

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 354/TT/2020

Coram:

**Shri P.K. Pujari, Chairperson
Shri Arun Goyal, Member
Shri P.K. Singh, Member**

Date of order: 08.02.2022

In the Matter of

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and revision of transmission tariff of 2001-04, 2004-09 and 2009-14 tariff periods, truing up of transmission tariff of 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for Vindhyachal Stage-II Transmission System in Western Region.

And in the Matter of:

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

.....Petitioner

Vs.

1. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Rampur,
Jabalpur, 482 008.
2. Madhya Pradesh Power Transmission Company Limited,
Shakti Bhawan, Rampur,
Jabalpur, 482 008.
3. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Limited,
3/54, Press Complex,
Agra-Bombay Road,
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, Near Mandvi Hotel,
Panaji, Goa-403001.
 8. Electricity Department,
Administration of Daman & Diu,
Daman-396210.
 9. Electricity Department,
Administration of Dadra Nagar Haveli,
U.T., Silvassa-396230.
 10. Chhattisgarh State Power Transmission Company Limited,
State Load Despatch Building,
Dangania,
Raipur-492013.
 11. Chhattisgarh State Power Distribution Company Limited,
P. O. Sunder Nagar, Dangania,
Raipur, Chhattisgarh-492013.
-Respondent(s)**

For Petitioner : Shri S.S. Raju, PGCIL
Shri D.K. Biswal, PGCIL
Shri Ved Prakash Rastogi, PGCIL
Shri A.K. Verma, PGCIL

For Respondents : Shri Anindya Khare, MPPMCL



ORDER

The Petitioner, Power Grid Corporation of India Limited, has filed the instant petition for revision of transmission tariff of 2001-04, 2004-09 and 2009-14 tariff periods, truing up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of transmission tariff of 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following assets covered under Vindhyachal Stage-II Transmission System in Western Region (hereinafter referred to as “the Transmission System”):

- (i) 400 kV D/C Vindhyachal-Satna-Bina transmission lines with associated bays and 400/220 kV Sub-station at Satna (1 x 315 MVA ICT);
- (ii) 400 KV Korba-Raipur Transmission line, LILO of Korba Bhilai Circuit III new sub-station at Raipur with 315 MVA Interconnecting Transformer I and bus reactor & associated bays;
- (iii) 315 MVA Interconnecting Transformer II at Raipur, and
- (iv) LILO of Circuit II of 400 kV D/C Bhilai-Chandrapur line at Raipur.

The aforesaid assets have hereinafter been referred to as “the transmission assets” with reference to tariff periods 1999-2001, 2001-04 and 2004-09. The transmission assets were combined and combined tariff was claimed with respect to them for 2009-14 tariff period onwards. Accordingly, the transmission assets have been termed as “Combined Asset” for 2009-14 tariff period onwards.

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

“1) Approve the revised Transmission Tariff for 2001-04 block, Transmission Tariff for 2004-09 block and transmission tariff for 2009-14 block for the assets covered under this petition, as per para 8 above.

2) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 9 and 10 above.



3) (a) 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 regulations 2014 and tariff regulation'19 as per para 9.0 & 10 above for respective block.

(b) Further it is submitted that deferred tax liability before 01.04.2009 shall be recoverable from the beneficiaries or long term customers / DIC as the case may be, as and when the same is materialized as per regulation 49 of 2014 and regulation 67 of 2019 tariff regulation. The petitioner may be allow to recover the deferred tax liability materialised directly without making any application before the commission as provided in the regulation.

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

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

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

7) Allow the petitioner to recover FERV on the foreign loans deployed as provided under clause 68 of the Tariff Regulations,2019.

8) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 10.5 above.

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

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

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

Backdrop of the case

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



(a) Investment Approval (IA) was accorded by Ministry of Power vide its letter dated 6.10.1995 for implementation of the Transmission System at an estimated cost of ₹65771.00 lakh, including IDC of ₹11029.00 lakh.

(b) The scope of work covered under the Transmission System is as follows:

A. Transmission Line:

- i. 400 kV D/C Vindhyachal-Satna ckt-I and II transmission line and
- ii. 400 kV Satna-Bina ckt-I and II transmission line.
- iii. 400 kV Korba-Bhatapara transmission line.
- iv. 400 kV Bhatapara-Bhilai transmission line
- v. 400 kV Raipur-Bhilai transmission line

B. Sub-stations new/extension:

- i. New 400/220 kV intermediate sub-station (POWERGRID) near Satna with transformation capacity of 1 x 315 MVA ICT.
- ii. Extension of 400 kV sub-station at Bina (MPEB) by two 400 kV bays.
- iii. Extension of 400 kV Switchyard at Korba STPP (NTPC) by one 400 kV bay.
- iv. New 400/220 kV sub-station at Raipur (POWERGRID) with transformation capacity of 2 x 315 MVA ICTs.

(c) The transmission assets were put into commercial operation on the following dates:

Sl. No.	Name of Transmission Line	COD
1	400 kV D/C Vindhyachal-Satna-Bina transmission lines with associated bays and 400/220 kV sub-station at Satna (1 x 315 MVA ICT)	1.8.1999
2	400 kV Korba-Raipur Transmission line, LILO of Korba Bhilai Circuit III new sub-station at Raipur with 315 MVA Interconnecting Transformer I and bus reactor & associated bays.	1.1.2000
3	315 MVA Interconnecting Transformer-II at Raipur	1.4.2000
4	LILO of Circuit-II of 400 kV D/C Bhilai-Chandrapur line at Raipur.	1.4.2000

(d) Complete scope of the work as per IA is covered in the instant petition.



(e) The Commission vide common order dated 18.3.2003 in Petition No. 10 of 1999 and Petition No. 14 of 2000 approved the transmission tariff of the transmission assets from the date of commercial operation (“COD”) to 31.3.2001.

(f) The Commission vide order dated 6.8.2003 in Petition No. 72 of 2002 allowed transmission tariff in respect of the transmission assets from 1.4.2001 to 31.3.2004 that was revised by the Commission vide order dated 17.1.2008.

(g) The Commission vide order dated 14.2.2006 in Petition No. 73 of 2004 allowed transmission tariff with respect to the transmission assets from 1.4.2004 to 31.3.2009 and the same was revised vide order dated 29.4.2008.

(h) The Commission vide order dated 5.5.2011 in Petition No. 191 of 2010 allowed transmission tariff in respect of the transmission assets for 2009-14 tariff period. The Commission vide order dated 26.2.2016 in Petition No. 426/TT/2014 trued up the transmission tariff for 2009-14 and determined the tariff for 2014-19 period.

(i) The Petitioner has sought revision of transmission tariff approved for 2001-04 and 2004-09 tariff periods on account of change in Interest on Loan (“IoL”) and Interest on Working Capital (“IWC”) to the extent of revision in IoL and in Maintenance Spares in terms of the judgements of the Appellate Tribunal for Electricity (“the APTEL”) dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and dated 13.6.2007 in Appeal No.139 of 2006 and batch cases. The Petitioner has also sought consequential revision of transmission tariff allowed for 2009-14 tariff period, truing-up of tariff of 2014-19 tariff period and determination of transmission tariff of 2019-24 tariff period for the transmission assets.

(j) APTEL in its judgment dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters pertaining to generating stations of NTPC had considered 4 (four) issues. The issues considered by APTEL and its decisions are as given in the following table:



Sl. No.	Issue	APTEL's decisions/ directions
1	Whether APTEL can enquire into the validity of Regulations framed by the Commission	Challenge to the validity of Regulations framed by the Commission falls outside the purview of APTEL.
2	Computation of interest on loan	In view of the order of APTEL dated 14.11.2016 in Appeal Nos. 94 and 96 of 2005 and order dated 24.1.2007 passed in Appeal Nos. 81 to 87, 89 to 93 of 2005, computation of loan has to be based on loan repayment on normative basis. The Commission is required to recalculate the loan outstanding as on 31.3.2004 based on loan repayment on normative basis.
3(a)	O&M Expenses: Inadequate provision of employee costs as part of O&M Expenses due to variation in salary and wages	The Commission's view upheld.
3(b)	O&M Expenses: Non-inclusion of incentives and ex-gratia payment to employees	The Commission's view upheld.
4	Cost of spares for calculation of working capital	The Commission's view upheld.

(k) APTEL in its judgment dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters pertaining to generating stations of NTPC had considered 9 (nine) issues. The issues considered and the decisions of APTEL are given in the following table:

Sr. No.	Issue	APTEL's decisions/ directions
I	Computation of outstanding loan at the beginning of the tariff period i.e. 1.4.2004.	The Commission is required to recalculate the loan outstanding as on 31.3.2004 based on loan repayment on normative basis.
II	Consequence of refinance of loan.	The Commission to consider the issue afresh.
III	Treating depreciation available as deemed repayment of loan.	The Commission to make a fresh computation of outstanding loan.
IV	Admissibility of depreciation up to 90%.	The Commission to consider the issue afresh.
V	Cost of Maintenance Spares.	The Commission to consider the issue afresh.
VI	Impact of de-capitalisation of the assets on cumulative repayment of Loan.	The cumulative repayment of the loan proportionate to the assets decapitalized required to be reduced. The Commission to act accordingly.
VII	Non-consideration of normative transit loss for coal import.	The Commission to consider afresh the transit losses for coal imported from coal mines other than the dedicated ones.



VIII	Foreign Exchange rate variation (FERV)	FERV has been kept as pass through to ensure that any liability or gain, if any, arising on account of any variation in foreign exchange rates is passed on to the beneficiary as held in order dated 4.10.2006 in Appeal No.135 to 140 of 2005. The Commission to act accordingly.
IX	Computation of interest on loan in Singrauli Station.	Net loan closing at the end of a year is reflected as net loan opening on the first day of the next year. The Commission shall re-compute the interest accordingly.

(l) The Commission and certain interested parties preferred Civil Appeals against the APTEL's judgments before the Hon'ble Supreme Court in 2007. The Appeals were admitted and initially stay was granted by the Hon'ble Supreme Court. Subsequently, on an assurance by NTPC that the issues under Appeal would not be pressed for implementation during the pendency of the Appeals, the stay was vacated by the Hon'ble Supreme Court.

(m) Based on the APTEL's judgments dated 22.1.2007 and 13.6.2007, the Petitioner had sought revision of tariff of its transmission assets for 2001-04 and 2004-09 tariff periods in Petition No. 121/2007. The Commission after taking into consideration the pendency of Appeals before the Hon'ble Supreme Court adjourned the said petition *sine die* and directed that the same shall be revived after disposal of Civil Appeals by the Hon'ble Supreme Court.

(n) The Hon'ble Supreme Court vide its order dated 10.4.2018, dismissed the said Civil Appeals filed against APTEL's said judgments. Thus, the judgements of APTEL have attained finality.

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

(p) The instant petition was heard on 31.8.2021 and in view of APTEL's judgments dated 22.1.2007 and 13.6.2007 and the order of Hon'ble Supreme



Court dated 10.4.2018, the tariff is being revised. Period wise transmission tariff is being re-worked based on the Tariff Regulations applicable for the respective tariff periods and suitable assumptions have been made at certain places and applied which are indicated.

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notice published in the newspapers. Madhya Pradesh Power Management Company Ltd. (MPPMCL), Respondent No. 1, has filed its reply vide affidavit dated 8.2.2021 and has raised issues of prudence check before revision of tariff, grossing up of Return of Equity ("RoE") and Additional Capital Expenditure ("ACE") claimed in 2014-19 and 2019-24 tariff periods. The Petitioner vide affidavit dated 24.8.2021 has filed rejoinder to the reply of MPPMCL. The issues raised by MPPMCL and clarifications given by the Petitioner are dealt in the relevant paragraphs of this order.

6. It has been placed before us that MPPMCL has been repeatedly raising the same issue of RoE as has been raised by it in number of other petitions despite clear findings of the Commission. The contentions of MPPMCL on this issue have already been rejected by the Commission in various petitions including vide order dated 2.2.2021 in Petition No. 312/TT/2020. Since MPPMCL has not challenged the findings of the Commission, the same have attained finality. Accordingly, we reject the



contentions of MPPMCL on the issue of RoE in this petition as well. In view of this, the pleas raised by MPPMCL on the issue of RoE, Petitioner's response thereto and Commission's findings on the said issue have not been repeated here for conciseness. The issues which are specific to the instant petition and not dealt by the Commission earlier are considered in the relevant portions of this order.

Re: Interest on Loan ("IoL")

7. APTEL while dealing with the issue of computation of IoL, in judgment dated 22.1.2007, observed that IoL for the period from 1.4.1998 to 31.3.2001 shall be computed only on normative loan repayment as per its judgment dated 14.11.2006 in Appeal Nos.94 and 96 of 2005. APTEL vide its judgment dated 14.11.2006 had set aside the Commission's methodology of computation of loan on the actual repayment basis or normative repayment whichever is higher and held that the Commission is required to adopt normative debt repayment methodology for working out IoL liability order for the period 1.4.1998 to 31.3.2001. In view of the above, the interest allowed for 2001-04 and 2004-09 tariff periods is revised on the basis of the normative debt repayment methodology.

Re: Additional Capital Expenditure ("ACE")

8. APTEL vide judgment dated 13.6.2007 in Appeal No. 139/2006 and batch matters held that additional capitalisation after COD should also be considered for computation of maintenance spares. In view of above, the maintenance spares to be considered for computation of working capital for 2001-04 and 2004-09 tariff periods are also required to be revised taking into consideration ACE after the date of commercial operation.



Re: Depreciation

9. As regards depreciation, APTEL in its judgement dated 13.6.2007 in Appeal No.139 of 2006 and batch matters observed that depreciation is an expense and it cannot be deployed for deemed repayment of loan and accordingly directed the Commission to compute the outstanding loan afresh. In view of above directions of APTEL, the outstanding loan allowed for the transmission assets for 2001-04 and 2004-09 tariff periods is revised in the instant order.

10. The revision of transmission tariff allowed for 2001-04 and 2004-09 tariff periods necessitates the revision of transmission tariff allowed for 2009-14 tariff period which is also allowed in the present order. The implementation of the directions of APTEL vide judgment dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and judgment dated 13.6.2007 in Appeal No. 139 of 2006 and batch cases in the case of Petitioner was kept pending awaiting the outcome of the Civil Appeals filed before the Hon'ble Supreme Court. Taking into consideration the facts of the case and keeping in view the interest of the consumers, we are of the view that the beneficiaries should not be burdened with the carrying cost for the difference in the tariff allowed earlier and allowed in the instant order for 2001-04, 2004-09 and 2009-14 tariff periods. Therefore, we direct that the Petitioner will neither claim nor pay any carrying cost from or to the beneficiaries for the difference, if any, in the tariff allowed earlier and the tariff being allowed in the instant order. Further, the said difference in tariff shall be recovered/ paid over a period of six months from the date of issue of this order.

11. The hearing in this matter was held on 31.8.2021 through video conference and order was reserved.



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

13. This order is issued considering the submissions made by the Petitioner in the Petition vide affidavits dated 24.1.2020 and 25.8.2021, MPPMCL's reply filed vide affidavit dated 8.2.2021 and the Petitioner's rejoinder filed affidavit dated 24.8.2021.

REVISION OF TRANSMISSION CHARGES ALLOWED FOR 2001-04, 2004-09 AND 2009-14 TARIFF PERIODS

2001-04 Tariff Period

14. The transmission charges in respect of the transmission assets approved for 2001-04 period vide order dated 17.1.2008 in Petition No. 77 of 2002 are as follows:

(₹ in lakh)

400 kV D/C Vindhyachal-Satna-Bina transmission lines with associated bays			
Particulars	2001-02	2002-03	2003-04
Depreciation	1240.66	1240.66	1240.66
Return on Equity	642.19	642.19	642.19
O&M Expenses	430.69	456.53	483.92
Advance against Depreciation	266.72	472.33	1385.48
Interest on Loan	3333.10	3187.95	3002.43
Interest on Working Capital	169.86	174.80	193.01
Total	6083.21	6174.46	6947.69

(₹ in lakh)

400 kV Korba-Raipur Transmission line, LILO of Korba-Bhilai Circuit III new Sub-station at Raipur with 315 MVA Interconnecting Transformer I and bus reactor & associated bays			
Particulars	2001-02	2002-03	2003-04
Depreciation	476.77	476.77	476.77
Return on Equity	153.77	153.77	153.77
O&M Expenses	135.29	143.41	152.01
Advance against Depreciation	0.00	36.45	780.10
Interest on Loan	1392.69	1337.77	1253.43
Interest on Working Capital	61.27	62.22	76.48
Total	2219.79	2210.39	2892.57



(₹ in lakh)

315 MVA Interconnecting Transformer II at Raipur LILO of Circuit II of 400 kV D/C Bhillai-Chandrapur line at Raipur			
Particulars	2001-02	2002-03	2003-04
Depreciation	82.78	82.78	82.78
Return on Equity	21.06	21.06	21.06
O&M Expenses	18.73	19.85	21.04
Advance against Depreciation	0.00	0.00	122.78
Interest on Loan	230.47	221.58	207.38
Interest on Working Capital	10.19	10.24	12.59
Total	363.23	355.51	467.63

15. The Petitioner has claimed the following revised transmission charges with respect to the transmission assets for 2001-04 period in this petition:

(₹ in lakh)

400 kV D/C Vindhychal-Satna-Bina transmission lines with associated bays			
Particulars	2001-02	2002-03	2003-04
Depreciation	1240.66	1240.66	1240.66
Return on Equity	642.19	642.19	642.19
O&M Expenses	430.69	456.53	483.92
Advance against Depreciation	250.92	458.23	1417.64
Interest on Loan	3334.45	3190.50	3002.24
Interest on Working Capital	169.58	174.58	193.64
Total	6068.48	6162.68	6980.28

(₹ in lakh)

400 kV Korba-Raipur Transmission line, LILO of Korba Bhillai Circuit III new sub-station at Raipur with 315 MVA Interconnecting Transformer I and bus reactor & associated bays			
Particulars	2001-02	2002-03	2003-04
Depreciation	476.77	476.77	476.77
Return on Equity	153.77	153.77	153.77
O&M Expenses	135.29	143.41	152.01
Advance against Depreciation	0.00	27.37	800.82
Interest on Loan	1393.66	1339.59	1253.29
Interest on Working Capital	61.29	62.08	76.89
Total	2220.78	2202.98	2913.55

(₹ in lakh)

315 MVA Interconnecting Transformer-II at Raipur LILO of Circuit-II of 400 kV D/C Bhillai-Chandrapur line at Raipur			
Particulars	2001-02	2002-03	2003-04
Depreciation	82.78	82.78	82.78
Return on Equity	21.06	21.06	21.06
O&M Expenses	18.73	19.85	21.04
Advance against Depreciation	0.00	0.00	122.78
Interest on Loan	230.63	221.89	207.36
Interest on Working Capital	10.20	10.25	12.60
Total	363.40	355.82	467.61



16. We have considered the submissions of the Petitioner and have perused the orders dated 6.8.2003 and 17.1.2008 in Petition No. 72 of 2002. Tariff is allowed in respect of the transmission assets on the basis of following:

- a. Admitted capital cost as on 1.4.2001 of the transmission assets;
- b. Weighted Average Rate of Interest on actual loan, Weighted Average Rate of Depreciation, Rate of Interest for Working Capital and O&M Expenses as per order dated 6.8.2003 and 17.1.2008 in Petition No. 72 of 2002.

17. In view of above, revised transmission charges allowed with respect to the transmission assets for 2001-04 tariff period are as follows:

(₹ in lakh)

400 kV D/C Vindhyachal-Satna-Bina transmission lines with associated bays			
Particulars	2001-02	2002-03	2003-04
Depreciation	1240.66	1240.66	1240.66
Return on Equity	642.19	642.19	642.19
O&M Expenses	430.69	456.53	483.92
Advance against Depreciation	250.92	458.23	1417.64
Interest on Loan	3334.45	3190.50	3002.24
Interest on Working Capital	169.58	174.58	193.64
Total	6068.48	6162.68	6980.28

(₹ in lakh)

400 kV Korba-Raipur Transmission line, LILO of Korba-Bhilai Circuit III new Sub-station at Raipur with 315 MVA Interconnecting Transformer I and bus reactor & associated bays			
Particulars	2001-02	2002-03	2003-04
Depreciation	476.77	476.77	476.77
Return on Equity	153.77	153.77	153.77
O&M Expenses	135.29	143.41	152.01
Advance against Depreciation	0.00	27.37	800.82
Interest on Loan	1393.66	1339.59	1253.29
Interest on Working Capital	61.29	62.08	76.89
Total	2220.78	2202.98	2913.55

(₹ in lakh)

315 MVA Interconnecting Transformer II at Raipur LILO of Circuit II of 400 kV D/C Bhilai-Chandrapur line at Raipur			
Particulars	2001-02	2002-03	2003-04
Depreciation	82.78	82.78	82.78
Return on Equity	21.06	21.06	21.06
O&M Expenses	18.73	19.85	21.04
Advance against Depreciation	0.00	0.00	122.78
Interest on Loan	230.63	221.89	207.36
Interest on Working Capital	10.20	10.25	12.60
Total	363.39	355.82	467.61



18. The Annual Fixed Charges (“AFC”) allowed in respect of the transmission assets for 2001-04 tariff period vide orders dated 6.8.2003 and 17.1.2008 in Petition No. 72 of 2002, revised AFC claimed in the instant petition and AFC allowed in the instant order are as follows:

(₹ in lakh)				
Assets	Particulars	2001-02	2002-03	2003-04
400 kV D/C Vindhyachal-Satna-Bina transmission lines with associated bays	AFC approved vide orders dated 6.8.2003 and 17.1.2008 in Petition No. 72 of 2002.	6083.21	6174.46	6947.69
	AFC claimed by the Petitioner in the instant petition.	6068.48	6162.68	6980.28
	AFC allowed in the instant order.	6068.48	6162.68	6980.28
400 kV Korba-Raipur Transmission Line, LILO of Korba-Bhilai Circuit-III new Sub-station at Raipur with 315 MVA Interconnecting Transformer I and bus reactor & associated bays.	AFC approved vide orders dated 6.8.2003 and 17.1.2008 in Petition No. 72 of 2002.	2219.79	2210.39	2892.57
	AFC claimed by the Petitioner in the instant petition.	2220.78	2202.98	2913.55
	AFC allowed in the instant order	2220.78	2202.98	2913.55
315 MVA Interconnecting Transformer II at Raipur LILO of Circuit II of 400 kV D/C Bhilai-Chandrapur line at Raipur	AFC approved vide orders dated 6.8.2003 and 17.1.2008 in Petition No. 72 of 2002.	363.23	355.51	467.63
	AFC claimed by the Petitioner in the instant petition.	363.40	355.82	467.61
	AFC allowed in the instant order.	363.39	355.82	467.61

2004-09 Tariff Period

19. The transmission charges approved in respect of the transmission assets for 2004-09 tariff period vide order dated 29.4.2008 in Petition No. 73 of 2004 are as follows:



(₹ in lakh)

400 kV D/C Vindhyachal-Satna-Bina transmission lines with associated bays					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	1197.63	1197.63	1197.63	1197.63	1197.63
Return on Equity	561.92	561.92	561.92	561.92	561.92
O&M Expenses	471.48	490.30	510.52	529.97	552.08
Advance against Depreciation	0.00	0.00	692.27	1655.10	1609.93
Interest on Loan	2519.32	2313.55	2095.55	1864.07	1634.97
Interest on Working Capital	145.19	145.62	158.11	175.28	175.27
Total	4895.54	4709.01	5216.00	5983.96	5731.79

(₹ in lakh)

400 kV Korba-Raipur Transmission line, LILO of Korba-Bhilai Circuit III new sub-station at Raipur with 315 MVA Interconnecting Transformer I and bus reactor & associated bays					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	463.84	463.84	463.84	463.84	463.84
Return on Equity	134.55	134.55	134.55	134.55	134.55
O&M Expenses	217.98	226.71	235.90	245.12	255.12
Advance against Depreciation	0.00	476.43	826.65	879.39	700.54
Interest on Loan	998.02	883.54	765.63	643.94	534.25
Interest on Working Capital	53.82	61.57	67.14	67.56	64.26
Total	1868.22	2246.64	2493.71	2434.40	2152.56

(₹ in lakh)

315 MVA Interconnecting Transformer II at Raipur LILO of Circuit II of 400 kV D/C Bhilai-Chandrapur line at Raipur					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	80.70	80.70	80.70	80.70	80.70
Return on Equity	18.43	18.43	18.43	18.43	18.43
O&M Expenses	33.57	34.91	36.32	37.75	39.28
Advance against Depreciation	0.00	104.74	139.25	147.03	111.67
Interest on Loan	163.13	143.15	122.67	101.63	82.98
Interest on Working Capital	8.68	10.38	10.87	10.89	10.22
Total	304.51	392.31	408.24	396.43	343.28

20. The Petitioner has claimed the following revised transmission charges in respect of the transmission assets for 2004-09 period in the instant petition:

(₹ in lakh)

400 kV D/C Vindhyachal-Satna-Bina transmission lines with associated bays					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	1197.63	1197.63	1197.63	1197.63	1197.63
Return on Equity	561.92	561.92	561.92	561.92	561.92
O&M Expenses	471.48	490.30	510.52	529.97	552.08
Advance against Depreciation	0.00	0.00	754.67	1661.93	1612.59
Interest on Loan	2518.82	2312.42	2093.86	1861.85	1632.40
Interest on Working Capital	145.60	146.04	159.63	175.85	175.79
Total	4895.45	4708.31	5278.23	5989.15	5732.42



(₹ in lakh)

400 kV Korba-Raipur Transmission line, LILO of Korba-Bhilai Circuit III new Sub-station at Raipur with 315 MVA Interconnecting Transformer I and bus reactor & associated bays					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	463.84	463.84	463.84	463.84	463.84
Return on Equity	134.55	134.55	134.55	134.55	134.55
O&M Expenses	217.98	226.71	235.90	245.12	255.12
Advance against Depreciation	0.00	485.62	830.19	882.43	701.71
Interest on Loan	997.74	882.94	764.75	642.82	532.99
Interest on Working Capital	54.35	62.28	67.78	68.22	64.93
Total	1868.46	2255.93	2497.01	2436.98	2153.13

(₹ in lakh)

315 MVA Interconnecting Transformer-II at Raipur LILO of Circuit II of 400 kV D/C Bhilai-Chandrapur line at Raipur					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	80.70	80.70	80.70	80.70	80.70
Return on Equity	18.43	18.43	18.43	18.43	18.43
O&M Expenses	33.57	34.91	36.32	37.75	39.28
Advance against Depreciation	0.00	108.17	139.39	147.36	111.62
Interest on Loan	163.08	143.05	122.54	101.49	82.82
Interest on Working Capital	8.73	10.50	10.93	10.96	10.29
Total	304.51	395.75	408.30	396.68	343.14

21. We have considered the submissions of the Petitioner. The transmission tariff is allowed in respect of the transmission assets on the basis of following:

- a) Admitted capital cost of the transmission assets as on 1.4.2004 including ACE as per orders dated 14.2.2006 and 29.4.2008 in Petition No. 73 of 2004;
- b) Weighted Average Rate of Interest on actual loan, Weighted Average Rate of Depreciation, Rate of Interest for Working Capital and O&M Expenses as per orders dated 14.2.2006 and 29.4.2008 in Petition No. 73 of 2004.

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



(₹ in lakh)

400 kV D/C Vindhyachal-Satna-Bina transmission lines with associated bays					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	1197.63	1197.63	1197.63	1197.63	1197.63
Return on Equity	561.92	561.92	561.92	561.92	561.92
O&M Expenses	471.48	490.30	510.52	529.97	552.08
Advance against Depreciation	0.00	0.00	754.67	1661.93	1612.59
Interest on Loan	2518.82	2312.42	2093.86	1861.85	1632.40
Interest on Working Capital	145.60	146.04	159.63	175.85	175.79
Total	4895.44	4708.31	5278.23	5989.15	5732.41

(₹ in lakh)

400 kV Korba-Raipur Transmission line, LILO of Korba-Bhilai Circuit III new sub-station at Raipur with 315 MVA Interconnecting Transformer I and bus reactor & associated bays					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	463.84	463.84	463.84	463.84	463.84
Return on Equity	134.55	134.55	134.55	134.55	134.55
O&M Expenses	217.98	226.71	235.90	245.12	255.12
Advance against Depreciation	0.00	485.63	830.20	882.43	701.71
Interest on Loan	997.74	882.94	764.75	642.82	532.99
Interest on Working Capital	54.35	62.28	67.78	68.22	64.93
Total	1868.45	2255.93	2497.01	2436.98	2153.13

(₹ in lakh)

315 MVA Interconnecting Transformer II at Raipur LILO of Circuit II of 400 kV D/C Bhilai-Chandrapur line at Raipur					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	80.70	80.70	80.70	80.70	80.70
Return on Equity	18.43	18.43	18.43	18.43	18.43
O&M Expenses	33.57	34.91	36.32	37.75	39.28
Advance against Depreciation	0.00	108.17	139.38	147.35	111.61
Interest on Loan	163.08	143.05	122.54	101.48	82.82
Interest on Working Capital	8.73	10.50	10.93	10.96	10.29
Total	304.51	395.75	408.30	396.68	343.13

23. AFC allowed for 2004-09 tariff period vide orders dated 14.2.2006 and 29.4.2008 in Petition No. 73 of 2004, revised AFC claimed in the instant petition and AFC allowed in the instant order are as follows:

(₹ in lakh)

Assets	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
400 kV D/C Vindhyachal-Satna-Bina transmission lines with associated bays	AFC approved vide orders dated 14.2.2006 and 29.4.2008 in Petition No. 73 of 2004.	4895.54	4709.01	5216.00	5983.96	5731.79
	AFC claimed by the Petitioner in the	4895.45	4708.31	5278.23	5989.15	5732.42



	instant petition.					
	AFC allowed in the instant order.	4895.44	4708.31	5278.23	5989.15	5732.41
400 kV Korba-Raipur Transmission line, LILO of Korba-Bhilai Circuit III new Sub-station at Raipur with 315 MVA Interconnecting Transformer I and bus reactor & associated bays	AFC approved vide orders dated 14.2.2006 and 29.4.2008 in Petition No. 73 of 2004.	1868.22	2246.64	2493.71	2434.40	2152.56
	AFC claimed by the Petitioner in the instant petition.	1868.46	2255.93	2497.01	2436.98	2153.13
	AFC allowed in the instant order.	1868.45	2255.93	2497.01	2436.98	2153.13
315 MVA Interconnecting Transformer II at Raipur LILO of Circuit II of 400 kV D/C Bhilai-Chandrapur line at Raipur	AFC approved vide orders dated 14.2.2006 and 29.4.2008 in Petition No. 73 of 2004.	304.51	392.31	408.24	396.43	343.28
	AFC claimed by the Petitioner in the instant petition.	304.51	395.75	408.30	396.68	343.14
	AFC allowed in the instant order.	304.51	395.75	408.30	396.68	343.13

2009-14 Tariff Period

24. The Commission vide order dated 5.5.2011 in Petition No. 191 of 2010 approved the tariff of Combined Asset for 2009-14 period and vide order dated 26.2.2016 in Petition No. 426/TT/2014 trued up the transmission tariff of the Combined Asset as follows:

	(₹ in lakh)				
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	3240.11	3240.86	3241.61	795.94	796.66
Interest on Loan	1656.59	1258.20	1067.78	994.10	1015.82
Return on equity	953.57	989.32	991.11	991.99	1004.81
Interest on Working Capital	187.74	183.97	184.04	135.75	140.92
O & M Expenses	1315.67	1390.95	1470.65	1554.74	1643.39
Total	7353.68	7063.29	6955.18	4472.52	4601.60

25. The Petitioner has claimed the following revised transmission charges in respect of the Combined Asset for 2009-14 period in the instant petition:



(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	3240.11	3240.86	3241.61	795.94	796.66
Interest on Loan	1653.13	1255.19	1064.78	990.99	1012.49
Return on equity	953.57	989.32	991.11	991.99	1004.81
Interest on Working Capital	187.67	183.90	183.98	135.69	140.85
O & M Expenses	1315.67	1390.95	1470.65	1554.74	1643.39
Total	7350.15	7060.22	6952.12	4469.35	4598.20

26. We have considered the Petitioner's claim. The tariff is allowed in respect of the Combined Asset on the basis of following:

- a) Admitted capital cost for the Combined Asset as on 1.4.2009;
- b) ACE approved during 2009-14 period vide order dated 26.2.2016 in Petition No. 426/TT/2014;
- c) Weighted Average Rate of Interest on actual loan derived/adopted from order dated 26.2.2016 in Petition No. 426/TT/2014; and
- d) Weighted Average Rate of Depreciation as per order 26.2.2016 in Petition No. 426/TT/2014.

27. In view of above, the revised transmission charges allowed in respect of the Combined Asset for 2009-14 tariff period are as follows:

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	3240.11	3240.86	3241.61	795.94	796.66
Interest on Loan	1653.13	1255.19	1064.78	990.99	1012.49
Return on equity	953.57	989.32	991.11	991.99	1004.81
Interest on Working Capital	187.67	183.90	183.98	135.69	140.85
O & M Expenses	1315.67	1390.95	1470.65	1554.74	1643.39
Total	7350.15	7060.22	6952.12	4469.35	4598.21

28. AFC allowed in respect of the Combined Asset for 2009-14 tariff period vide order dated 26.2.2016 in Petition No. 426/TT/2014, revised AFC claimed in the instant petition and AFC allowed in the instant order are as follows:



(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
AFC approved vide order dated 26.2.2016 in Petition No. 426/TT/2014.	7353.68	7063.29	6955.18	4472.52	4601.60
AFC claimed by the Petitioner in the instant petition.	7350.15	7060.22	6952.12	4469.35	4598.20
AFC allowed in the instant order	7350.15	7060.22	6952.12	4469.35	4598.21

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

29. The details of the trued-up transmission charges claimed by the Petitioner in respect of the Combined Asset are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	793.68	793.68	797.77	802.51	802.92
Interest on Loan	1039.95	986.77	1020.75	965.82	907.21
Return on equity	1005.58	1010.19	1013.98	1018.65	1021.77
Interest on Working Capital	148.45	150.11	153.92	155.82	157.59
O & M Expenses	1504.24	1554.57	1606.09	1659.34	1714.39
Total	4491.90	4495.32	4592.51	4602.14	4603.88

30. The details of the trued up IWC claimed by the Petitioner in respect of the Combined Asset are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M expenses	125.35	129.55	133.84	138.28	142.87
Maintenance Spares	225.64	233.19	240.91	248.90	257.16
Receivables	748.65	749.22	765.42	767.02	767.31
Total	1099.64	1111.96	1140.17	1154.20	1167.34
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	148.45	150.11	153.92	155.82	157.59

Capital Cost as on 1.4.2014

31. The capital cost of the Combined Assets has been calculated in accordance with Regulations 9(3) and 9(6) of the 2014 Tariff Regulations. The Commission vide order dated 26.2.2016 in Petition No. 426/TT/2014 admitted the capital cost of ₹62401.93 lakh as on 31.3.2014. Therefore, the admitted capital cost of ₹62401.93 lakh as on 31.3.2014 has been considered as on 1.4.2014 for working out the trued-up tariff in respect of the Combined Asset for 2014-19 tariff period.



Additional Capital Expenditure (“ACE”)

32. The Commission vide order dated 26.2.2016 in Petition No. 426/TT/2014 had approved ACE of ₹85.52 lakh for 2014-15 period and ₹100.00 lakh for 2015-16 period towards tower strengthening works under Regulation 14(3)(ix) of the 2014 Tariff Regulations.

33. The Petitioner has claimed the following ACE and submitted Auditor’s Certificate in support of the same:

(₹ in lakh)

Actual ACE		
2016-17	2017-18	2018-19
145.57	12.45	0.32

34. MPPMCL, with regard to additional capitalization and de-capitalization of various equipment during 2014-19 tariff period, has contended that though the Petitioner has submitted that it is felt necessary to replace the equipment in progressive manner to facilitate smooth functioning of system, the Petitioner has claimed them without any supporting document. The Petitioner has not submitted any material to show how it came to the conclusion that a particular equipment needs immediate replacement.

35. In response, the Petitioner vide affidavit dated 24.8.2021 has submitted Auditor’s certificate dated 19.12.2019 wherein details of capital cost incurred upto COD along with actual ACE and decapitalization expenditure for 2014-19 tariff period in respect of the Combined Asset have been given and the same are as follows:



(₹ in lakh)

Particulars	Cost	Description
Actual cost as on 31. 3.2014	572.89	Land (Freehold)
	1348.08	Civil & Buildings
	14477.95	Sub-station
	45524.7	TL
	470.52	PLCC
	7.79	Lease Hold Land
Total Cost as on 31.3.2014	62401.93	
Additional Capitalization for 2016-17	145.57	Towards tower strengthening under Clause 3(ix) of Regulation 14 of the 2014 Tariff Regulations.
Additional Capitalization for 2017-18	12.45	Towards tower strengthening under Clause 3(ix) of Regulation 14 of the 2014 Tariff Regulations.
Additional Capitalization for 2018-19	0.32	Towards tower strengthening under Clause 3(ix) of Regulation 14 of the 2014 Tariff Regulations.
Total Cost as on 31.3.2019 as per Auditor's certificate	62560.27	

36. The Petitioner has further submitted that the Commission vide order dated 26.2.2016 in Petition No. 426/TT/2014 had approved ACE of ₹185.52 lakh for 2014-19 period towards replacement of problematic/ defective equipment which are completing 25 years of service during 2014-19 period. The actual expenditure towards ACE incurred by the Petitioner is ₹158.34 lakh for 2014-19 tariff period and the same is claimed under Regulation 14(3)(vii) and Regulation 14(3)(ix) of the 2014 Tariff Regulations.

37. We have considered the submissions of the Petitioner and MPPMCL. Actual ACE of ₹158.34 lakh claimed towards tower strengthening works is allowed as against allowed ACE of ₹185.52 lakh under Regulation 14(3)(vii) and Regulation 14(3)(ix) of the 2014 tariff regulations.

Capital Cost considered for truing-up of tariff for 2014-19 period

38. The capital cost considered for truing-up of tariff for 2014-19 tariff period in respect of the Combined Asset is as follows:



(₹ in lakh)		
Capital Cost as on 1.4.2014	ACE during 2014-19 Period	Capital Cost as on 31.3.2019
62401.93	158.34	62560.26

Debt-Equity Ratio

39. As per Regulation 19(3) of the 2014 Tariff Regulations, the admitted debt-equity ratio of 91.79:8.21 for the period ending on 31.3.2014 has been considered as opening debt-equity ratio as on 1.4.2014 and debt-equity ratio of 70:30 has been considered for ACE during 2014-19 period for the purpose of truing-up of tariff of 2014-19 period in respect of the Combined Asset. The details of the debt-equity ratio in respect of the Combined Asset as on 1.4.2014 and 31.3.2019 are as follows:

Funding	Capital cost as on 1.4.2014 (₹ in lakh)	(in %)	Total cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	57277.94	91.79	57388.78	91.73
Equity	5123.99	8.21	5171.49	8.27
Total	62401.93	100.00	62560.26	100.00

Depreciation

40. Depreciation has been allowed as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. Depreciation has been allowed considering capital expenditure as on 1.4.2014 and approved ACE during 2014-19 tariff period. The Combined Asset has already completed 12 years of life as on 31.3.2012. The remaining depreciable value has been spread across the balance useful life of the Combined Asset. Depreciation allowed during 2014-19 period in respect of the Combined Asset is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	62401.92	62401.92	62401.92	62547.49	62559.94
ACE	0.00	0.00	145.57	12.45	0.32
Closing Gross Block	62401.92	62401.92	62547.49	62559.94	62560.26
Average Gross Block	62401.92	62401.92	62474.71	62553.72	62560.10
Weighted average Rate of Depreciation (in %)	1.27	1.27	1.28	1.28	1.28



Elapsed life (at the beginning of the year) (Year)	14.00	15.00	16.00	17.00	18.00
Balance useful life (at the beginning of the year) (Year)	18.00	17.00	16.00	15.00	14.00
Aggregate Depreciable Value	55646.13	55646.13	55711.63	55782.74	55788.49
Depreciation during the year	793.67	793.67	797.77	802.51	802.92
Cumulative depreciation at the end of the year	42153.66	42947.34	43745.11	44547.62	45350.54
Remaining Depreciable Value at the end of the year	13492.46	12698.79	11966.53	11235.13	10437.95

41. The details of depreciation approved vide order dated 26.2.2016 in Petition No. 426/TT/2014, depreciation claimed in the instant petition and trued-up depreciation allowed in the instant order in respect of the Combined Asset are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 26.2.2016 in Petition No. 426/TT/2014.	798.80	803.71	806.52	806.52	806.52
Claimed by the Petitioner in the instant petition.	793.68	793.68	797.77	802.51	802.92
Allowed after true-up in this order.	793.67	793.67	797.77	802.51	802.92

Interest on Loan ("IoL")

42. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. IoL is calculated based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of IoL allowed in respect of the Combined Asset are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	57277.94	57277.94	57277.94	57379.84	57388.55
Cumulative Repayments up to Previous Year	41360.00	42153.67	42947.35	43745.12	44547.63
Net Loan-Opening	15917.94	15124.27	14330.59	13634.72	12840.93
Additions due to ACE	0.00	0.00	101.90	8.72	0.22
Repayment during the year	793.67	793.67	797.77	802.51	802.92



Net Loan-Closing	15124.27	14330.59	13634.72	12840.93	12038.23
Average Loan	15521.10	14727.43	13982.66	13237.82	12439.58
Weighted Average Rate of Interest on Loan (in %)	6.70	6.70	7.30	7.30	7.29
Interest on Loan	1039.94	986.77	1020.73	965.82	907.20

43. The details of IoL approved vide order dated 26.2.2016 in Petition No. 426/TT/2014, IoL claimed by the Petitioner in the instant petition and IoL allowed after truing up in the instant order in respect of the Combined Asset is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 26.2.2016 in Petition No. 426/TT/2014.	1009.45	961.81	911.98	859.80	807.62
Claimed by the Petitioner in the instant petition.	1039.95	986.77	1020.75	965.82	907.21
Allowed after true-up in this order.	1039.94	986.77	1020.73	965.82	907.20

Return on Equity ("RoE")

44. The Petitioner has claimed RoE in respect of the Combined Asset 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 (in %) [(Base Rate)/(1-t)]
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

45. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates and the same is 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

46. The MAT rates as allowed vide order dated 27.4.2020 in Petition No. 274/TT/2019 has been considered for the purpose of grossing up of rate of RoE for true-up of the tariff of 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations and the same is as follows:

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

47. Accordingly, RoE allowed in respect of the Combined Asset is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	5123.99	5123.99	5123.99	5167.66	5171.39
Addition due to ACE	0.00	0.00	43.67	3.73	0.10
Closing Equity	5123.99	5123.99	5167.66	5171.39	5171.49
Average Equity	5123.99	5123.99	5145.83	5169.53	5171.44
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
Applicable ROE Rate (in %)	19.610	19.705	19.705	19.705	19.758
Return on Equity for the year	1004.81	1009.68	1013.98	1018.66	1021.77

48. The details of RoE approved vide order dated 26.2.2016 in Petition No. 426/TT/2014, RoE claimed in the instant petition and true-up RoE allowed in the instant order in respect of the Combined Asset are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 26.2.2016 in Petition No. 426/TT/2014.	1007.33	1012.79	1015.73	1015.73	1015.73
Claimed by the Petitioner in the instant petition.	1005.58	1010.19	1013.98	1018.65	1021.77
Allowed after true-up in this order.	1004.81	1009.68	1013.98	1018.66	1021.77



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

49. The O&M Expenses claimed by the Petitioner are within the norms specified under the 2014 Tariff Regulations. O&M Expenses approved in respect of the Combined Asset for 2014-19 tariff period are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station Bays (Numbers)					
400 kV: Satna I(Pirana PG-I) at Bina	1	1	1	1	1
400 kV: Satna II(Pirana PG-II) at Bina	1	1	1	1	1
400 kV: Bina I(PG)at Satna	1	1	1	1	1
400 kV: Bina II(PG) at Satna	1	1	1	1	1
400 kV: Vindhychal I at Satna	1	1	1	1	1
400 kV: Vindhychal II at Satna	1	1	1	1	1
400 kV: ICT-I 315 MVA Bay at Satna	1	1	1	1	1
400 kV: Bus Reactor (50 MVAR) Bay at Satna	1	1	1	1	1
400 kV: Raipur:Korba I(Sipat-III) at Raipur	1	1	1	1	1
400 kV: Raipur:Korba II(Bhattapara) at Raipur	1	1	1	1	1
400 kV: Raipur:Bhilai I at Raipur	1	1	1	1	1
400 kV: Raipur:Bhilai II at Raipur	1	1	1	1	1
400 kV: Raipur:ICT I (315 MVA) Bay at Raipur	1	1	1	1	1
400 kV: Raipur:ICT II (315 MVA) at Raipur	1	1	1	1	1
400 kV: Raipur:Bus Reactor Bay at Raipur	1	1	1	1	1
400 kV: Raipur:Bhadrawati I at Raipur	1	1	1	1	1
400 kV: Korba:Raipur II(Bhattapara) at Korba	1	1	1	1	1
Norm (₹ lakh/bay)					
400 kV Bay (AIS)	60.30	62.30	64.37	66.51	68.71
Total Sub-station O&M Expenses (₹ in lakh)(A)	1025.10	1059.10	1094.29	1130.67	1168.07
Transmission Lines (kms)					
400 kV D/C Vindhychal Satna CKT-I and II	267.00	267.00	267.00	267.00	267.00
400kV D/C Satna-Bina CKT-I and II	276.00	276.00	276.00	276.00	276.00
400kV D/C Bhatapara-Bhilai (Loop out from Raipur)	9.00	9.00	9.00	9.00	9.00
400kV D/C Raipur-Bhilai I and Part of Raipur-Bhadrawati I	12.00	12.00	12.00	12.00	12.00
400kV S/C Korba-Bhatapara-Bhilai	199.00	199.00	199.00	199.00	199.00
Norm (₹ lakh/km)					
D/C Twinconductor	0.707	0.731	0.755	0.780	0.806
S/C Twinconductor	0.404	0.418	0.432	0.446	0.461



Total Transmission Line O&M Expenses (₹ in lakh)(B)	479.14	495.47	511.79	528.67	546.32
Total O&M Expenses (₹ in lakh) (C) = (A+B)	1504.24	1554.57	1606.08	1659.34	1714.39

50. The details of O&M Expenses approved vide order dated 26.2.2016 in Petition No. 426/TT/2014, O&M Expenses claimed in the instant petition and true-up O&M Expenses allowed in the instant order in respect of the Combined Asset are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 26.2.2016 in Petition No. 426/TT/2014.	1504.24	1554.57	1606.08	1659.34	1714.39
Claimed by the Petitioner in the instant petition.	1504.24	1554.57	1606.09	1659.34	1714.39
Allowed after true-up in this order	1504.24	1554.57	1606.08	1659.34	1714.39

Interest on Working Capital (“IWC”)

51. The Petitioner is entitled to IWC as per Regulation 28 of the 2014 Tariff Regulations. The components of the working capital and the Petitioner’s entitlement to interest thereon are discussed as follows:

(i) Receivables

Receivables as a component of working capital will be equivalent to two months fixed cost. The Petitioner has claimed the receivables on the basis of 2 months annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) Maintenance Spare

Regulation 28 of the 2014 Tariff Regulations provides for Working Capital towards maintenance spares @ 15% per annum of the O&M Expenses. The value of maintenance spares has accordingly been worked out.



(iii) O & M Expenses

Operation and maintenance expenses have been considered for one month as a component of working capital. The Petitioner has claimed O&M Expenses for 1 month of the respective year as claimed in the petition. This has been considered in the working capital.

(iv) Rate of Interest on Working Capital

As per Proviso 3 of Regulation 28 of the 2014 Tariff Regulation, SBI Base rate 10.00% as on 1.4.2014 plus 350 basis points. 13.50% has been considered for the asset as the rate of interest on working capital.

52. The trued-up IWC allowed in respect of the Combined Asset for 2014-19 tariff period is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one Month)	125.35	129.55	133.84	138.28	142.87
Working Capital for Maintenance Spares (15% of O&M Expenses)	225.64	233.18	240.91	248.90	257.16
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	748.52	749.13	765.41	767.02	767.31
Total Working Capital	1099.51	1111.86	1140.17	1154.20	1167.34
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of working capital	148.43	150.10	153.92	155.82	157.59

53. The details of IWC approved vide order dated 26.2.2016 in Petition No. 426/TT/2014, IWC claimed in the instant petition and trued-up IWC allowed in the instant order in respect of the Combined Asset is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 26.2.2016 in Petition No. 426/TT/2014.	147.91	149.83	151.66	153.40	155.24
Claimed by the Petitioner in the instant petition.	148.45	150.11	153.92	155.82	157.59
Allowed after true-up in this order.	148.43	150.10	153.92	155.82	157.59



Approved Annual Fixed Charges for 2014-19 Tariff Period

54. Accordingly, AFC after true-up in respect of the Combined Asset for 2014-19 tariff period are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	793.67	793.67	797.77	802.51	802.92
Interest on Loan	1039.94	986.77	1020.73	965.82	907.20
Return on Equity	1004.81	1009.68	1013.98	1018.66	1021.77
O&M Expenses	1504.24	1554.57	1606.08	1659.34	1714.39
Interest on Working Capital	148.43	150.10	153.92	155.82	157.59
Total	4491.11	4494.79	4592.49	4602.14	4603.88

55. The details of AFC approved vide order dated 26.2.2016 in Petition No. 426/TT/2014, AFC claimed in the instant petition and true-up AFC allowed in the instant order in respect of the Combined Asset are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 26.2.2016 in Petition No. 426/TT/2014.	4467.72	4482.70	4491.97	4494.80	4499.50
Claimed by the Petitioner in the instant petition.	4491.90	4495.32	4592.51	4602.14	4603.88
Allowed after true-up in this order.	4491.11	4494.79	4592.49	4602.14	4603.88

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

56. The Petitioner has claimed the following transmission charges in respect of the Combined Asset for 2019-24 tariff period:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	802.94	802.95	802.92	828.41	849.04
Interest on Loan	848.79	790.22	731.65	684.66	635.96
Return on equity	971.31	971.31	971.31	984.66	998.01
Interest on Working Capital	104.43	106.01	107.48	109.81	111.88
O & M Expenses	1491.26	1543.82	1597.62	1653.80	1710.52
Total	4218.73	4214.31	4210.98	4261.34	4305.41

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



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	124.27	128.65	133.14	137.82	142.54
Maintenance Spares	223.69	231.57	239.64	248.07	256.58
Receivables	518.70	519.57	519.16	525.37	529.35
Total	866.66	879.79	891.94	911.26	928.47
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest	104.43	106.01	107.48	109.81	111.88

Capital Cost

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

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

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

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

(b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*

(c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*

(d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*

(e) *Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*

(f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*

(g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*

(h) *Adjustment of revenue earned by the transmission licensee by using the asset before the date of commercial operation;*

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

(j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*

(k) *Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*

(l) *Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*

(m) *Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*



(n) Expenditure on account of change in law and force majeure events; and
(o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

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

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

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

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

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

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

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



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

59. The admitted capital cost of ₹62560.26 lakh as on 31.3.2019 in respect of the Combined Asset has been considered as opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Additional Capital Expenditure (“ACE”)

60. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provide as follows:

“24. Additional Capitalization within the original scope and up to 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 Asset, the additional capitalization shall be worked out after adjusting the gross fixed Asset and cumulative depreciation of the Asset replaced on account of de-capitalization.

(2) *The generating company or the transmission licensee, as the case may be shall submit the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution.”*

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

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



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

(2) In case of replacement of Asset 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 Asset and the cumulative depreciation, subject to prudence check on the following grounds:

- (a) The useful life of the Asset is not commensurate with the useful life of the project and such Asset 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.

61. The Petitioner vide Auditor's Certificate dated 19.12.2019 has projected net ACE of ₹413.33 lakh for Combined Asset after adjusting de-capitalisation during 2019-24 tariff period and the same is as follows:

(₹ in lakh)		
Particulars	Cost	Description
Additional capitalization for 2022-23	489.58	Additional capitalization in Sub-station
De-capitalization 2022-23	76.25	De-capitalization in Sub-station
Net ACE	413.33	

62. The Petitioner has submitted that CTs (Current Transformers), CBs (Circuit Breakers), Wave Traps, Control & Protection Panels and Power & Control Cables of the Transmission System were commissioned during 1992-93 and some of these equipment have worn out, leading to frequent faults, burn outs and repairs. Current Transformers and Capacitive Voltage Transformers have completed more than 25 years of service. Hence, frequent oil leakages and hot spots are observed due to



ageing. Further, these CTs and CVTs (Capacity Voltage Transformers) have become obsolete. Therefore, neither timely support from OEM (Original Equipment Manufacturer) nor spares are available. Accordingly, there are chances of breakdown which create element outage due to failure. Isolators installed have completed more than 25 years of service. Hence, there is problem of frequent mis-alignments, jamming, improper closing/ opening, over travel, sluggishness in operating mechanism and hot spots due to ageing. Most of the time, even local operation also becomes difficult. Outage hours have increased due to the above issues. Wave Traps installed have also completed more than 25 years of service. As a result, failure of terminal connectors occurs frequently and also there have been incidences of burning of wave traps and unwinding of wave trap coils because of deterioration of insulation between turns of coil due to ageing. Hence, dismantling of complete WTs (Wave Traps) is also required for rectification of above issues which increases outage period of the element. Most of the relays installed are of static type. Hence, problem of mal-operation/non-operation occurs frequently because relay contacts get stuck up as coils of auxiliary relays have weakened due to ageing. The operation of switchyard equipment from Control Panel is also difficult due to ageing of switches. Power & Control Cables, Wiring & Terminal Blocks inside both Control & Protection panels and Equipment MBs have become brittle leading to DC leakages and other frequent failures. These issues result in spurious/non-desirable trippings of elements. Therefore, it has become necessary to replace above-mentioned equipment in a progressive manner so that the system is not affected and also for the smooth functioning of the system.



63. MPPMCL has submitted that the Petitioner has proposed ACE and de-capitalization for 2019-24 tariff period but they are not backed by any prior study/survey.

64. In response, the Petitioner has submitted that detailed justifications along with mail communications for replacement of switchyard equipment under proposed O&M, ACE and decapitalization has been submitted for 2019-24 tariff period vide affidavit dated 24.8.2021.

65. The Petitioner vide affidavit dated 24.8.2021 has submitted details of the proposed ACE only in respect of 50 MVAR Sipat-III (Bhadrawati-II) Line Reactor at Raipur during the year 2022-23. Though the Petitioner has proposed replacement of CTs, CBs, Wave Traps, Control & Protection Panels and Power & Control Cables of the Transmission System, no details thereof have been provided. Therefore, ACE for these is not being allowed in the instant petition. and the Petitioner is directed to submit details of the proposed items at the time of truing up and the same will be reviewed then. As regards the Petitioner's proposal to replace 50 MVAR, Sipat-III (Bhadrawati-II) Line Reactor at Raipur during the year 2022-23, we are of the view that it being major element of the Transmission System, it is prudent to discuss this in Regional Power Committee (RPC) and the concerned beneficiaries. Accordingly, the projected ACE towards Line Reactors is also disallowed at this juncture and the Petitioner is directed to seek prior approval of RPC in respect of the said proposed replacements and file a separate petition for consideration of the Commission.

66. Accordingly, capital cost of the Combined Asset as on 31.3.2024 is approved as follows:



(₹ in lakh)		
Capital cost allowed as on 1.4.2019	ACE	Capital cost as on 31.3.2024
	2022-23	
62560.26	0.00	62560.26

Debt-Equity Ratio

67. 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.

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

Funding	Capital cost as on 1.4.2019 (₹ in lakh)	(in %)	Total cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	57388.78	91.73	57388.78	91.73
Equity	5171.49	8.27	5171.49	8.27
Total	62560.26	100.00	62560.26	100.00

Depreciation

69. 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 asset 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 asset of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

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

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

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

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

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

(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 asset 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 or 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.”

70. We have considered the submissions of the Petitioner. The transmission assets forming part of the Combined Asset have already completed 12 years of life as on 31.3.2012. The remaining depreciable value has been spread across the balance useful life of the Combined Asset. The depreciation allowed in respect of the Combined Asset for 2019-24 tariff period is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	62560.26	62560.26	62560.26	62560.26	62560.26
ACE	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	62560.26	62560.26	62560.26	62560.26	62560.26
Average Gross Block	62560.26	62560.26	62560.26	62560.26	62560.26
Weighted average Rate of Depreciation (in %)	1.28	1.28	1.28	1.28	1.28
Elapsed life (at the beginning of the year) (Year)	19.00	20.00	21.00	22.00	23.00
Balance useful life (at the beginning of the year) (Year)	13.00	12.00	11.00	10.00	9.00
Aggregate Depreciable Value	55788.63	55788.63	55788.63	55788.63	55788.63
Depreciation during the year	802.93	802.93	802.93	802.93	802.93
Cumulative depreciation at the end of the year	46153.47	46956.40	47759.33	48562.26	49365.19
Remaining Depreciable Value at the end of the year	9635.17	8832.24	8029.31	7226.38	6423.44

Interest on Loan (“IoL”)

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

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



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

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

(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”.



72. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period will be adjusted. The floating rate of interest, if any, shall be considered at the time of truing up. Accordingly, IoL has been worked out in respect of the Combined Asset in accordance with Regulation 32 of the 2019 Tariff Regulations and the same is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	57388.78	57388.78	57388.78	57388.78	57388.78
Cumulative Repayments up to Previous Year	45350.55	46153.48	46956.41	47759.34	48562.27
Net Loan-Opening	12038.23	11235.30	10432.37	9629.44	8826.51
Additions due to ACE	0.00	0.00	0.00	0.00	0.00
Repayment during the year	802.93	802.93	802.93	802.93	802.93
Net Loan-Closing	11235.30	10432.37	9629.44	8826.51	8023.58
Average Loan	11636.77	10833.84	10030.91	9227.98	8425.04
Weighted Average Rate of Interest on Loan (%)	7.29	7.29	7.29	7.29	7.29
Interest on Loan	848.79	790.22	731.66	673.09	614.51

Return on Equity (“RoE”)

73. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations specify as follows:

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

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

Provided that return on equity in respect of additional capitalization after cutoff date beyond the original scope, excluding additional capitalization on 7 account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%

Provided further that:



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

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 follows:

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

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:

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.”

74. The Petitioner has submitted that MAT rate is applicable to it. We have considered the submissions of the Petitioner. Accordingly, MAT rate applicable in 2019-20 has been considered for the purpose of RoE which shall be trued up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed in respect of the Combined Asset under Regulation 30 of the 2019 Tariff Regulations is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	5171.49	5171.49	5171.49	5171.49	5171.49
Additions due to ACE	0.00	0.00	0.00	0.00	0.00
Closing Equity	5171.49	5171.49	5171.49	5171.49	5171.49
Average Equity	5171.49	5171.49	5171.49	5171.49	5171.49
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity	971.31	971.31	971.31	971.31	971.31



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

75. Regulation 35(3)(a) and Regulation 35(4) of the 2019 Tariff Regulations specify the norms for O&M Expenses for the Transmission System and the same is as follows:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
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
<i>Norms for AC and HVDC lines (₹ lakh per km)</i>					
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
<i>Norms for HVDC stations</i>					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834



± 500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
± 800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

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

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

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

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

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



76. The O&M Expenses claimed by the Petitioner in respect of the elements of the Combined Asset are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays (Numbers)					
400 kV: Satna I (Pirana PG-I) at Bina	1	1	1	1	1
400 kV: Satna II (Pirana PG-II) at Bina	1	1	1	1	1
400 kV: Bina I(PG)at Satna	1	1	1	1	1
400 kV: Bina II(PG) at Satna	1	1	1	1	1
400 kV: Vindhyachal I at Satna	1	1	1	1	1
400 kV: Vindhyachal II at Satna	1	1	1	1	1
400 kV: ICT-I 315 MVA Bay at Satna	1	1	1	1	1
400 kV: Bus Reactor (50 MVAR) Bay at Satna	1	1	1	1	1
400 kV: Raipur: Korba I (Sipat-III) at Raipur	1	1	1	1	1
400 kV: Raipur: Korba II (Bhattapara) at Raipur	1	1	1	1	1
400 kV: Raipur: Bhilai I at Raipur	1	1	1	1	1
400 kV: Raipur: Bhilai II at Raipur	1	1	1	1	1
400 kV: Raipur: ICT I (315 MVA) Bay at Raipur	1	1	1	1	1
400 kV: Raipur: ICT II (315 MVA) at Raipur	1	1	1	1	1
400 kV: Raipur: Bus Reactor Bay at Raipur	1	1	1	1	1
400 kV: Raipur: Bhadrawati I at Raipur	1	1	1	1	1
400 kV: Korba: Raipur II (Bhattapara) at Korba	1	1	1	1	1
Norm (₹ lakh/bay)					
400 kV Bay (AIS)	32.15	33.28	34.45	35.66	36.91
Total Sub-station O&M Expenses (₹ in lakh)	546.55	565.76	585.65	606.22	627.47
Transmission Lines (kms)					
400 kV D/C Vindhychal Satna CKT-I and II	267.00	267.00	267.00	267.00	267.00
400 kV D/C Satna-Bina CKT-I and II	276.00	276.00	276.00	276.00	276.00
400 kV D/C Bhatapara-Bhilai (Loop out from Raipur)	9.00	9.00	9.00	9.00	9.00
400 kV D/C Raipur-Bhilai I and Part of Raipur-Bhadrawati I	12.00	12.00	12.00	12.00	12.00
400 kV S/C Korba-Bhatapara-Bhilai	199.00	199.00	199.00	199.00	199.00
Norm (₹ lakh/km)					
D/C Twin conductor	0.881	0.912	0.944	0.977	1.011
S/C Twin conductor	0.503	0.521	0.539	0.558	0.578
Total Transmission Line O&M Expenses (₹ in lakh)	596.98	618.05	639.68	662.07	685.23



Transformers					
Raipur:400/220 kV, 315 MVA ICT-I at Raipur	315.00	315.00	315.00	315.00	315.00
Raipur:400/220 kV, 315 MVA ICT-II at Raipur	315.00	315.00	315.00	315.00	315.00
Satna:400/220 kV, 315 MVA ICT-I at Satna	315.00	315.00	315.00	315.00	315.00
Norms (₹ lakh/ MVA)					
400 kV	0.36	0.37	0.38	0.40	0.41
O&M Expenses Transformers (₹ in lakh)	338.31	350.60	362.88	376.11	388.40
Communication System (PLCC)					
Project Cost (₹ in lakh)	470.52	470.52	470.52	470.52	470.52
Norm (in %)	2	2	2	2	2
O&M Expenses PLCC (₹ in lakh)	9.41	9.41	9.41	9.41	9.41
Total O&M Expenses (₹ in lakh)	1491.25	1543.81	1597.62	1653.81	1710.50

77. 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.

78. The O&M Expenses approved in respect of elements of Combined Asset for 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays (Numbers)					
400 kV: Satna I (Pirana PG-I) at Bina	1	1	1	1	1
400 kV: Satna II (Pirana PG-II) at Bina	1	1	1	1	1
400 kV: Bina I (PG) at Satna	1	1	1	1	1
400 kV: Bina II (PG) at Satna	1	1	1	1	1



400 kV: Vindhyachal I at Satna	1	1	1	1	1
400 kV: Vindhyachal II at Satna	1	1	1	1	1
400 kV: ICT-I 315 MVA Bay at Satna	1	1	1	1	1
400 kV: Bus Reactor (50 MVAR) Bay at Satna	1	1	1	1	1
400 kV: Raipur: Korba I (Sipat-III) at Raipur	1	1	1	1	1
400 kV: Raipur: Korba II (Bhattapara) at Raipur	1	1	1	1	1
400 kV: Raipur: Bhilai I at Raipur	1	1	1	1	1
400 kV: Raipur: Bhilai II at Raipur	1	1	1	1	1
400 kV: Raipur: ICT I (315 MVA) Bay at Raipur	1	1	1	1	1
400 kV: Raipur: ICT II (315 MVA) at Raipur	1	1	1	1	1
400 kV: Raipur: Bus Reactor Bay at Raipur	1	1	1	1	1
400 kV: Raipur: Bhadrawati I at Raipur	1	1	1	1	1
400 kV: Korba: Raipur II (Bhattapara) at Korba	1	1	1	1	1
Norm (₹ lakh/bay)					
400 kV Bay (AIS)	32.15	33.28	34.45	35.66	36.91
Total Sub-station O&M Expenses (₹ in lakh)	546.55	565.76	585.65	606.22	627.47
Transmission Lines (kms)					
400 kV D/C Vindhychal Satna CKT-I and II	267.00	267.00	267.00	267.00	267.00
400 kV D/C Satna-Bina CKT-I and II	276.00	276.00	276.00	276.00	276.00
400 kV D/C Bhatapara-Bhilai (Loop out from Raipur)	9.00	9.00	9.00	9.00	9.00
400 kV D/C Raipur-Bhilai I and Part of Raipur-Bhadrawati I	12.00	12.00	12.00	12.00	12.00
400 kV S/C Korba-Bhatapara-Bhilai	199.00	199.00	199.00	199.00	199.00
Norm (₹ lakh/km)					
D/C Twin conductor	0.881	0.912	0.944	0.977	1.011
S/C Twin conductor	0.503	0.521	0.539	0.558	0.578
Total Transmission Line O&M Expenses (₹ in lakh)	596.98	618.05	639.68	662.07	685.23
Transformers					
Raipur:400/220 KV, 315 MVA ICT-I at Raipur	315.00	315.00	315.00	315.00	315.00
Raipur:400/220 KV, 315 MVA ICT-II at Raipur	315.00	315.00	315.00	315.00	315.00
Satna:400/220 KV, 315 MVA ICT-I at Satna	315.00	315.00	315.00	315.00	315.00
Norms (₹ lakh/ MVA)					
400kV	0.36	0.37	0.38	0.40	0.41
O&M Expenses Transformers (₹ in lakh)	338.31	350.60	362.88	376.11	388.40
Total O&M Expenses (₹ in lakh)	1481.84	1534.40	1588.21	1644.40	1701.09



Interest on Working Capital (“IWC”)

79. 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)...

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

- i. Receivables equivalent to 45 days of fixed cost;*
- ii. Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and*
- iii. Operation and maintenance expenses, including security expenses for one month”*

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

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

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

“3.Definitions ...

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

80. 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 interest on working capital as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) on working capital considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-



24. Therefore, IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations and the components of the working capital and interest allowed thereon in respect of the Combined Asset is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for 1 Month)	123.49	127.87	132.35	137.03	141.76
Working Capital for Maintenance Spares (15% of O&M Expenses)	222.28	230.16	238.23	246.66	255.16
Working Capital for Receivables (Equivalent to 45days of annual transmission charges)	517.49	517.48	516.23	516.11	514.62
Total Working Capital	863.25	875.51	886.81	899.80	911.54
Rate of Interest of working capital (in %)	12.05	11.25	10.50	10.50	10.50
Interest of working capital	104.02	98.49	93.12	94.48	95.71

Annual Fixed Charges for 2019-24 Tariff Period

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	802.93	802.93	802.93	802.93	802.93
Interest on Loan	848.79	790.22	731.66	673.09	614.91
Return on Equity	971.31	971.31	971.31	971.31	971.31
Operation and Maintenance Expenses	1481.84	1534.40	1588.21	1644.40	1701.09
Interest on Working Capital	104.02	98.49	93.12	94.48	95.71
Total	4208.89	4197.36	4187.22	4186.21	4185.55

Filing Fee and Publication Expenses

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



Licence Fee & RLDC Fees and Charges

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

Goods and Services Tax

84. 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, paid by the Petitioner on account of demand from Government/Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

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

Security Expenses

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

87. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it on projected basis for 2019-24 tariff period on the basis of actual security expenses



incurred in 2018-19 in Petition No. 260/MP/2020. The Commission vide order dated 3.8.2021 in Petition No. 260/MP/2020 approved security expenses from 1.4.2019 to 31.3.2024. Therefore, security expenses will be shared in terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. 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

88. 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

89. During 2001-04, 2004-09 and 2009-14 tariff periods (up to 30.6.2011), the transmission charges for inter-State transmission systems were being shared in accordance with the Tariff Regulations for the respective tariff periods. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the provisions of the 2010 Sharing Regulations. However, with effect from 1.11.2020, the 2010 Sharing Regulations has been repealed and sharing is governed by the provisions of the 2020 Sharing Regulations. Accordingly, the liabilities of DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and shall be recovered from the concerned DICs through Bill 2 under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of transmission charges for subsequent period shall be recovered in terms of provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.



90. To summarise:

a) The revised transmission charges allowed for the transmission assets for 2001-04 tariff period as per the APTEL's judgments are as follows:

(₹ in lakh)

400 kV D/C Vindhyachal-Satna-Bina transmission lines with associated bays			
Particulars	2001-02	2002-03	2003-04
Annual Fixed Charges	6068.48	6162.68	6980.28

(₹ in lakh)

400 kV Korba-Raipur Transmission line, LILO of KorbaBhilai Circuit III new sub-station at Raipur with 315 MVA Interconnecting Transformer I and bus reactor & associated bays.			
Particulars	2001-02	2002-03	2003-04
Annual Fixed Charges	2220.78	2202.98	2913.55

(₹ in lakh)

315 MVA Interconnecting Transformer II at Raipur LILO of Circuit II of 400 kV D/C Bhillai-Chandrapur line at Raipur			
Particulars	2001-02	2002-03	2003-04
Annual Fixed Charges	363.39	355.82	467.61

b) The revised annual fixed charges allowed in respect of the transmission assets for 2004-09 tariff period as per the APTEL's judgments are:

(₹ in lakh)

400 kV D/C Vindhyachal-Satna-Bina transmission lines with associated bays					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Annual Fixed Charges	4895.44	4708.31	5278.23	5989.15	5732.41

(₹ in lakh)

400 kV Korba-Raipur Transmission line, LILO of Korba-Bhilai Circuit III new Sub-station at Raipur with 315 MVA Interconnecting Transformer I and bus reactor & associated bays					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Annual Fixed Charges	1868.45	2255.93	2497.01	2436.98	2153.13

(₹ in lakh)

315 MVA Interconnecting Transformer II at Raipur LILO of Circuit II of 400 kV D/C Bhillai-Chandrapur line at Raipur					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Annual Fixed Charges	304.51	395.75	408.30	396.68	343.13

c) The consequential revision of annual fixed charges allowed in respect of the Combined Asset for 2009-14 tariff period are as follows:

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Annual Fixed Charges	7350.15	7060.22	6952.12	4469.35	4598.21



d) The trued-up annual fixed charges allowed in respect of the Combined Asset for 2014-19 tariff period are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges	4491.11	4494.79	4592.49	4602.14	4603.88

e) The annual fixed charges allowed in respect of the Combined Asset for 2019-24 tariff period in this order are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	4208.89	4197.36	4187.22	4186.21	4185.55

91. This order disposes of Petition No 354/TT/2020 in terms of the above discussions and findings.

sd/-
(P.K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(P. K. Pujari)
Chairperson

