depreciation	13.92	44.73	51.83
B	Interest on Loan	14.79	45.12	48.21
C	Return on Equity	15.58	50.08	58.18
D	O & M Expenses	28.22	66.51	68.71
E	Interest on Working Capital	2.44	6.53	7.04
F	Total (A+B+C+D+E)	74.94	212.97	233.97



(₹ in lakh)

	Particulars	Asset-E		
		2016-17 (pro-rata for 8 days)	2017-18	2018-19
	Annual Transmission Charges			
A	Depreciation	7.45	376.39	414.09
B	Interest on Loan	7.67	372.21	384.41
C	Return on Equity	8.34	421.41	465.19
D	O & M Expenses	4.39	206.78	213.66
E	Interest on Working Capital	0.74	36.32	38.72
F	Total (A+B+C+D+E)	28.59	1413.12	1516.08

(₹ in lakh)

	Particulars	Asset-F1	
		2016-17 (pro-rata for 316 days)	2017-18
	Annual Transmission Charges		
A	Depreciation	54.15	65.17
B	Interest on Loan	52.37	58.60
C	Return on Equity	60.51	72.90
D	O & M Expenses	80.60	96.20
E	Interest on Working Capital	7.73	9.17
F	Total (A+B+C+D+E)	255.37	302.05

(₹ in lakh)

	Particulars	Asset-F2	
		2016-17 (pro-rata for 316 days)	2017-18
	Annual Transmission Charges		
A	Depreciation	54.15	65.17
B	Interest on Loan	52.37	58.60
C	Return on Equity	60.51	72.90
D	O & M Expenses	80.60	96.20
E	Interest on Working Capital	7.73	9.17
F	Total (A+B+C+D+E)	255.37	302.05

(₹ in lakh)

	Particulars	Asset-G	
		2016-17	2017-18
	Annual Transmission Charges		
A	Depreciation	667.85	758.27
B	Interest on Loan	687.52	722.15
C	Return on Equity	776.74	887.54
D	O & M Expenses	319.24	329.82
E	Interest on Working Capital	62.17	67.77
F	Total (A+B+C+D+E)	2513.52	2765.55



62. The details of AFC allowed vide order dated 1.11.2019 in Petition No. 182/TT/2018 for Asset-A, and order dated 22.11.2017 in Petition no. 208/TT/2016 for Assets C, D & G and AFC claimed by the Petitioner in the instant petition and true-up AFC in the instant order are as follows:

Asset-A

Particulars	(₹ in lakh)			
	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 1.11.2019 in Petition No. 182/TT/2018	0.89	35.17	57.05	63.14
Claimed by the Petitioner in the instant petition	3.13	78.9	89.99	92.47
Allowed after true-up in this order	3.13	78.86	89.93	92.41

Asset-B1

Particulars	(₹ in lakh)		
	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition	167.74	493.68	520.91
Allowed after true-up in this order	167.74	491.90	517.44

Asset-B2

Particulars	(₹ in lakh)		
	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition	53.28	173.86	183.23
Allowed after true-up in this order	53.21	173.41	182.53

Asset-C

Particulars	(₹ in lakh)		
	2016-17	2017-18	2018-19
Approved vide order dated 22.11.2017 in Petition No. 208/TT/2016	75.02	205.24	228.47
Claimed by the Petitioner in the instant petition	76.65	213.28	233.92
Allowed after true-up in this order	76.59	213.14	233.80



Asset-D

Particulars	(₹ in lakh)		
	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 22.11.2017 in Petition No. 208/TT/2016	73.39	204.99	228.72
Claimed by the Petitioner in the instant petition	75.00	213.10	234.10
Allowed after true-up in this order	74.94	212.97	233.97

Asset-E

Particulars	(₹ in lakh)		
	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition	29.04	1441.86	1552.52
Allowed after true-up in this order	28.59	1413.12	1516.08

Asset-F1

Particulars	(₹ in lakh)	
	2017-18	2018-19
Claimed by the Petitioner in the instant petition	256.47	304.48
Allowed after true-up in this order	255.37	302.05

Asset-F2

Particulars	(₹ in lakh)	
	2017-18	2018-19
Claimed by the Petitioner in the instant petition	256.47	304.48
Allowed after true-up in this order	255.37	302.05

Asset-G

Particulars	(₹ in lakh)	
	2017-18	2018-19
Approved <i>vide</i> order dated 22.11.2017 in Petition No. 208/TT/2016	2772.56	3302.69
Claimed by the Petitioner in the instant petition	2519.81	2771.10
Allowed after true-up in this order	2513.52	2765.55

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

63. The Petitioner has combined all the transmission assets, except Asset-F2, covered in the transmission project into one single 'Combined Asset' (hereinafter referred to as 'Combined Asset') and has filed a consolidated petition claiming tariff for



the Combined Asset as a whole for the 2019-24 tariff period as provided in Regulation 8(1) of the 2019 Tariff Regulations and claimed tariff for Asset-F2 separately.

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	1651.75	1707.84	1707.84	1707.84	1707.84
Interest on Loan	1383.38	1321.65	1197.05	1073.50	935.07
Return on Equity	1779.06	1852.93	1852.93	1852.93	1852.93
O&M Expenses	180.62	185.76	187.84	190.15	191.89
Interest on Working Capital	2483.48	2570.60	2661.29	2757.04	2851.95
Total	7478.29	7638.78	7606.95	7581.46	7539.68

65. The Petitioner has claimed the following transmission charges for 2019-24 tariff period for Asset-F2:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	65.96	65.96	65.96	65.96	65.96
Interest on Loan	54.89	49.76	45.29	41.06	35.70
Return on Equity	70.14	70.14	70.14	70.14	70.14
O&M Expenses	4.83	4.84	4.84	4.84	4.84
Interest on Working Capital	45.02	46.60	48.24	49.92	51.68
Total	240.84	237.30	234.47	231.92	228.32

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	206.96	214.22	221.77	229.75	237.66
Maintenance Spares	372.52	385.59	399.19	413.56	427.79
Receivables	919.46	941.77	937.84	934.70	927.01
Total Working Capital	1498.94	1541.58	1558.80	1578.01	1592.46
Rate of Interest (in %)	180.62	185.76	187.84	190.15	191.89
Interest on Working Capital	180.62	185.76	187.84	190.15	191.89



67. The details of IWC claimed by the Petitioner for the 2019-24 tariff period in respect of the Asset-F2 are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	3.75	3.88	4.02	4.16	4.31
Maintenance Spares	6.75	6.99	7.24	7.49	7.75
Receivables	29.61	29.26	28.91	28.59	28.07
Total Working Capital	40.11	40.13	40.17	40.24	40.13
Rate of Interest (in %)	4.83	4.84	4.84	4.85	4.84
Interest on Working Capital	4.83	4.84	4.84	4.85	4.84

Effective Date of Commercial Operation (E-COD)

68. The Petitioner has stated that E-COD of the Combined Asset works out to be 12.12.2016. E-COD of the Combined Asset has been worked out based on the trued-up capital cost and dates of commercial operation of the individual assets which is as under:

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-A	564.37	16.3.2016	430.00	1.88%	8.07	1.3.2017
Asset-B1	2461.48	18.11.2016	183.00	8.18%	14.97	
Asset-B2	493.38	18.11.2016	183.00	1.64%	3.00	
Asset-C	980.16	20.10.2016	212.00	3.26%	6.91	
Asset-D	981.61	23.10.2016	209.00	3.26%	6.82	
Asset-E	7873.36	24.3.2017	57.00	26.17%	14.92	
Asset-F1	1230.08	20.5.2017	0.00	4.09%	0.00	
Asset-G	15383.69	1.4.2017	49.00	51.52%	25.24	
Total	30080.31			1.00	79.93	

69. E-COD is used to determine the elapsed life of the project as a whole which works out as 2 years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).



Weighted Average Life (WAL) of the Assets

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

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

72. 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 element-wise life as defined in the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, the WAL of the Combined Asset except Asset-F2 commissioned during 2014-19 period has been worked out as 25 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	25.00	1860.70	46517.41	24.772 years (Rounded off to 25 years)
Transmission Line	35.00	0.00	0.00	
Sub-station	25.00	27827.09	695677.24	
PLCC	15.00	42.17	632.55	
I.T. Equipment	6.67	350.36	2335.71	
Total		30080.31	745162.91	

73. The WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed above, the Effective COD of the assets is 4.8.2016 and the elapsed life of the project as a whole works out as 2



years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from Effective COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 23 years.

Capital Cost

74. 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.”

75. Against the overall apportioned approved capital cost (as per RCE) of ₹38970.34 lakh, the estimated completion cost is ₹33932.39 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 and Asset-F2.

76. 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, sub-station 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 capital cost for combined asset except Asset-F2 as on 1.4.2019 as per following details:

Element	Asset-A	Asset-B1	Asset-B2	Asset-C	Asset-D	Asset-E	Asset-F1	Asset-G	(₹ in lakh)
									Capital cost for Combined Asset as on 31.3.2019
Freehold Land	-	-	-	-	-	-	-	-	-
Leasehold Land	-	-	-	-	-	-	-	-	-
Building Civil Works & Colony	-	26.37	-	-	-	29.75	-	1804.58	1,860.70
Transmission Line	-	-	-	-	-	-	-	-	-
Sub Station	564.37	2,410.55	473.70	973.19	974.59	7,783.13	1207.59	13439.98	27827.09
PLCC	-	-	19.68	-	-	-	22.49	-	42.17
IT Equipment (Incl. Software)	-	24.56	-	6.97	7.01	60.48	-	251.33	350.36
Total	564.37	2461.48	493.38	980.16	981.61	7873.36	1230.08	15495.89	30080.31

77. The trued-up capital cost of ₹30080.31 lakh for combined asset except Asset-F2 is considered as admitted capital cost as on 31.3.2019 for working out tariff for 2019-24 tariff period.

78. The capital cost of Asset-F2 as on 1.4.2019 as follows:



(₹ in lakh)	
Element	Asset-F2
Freehold Land	-
Leasehold Land	-
Building Civil Works & Colony	-
Transmission Line	-
Sub Station	1207.59
PLCC	22.49
IT Equipment (Incl. Software)	-
Total	1230.08

79. The trued-up capital cost of ₹1230.08 lakh for Asset-F2 is considered as admitted capital cost as on 31.3.2019 for working out tariff for 2019-24 tariff period.

Additional Capital Expenditure (ACE)

80. Regulation 24 and Regulation 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

(i) *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; and
- (g) Raising of ash dyke as a part of ash disposal system.
- (2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:
- (a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;
- (b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;
- (c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and
- (d) The replacement of such asset or equipment has otherwise been allowed by the Commission”.

81. The Petitioner has claimed ACE of ₹2622.00 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 differed for execution. The same are as follows:

(₹ in lakh)

Assets	Asset Type	ACE Claimed (2019-24)
Asset-B2	Sub-station	8.26
Asset-E	Building & Civil Works	25.69
Asset-G	Building & Civil Works	1329.04
	Sub-station	1259.01
Total		2622.00

82. MPPMCL has submitted that the Petitioner has not supported its claims for ACE with proper documents and therefore the ACE may be deferred till true-up.

83. We have considered the rival submissions. The ACE claimed by the Petitioner has been allowed under Regulation 25(1)(a) of the 2019 Tariff Regulations, as it is



towards undischarged liabilities discharged after the cut-off date for works executed prior to the cut-off date. The total capital expenditure as on 31.3.2024 is within the apportioned approved cost. Accordingly, ACE for 2019-20 and the capital cost as on 31.3.2024 for the transmission asset considered are as follows:

(₹ in lakh)			
Assets	Capital Cost admitted as on 1.4.2019 (A)	ACE allowed for 2019-20 (B)	Capital Cost allowed as on 31.3.2024 (C)=(A)+(B)
Combined Asset (excluding Asset-F2)	30080.31	2622.00	32702.31
Asset-F2	1230.08	0.00	1230.08

Debt-Equity ratio

84. 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.”

85. 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 purpose of 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	21056.22	70.00	1835.40	70.00	22891.62	70.00
Equity	9024.09	30.00	786.60	30.00	9810.69	30.00
Total	30080.31	100.00	2622.00	100.00	32702.31	100.00



86. The debt-equity considered for the purpose of computation of tariff for Asset-F2 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	861.06	70.00	0.00	70.00	861.06	70.00
Equity	369.02	30.00	0.00	30.00	369.02	30.00
Total	1230.08	100.00	0.00	100.00	1230.08	100.00

Depreciation

87. 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.”

88. The IT equipment has been considered as part of the gross block and depreciated using WAROD (as placed at Annexure-II). WAROD has been worked out after taking into account the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations. The salvage value of IT equipment has been considered as NIL, i.e. IT asset has been considered as 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:

		(₹ in lakh)				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation					
A	Opening Gross Block	30080.31	32702.31	32702.31	32702.31	32702.31
B	ACE	2622.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	32702.31	32702.31	32702.31	32702.31	32702.31
D	Average Gross Block (A+C)/2	31391.31	32702.31	32702.31	32702.31	32702.31
E	Weighted average rate of Depreciation (WAROD) (in %)	5.23	5.19	5.19	5.19	5.19
F	Balance useful life of the asset (Year)	23	22	21	20	19
G	Elapsed life at the beginning of the year (Year)	2	3	4	5	6
H	Aggregate Depreciable Value	28287.22	29467.12	29467.12	29467.12	29467.12
I	Depreciation during the year	1642.72	1698.80	1698.80	1698.80	1698.80
J	Cumulative Depreciation	4630.02	6328.82	8027.62	9726.42	11425.22
K	Remaining Depreciable Value (H-J)	23657.19	23138.29	21439.49	19740.69	18041.89

89. The depreciation allowed for Asset-F2 is as follows:



(₹ in lakh)

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation					
A	Opening Gross Block	1230.08	1230.08	1230.08	1230.08	1230.08
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B).	1230.08	1230.08	1230.08	1230.08	1230.08
D	Average Gross Block (A+C)/2	1230.08	1230.08	1230.08	1230.08	1230.08
E	Weighted average rate of Depreciation (WAROD) (in %)	5.30	5.30	5.30	5.30	5.30
F	Balance useful life of the asset (Year)	24	23	22	21	20
G	Elapsed life at the beginning of the year (Year)	1	2	3	4	5
H	Aggregate Depreciable Value	1107.07	1107.07	1107.07	1107.07	1107.07
I	Depreciation during the year	65.18	65.18	65.18	65.18	65.18
J	Cumulative Depreciation	184.50	249.68	314.86	380.04	445.22
K	Remaining Depreciable Value (H-J)	922.57	857.39	792.21	727.03	661.85

Interest on Loan (IoL)

90. 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.”

91. 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.

92. 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, shall 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 Combined Asset for 2019-24 tariff period is as follows:

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Loan					
A	Gross Normative Loan	21056.22	22891.62	22891.62	22891.62	22891.62
B	Cumulative Repayments upto Previous Year	2987.30	4630.02	6328.82	8027.62	9726.42
C	Net Loan-Opening (A-B)	18068.92	18261.60	16562.80	14864.00	13165.20
D	Additions	1835.40	0.00	0.00	0.00	0.00
E	Repayment during the year	1642.72	1698.80	1698.80	1698.80	1698.80



	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
F	Net Loan-Closing (C+D-E)	18261.60	16562.80	14864.00	13165.20	11466.40
G	Average Loan (C+F)/2	18165.26	17412.20	15713.40	14014.60	12315.80
H	Weighted Average Rate of Interest on Loan (in %)	7.8242	7.8118	7.8697	7.9501	7.9276
I	Interest on Loan (G*H)	1421.29	1360.21	1236.60	1114.17	976.35

93. The Interest on Loan allowed for Asset-F2 is as follows:

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Loan					
A	Gross Normative Loan	861.06	861.06	861.06	861.06	861.06
B	Cumulative Repayments upto Previous Year	119.32	184.50	249.68	314.86	380.04
C	Net Loan-Opening (A-B)	741.74	676.56	611.38	546.20	481.02
D	Additions	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	65.18	65.18	65.18	65.18	65.18
F	Net Loan-Closing (C+D-E)	676.56	611.38	546.20	481.02	415.84
G	Average Loan (C+F)/2	709.15	643.97	578.79	513.61	448.43
H	Weighted Average Rate of Interest on Loan (in %)	7.6441	7.6310	7.7269	7.8932	7.8604
I	Interest on Loan (G*H)	54.21	49.14	44.72	40.54	35.25

Return on Equity (RoE)

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

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

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

Provided that return on equity in respect of additional capitalization after 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.”

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

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Return on Equity					
A	Opening Equity	9024.09	9810.69	9810.69	9810.69	9810.69
B	Additions	786.60	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	9810.69	9810.69	9810.69	9810.69	9810.69



	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
D	Average Equity (A+C)/2	9417.39	9810.69	9810.69	9810.69	9810.69
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)	1768.77	1842.64	1842.64	1842.64	1842.64

96. The Return on Equity approved for Asset-F2 is as follows:

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Return on Equity					
A	Opening Equity	369.02	369.02	369.02	369.02	369.02
B	Additions	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	369.02	369.02	369.02	369.02	369.02
D	Average Equity (A+C)/2	369.02	369.02	369.02	369.02	369.02
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)	69.31	69.31	69.31	69.31	69.31

Operation & Maintenance Expenses (O&M Expenses)

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

Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
765 kV bays of:					
(i) Raipur: ICT Bay 2					
(ii) Tamnar: ICT Bay 4					
400 kV bays of:					
(i) Damoh: ICT Bay					
(ii) Rajgarh: 63 MVAR SLR BAY 1					
(iii) Rajgarh: 63 MVAR SLR BAY 2					
(iv) Raipur: ICT 2 bay					
(v) Tamnar: ICT 4 bay					
400 kV GIS bays of:					
(i) Vadodara: 400 kV Bays for ICT 1&2					
220 kV bays of:					



Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
(i) Damoh: ICT Bay (ii) Damoh: Damoh (MPPTCL) Bay (iii) Damoh: Sagar Bay 220 kV GIS bays of: (i) Vadodara: 400/220 kV 500 MVA ICT 1&2 (ii) Vadodara: 220 kV Downstream Bays					
765 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	45.01	46.60	48.23	49.93	51.68
400 kV Bays	7	7	7	7	7
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
220 kV Bays	7	7	7	7	7
Norms (₹ lakh/Bay)	22.51	23.30	34.12	24.96	25.84
Transformers: 765 kV (i) Raipur : 1500 MVA 765/400 kV ICT 2 (ii) Tamnar: 1500 MVA 765/400 kV ICT 4 400 kV (i) Damoh: 400/220 kV MVA ICT (ii) Vadodara: 400/220 kV 500 MVA ICT 1&2					
765 kV (MVA)	2	2	2	2	2
Norms (₹ lakh/MVA)	0.491	0.508	0.526	0.545	0.564
400 kV (MVA)	3	3	3	3	3
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411
PLCC (@ 2% of capital cost)					
Capital cost for PLCC	0.84	0.84	0.84	0.84	0.84
Total O&M Expense (₹ in lakh)	2483.48	2570.60	2661.29	2757.04	2851.95

98. The O&M Expenses claimed by the Petitioner for various elements included in the Asset-F2 for 2019-24 tariff period are as follows:

Particulars	Asset-F2				
	2019-20	2020-21	2021-22	2022-23	2023-24
220 kV GIS bays of: (i) Vadodara: 220 kV Downstream Bays					
220 kV GIS Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	22.51	23.30	24.12	24.96	25.84
Total O&M Expense (₹ in lakh)	45.02	46.60	48.24	49.92	51.68

99. Regulation 35(3)(a) and Regulation 33(4) of the 2019 Tariff Regulations provides as follows:



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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (₹ Lakh per MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 Kv	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958



Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

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

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

101. The Commission has observed that the Petitioner has claimed the GIS bays under the Vadodara Sub-station under the norms for conventional bays. The Commission has allowed the same under the norms for GIS bays.

102. 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 bays of: (i) Raipur: ICT Bay 2 (ii) Tamnar: ICT Bay 4					
400 kV bays of: (iii) Damoh:ICT Bay					



Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
(iv) Rajgarh: 63 MVAR SLR BAY 1					
(v) Rajgarh: 63 MVAR SLR BAY 2					
(vi)					
(vii) Raipur: ICT 2 bay					
(viii) Tamnar: ICT 4 bay					
400 kV GIS bays of:					
(ix) Vadodara: 400 kV Bays for ICT 1&2					
220 kV bays of:					
(x) Damoh: ICT Bay					
(xi) Damoh: Damoh (MPPTCL) Bay					
(xii) Damoh: Sagar Bay					
220 kV GIS bays of:					
(i) Vadodara: 400/220 kV 500 MVA ICT 1&2					
(ii) Vadodara: 220 kV Downstream Bays					
765 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	45.01	46.60	48.23	49.93	51.68
400 kV Bays	5	5	5	5	5
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
400 kV GIS Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	22.505	23.296	24.115	24.962	25.837
220 kV Bays	3	3	3	3	3
Norms (₹ lakh/Bay)	22.51	23.30	34.12	24.96	25.84
220 GIS kV Bays	4	4	4	4	4
Norms (₹ lakh/Bay)	15.757	16.31	16.884	17.472	18.088
Transformers:					
765 kV					
(i) Raipur : 1500 MVA 765/400 kV ICT 2					
(ii) Tamnar: 1500 MVA 765/400 kV ICT 4					
400 kV					
(iii) Vadodara: 400/220 kV 500 MVA ICT 1&2					
(iv) Damoh: 400/220 kV MVA ICT					
765 kV (MVA)	2	2	2	2	2
Norms (₹ lakh/MVA)	0.491	0.508	0.526	0.545	0.564
400 kV (MVA)	3	3	3	3	3
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411
PLCC (@ 2% of capital cost)					
Total O&M Expense (₹ in lakh)	2436.34	2521.83	2610.84	2704.85	2797.96

103. The O&M Expenses have been worked out for the Asset-F2 in accordance with the Norms of the 2019 Tariff Regulations and the same are as follows:



Particulars	Asset-F2				
	2019-20	2020-21	2021-22	2022-23	2023-24
220 kV GIS bays of:					
(i) Vadodara: 220 kV Downstream Bays					
220 kV GIS Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	15.757	16.31	16.884	17.472	18.088
Total O&M Expense (₹ in lakh)	31.51	32.62	33.77	34.94	36.18

Interest on Working Capital (IWC)

104. 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;”*

105. 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 from 2021-22 onwards has been considered as 10.50% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.00% plus 350 basis points). The components of the working capital and interest thereon allowed for Combined Asset is as follows:

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Working Capital					
A	Working Capital O&M Expenses (O&M Expenses for one month)	203.03	210.15	217.57	225.40	233.16
B	Working Capital Maintenance Spares (15% of O&M Expenses)	365.45	378.27	391.63	405.73	419.69
C	Working Capital Receivables (Equivalent to 45 days of annual transmission charges)	915.73	936.37	930.89	927.63	919.78
D	Total Working Capital (A+B+C)	1484.21	1524.80	1540.09	1558.77	1572.64
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest on working capital (D*E)	178.85	171.54	161.71	163.67	165.13

106. The components of the working capital and interest for Asset-F2 is as follows:

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Working Capital					
A	Working Capital O&M Expenses (O&M Expenses for one month)	2.63	2.72	2.81	2.91	3.01
B	Working Capital Maintenance Spares (15% of O&M Expenses)	4.73	4.89	5.07	5.24	5.43
C	Working Capital Receivables (Equivalent to 45 days of annual transmission charges)	27.59	27.14	26.71	26.33	25.76
D	Total Working Capital (A+B+C)	34.95	34.75	34.58	34.49	34.20
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest on working capital (D*E)	4.21	3.91	3.63	3.62	3.59



Annual Fixed Charges of the 2019-24 Tariff Period

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	1642.72	1698.80	1698.80	1698.80	1698.80
Interest on Loan	1421.29	1360.21	1236.60	1114.17	976.35
Return on Equity	1768.77	1842.64	1842.64	1842.64	1842.64
O&M Expenses	2436.34	2521.83	2610.84	2704.85	2797.96
Interest on Working Capital	178.85	171.54	161.71	163.67	165.13
Total	7447.97	7595.02	7550.59	7524.14	7480.88

108. The transmission charges allowed in respect of Asset-F2 for the 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	65.18	65.18	65.18	65.18	65.18
Interest on Loan	54.21	49.14	44.72	40.54	35.25
Return on Equity	69.31	69.31	69.31	69.31	69.31
O&M Expenses	31.51	32.62	33.77	34.94	36.18
Interest on Working Capital	4.21	3.91	3.63	3.62	3.59
Total	224.43	220.16	216.61	213.60	209.51

Filing Fee and the Publication Expenses

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

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



License Fee and RLDC Fees and Charges

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

Goods and Services Tax (GST)

112. The Petitioner has submitted that, if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Government/ Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

113. MPPMCL has submitted that the demand of the Petitioner is premature and need not to be considered at this juncture. In response, the Petitioner has submitted that currently transmission of electricity by an electric transmission utility is exempted from GST. Hence, the transmission charges currently charged are exclusive of GST. Further, if GST is levied at any rate and at any point of time in future, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately.

114. We have considered the rival 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

115. 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.

116. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses on projected basis for 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The said petition has already been disposed of by the Commission vide order dated 3.8.2021. Therefore, 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

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

Sharing of Transmission Charges

118. The Commission vide order dated 5.2.2020 in Petition No.28/TT/2019 held that the transmission charges in case of Asset-B2 (referred to as Asset-1 in order dated 5.2.2020) from its COD to the COD of the downstream assets under the scope of MPPTCL shall be shared by MPPTCL and in case of Asset-E and Asset-F1 & Asset-F2 (referred to as Asset-2 and Asset-3 in order dated 5.2.2020) from their COD on 24.3.2017 and 20.5.2017 respectively to the COD of the downstream assets under the scope of GETCO shall be shared by GETCO. The relevant portion of the Commission's order dated 5.2.2020 in Petition No. 28/TT/2019 is as follows:



“38. The transmission charges in case of Asset-1 from 18.11.2016 (COD) to 28.8.2017 (one day before actual charging of downstream system) shall be on account of MPPTCL and thereafter, from 29.8.2017 (Actual Charging of downstream system), it will be shared under PoC mechanism, as per provisions of the 2010 sharing regulations.

.....

45. The transmission charges in case of Asset-2 and Asset-3 from their COD, i.e. 24.3.2017 and 20.5.2017 respectively upto COD of downstream transmission system under the scope of GETCO shall be borne by GETCO and thereafter, the transmission charges allowed in this order, as provided in Regulation 43 of the 2014 Tariff Regulations, shall be shared by the beneficiaries and long term transmission customers in terms of the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 as amended from time to time.”

119. The Petitioner has submitted the details of the COD of the associated downstream assets under the scope of MPPTCL and GETCO and it is as follows:

Assets	Description	Approved COD	Date of downstream line Commissioning	Line Description
Asset-B2	02 numbers Line bays at Damoh Sub-station	18.11.2016	28.8.2017	220 kV Damoh –Damoh 3 and Damoh –Sagar 2
Asset-E	400/220 kV, 500 MVA, 2 Nos. ICTs at Vadodara GIS with associated bays	24.3.2017	-	-
Asset-F	4 numbers 220 kV Line bays at Vadodara GIS	20.5.2017	14.4.2018	220 kV Vadodara-Venkatpura#1 and 2
			17.12.2020	220 kV Vadodara-Jambuva#1 and 2

120. Accordingly, the transmission charges of Asset-B2 and Asset-F (bifurcated into Asset-F1 and Asset-F2) from their COD to the COD of the downstream assets shall be shared by MPPTCL and GETCO as follows:

Assets	Description	Approved COD	Date of downstream line Commissioning	Liability of transmission charges
Asset-B2	02 numbers Line bays at Damoh Sub-station	18.11.2016	28.8.2017	The transmission charges in case of Asset-B2 from 18.11.2016 to 27.8.2017 shall be borne by MPPTCL and thereafter, from 28.8.2017, it will be shared under common pool mechanism, as per



				provisions of the 2010 sharing regulations.
Asset-E	400/220 kV, 500 MVA, 2 Nos. ICTs at Vadodara GIS with associated bays	24.3.2017	14.4.2018	As the Asset cannot be put to use without Asset-F1, the Petitioner is not entitled for any transmission charges from 24.3.2017 to 19.5.2017. The transmission charges in case of Asset-E from 20.5.2017 till 13.4.2018 shall be borne by GETCO and thereafter it will be shared under common pool mechanism, as per provisions of the 2010 sharing regulations.
Asset-F1	2 numbers 220 kV Line bays at Vadodara GIS	20.5.2017	14.4.2018	The transmission charges in case of Asset-F1 from 20.5.2017 to 13.4.2018 shall be borne by GETCO and thereafter, from 14.4.2018, it will be shared under common pool mechanism, as per provisions of the 2010 sharing regulations.
Asset-F2	2 numbers 220 kV Line bays at Vadodara GIS	20.5.2017	17.12.2020	The transmission charges in case of Asset-F2 from 20.5.2017 to 16.12.2020 shall be borne by GETCO and thereafter, from 17.12.2020, it will be shared under common pool mechanism, as per the applicable sharing regulations.

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



122. To summarise:

- a. The trued-up Annual Fixed Charges (AFC) allowed for 2014-19 tariff period are:

(₹ in lakh)				
Assets	2015-16	2016-17	2017-18	2018-19
Asset-A	3.13	78.86	89.93	92.41
Asset-B1		167.74	491.90	517.44
Asset-B2		53.21	173.41	182.53
Asset-C		76.59	213.14	233.80
Asset-D		74.94	212.97	233.97
Asset-E		28.59	1413.12	1516.08
Asset-F1			255.37	302.05
Asset-F2			255.37	302.05
Asset-G			2513.52	2765.55

- b. Annual Fixed Charges allowed in respect of the Combined Asset (except Asset-F2) and Asset-F2 for 2019-24 tariff period in this order are:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Combined Asset (except Asset-F2)	7447.97	7595.02	7550.59	7524.14	7480.88
Asset-F2	224.43	220.16	216.61	213.60	209.51

123. Annexure-I, Annexure-II given hereinafter form part of the instant order.

124. This order disposes of Petition No. 273/TT/2022 in terms of above discussions and findings.

sd/-
(I.S. Jha)
Member

sd/-
(Arun Goyal)
Member



Asset-A

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 Depreciatio n as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
		2016-17	2017-18	Total			2015-16	2016-17	2017-18	2018-19
Sub- station	410.11	97.43	56.83	154.26	564.37	5.28%	0.95	24.23	28.30	29.80
Total	410.11	97.43	56.83	154.26	564.37	Total	0.95	24.23	28.30	29.80
Average Gross Block (₹ in lakh)							410.11	458.82	535.95	564.37
Weighted Average Rate of Depreciation							5.28%	5.28%	5.28%	5.28%



Asset-B1

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	Total			2016-17	2017-18	2018-19	
Sub-station	1912.49	155.19	280.34	498.06	2410.55	5.28%	105.08	116.57	125.63	
IT Equipment (Incl. Software)	17.20	4.87	2.48	7.35	24.56	5.28%	1.04	1.23	1.30	
Total	1929.70	160.06	282.82	531.78	2461.48	Total	106.11	117.81	127.36	
							Average Gross Block (₹ in lakh)	2012.16	2236.04	2421.90
							Weighted Average Rate of Depreciation	5.28%	5.28%	5.27%



Asset-B2

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)		
		2016-17	2017-18	Total			2016-17	2017-18	2018-19
Capital Expenditure									
Sub-station	179.16	214.98	75.68	294.54	473.70	5.28%	15.14	22.81	24.91
PLCC	-	3.74	15.94	19.68	19.68	6.33%	0.12	0.74	1.25
Total	179.16	218.72	91.62	314.22	493.38	Total	15.25	23.55	26.15
Average Gross Block (₹ in lakh)							288.52	443.69	491.44
Weighted Average Rate of Depreciation							5.29%	5.31%	5.32%



Asset-C

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)			
		2016-17	2017-18	Total			2016-17	2017-18	2018-19	
Sub-station	487.59	221.48	264.12	485.60	973.19	5.28%	31.59	44.41	51.38	
IT Equipment (Incl. Software)	4.90	1.38	0.69	2.07	6.97	5.28%	0.30	0.35	0.37	
Total	492.49	222.86	264.81	487.67	980.16	Total	31.89	44.76	51.75	
							Average Gross Block (₹ in lakh)	604.61	849.13	981.54
							Weighted Average Rate of Depreciation	5.28%	5.28%	5.28%



Asset-D

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)			
		2016-17	2017-18	Total			2016-17	2017-18	2018-19	
Sub-station	484.94	221.48	268.17	489.65	974.59	5.28%	31.45	44.38	51.46	
IT Equipment (Incl. Software)	4.90	1.38	0.73	2.11	7.01	5.28%	0.30	0.35	0.37	
Total	489.84	222.86	268.90	491.76	981.61	Total	31.75	44.73	51.83	
							Average Gross Block (₹ in lakh)	601.96	848.53	982.99
							Weighted Average Rate of Depreciation	5.28%	5.28%	5.28%



Asset-E

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)		
		2017-18	Total			2016-17	2017-18	2018-19
Sub-station	6379.01	1383.47	1404.12	7783.13	5.28%	336.81	373.34	410.40
IT Equipment (Incl. Software)	55.38	5.11	5.11	60.48	5.28%	2.92	3.06	3.19
Total	6434.38	1388.58	1438.98	7873.36	Total	339.74	376.39	414.09
Average Gross Block (₹ in lakh)						6434.38	7128.67	7848.16
Weighted Average Rate of Depreciation						5.28%	5.28%	5.28%



Asset-F1

2014-19		ACE (₹ in lakh)			Depreciation as per Regulations			
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depn.	2017-18	2018-19
Sub-station	1135.13	72.02	0.44	72.46	1207.59	5.28%	61.84	63.75
PLCC	0.00	22.49	0.00	22.49	22.49	6.33%	0.71	1.42
Total	1135.14	94.51	0.44	94.95	1230.08	Total	62.55	65.17
Average Gross Block (₹ in lakh)							1182.38	1229.86
Weighted Average Rate of Depreciation							5.29%	5.30%



Asset-F2

2014-19		ACE (₹ in lakh)			Depreciation as per Regulations			
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depn.	2017-18	2018-19
Sub-station	1135.13	72.02	0.44	72.46	1207.59	5.28%	61.84	63.75
PLCC	0.00	22.49	0.00	22.49	22.49	6.33%	0.71	1.42
Total	1135.13	94.51	0.44	94.95	1230.08	Total	62.55	65.17
Average Gross Block (₹ in lakh)							1182.38	1229.86
Weighted Average Rate of Depreciation							5.29%	5.30%



Asset-G

2014-19	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	ACE (₹ in lakh)		Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Depreciation as per Regulations		
		2017-18	2018-19			Rate of Depn.	2017-18	2018-19
Building Civil Works & Colony	1142.94	386.18	275.46	661.64	1804.58	3.34%	44.62	55.67
Sub Station	10433.77	2237.05	769.16	3006.21	13439.98	5.28%	609.96	689.32
IT Equipment (Incl. Software)	251.06	0.27	0.00	0.27	251.33	15.00%	13.26	13.27
Total	11827.76	2623.51	1044.62	3668.13	15495.89	Total	667.85	758.27
Average Gross Block (₹ in lakh)							13139.51	14973.58
Weighted Average Rate of Depreciation							5.08%	5.06%



Combined Assets (excluding Asset-F2)

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Building Civil Works & Colony	1860.70	1354.73	1354.73	3215.43	3.34%	84.77	107.40	107.40	107.40	107.40
Sub Station	27827.09	1267.27	1267.27	29094.36	5.28%	1502.73	1536.18	1536.18	1536.18	1536.18
PLCC	42.17	-	-	42.17	6.33%	2.67	2.67	2.67	2.67	2.67
IT Equipment (Incl. Software)	350.36	-	-	350.36	15.00%	52.55	52.55	52.55	52.55	52.55
Total	30080.31	2622.00	2622.00	32702.31		1642.72	1698.80	1698.80	1698.80	1698.80
Average Gross Block (₹ in lakh)						31391.31	32702.31	32702.31	32702.31	32702.31
Weighted Average Rate of Depreciation						5.23%	5.19%	5.19%	5.19%	5.19%



Asset-F2

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projecte d ACE (₹ in lakh)	Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciatio n as per Regulation s	Annual Depreciation as per Regulations (₹ in lakh)				
		Total			2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station	1207.59	0.00	1207.59	5.28%	63.76	63.76	63.76	63.76	63.76
PLCC	22.49	0.00	22.49	6.33%	1.42	1.42	1.42	1.42	1.42
Total	1230.08	-	1230.08		65.18	65.18	65.18	65.18	65.18
Average Gross Block (₹ in lakh)					1230.08	1230.08	1230.08	1230.08	1230.08
Weighted Average Rate of Depreciation					5.30%	5.30%	5.30%	5.30%	5.30%

