

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 467/TT/2020

Coram:

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

Date of order: 15.04.2022

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 and truing up of transmission tariff of 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of Combined Assets of **(i)** 400 kV Gandhar-Padge Single Circuit (S/C) transmission line with associated bays and 400 kV Gandhar-Gandhar S/C transmission line and **(ii)** 220 kV Gandhar-Bharuch Double Circuit (D/C) transmission line with associated bays and 400 kV Gandhar-Dehgam D/C transmission line with Sub-station at Dehgam associated with Gandhar Gas Power Station (Stage-I) in Western Region.

And in the Matter of:

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

.....Petitioner

Versus

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 – 452 008.
4. Maharashtra State Electricity Distribution Company Limited,
Hongkong Bank Building, 3rd Floor,
M.G. Road, Fort,
Mumbai – 400 001.
5. Maharashtra State Electricity Transmission Company Limited,
Prakashganga, 6th Floor, Plot No. C-19, E-Block,
Bandra Kurla Complex, Bandra (East),
Mumbai – 400 051.
6. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan,
Race Course Road,
Vadodara – 390 007.
7. Electricity Department,
Government of Goa, Vidyut Bhawan, Panaji,
Near Mandvi Hotel,
Goa – 403 001.
8. Electricity Department,
Administration of Daman & Diu,
Daman – 396 210.
9. Electricity Department,
Administration of Dadra Nagar Haveli,
U.T., Silvassa – 396 230.
10. Chhattisgarh State Power Transmission Company Limited,
Office of The Executive Director (C&P),
State Load Despatch Building, Dangania,
Raipur – 492 013.
11. Chhattisgarh State Power Distribution Company Limited,
P.O.Sunder Nagar, Dangania, Raipur,
Chhattisgarh – 492 013.

.....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, a deemed transmission licensee, 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 tariff of 2019-24 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 associated with Gandhar Gas Power Station (Stage-I) (hereinafter referred to as the “transmission system”) in Western Region:

Combined Assets

- (i) 400 kV Gandhar-Padge Single Circuit (S/C) transmission line with associated bays and 400 kV Gandhar-Gandhar S/C transmission line,
- (ii) 220 kV Gandhar-Bharuch Double Circuit (D/C) transmission line with associated bays and 400 kV Gandhar-Dehgam D/C transmission line with Sub-station at Dehgam

2. The Petitioner is using expression Combined Assets in the present petition with reference to the aforesaid assets till the stage of determination of tariff for 2009-14 period. However, in the truing up tariff petition of 2009-14 period and determination of tariff for 2019-14 period, the Petitioner used the term Asset-I and



Asset-II with reference to above Combined Assets (i) and (ii). Accordingly, in the present order, Combined Assets (i) and (ii) till the stage determination of tariff of 2014-19 period, wherever context requires, have been referred individually as Asset-I and Asset-II respectively and jointly as transmission assets. For determination of tariff of 2019-24 period, the Petitioner has combined Asset-I and Asset-II into Combined Asset, therefore, for 2019-24 period, term Combined Asset has been used in this order.

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

1) Approve the revised Transmission Tariff for 2001-04, 2004-09 & 2009-14 block 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 Regulation 2014 and Tariff regulations 2019 as per para 9 and 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 adjust the cumulative depreciation by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful life



and to recover the unrecovered depreciation in case of Asset-I separately on account of de-capitalization.

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

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

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

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

Background

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

a. Ministry of Power, vide its letter dated 13.2.1992 had accorded its approval for setting up of Gandhar Gas Power Station Stage-I at a cost of ₹186011 lakh. Investment Approval (IA) accorded by Ministry of Power included implementation of the transmission system associated with Gandhar Gas Power Station Stage-I at an estimated cost of ₹20381 lakh. Administrative approval for the transmission system was revised by Ministry of Power vide letter dated 4.1.2000 for a total cost of ₹24414 lakh.

b. The scope of work included in the transmission system and dates of commercial operation (COD) of the transmission lines are as follows:

Sl. No.	Name of the transmission lines	COD	Asset's nomenclature as per order dated 2.5.2011 In Petition No. 166/2010
a.	220 kV Gandhar-Bharuch D/C line with associated bays at Bharuch Sub-station	1.8.1994	Asset-II
b.	400 kV Gandhar-Dehgam D/C line with Sub-station at Dehgam	1.6.1995	



c.	400 kV Gandhar-Padghe S/C line with bays at Padghe Sub-station	1.3.1998	Asset-I
d.	400 kV Gandhar-Gandhar S/C line	1.6.1998	

c. Entire scope of work is covered in the instant petition.

d. Transmission tariff for the period from 1.4.2001 to 31.3.2004 was approved in respect of the transmission assets vide orders dated 30.4.2004 and 17.1.2008 in Petition No. 74/2002. Transmission tariff for the period from 1.4.2004 to 31.3.2009 was approved in respect of the transmission assets vide orders dated 14.2.2006 and 14.3.2008 in Petition No.112/2004.

e. Transmission tariff in respect of the transmission assets for 2009-14 period was allowed vide order dated 2.5.2011 in Petition No.166/2010. Further, transmission tariff for 2009-14 period in respect of the transmission assets was trued up and tariff for 2014-19 was determined vide order dated 7.10.2015 in Petition No. 151/TT/2014.

f. The Petitioner has sought revision of transmission tariff approved in respect of the transmission assets 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 judgments of the Appellate Tribunal for Electricity ("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 in respect of the transmission assets of tariff allowed for 2009-14 tariff period, truing up of tariff of 2014-19 tariff period and determination of tariff in respect of Combined Asset of 2019-24 tariff period.



g. APTEL in 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 the APTEL and its decisions/directions are as follows:

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 the 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.

h. 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/directions of the APTEL are as follows:

Sl. 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.

i. 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.

j. 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 be revived after the disposal of Civil Appeals by the Hon'ble Supreme Court.



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

l. 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 trueing up petition for 2014-19 tariff period.

5. 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, 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.

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

7. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers. MPPMCL, Respondent No. 1, has filed its reply vide affidavit dated 27.5.2020 and has raised issues of prudence check before revision of tariff, grossing up of Return on Equity (RoE) during 2014-19 tariff period, ACE and decapitalization



during 2019-24 tariff period. The Petitioner vide affidavit dated 4.8.2021 has filed rejoinder to the reply of MPPMCL.

8. It has been placed before us that MPPMCL has been raising the same issue of RoE in other petitions as well despite clear findings of the Commission. The contentions of MPPMCL on the the issue of RoE has been rejected by the Commission in other petitions including Petition No. 326/TT/2020 vide order dated 21.9.2021. As MPPMCL has not challenged the findings, the same have attained finality. Accordingly, the issue of RoE raised by MPPMCL is rejected. Other issues raised by MPPMCL and clarifications thereto given by the Petitioner have been dealt in the relevant paragraphs of this present order.

Re: Interest on Loan (“IoL”)

9. APTEL while dealing with the issue of computation of IoL, in judgment dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters, 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 No. 94 of 2005 and Appeal No. 96 of 2005. APTEL vide its judgment dated 14.11.2006 had set aside the Commission’s methodology of computation of loan on 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 from 1.4.1998 to 31.3.2001. In view of the above, 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”)

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

Re: Depreciation

11. 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.

12. 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 being done in the present order. The implementation of the directions of APTEL in case of the 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 carrying cost for the difference in the tariff allowed earlier and tariff being 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.

13. Hearing in this matter was held on 17.8.2021 through video conference and the order was reserved.

14. This order is issued considering the submissions made by the Petitioner in the petition vide affidavits dated 23.1.2020, 22.12.2020 and 1.7.2021, reply filed by MPPMCL vide affidavit dated 27.5.2020 and the Petitioner's rejoinder affidavit dated 4.8.2021 to the of reply MPPMCL .

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

Revision of Transmission Charges for 2001-04, 2004-09 and 2009-14 Tariff Periods

2001-04 Tariff Period

16. The Commission vide orders dated 30.4.2004 and 17.1.2008 in Petition No. 74/2002 had approved transmission charges in respect of the transmission assets from 1.4.2001 to 31.3.2004. The transmission charges approved in respect of the transmission assets for 2001-04 period vide orders dated 30.4.2004 and 17.1.2008 in Petition No. 74/2002 are as follows:

(₹ in lakh)

400 kV Gandhar-Padghe S/C line			
Particulars	2001-02	2002-03	2003-04
Depreciation	302.58	302.58	302.58
Return on Equity	735.12	735.12	735.12
O&M Expenses	104.81	111.10	117.77
Advance against Depreciation	267.34	0.00	0.00
Interest on Loan	440.96	346.51	302.95
Interest on Working Capital	53.22	47.30	47.67
Total	1904.04	1542.62	1506.09



(₹ in lakh)

400 kV Gandhar-Gandhar S/C line			
Particulars	2001-02	2002-03	2003-04
Depreciation	14.70	14.70	14.70
Return on Equity	36.48	36.48	36.48
O&M Expenses	4.08	4.33	4.59
Advance against Depreciation	12.63	0.00	0.00
Interest on Loan	22.28	19.80	19.72
Interest on Working Capital	2.57	2.33	2.38
Total	92.75	77.63	77.87

(₹ in lakh)

220 kV Gandhar-Bharuch D/C line and 400 kV Gandhar-Dehgam D/C line			
Particulars	2001-02	2002-03	2003-04
Depreciation	341.01	341.01	341.01
Return on Equity	880.53	880.53	880.53
O&M Expenses	185.12	196.23	208.00
Advance against Depreciation	117.60	0.00	0.00
Interest on Loan	339.99	275.00	177.22
Interest on Working Capital	59.10	57.11	56.87
Total	1923.35	1749.87	1663.63

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

(₹ in lakh)

400 kV Gandhar-Padghe S/C line			
Particulars	2001-02	2002-03	2003-04
Depreciation	302.58	302.58	302.58
Return on Equity	735.12	735.12	735.12
O&M Expenses	104.81	111.10	117.77
Advance against Depreciation	267.34	0.00	0.00
Interest on Loan	440.96	346.51	302.95
Interest on Working Capital	53.22	47.30	47.67
Total	1904.03	1542.61	1506.09

(₹ in lakh)

400 kV Gandhar-Gandhar S/C line			
Particulars	2001-02	2002-03	2003-04
Depreciation	14.70	14.70	14.70
Return on Equity	36.48	36.48	36.48
O&M Expenses	4.08	4.33	4.59
Advance against Depreciation	12.63	0.00	0.00
Interest on Loan	22.28	19.80	19.72
Interest on Working Capital	2.57	2.33	2.38
Total	92.74	77.64	77.87



(₹ in lakh)

220 kV Gandhar-Bharuch D/C line and 400 kV Gandhar-Dehgam D/C line			
Particulars	2001-02	2002-03	2003-04
Depreciation	341.01	341.01	341.01
Return on Equity	880.53	880.53	880.53
O&M Expenses	185.13	196.22	208.00
Advance against Depreciation	117.60	0.00	0.00
Interest on Loan	339.99	275.00	174.02
Interest on Working Capital	59.10	57.11	56.81
Total	1923.36	1749.87	1660.37

18. We have considered the submissions of the Petitioner and have perused the orders dated 30.4.2004 and 17.1.2008 in Petition No.74/2002. 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 adopted from orders dated 30.4.2004 and 17.1.2008 in Petition No. 74/2002; and
- c) Weighted Average Rate of Depreciation (WAROD), Rate of Interest for Working Capital and O&M Expenses as per orders dated 30.4.2004 and 17.1.2008 in Petition No. 74/2002.

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

(₹ in lakh)

400 kV Gandhar-Padghe S/C line			
Particulars	2001-02	2002-03	2003-04
Depreciation	302.58	302.58	302.58
Return on Equity	735.12	735.12	735.12
O&M Expenses	104.81	111.10	117.77
Advance against Depreciation	267.34	0.00	0.00
Interest on Loan	440.96	346.51	302.95
Interest on Working Capital	53.22	47.30	47.67
Total	1904.03	1542.61	1506.08



(₹ in lakh)

400 kV Gandhar-Gandhar S/C line			
Particulars	2001-02	2002-03	2003-04
Depreciation	14.70	14.70	14.70
Return on Equity	36.48	36.48	36.48
O&M Expenses	4.08	4.33	4.59
Advance against Depreciation	12.63	0.00	0.00
Interest on Loan	22.28	19.80	19.72
Interest on Working Capital	2.57	2.33	2.38
Total	92.74	77.63	77.87

(₹ in lakh)

220 kV Gandhar-Bharuch D/C line and 400 kV Gandhar-Dehgam D/C line			
Particulars	2001-02	2002-03	2003-04
Depreciation	341.01	341.01	341.01
Return on Equity	880.53	880.53	880.53
O&M Expenses	185.12	196.23	208.00
Advance against Depreciation	117.60	0.00	0.00
Interest on Loan	339.99	275.00	174.02
Interest on Working Capital	59.10	57.11	56.81
Total	1923.35	1749.87	1660.37

20. Annual Fixed Charges (AFC) allowed for 2001-04 tariff period vide orders dated 30.4.2004 and 17.1.2008 in Petition No. 74/2002, revised AFC claimed in the instant petition and AFC allowed in the instant order in respect of the transmission assets are as follows:

(₹ in lakh)

Assets	Particulars	2001-02	2002-03	2003-04
400 kV Gandhar-Padghe S/C line	AFC approved vide orders dated 30.4.2004 and 17.1.2008 in Petition No. 74/2002	1904.04	1542.62	1506.09
	AFC claimed by the Petitioner in the instant petition	1904.03	1542.61	1506.09
	AFC allowed in the instant order	1904.03	1542.61	1506.08
400 kV Gandhar-Gandhar S/C line	AFC approved vide orders dated 30.4.2004 and 17.1.2008 in Petition No. 74/2002	92.75	77.63	77.87
	AFC claimed by the Petitioner in the instant petition	92.74	77.64	77.87
	AFC allowed in the instant order	92.74	77.63	77.87
220 kV Gandhar-Bharuch D/C line	AFC approved vide orders dated 30.4.2004 and 17.1.2008 in	1923.35	1749.87	1663.63



and 400 kV Gandhar-Dehgam D/C line	Petition No. 74/2002.			
	AFC claimed by the Petitioner in the instant petition.	1923.36	1749.87	1660.37
	AFC allowed in the instant order.	1923.35	1749.87	1660.37

2004-09 Tariff Period

21. The Commission vide orders dated 14.2.2006 and 14.3.2008 in Petition No. 112/2004 has approved transmission tariff in respect of the transmission assets for the period from 1.4.2004 to 31.3.2009. The details of transmission tariff approved in respect of the transmission assets are as follows:

(₹ in lakh)

400 kV Gandhar-Padghe S/C line					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	302.58	302.58	302.58	302.58	302.58
Return on Equity	643.23	643.23	643.23	643.23	643.23
O&M Expenses	95.77	99.58	103.73	107.62	112.17
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	98.54	79.48	60.42	41.36	22.30
Interest on Working Capital	37.60	38.38	39.24	40.15	41.15
Total	1177.72	1163.25	1149.19	1134.93	1121.42

(₹ in lakh)

400 kV Gandhar-Gandhar S/C line					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	14.71	14.71	14.71	14.71	14.71
Return on Equity	31.92	31.92	31.92	31.92	31.92
O&M Expenses	2.95	3.07	3.20	3.32	3.46
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	7.02	6.09	5.17	4.24	3.31
Interest on Working Capital	1.82	1.86	1.90	1.94	1.99
Total	58.42	57.65	56.89	56.13	55.38

(₹ in lakh)

220 kV Gandhar-Bharuch D/C line and 400 kV Gandhar-Dehgam D/C line					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	341.01	341.01	341.01	341.01	230.30
Return on Equity	822.13	822.13	822.13	822.13	822.13
O&M Expenses	274.02	284.99	296.58	308.11	320.74



Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	67.95	46.47	24.98	7.12	0.00
Interest on Working Capital	48.72	49.85	51.06	52.41	52.14
Total	1553.83	1544.44	1535.76	1530.78	1425.30

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

(₹ in lakh)

400 kV Gandhar-Padghe S/C line					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	302.58	302.58	302.58	302.58	302.58
Return on Equity	643.23	643.23	643.23	643.23	643.23
O&M Expenses	95.77	99.58	103.73	107.62	112.17
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	96.93	84.92	72.91	60.90	48.89
Interest on Working Capital	37.60	38.51	39.49	40.53	41.65
Total	1176.11	1168.82	1161.94	1154.86	1148.53

(₹ in lakh)

400 kV Gandhar-Gandhar S/C line					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	14.71	14.71	14.71	14.71	14.71
Return on Equity	31.92	31.92	31.92	31.92	31.92
O&M Expenses	2.95	3.07	3.2	3.32	3.46
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	7.07	6.24	5.41	4.57	3.74
Interest on Working Capital	1.82	1.86	1.90	1.95	1.99
Total	58.47	57.80	57.14	56.47	55.82

(₹ in lakh)

220 kV Gandhar-Bharuch D/C line and 400 kV Gandhar-Dehgam D/C line					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	341.01	341.01	341.01	341.01	230.30
Return on Equity	822.13	822.13	822.13	822.13	822.13
O&M Expenses	274.02	284.99	296.58	308.11	320.74
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	60.98	53.50	46.03	38.55	31.08
Interest on Working Capital	50.52	52.00	53.58	55.24	55.09
Total	1548.66	1553.63	1559.33	1565.04	1459.34



23. We have considered the submissions of the Petitioner and have perused the orders dated 14.2.2006 and 14.3.2008 in Petition No. 112/2004. The tariff is allowed in respect of the transmission assets on the basis of following:

- a) Admitted capital cost as on 1.4.2004 of the transmission assets;
- b) Weighted Average Rate of Interest on actual loan adopted from orders dated 14.2.2006 and 14.3.2008 in Petition No.112/2004, and
- d) WAROD, Rate of Interest for Working Capital and O&M Expenses as per orders dated 14.2.2006 and 14.3.2008 in Petition No.112/2004.

24. 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 Gandhar-Padghe S/C line					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	302.58	302.58	302.58	302.58	302.58
Return on Equity	643.23	643.23	643.23	643.23	643.23
O&M Expenses	95.77	99.58	103.73	107.62	112.17
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	96.93	84.92	72.91	60.90	48.89
Interest on Working Capital	37.60	38.51	39.49	40.53	41.65
Total	1176.11	1168.82	1161.94	1154.86	1148.52

(₹ in lakh)

400 kV Gandhar-Gandhar S/C line					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	14.71	14.71	14.71	14.71	14.71
Return on Equity	31.92	31.92	31.92	31.92	31.92
O&M Expenses	2.95	3.07	3.20	3.32	3.46
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	7.07	6.24	5.41	4.57	3.74
Interest on Working Capital	1.82	1.86	1.90	1.95	1.99
Total	58.47	57.79	57.13	56.46	55.82



(₹ in lakh)

220 kV Gandhar-Bharuch D/C line and 400 kV Gandhar-Dehgam D/C line					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	341.01	341.01	341.01	341.01	230.30
Return on Equity	822.13	822.13	822.13	822.13	822.13
O&M Expenses	274.02	284.99	296.58	308.11	320.74
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	60.98	53.50	46.03	38.55	31.08
Interest on Working Capital	50.52	52.00	53.58	55.24	55.09
Total	1548.65	1553.63	1559.32	1565.03	1459.34

25. AFC allowed in respect of 2004-09 tariff period vide orders dated 14.2.2006 and 14.3.2008 in Petition No.112/2004, 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 Gandhar-Padghe S/C line	AFC approved vide order dated orders dated 14.2.2006 and 14.3.2008 in Petition No.112/2004	1177.72	1163.25	1149.19	1134.93	1121.42
	AFC claimed by the Petitioner in the instant petition	1176.11	1168.82	1161.94	1154.86	1148.53
	AFC allowed in the instant order	1176.11	1168.82	1161.94	1154.86	1148.52
400 kV Gandhar-Gandhar S/C line	AFC approved vide orders dated 14.2.2006 and 14.3.2008 in Petition No.112/2004	58.42	57.65	56.89	56.13	55.38
	AFC claimed by the Petitioner in the instant petition	58.47	57.80	57.14	56.47	55.82
	AFC allowed in the instant order	58.47	57.79	57.13	56.46	55.82
220 kV Gandhar-Bharuch D/C line and 400 kV Gandhar-Dehgam D/C line	AFC approved vide order dated orders dated 14.2.2006 and 14.3.2008 in Petition No.112/2004	1553.83	1544.44	1535.76	1530.78	1425.30
	AFC claimed by the Petitioner in the instant petition	1548.66	1553.63	1559.33	1565.04	1459.34
	AFC allowed in the instant order	1548.65	1553.63	1559.32	1565.03	1459.34



2009-14 Tariff Period

26. The Commission vide order dated 2.5.2011 in Petition No. 166/2010 approved the tariff in respect of Asset-I and Asset-II for 2009-14 tariff period and vide order dated 7.10.2015 in Petition No. 151/TT/2014 trued up the tariff in respect of the transmission assets allowed for 2009-14 period and the same is as follows:

(₹ in lakh)

Asset-I					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	632.80	632.80	216.97	216.97	216.97
Return on Equity	900.55	933.54	934.45	934.45	945.69
O&M Expenses	163.74	172.96	182.97	193.47	204.48
Interest on Loan	7.81	0.00	0.00	0.00	0.00
Interest on Working Capital	40.31	41.30	33.15	33.68	34.46
Total	1745.20	1780.59	1367.55	1378.57	1401.60

(₹ in lakh)

Asset-II					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	230.30	230.30	230.30	230.30	230.30
Return on Equity	1096.60	1136.77	1137.88	1137.88	1151.56
O&M Expenses	437.30	462.34	488.82	516.75	546.24
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	49.53	51.62	52.97	54.36	56.12
Total	1813.72	1881.02	1909.96	1939.29	1984.22

27. The Petitioner has claimed the following revised transmission charges in respect of the transmission assets for 2009-14 period in this petition:

(₹ in lakh)

Asset-I					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	632.80	632.80	216.97	216.97	216.97
Return on Equity	900.55	933.54	934.45	934.45	945.69
O&M Expenses	163.74	172.96	182.97	193.47	204.48
Interest on Loan	26.28	3.17	0.00	0.00	0.00
Interest on Working Capital	40.70	41.36	33.15	33.68	34.46
Total	1764.07	1783.84	1367.54	1378.57	1401.60



(₹ in lakh)

Asset-II					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	230.30	230.30	230.30	230.30	230.30
Return on Equity	1096.60	1136.77	1137.88	1137.88	1151.56
O&M Expenses	437.30	462.34	488.82	516.75	546.24
Interest on Loan	20.09	6.42	0.00	0.00	0.00
Interest on Working Capital	49.95	51.75	52.97	54.36	56.12
Total	1834.24	1887.58	1909.97	1939.29	1984.22

28. We have considered the Petitioner's claim. Tariff allowed in respect of the transmission assets on the basis of following:

- Admitted capital cost of transmission assets as on 1.4.2009;
- Weighted Average Rate of Interest on actual loan derived/adopted from order dated 7.10.2015 in Petition No.151/TT/2014; and
- WAROD as per order dated 7.10.2015 in Petition No.151/TT/2014.

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

(₹ in lakh)

Asset-I					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	632.80	632.80	216.97	216.97	216.97
Return on Equity	900.55	933.54	934.45	934.45	945.69
O&M Expenses	163.74	172.96	182.97	193.47	204.48
Interest on Loan	26.28	3.17	0.00	0.00	0.00
Interest on Working Capital	40.70	41.36	33.15	33.68	34.46
Total	1764.07	1783.84	1367.54	1378.57	1401.60

(₹ in lakh)

Asset-II					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	230.30	230.30	230.30	230.30	230.30
Return on Equity	1096.60	1136.77	1137.88	1137.88	1151.56
O&M Expenses	437.30	462.34	488.82	516.75	546.24
Interest on Loan	20.09	6.42	0.00	0.00	0.00
Interest on Working Capital	49.95	51.75	52.97	54.36	56.12
Total	1834.23	1887.57	1909.96	1939.29	1984.22



30. AFC allowed in respect of the transmission assets for 2009-14 tariff period vide order dated 7.10.2015 in Petition No. 151/TT/2014, revised AFC claimed in the instant petition and AFC allowed in the instant order are as follows:

(₹ in lakh)

Assets	Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Asset-I	AFC approved vide order dated 7.10.2015 in Petition No. 151/TT/2014	1745.20	1780.59	1367.55	1378.57	1401.60
	AFC claimed by the Petitioner in the instant petition	1764.07	1783.84	1367.54	1378.57	1401.60
	AFC allowed in the instant order	1764.07	1783.84	1367.54	1378.57	1401.60
Asset-II	AFC approved vide order dated 7.10.2015 in Petition No. 151/TT/2014	1813.72	1881.02	1909.96	1939.29	1984.22
	AFC claimed by the Petitioner in the instant petition	1834.24	1887.58	1909.97	1939.29	1984.22
	AFC allowed in the instant order	1834.23	1887.57	1909.96	1939.29	1984.22

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

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

(₹ in lakh)

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	216.97	216.98	216.97	216.98	216.97
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on equity	946.41	950.75	950.27	950.27	952.83
Interest on Working Capital	37.05	37.50	37.85	38.20	38.64
O&M Expenses	185.94	192.29	198.73	205.22	212.08
Total	1386.37	1397.52	1403.82	1410.67	1420.52

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	230.29	230.29	230.29	230.29	230.29
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on equity	1152.44	1157.73	1157.14	1157.14	1160.25
Interest on Working Capital	59.50	60.54	61.47	62.46	63.54
O&M Expenses	500.86	517.56	534.72	552.45	570.79
Total	1943.09	1966.12	1983.62	2002.34	2024.87



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

(₹ in lakh)

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M expenses	15.50	16.02	16.56	17.10	17.67
Maintenance Spares	27.89	28.84	29.81	30.78	31.81
Receivables	231.06	232.92	233.97	235.11	236.75
Total	274.45	277.78	280.34	282.99	286.23
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	37.05	37.50	37.85	38.20	38.64

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M expenses	41.74	43.13	44.56	46.04	47.57
Maintenance Spares	75.13	77.63	80.21	82.87	85.62
Receivables	323.85	327.69	330.60	333.72	337.48
Total	440.72	448.45	455.37	462.63	470.67
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	59.50	60.54	61.47	62.46	63.54

Capital Cost as on 1.4.2014

33. Capital cost of the transmission assets has been calculated in accordance with Regulations 9(3) of the 2014 Tariff Regulations. The Commission vide order dated 7.10.2015 in Petition No. 151/TT/2014 approved the transmission tariff in respect of the transmission assets for 2014-19 period based on admitted capital cost of ₹11989.48 lakh for Asset-I and ₹11744.66 lakh for Asset-II as on 31.3.2014. Therefore, admitted capital cost of ₹11989.48 lakh for Asset-I and ₹11744.66 lakh for Asset-II as on 31.3.2014 has been considered as on 1.4.2014 for working out the trued-up tariff in respect of the transmission assets for 2014-19 tariff period.

34. The Petitioner has not claimed any ACE for 2014-19 tariff period.



35. Capital cost considered for truing up of tariff for 2014-19 tariff period in respect of the transmission assets is as follows:

(₹ in lakh)

Assets	Capital Cost as on 1.4.2014	ACE during 2014-19 period	Capital Cost as on 31.3.2019
Asset-I	11989.48	0.00	11989.48
Asset-II	11744.66	0.00	11744.66

Debt-Equity Ratio

36. The Petitioner has claimed debt-equity ratio as on 31.3.2014 allowed by the Commission vide order dated 7.10.2015 in Petition No. 151/TT/2014 and the same has been considered as opening debt-equity ratio as on 1.4.2014 as provided under Regulation 19(3) of the 2014 Tariff Regulations. The details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 in respect of the transmission assets are as follows:

Asset-I				
Particulars	Capital cost as on 1.4.2014 (₹ in lakh)	(in %)	Total cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	7167.00	59.78	7167.00	59.78
Equity	4822.48	40.22	4822.48	40.22
Total	11989.48	100.00	11989.48	100.00
Asset-II				
Particulars	Capital cost as on 1.4.2014 (₹ in lakh)	(in %)	Total cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	5872.33	50.00	5872.33	50.00
Equity	5872.33	50.00	5872.33	50.00
Total	11744.66	100.00	11744.66	100.00

Depreciation

37. The transmission assets have already completed 12 years before 1.4.2014. Accordingly, depreciation has been calculated based on the remaining depreciable value to be recovered over the balance useful life. Thus, the trued up depreciation allowed in respect of the transmission assets for 2014-19 tariff period is as follows:



(₹ in lakh)

Asset-1						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	11989.48	11989.48	11989.48	11989.48	11989.48
B	Addition during the year 2014-19	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	11989.48	11989.48	11989.48	11989.48	11989.48
D	Average Gross Block [(A+C)/2]	11989.48	11989.48	11989.48	11989.48	11989.48
E	Depreciable value (D*90%)	10790.53	10790.53	10790.53	10790.53	10790.53
F	Weighted average rate of Depreciation (WAROD) (in %) (K/D)	1.81	1.81	1.81	1.81	1.81
G	Lapsed useful life at the beginning of the year (Year)	15.00	16.00	17.00	18.00	19.00
H	Balance useful life at the beginning of the year (Year)	19.00	18.00	17.00	16.00	15.00
I	Cumulative Depreciation at the beginning of the year	6668.06	6885.03	7102.00	7318.98	7535.95
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	4122.47	3905.50	3688.53	3471.56	3254.58
K	Depreciation during the year	216.97	216.97	216.97	216.97	216.97
L	Cumulative Depreciation at the end of the year (I+K)	6885.03	7102.00	7318.98	7535.95	7752.92
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	3905.50	3688.53	3471.56	3254.58	3037.61

(₹ in lakh)

Asset-2						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	11744.66	11744.66	11744.66	11744.66	11744.66
B	Addition during the year 2014-19	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	11744.66	11744.66	11744.66	11744.66	11744.66
D	Average Gross Block [(A+C)/2]	11744.66	11744.66	11744.66	11744.66	11744.66
E	Freehold Land	104.71	104.71	104.71	104.71	104.71
F	Depreciable value [(D-E)*90%]	10475.96	10475.96	10475.96	10475.96	10475.96
G	Weighted average rate of Depreciation (WAROD) (in %)	1.96	1.96	1.96	1.96	1.96
H	Lapsed useful life at the beginning of the year (Year)	19.00	20.00	21.00	22.00	23.00
I	Balance useful life at the beginning of the year (Year)	13.00	12.00	11.00	10.00	9.00
J	Cumulative Depreciation at the beginning of the year	7482.15	7712.44	7942.74	8173.03	8403.32
K	Remaining Aggregate Depreciable Value at the beginning of the year (F-J)	2993.81	2763.51	2533.22	2302.93	2072.63
L	Depreciation during the year	230.29	230.29	230.29	230.29	230.29
M	Cumulative Depreciation at the end of the year (J+L)	7712.44	7942.74	8173.03	8403.32	8633.61
N	Remaining Aggregate Depreciable Value at the end of the year (F-M)	2763.51	2533.22	2302.93	2072.63	1842.34



38. The details of depreciation as allowed in respect of the transmission assets vide order dated 7.10.2015 in Petition No. 151/TT/2014, claimed by the Petitioner in the instant Petition and trued up in the instant order are as follows:

(₹ in lakh)						
Assets	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	Allowed vide order dated 7.10.2015 in Petition No. 151/TT/2014.	216.97	216.97	216.97	216.97	216.97
	Claimed by the Petitioner in the instant petition.	216.97	216.98	216.97	216.98	216.97
	Approved after true-up in this order.	216.97	216.97	216.97	216.97	216.97
Asset-II	Allowed vide order dated 7.10.2015 in Petition No. 151/TT/2014.	230.30	230.30	230.30	230.30	230.30
	Claimed by the Petitioner in the instant petition.	230.29	230.29	230.29	230.29	230.29
	Approved after true-up in this order.	230.29	230.29	230.29	230.29	230.29

Interest on Loan (“IoL”)

39. The Petitioner has not claimed IoL in respect of the transmission assets for 2014-19 tariff period as the entire loan has been repaid. Accordingly, IoL is not considered for 2014-19 tariff period.

Return on Equity (“RoE”)

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



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

41. The Commission vide order dated 27.4.2020 in Petition No.274/TT/2019 has arrived at the effective tax rate for the Petitioner based on the notified MAT rates 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

42. MAT rates as allowed vide order dated 27.4.2020 in Petition No. 274/TT/2019 for the purpose of grossing up of rate of RoE for truing up of tariff of 2014-19 period, in terms of the provisions of the 2014 Tariff Regulations, are considered in the instant case which are 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

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



(₹ in lakh)

Asset-I						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	4822.48	4822.48	4822.48	4822.48	4822.48
B	Addition due to ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	4822.48	4822.48	4822.48	4822.48	4822.48
D	Average Equity [(A+C)/2]	4822.48	4822.48	4822.48	4822.48	4822.48
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
G	Applicable RoE Rate (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity for the year (D*G)	945.69	950.27	950.27	950.27	952.83

(₹ in lakh)

Asset-II						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	5872.33	5872.33	5872.33	5872.33	5872.33
B	Addition due to ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	5872.33	5872.33	5872.33	5872.33	5872.33
D	Average Equity [(A+C)/2]	5872.33	5872.33	5872.33	5872.33	5872.33
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
G	Applicable RoE Rate (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity for the year (D*G)	1151.56	1157.14	1157.14	1157.14	1160.25

44. The details of RoE in respect of the transmission assets as allowed by the Commission vide order dated 7.10.2015 in Petition No. 151/TT/2014, claimed by the Petitioner in the instant Petition and true up in the instant order are as follows:

(₹ in lakh)

Assets	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	Allowed vide order dated 7.10.2015 in Petition No. 151/TT/2014	945.69	945.69	945.69	945.69	945.69
	Claimed by the Petitioner in the instant petition	946.41	950.75	950.27	950.27	952.83
	Approved after true-up in this order	945.69	950.27	950.27	950.27	952.83
Asset-II	Allowed vide order dated 7.10.2015 in Petition No. 151/TT/2014	1151.56	1151.56	1151.56	1151.56	1151.56
	Claimed by the Petitioner in the instant petition	1152.44	1157.73	1157.14	1157.14	1160.25
	Approved after true-up in this order	1151.56	1157.14	1157.14	1157.14	1160.25

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

45. O&M Expenses for various elements of the transmission assets as claimed by the Petitioner are within the norms specified under the 2014 Tariff Regulations and the same are allowed as follows:

(₹ in lakh)

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission Lines (in km)					
400 kV S/C Gandhar-Padghe Transmission Line	298.00	298.00	298.00	298.00	298.00
400 kV S/C Gandhar(NTPC)-Gandhar(GTEC) Transmission Line	13.00	13.00	13.00	13.00	13.00
Norms (₹ lakh/ km)					
S/C (Twin/Triple Conductor)	0.404	0.418	0.432	0.446	0.461
Total Transmission Line O&M Expenses	125.64	130.00	134.35	138.71	143.37
Sub-station (Bays)					
400 kV: Padghe:Jhanore/ Gandhar	1	1	1	1	1
Norms (₹ lakh/Bay)					
400 kV	60.30	62.30	64.37	66.51	68.71
Total Sub-station O&M Expenses	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	185.94	192.30	198.72	205.22	212.08

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission Lines (in km)					
400 kV Gandhar-Dehgam Ckt I and Ckt II	157.00	157.00	157.00	157.00	157.00
220 kV Gandhar-Haldarwa Ckt I and Ckt II	13.00	13.00	13.00	13.00	13.00
Norms (₹ lakh/km)					
D/C (Twin/Triple Conductor)	0.707	0.731	0.755	0.780	0.806
D/C (Single Conductor)	0.303	0.313	0.324	0.334	0.346
Total Transmission Line O&M Expenses	114.94	118.84	122.75	126.80	131.04
Sub-station (Bays)					
400 kV: Dehgam:Jhanore 1/ Gandhar 1	1	1	1	1	1
400 kV: Dehgam:Jhanore 2 / Gandhar 2	1	1	1	1	1
400 kV: Dehgam:ICT 1	1	1	1	1	1
400 kV: Dehgam:ICT 2	1	1	1	1	1
400 kV: Dehgam:Bus Reactor	1	1	1	1	1
220 kV: Haldarwa:Jhanore 1/ Gandhar 1	1	1	1	1	1
220 kV: Haldarwa:Jhanor 2 /	1	1	1	1	1



Gandhar 2					
Norms (₹ lakh/Bay)					
400 kV	60.30	62.30	64.37	66.51	68.71
220 kV	42.21	43.61	45.06	46.55	48.10
Total Sub-station O&M Expenses	385.92	398.72	411.97	425.65	439.75
Total O&M Expenses (₹ in lakh)	500.86	517.56	534.72	552.45	570.79

46. The details of O&M Expenses in respect of the transmission assets allowed vide order dated 7.10.2015 in Petition No. 151/TT/2014, claimed by the Petitioner in the instant Petition and trued up in the instant order are as follows:

		(₹ in lakh)				
Assets	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	Allowed vide order dated 7.10.2015 in Petition No. 151/TT/2014	185.94	192.30	198.72	205.22	212.08
	Claimed by the Petitioner in the instant petition	185.94	192.29	198.73	205.22	212.08
	Approved after true-up in this order	185.94	192.30	198.72	205.22	212.08
Asset-II	Allowed vide order dated 7.10.2015 in Petition No. 151/TT/2014	500.86	517.56	534.72	552.45	570.79
	Claimed by the Petitioner in the instant petition	500.86	517.56	534.72	552.45	570.79
	Approved after true-up in this order	500.86	517.56	534.72	552.45	570.79

Interest on Working Capital ("IWC")

47. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and trued-up IWC allowed in respect of the transmission assets are as follows:

		(₹ in lakh)				
		Asset-I				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19	
Working Capital for O&M Expenses (O&M Expenses for one month)	15.50	16.02	16.56	17.10	17.67	
Working Capital for Maintenance Spares (15% of O&M)	27.89	28.84	29.81	30.78	31.81	
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	230.94	232.84	233.97	235.11	236.75	
Total Working Capital	274.33	277.71	280.34	282.99	286.24	



Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of working capital	37.03	37.49	37.85	38.20	38.64

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	41.74	43.13	44.56	46.04	47.57
Working Capital for Maintenance Spares (15% of O&M)	75.13	77.63	80.21	82.87	85.62
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	323.270	327.59	330.60	333.72	337.48
Total Working Capital	440.57	448.35	455.37	462.63	470.66
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of working capital	59.48	60.53	61.48	62.45	63.54

48. The details of IWC in respect of the transmission assets allowed vide order dated 7.10.2015 in Petition No. 151/TT/2014, claimed by the Petitioner in the instant Petition and trued up in the instant order are as follows:

(₹ in lakh)

Assets	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	Allowed vide order dated 7.10.2015 in Petition No. 151/TT/2014	37.03	37.39	37.74	38.10	38.48
	Claimed by the Petitioner in the instant petition	37.05	37.50	37.85	38.20	38.64
	Approved after true-up in this order	37.03	37.49	37.85	38.20	38.64
Asset-II	Allowed vide order dated 7.10.2015 in Petition No. 151/TT/2014	59.48	60.40	61.35	62.33	63.34
	Claimed by the Petitioner in the instant petition	59.50	60.54	61.47	62.46	63.54
	Approved after true-up in this order	59.48	60.53	61.48	62.45	63.54



Approved Annual Fixed Charges for 2014-19 Tariff Period

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

(₹ in lakh)

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	216.97	216.97	216.97	216.97	216.97
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	945.69	950.27	950.27	950.27	952.83
O&M Expenses	185.94	192.30	198.72	205.22	212.08
Interest on Working Capital	37.03	37.49	37.85	38.20	38.64
Total	1385.64	1397.03	1403.81	1410.66	1420.52

(₹ in lakh)

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	230.29	230.29	230.29	230.29	230.29
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1151.56	1157.14	1157.14	1157.14	1160.25
O&M Expenses	500.86	517.56	534.72	552.45	570.79
Interest on Working Capital	59.48	60.53	61.48	62.45	63.54
Total	1942.19	1965.52	1983.63	2002.34	2024.88

50. Accordingly, Annual Transmission Charges as allowed vide order dated 7.10.2015 in Petition No. 151/TT/2014, as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

Assets	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	Allowed vide order dated 7.10.2015 in Petition No. 151/TT/2014	1385.64	1392.35	1399.12	1405.98	1413.22
	Claimed by the Petitioner in the instant petition	1386.37	1397.52	1403.82	1410.67	1420.52
	Approved after true-up in this order	1385.64	1397.03	1403.81	1410.66	1420.52
Asset-II	Allowed vide order dated 7.10.2015 in Petition No. 151/TT/2014	1942.20	1959.82	1977.93	1996.64	2015.99
	Claimed by the Petitioner in the instant petition	1943.09	1966.12	1983.62	2002.34	2024.87
	Approved after true-up in this order	1942.19	1965.52	1983.63	2002.34	2024.88

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Determination of Annual Fixed Charges for 2019-24 Tariff Period

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

(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	488.00	506.70	574.61	736.61	797.61
Interest on Loan	0.00	0.00	3.79	12.21	8.42
Return on Equity	2008.70	2006.07	2012.41	2024.49	2028.65
Interest on Working Capital	70.91	72.32	74.84	78.88	80.92
O&M Expenses	765.67	792.86	820.51	849.55	878.74
Total	3333.28	3377.95	3486.16	3701.74	3794.34

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

(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	63.81	66.07	68.38	70.80	73.23
Maintenance Spares	114.85	118.93	123.08	127.43	131.81
Receivables	409.83	415.18	429.64	456.38	466.52
Total Working Capital	588.49	600.18	621.10	654.61	671.56
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	70.91	72.32	74.84	78.88	80.92

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

53. The Petitioner has claimed E-COD of the Combined Asset as 8.7.1996. Based on the trued-up admitted capital cost and actual COD of all the transmission assets, E-COD has been worked out as follows:



Computation of E-COD					
Assets	Actual COD	Admitted Capital Cost as on 31.3.2019 (₹in lakh)	Weight of the cost (in %)	Number of Days from last COD	Weighted Days
Asset-I	1.4.1998	11989.48	50.52	0.00	0.00
Asset-II	1.8.1994	11744.66	49.48	1400.00	692.78
Total		23734.14	100.00	1400.00	692.78
E-COD (Latest COD – Total weighted Days) – 8.7.1996					

54. E-COD is used to determine the lapsed life of the project as a whole, which works out as twenty two (22) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).

Weighted Average Life (“WAL”)

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

56. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as stipulated in the 2019 Tariff Regulations. The element-wise life as defined in the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of the Combined Asset has been worked out as 32 years and the same is as follows:



Admitted Capital Cost as on 31.3.2019				
Particulars	Combined Asset Cost (₹in lakh) (1)	Life in Years (2)	Weighted Cost (3)=(1) x (2)	Weighted Average Life of Asset (in years) (4)= [(3)/(1)]
Building	750.86	25	18771.50	
Transmission Line	17662.24	35	618178.40	
Sub Station	5088.47	25	127211.75	
PLCC	127.86	15	1917.90	
Total	23629.43		766079.55	32.42 years, rounded off to 32 years

57. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed, E-COD of the transmission assets is 8.7.1996 and the lapsed life of the project as a whole, works out to twenty two (22) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 10 years.

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 regulation*



- (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 fulfillment 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 renovation and modernisation as admitted by this Commission in accordance with these regulations;
- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal 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 GrameenVidyutikaranYojana (RGGVY) and DeendayalUpadhyaya Gram JyotiYojana (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. Capital cost has been dealt in line with Regulation 19(3) of the 2019 Tariff Regulations. The element-wise capital cost (i.e. land, building, transmission line, Sub-station and PLCC) admitted by the Commission as on 31.3.2019 in respect of the transmission assets are clubbed together and the capital cost considered in respect of the Combined Asset as on 1.4.2019 is as follows:

(₹ in lakh)			
Particulars	Asset-I	Asset-II	Capital Cost for Combined Asset as on 1.4.2019
Freehold Land	0.00	104.71	104.71
Building	32.78	718.08	750.86
Transmission Line	11129.24	6533.00	17662.24
Sub-station	790.58	4297.89	5088.47
PLCC	36.88	90.98	127.86
Total	11989.48	11744.66	23734.14

Additional Capital Expenditure (“ACE”)



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

“24. Additional Capitalisation within the original scope and upto the cut-off date:

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

- (a) Undischarged liabilities recognized to be payable at a future date;*
- (b) Works deferred for execution;*
- (c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;*
- (d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;*
- (e) Change in law or compliance of any existing law; and*
- (f) Force Majeure events:*

Provided that in case of any replacement of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.

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

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

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

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

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



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

61. The Petitioner vide affidavit dated 22.12.2020 has submitted revised Auditor's Certificate dated 26.5.2020 and has projected net ACE of ₹1224.35 lakh in respect of the Combined Asset after adjustment of de-capitalisation during 2019-24 tariff period. The proposed ACE/ de-capitalization during 2019-24 period as submitted vide Auditor's Certificate is as follows:

Particulars	Amount (₹ in lakh)	
	Building	Sub-station
Proposed ACE in 2020-21	0.00	83.21
Proposed ACE in 2021-22	0.00	991.05
Proposed ACE in 2022-23	53.58	1208.31
Proposed ACE in 2023-24	53.58	111.96
Proposed De-capitalisation in 2020-21	0.00	105.91
Proposed De-capitalisation in 2021-22	0.00	403.55
Proposed De-capitalisation in 2022-23	11.45	679.5
Proposed De-capitalisation in 2023-24	11.45	65.48
NET ACE	84.26	1140.09

62. The Petitioner has submitted description of projected ACE and de-capitalization considered for computation of tariff for 2019-24 tariff period. Further, the Petitioner has submitted as follows:

- a. CTs, CBs, Wave Traps (WTs), Control and Protection Panels and Power and Control Cables of the transmission system were executed between 1994-98. Some of these equipment have worn out, leading to frequent faults, burn outs and repairs.



b. CTs and Capacitive Voltage Transformers (CVTs) have completed more than 25 years of service. Hence, frequent oil leakages and hot spots are observed due to ageing. These CTs and CVTs have become obsolete and no timely support from OEM nor spares are available. There are chances of break-down which may create element outage due to failure.

c. Isolators have completed 25 years of installation and causing problem of frequent mis-alignments, jamming, improper closing/ opening, over travel, sluggishness in operating mechanism and hot spots due to ageing which makes even local operation very difficult.

d. Wave Traps (WTs) have 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 WTs and unwinding of WT coils because of deterioration of insulation between turns of coil due to ageing. Hence, dismantling of complete WTs is also required for rectification of above issues which increase outage period of the element.

e. Relays installed are of static type and due to ageing, problem of mal-operation/non-operation occurs frequently because of sticking up of relay contacts as coils of auxiliary relays have weakened. Moreover, operation of switchyard equipment from Control Panel is difficult due to ageing of switches.

f. Power and Control Cables, wiring and terminal blocks inside both control and protection panels and equipment MBs have become brittle leading to DC leakages and other frequent failures. These issues result in spurious/ non-desirable tripping of elements.



g. All the HT and LT cables installed at both Jabalpur and Itarsi Sub-stations have also completed 25 years of service and is affecting the operation of EHV switchgear and deterioration of insulation.

h. It has become necessary to replace above mentioned equipment in a progressive manner so that the transmission system is not affected and functions smoothly.

i. The switchyard fencing are also damaged from many places and it requires to be dismantled and its erection is necessary considering safety of the Sub-station.

63. The Petitioner has submitted that admissibility of ACE incurred after the cut-off date is to be dealt in accordance with Regulation 25(2)(c) of the 2019 Tariff Regulations and ACE proposed has become necessary for efficient and secure operation of the transmission system.

64. In response to the Technical Validation letter, the Petitioner vide affidavit dated 1.7.2021 has submitted justification for replacement of equipment and switchyard civil works under ACE with respect to the transmission system and the same is as follows:

a. Work of proposed replacement of equipment is yet to be started and exact date of commencement of dismantling of old equipment to be carried cannot be ascertained in advance as it depends on many factors such as shut-down and availability as the work is to be carried out in the existing system. However, after dismantling, the equipment will be replaced as early as



possible. The exact date will be submitted after completion of the work in true-up of tariff for 2019-24 period.

b. ACE projected during 2019-24 tariff period has been accorded by Director (Operations) of the Petitioner Company. Accordingly, the said ACE may be considered for approval and on its approval, execution of work shall be carried out, keeping the provisions in the budget which is approved by the Board of Directors of the Petitioner's Company on year-to-year basis. A letter in this regard from Executive Director (Asset Management) has been submitted.

c. The proposed replacement of equipment has been claimed under Regulation 25(2) of the 2019 Tariff Regulations (i.e. ACE after the cut-off date). Even in the past, approvals have been accorded by the Commission towards replacement of problematic equipment under ACE. The Petitioner has long experience in operation and maintenance of EHV transmission system and follows the best in class practices. The decision for replacement of equipment is taken keeping in view the reliability of the system and based on difficulties being faced during maintenance. Further, the beneficiaries are the Respondents in the present petition and none of them have raised any question with regard to replacement. No life has been defined by the manufacturer for the individual equipment. However, the life of individual equipment may be considered as 25 years in line with sub-station's life as mentioned in the 2019 Tariff Regulations. Some problematic equipment like CB, CT, CVT, Isolators, C&R panel, control and power cable have been proposed to be replaced to ensure system reliability. Other equipment/materials like earthing system, tower and gantry structures, cables that play



very important role in operation of any sub-station require replacement. As a whole, it is very difficult to assess the life of the complete project. The equipment are replaced based on condition monitoring. However, balance of the system still remains under service for which replacement may be required in near future. The gross block of old equipment, proposed to be replaced is approximately 5.15% of the total gross block of the transmission system. However, other equipment of the project remains the same as executed with original project. As only some of the equipment are proposed to be replaced, it is difficult to determine the life extension of entire project including old equipment. The new equipment can definitely run for more than five years. Considering the combination of equipment in which majority of items are old and may require replacement in future which cannot be assessed at this stage.

d. In view of above facts and the fact that useful life of the transmission system shall be completed in 2029-2030 and no further life extension has been proposed, ACE may be allowed.

e. The Petitioner is carrying out periodic maintenance of sub-station equipment as per standard practice. In case of violation of parameters based on condition monitoring test, action for repair/replacement of equipment is taken. It has been observed that with the passage of time, there is advancement in technology and new design equipment are being used in the transmission system. In many cases, either the manufacturers have closed the manufacturing units or migrated to the new design equipment. Service support for these old equipment either becomes not available, or available with very high cost and high lead time. In case of old equipment, due to ageing, wear



and tear, the failure rate of equipment increases and results in abrupt failure which is extremely difficult to predict even with the help of condition monitoring test. Reliability of old equipment also becomes poor due to ageing, wear and tear and prone to safety risk for O&M staff. In order to address the above objectives and to achieve better reliability and security of system, replacement of equipment is planned under ACE.

65. MPPMCL has submitted that the Petitioner has proposed ACE and decapitalization during 2019-24 period on the plea that equipment have been installed long back, some of them have completed their service life, and that it has become necessary to replace these in a progressive manner so that the system is not affected and continue to function smoothly. However, the Petitioner has not submitted any study to arrive at the conclusion which particular equipment needs replacement on priority and reason therefor.

66. In response, the Petitioner has submitted justification alongwith the communications for replacement of equipment and switchyard civil works under ACE/ de-capitalization with respect to the transmission system.

67. The Petitioner has submitted revised Auditor's Certificate dated 20.5.2020 with estimated completion cost as on 31.3.2024 and the same is as follows:

(₹ in lakh)		
	Cost	Description
Actual cost as on 31.3.2014 and 31.3.2019	104.71	Free Hold Land
	750.86	Building and Civil Works
	5088.47	Substation
	17662.24	TL
	127.86	PLCC



Total Cost as on 31.3.2019	23734.14	ACE is towards replacement of problematic/defective equipment which are going to complete or have completed 25 years of useful life and towards dismantling of existing Switchyard fencing, Supply and Erection of Switchyard fencing.
ACE 2020-21	83.21	
Decapitalization 2020-21	105.91	
ACE 2021-22	991.05	
Decapitalization 2021-22	403.55	
ACE 2022-23	1261.89	
Decapitalization 2022-23	690.95	
ACE 2023-24	165.54	
Decapitalization in 2023-24	76.93	
Total ACE	2501.69	
Total Decapitalization	1277.34	
Net of ACE and Decapitalization	1224.35	
Total Cost as on 31.3.2024	24958.49	

68. The Petitioner has further submitted statement of de-capitalisation in Form-10B and the same is as follows:

(₹ in lakh)									
Sl. No.	Year of Decapitalisation	Work/ Equipment proposed to be decapitalised	Year of capitalisation of asset/ equipment being decapitalised	Original book value of asset being decapitalised	Debt Equity ratio at the time of capitalisation	Cumulative Depreciation corresponding to decapitalisation	Cumulative Repayment of Loan corresponding to decapitalisation	Justification	Petition No. (Old)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(9)	(10)	(11)
1	2020-21	Substation	1998	105.91	50:50	84.92	52.955	3 CTs, 1 CB & 3 CVTs.	Order dated 7.10.2015 in Petition No. 151/TT/2014
2	2021-22	Substation	1995-96	403.55	50:50	41.66	201.775	400 kV ICT-I	
3	2022-23	Substation	1994-1995	679.5	50:50	611.55	339.75	13 CB, 6 CVT, 1 Control Panel & HT Cable	
4	2022-23	Civil	1994-1995	11.45	50:50	10.305	5.725	Reconstruction of Switchyard Fencing after dismantling of old one	
5	2023-24	Substation	1994-1995	65.48	50:50	58.932	32.74	2 Control Panel & 2 CB Relay Panel	
6	2023-24	Civil	1994-1995	11.45	50:50	10.305	5.725	Reconstruction of Switchyard Fencing after dismantling of old one	

69. We have considered the submissions of the Petitioner and MPPMCL. The Petitioner has proposed to replace 315 MVA ICT-I at Dehgam with net ACE of



₹587.50 lakh in 2021-22. We observe that these are major elements of the transmission system which are critical and high value elements. Therefore, we are of the view that if such items are to be replaced, it is prudent to discuss them in RPC with concerned beneficiaries. Accordingly, projected ACE towards ICT is not allowed at this stage and the Petitioner is directed to seek prior approval of RPC for the said proposed replacements and file a separate petition for ACE towards “ICTs and Reactors” for consideration of the Commission.

70. The remaining proposed ACE is towards replacement of isolators (50 sets: 21 set of 420 kV and 29 sets of 220 kV Isolators at Dehgam), CTs (63 Nos: 36 number 400 kV CTs, 24 number 220 kV CT at Dehgam and 3 number CT at MSETCL Padghe), Capacitive Voltage Transformers (CVTs - 27 number: 12 number 220 kV at Dehgam, 6 number 400 kV at Dehgam, 6 number 220 kV at Haldwara, 3 number 420 kV at Padghe), control and relay panels, CB and power and control cables, LT Power cables for auxiliary supply at Dehgam Sub-station, 250 kVA DG set (1 set) due to obsolescence of technology In our view, these items are of critical nature and their failure may affect the stability and reliability of the grid. As such, the replacement of these equipment and consequent ACE is approved, subject to true-up on actual basis with sub-station wise details.

71. The Petitioner has submitted that switchyard fencing is damaged at many places. The Petitioner has claimed net ACE of ₹84.26 lakh (with de-cap of ₹22.9 lakh) towards reconstruction of switchyard fencing after dismantling the existing switchyard fencing at Dehgam Sub-station. We have considered the submissions of the Petitioner. We are of the view that switchyard fencing at Dehgam Sub-station is essential for the safety of the sub-station. Accordingly, ACE of ₹84.26 lakh towards



reconstruction of switchyard fencing at Dehgam Sub-station is allowed under Regulation 25(2)(d) of the Tariff Regulations.

72. In view of above, ACE and de-capitalisation allowed for 2019-24 tariff period is as follows:

(₹ in lakh)					
Sl. No.	Particulars	2020-21	2021-22	2022-23	2023-24
(1)	ACE	83.21	0.00	1261.89	165.54
(2)	Decapitalization	105.91	0.00	690.95	76.93
(3)	Net ACE (1)-(2)	-22.70	0.00	570.94	88.61

73. Accordingly, the details of capital cost (including ACE/ de-capitalization) considered with respect to the Combined Asset for 2019-24 tariff period are as follows:

(₹ in lakh)					
Capital cost allowed as on 1.4.2019	ACE				Capital cost as on 31.3.2024
	2020-21	2021-22	2022-23	2023-24	
23734.14	-22.70	0.00	570.94	88.61	24370.99

Debt-Equity Ratio

74. 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.”

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



Debt-Equity Ratio for Gross Capital Cost as on 1.4.2019

Particulars	Amount (₹ in lakh) (A)	(in %)
Debt	13039.33	54.94
Equity	10694.81	45.06
Total	23734.14	100.00

Debt-Equity Ratio for ACE and De-capitalisation during 2019-24 tariff period.

(₹ in lakh)

Particulars	ACE (B)		De-capitalization (C)		ACE (D)		De-capitalization (E)	
	2020-21	(in %)	2020-21	(in %)	2022-23	(in %)	2022-23	(in %)
Debt	58.25	70.00	52.96	50.00	883.32	70.00	345.48	50.00
Equity	24.96	30.00	52.96	50.00	378.57	30.00	345.48	50.00
Total	83.21	100.00	105.91	100.00	1261.89	100.00	690.95	100.00

(₹ in lakh)

Particulars	ACE (F)		De-capitalization (G)	
	2023-24	(in %)	2023-24	(in %)
Debt	115.88	70.00	38.47	50.00
Equity	49.66	30.00	38.47	50.00
Total	165.54	100.00	76.93	100.00

Debt-Equity Ratio for Gross Capital Cost as on 31.3.2024

Particulars	Amount (₹ in lakh) (H)=(A)+(B)-(C)+(D)-(E)+(F)-(G)	(in %)
Debt	13659.88	56.05
Equity	10711.11	43.95
Total	24370.99	100.00

Depreciation

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

77. The Combined Asset has already completed 12 years of useful life as on 31.3.2009. Accordingly, depreciation has been calculated based on the remaining depreciable value (up to 90% of existing gross block of assets) to be recovered over the balance useful life. As discussed above, the Petitioner has proposed ACE towards replacement of sub-station equipment. Hence, depreciation corresponding to ACE (new additions) claimed for 2019-20 onwards is allowed at normative rate of depreciation as specified in the 2019 Tariff Regulations. Depreciation allowed in respect of the Combined Asset for 2019-24 tariff period is as follows:

		(₹ in lakh)				
	(A) Existing Assets	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	23734.14	23734.14	23628.23	23628.23	22937.28
B	De-capitalisation	0.00	105.91	0.00	690.95	76.93



C	Closing Gross Block (A-B)	23734.14	23628.23	23628.23	22937.28	22860.35
D	Average Gross Block [(A+C)/2]	23734.14	23681.19	23628.23	23282.76	22898.82
E	Freehold Land	104.71	104.71	104.71	104.71	104.71
F	Depreciable Value [(D-E)*90%]	21266.49	21218.83	21171.17	20860.24	20514.69
G	Weighted average rate of Depreciation (WAROD) (in %)	2.06	2.04	2.06	1.90	2.14
H	Remaining life at the beginning of the year (Year)	10.00	9.00	8.00	7.00	6.00
I	Lapsed life at the beginning of the year (Year)	22.00	23.00	24.00	25.00	26.00
J	Cumulative Depreciation at the beginning of the year	16386.53	16874.53	17272.31	17759.67	17580.75
K	Remaining depreciable value at the beginning of the year (F-J)	4879.95	4344.30	3898.86	3100.57	2933.94
L	Depreciation during the year (K/H)	488.00	482.70	487.36	442.94	488.99
M	Depreciation adjustment on account of de-capitalisation	0.00	84.92	0.00	621.86	69.24
N	Cumulative Depreciation at the end of the year (J+L-M)	16874.53	17272.31	17759.67	17580.75	18000.50
O	Remaining depreciable value at the end of the year (F-N)	4391.96	3946.52	3411.50	3279.49	2514.19

(₹ in lakh)

	(B) New Additions	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	0.00	0.00	83.21	83.21	1345.10
B	Addition during the year	0.00	83.21	0.00	1261.89	165.54
C	Closing Gross Block (A+B)	0.00	83.21	83.21	1345.10	1510.64
D	Average Gross Block [(A+C)/2]	0.00	41.61	83.21	714.16	1427.87
E	WAROD (in %)	0.00	5.28	5.28	5.28	5.28
F	Depreciable Value (D*90%)	0.00	37.44	74.89	642.74	1285.08
G	Cumulative Depreciation at the beginning of the year	0.00	0.00	2.20	6.59	44.30
H	Depreciation (D*E)	0.00	2.20	4.39	37.71	75.39
I	Cumulative Depreciation at the end of the year (G+H)	0.00	2.20	6.59	44.30	119.69
J	Remaining Depreciation at the end of the year (F-I)	0.00	35.25	68.30	598.44	1165.39

(₹ in lakh)

(C) Total	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation during the year (A+B)	488.00	484.90	491.75	480.65	564.38

Interest on Loan ("IoL")

78. Regulation 32 of the 2019 Tariff Regulations provide as follows:



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

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

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

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

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

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

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

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

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

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

79. IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed in respect of the Combined Asset (New Additions) is as follows:



(₹ in lakh)

New Additions	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan		0.00	58.25	58.25	941.57
Cumulative Repayments upto Previous Year		0.00	2.20	6.59	44.30
Net Loan-Opening		0.00	56.05	51.66	897.27
Additions		58.25	0.00	883.32	115.88
Repayment during the year		2.20	4.39	37.71	75.39
Net Loan-Closing		56.05	51.66	897.27	937.76
Average Loan		28.03	53.85	474.46	917.52
Weighted Average Rate of Interest on Loan (in %)		6.30	6.30	6.30	6.30
Interest on Loan		1.77	3.39	29.89	57.80

Return on Equity (“RoE”)

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

Provided further that:

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

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

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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:

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

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

Illustration-

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

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

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

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



(b) *Estimated Advance Tax for the year on above is Rs 240 crore;*

(c) *Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;*

(d) *Rate of return on equity = $15.50 / (1 - 0.24) = 20.395\%$*

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

81. The Petitioner has submitted that it is liable to pay income tax at MAT rate applicable to the Petitioner Company.. RoE has been calculated @18.782% after grossing up RoE with MAT rate of 17.472% (Base Rate 15% + Surcharge 12% + Cess 4%) based on the formula given in Regulation 31(2) of the 2019 Tariff Regulations for 2019-24 tariff period. As per Regulation 31(3) of the 2019 Tariff Regulations, grossed-up rate of RoE at the end of every financial year shall be trued-up 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 IT authorities pertaining to 2019-24 tariff period on actual gross income. However, if any penalty arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the Petitioner. Any under-recovery or over-recovery of grossed-up rate on RoE after truing up shall be recovered or refunded to beneficiaries or the long term customers on yearly basis. The Petitioner has further submitted that any adjustment due to additional tax demand including interest duly adjusted for any refund of tax including interest received from IT authorities shall be



recoverable/ adjustable during 2019-24 tariff period on yearly basis on receipt of Income Tax assessment order.

82. We have considered the submissions of the Petitioner. MAT rate applicable in 2019-20 has been considered for the purpose of RoE which will 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 for 2019-24 tariff period is as follows:

		(₹ in lakh)				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	10694.81	10694.81	10666.82	10666.82	10699.91
B	Additions due to ACE	0.00	24.96	0.00	378.57	49.66
C	De-capitalisation	0.00	52.96	0.00	345.48	38.47
D	Closing Equity (A+B-C)	10694.81	10666.82	10666.82	10699.91	10711.11
E	Average Equity [(A+D)/2]	10694.81	10680.81	10666.82	10683.36	10705.51
F	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
G	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
H	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
I	Return on Equity (D*H)	2008.70	2006.07	2003.44	2006.55	2010.71

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

83. The norms specified under Regulation 35(3)(a) and Regulation 33(4) of the 2019 Tariff Regulations are as follows:

“35. Operation and Maintenance Expenses:

...

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (₹ Lakh per MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564



400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme



(3000 MW) shall be on the basis of the normative O&M expenses for ± 800 kV, Bishwanath-Agra HVDC bi-pole scheme;

- v. the O&M expenses of ± 800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ± 800 kV, Bishwanath-Agra HVDC bi-pole scheme; and
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three 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.”

84. O&M Expenses claimed by the Petitioner in respect of the various elements of the Combined Asset for the 2019-24 tariff period are allowed as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Transmission Lines (in km)					
400 kV S/C Gandhar-Padghe Transmission Line	298.00	298.00	298.00	298.00	298.00
400 kV S/C Gandhar(NTPC)-Gandhar(GTEC) Transmission Line	13.00	13.00	13.00	13.00	13.00
400 kV Gandhar-Dehgam Ckt I and Ckt II	157.00	157.00	157.00	157.00	157.00
220 kV Gandhar-Haldarwa Ckt I and Ckt II	13.00	13.00	13.00	13.00	13.00
Norms (₹ lakh/km)					
S/C (Twin/Triple Conductor)	0.503	0.521	0.539	0.558	0.578
D/C (Twin/Triple Conductor)	0.881	0.912	0.944	0.977	1.011
D/C (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Total Transmission Line O&M Expenses	299.65	310.30	321.09	332.37	344.11
Sub-station (Numbers)					
400 kV: Padghe:Jhanore/ Gandhar	1	1	1	1	1



400 kV: Dehgam:Jhanore 1/ Gandhar 1	1	1	1	1	1
400 kV: Dehgam:Jhanore 2 / Gandhar 2	1	1	1	1	1
400 kV: Dehgam:ICT 1	1	1	1	1	1
400 kV: Dehgam:ICT 2	1	1	1	1	1
400 kV: Dehgam:Bus Reactor	1	1	1	1	1
220 kV: Haladarwa:Jhanore 1/ Gandhar 1	1	1	1	1	1
220 kV: Haladarwa:Jhanor 2 / Gandhar 2	1	1	1	1	1
Norms (₹ lakh/Bay)					
400 kV	32.15	33.28	34.45	35.66	36.91
220kV	22.51	23.30	24.12	24.96	25.84
Total Sub-station O&M Expenses	237.92	246.28	254.94	263.88	273.14
Transformers: (in MVA)					
400 kV: Dehgam:ICT-I& ICT-II , 315 MVA 400/220 kV at Dehgam	630	630	630	630	630
Norms(₹ lakh/ MVA)					
400 kV	0.358	0.371	0.384	0.398	0.411
Total Transformer (ICT) O&M Expenses	225.54	233.73	241.92	250.74	258.93
Communication System:					
PLCC	127.86	127.86	127.86	127.86	127.86
Norms (in %)	2	2	2	2	2
Total Communication Expenses	2.56	2.56	2.56	2.56	2.56
Total O&M Expenses (₹ in lakh)	765.67	792.87	820.51	849.55	878.74

85. The Petitioner has claimed O&M Expenses separately for PLCC under Regulation 35(4) of the 2019 @2% of its original project cost in the instant petition and 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 and 2019 Tariff Regulations and the norms for sub-station has 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.

86. O&M Expenses allowed in respect of the Combined Asset are as follows:



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Transmission Lines (in km)					
400kV S/C Gandhar-Padghe Transmission Line	298.00	298.00	298.00	298.00	298.00
400 kV S/C Gandhar (NTPC)-Gandhar (GTEC) Transmission Line	13.00	13.00	13.00	13.00	13.00
400 kV Gandhar-Dehgam Ckt I and Ckt II	157.00	157.00	157.00	157.00	157.00
220 kV Gandhar-Haldarwa Ckt I and Ckt II	13.00	13.00	13.00	13.00	13.00
Norms (₹ lakh/km)					
S/C (Twin/Triple Conductor)	0.503	0.521	0.539	0.558	0.578
D/C (Twin/Triple Conductor)	0.881	0.912	0.944	0.977	1.011
D/C (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Total Transmission Line O&M Expenses	299.65	310.30	321.09	332.37	344.11
Sub-station (Numbers)					
400 kV: Padghe:Jhanore/ Gandhar	1	1	1	1	1
400 kV: Dehgam:Jhanore 1/ Gandhar 1	1	1	1	1	1
400 kV: Dehgam:Jhanore 2 / Gandhar 2	1	1	1	1	1
400 kV: Dehgam:ICT 1	1	1	1	1	1
400 kV: Dehgam:ICT 2	1	1	1	1	1
400 kV: Dehgam:Bus Reactor	1	1	1	1	1
220 kV: Haldarwa:Jhanore 1/ Gandhar 1	1	1	1	1	1
220 kV: Haldarwa:Jhanor 2 / Gandhar 2	1	1	1	1	1
Norms (₹ lakh/Bay)					
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
Total Sub-station Expenses	237.92	246.28	254.94	263.88	273.14
Transformers: (in MVA)					
400 kV: Dehgam:ICT-I&II, 315 MVA & 400/220 kV at Dehgam	630	630	630	630	630
Norms(₹ lakh/ MVA)					
400 kV	0.358	0.371	0.384	0.398	0.411
Total Transformer Expenses	225.54	233.73	241.92	250.74	258.93
Total O&M Expenses (₹ in lakh)	763.11	790.31	817.95	846.99	876.18

Interest on Working Capital (“IWC”)

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

“34. Interest on Working Capital

(1) The Working Capital shall cover:

...

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

i. Receivables equivalent to 45 days of 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 true-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;”

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

89. We have considered the submissions of the Petitioner. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations and components of the working capital and interest allowed thereon 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
Working Capital for O&M Expenses (O&M Expenses for one month)	63.59	65.86	68.16	70.58	73.02
Working Capital for Maintenance Spares (15% of O&M Expenses)	114.47	118.55	122.69	127.05	131.43
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/annual transmission charges)	409.50	413.04	416.75	422.78	439.76
Total Working Capital	587.56	597.45	607.61	620.41	644.20
Rate of Interest of working capital (in %)	12.05	11.25	10.50	10.50	10.50
Interest of working capital	70.80	67.21	63.80	65.14	67.64

Annual Fixed Charges for 2019-24 Tariff Period

90. The transmission charges allowed 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
Depreciation	488.00	484.90	491.75	480.65	564.38
Interest on Loan	0.00	1.77	3.39	29.89	57.80
Return on Equity	2008.70	2006.07	2003.44	2006.55	2010.71
O&M Expenses	763.11	790.31	817.95	846.99	876.18
Interest on Working Capital	70.80	67.21	63.80	65.14	67.64
Total	3330.61	3350.25	3380.33	3429.22	3576.72

Filing Fee and Publication Expenses

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

Licence Fee & RLDC Fees and Charges



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

Goods and Services Tax (GST)

93. 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.

94. 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

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

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



approved security expenses from 1.4.2019 to 31.3.2024. Accordingly, security expenses will be shared in terms of 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 overall security expenses and consequential IWC has become infructuous.

Capital Spares

97. 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

98. 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. With effect from 1.11.2020, the 2010 Sharing Regulations has been repealed and sharing of transmission charges is governed by the provisions of the 2020 Sharing Regulations. Accordingly, the liabilities of DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and and Sharing Regulations shall be recovered from the concerned DICs through Bill 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.



99. To summarise:

a) The revised Annual Fixed Charges (AFC) allowed in respect of the transmission assets for 2001-04 tariff periods are as follows:

(₹ in lakh) Assets	2001-02	2002-03	2003-04
400 kV Gandhar-Padghe S/C line	1904.03	1542.61	1506.08
400 kV Gandhar Gandhar S/C line	92.74	77.63	77.87
220 kV Gandhar-Bharuch D/C line and 400 kV Gandhar-Dehgam D/C line	1923.35	1749.87	1660.37

b) The revised AFC allowed in respect of the transmission assets for 2004-09 tariff periods are as follows:

Assets	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
400 kV Gandhar-Padghe S/C line	1176.11	1168.82	1161.94	1154.86	1148.52
400 kV Gandhar Gandhar S/C line	58.47	57.79	57.13	56.46	55.82
220 kV Gandhar-Bharuch D/C line and 400 kV Gandhar-Dehgam D/C line	1548.65	1553.63	1559.32	1565.03	1459.34

c) The revised AFC allowed in respect of the transmission assets for 2009-14 tariff periods are as follows:

Assets	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Asset-I	1764.07	1783.84	1367.54	1378.57	1401.60
Asset-II	1834.23	1887.57	1909.96	1939.29	1984.22

d) The trued-up AFC allowed in respect of the transmission assets for 2014-19 tariff period are as follows:

Assets	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	1385.64	1397.03	1403.81	1410.66	1420.52
Asset-II	1942.19	1965.52	1983.63	2002.34	2024.88



e) AFC 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
AFC	3330.61	3350.25	3380.33	3429.22	3576.72

100. This order disposes of Petition No. 467/TT/2020 in terms of the above discussions and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I.S. Jha)
Member

sd/-
(P. K. Pujari)
Chairperson

