

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 166/TT/2022

Coram:

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

Date of Order: 06.02.2023

In the matter of:

Petition under Section 62(1)(c) of the Electricity Act, 2003 for determination of Wheeling Charges in respect of Transmission System of Odisha Power Transmission Corporation Limited comprising the 220 kV D/C Rourkela-Tarkera-Budhipadar-Korba (Odisha portion) Line and associated Sub-station Bays for 2019-24 tariff period for transmission of surplus power from NTPC Power Stations in Eastern Region (ER) to Western Region (WR).

And in the matter of:

Odisha Power Transmission Corporation Limited (OPTCL),
Janpath, Bhubaneswar - 751022, Odisha.

.... Petitioner

Vs.

1. Power Grid Corporation of India Limited (PGCIL),
Soudamini, Plot No. 02,
Sector-29, Gurgaon-122001.
2. Madhya Pradesh Power Management Company Limited (MPPMCL),
Block No. 11, Ground Floor,
Shakti Bhawan, Rampur, Jabalpur-482008.
3. Gujarat Urja Vikas Nigam Limited (GUVNL),
Sardar Patel Vidyut Bhawan,
Race Course, Vadodara-390007.
4. Chhattisgarh State Power Distribution Company Limited (CSPDCL),
Vidut Sewa Bhawan, Ground Floor,
Danganiya, Raipur, Chhattisgarh-492013.
5. Maharashtra State Electricity Distribution Company Limited, (MSEDCL),
5th Floor, Prakashgad, Plot No. G-9, Bandra,
East Mumbai, Maharashtra-400051.



6. Government of Goa, Electricity Department, Division-II, Panaji, Goa.
7. Administration of Daman & Diu, Electricity Department, Power House Building (2nd Floor), Daman-396210.
8. Administration of Dadra and Nagar Haveli, Electricity Department, Silvassa-396230. **...Respondent(s)**

For Petitioner : Shri R.K. Mehta, Advocate, OPTCL
Ms. Himanshi Andley, Advocate, OPTCL

For Respondents : None

ORDER

The Petitioner, Odisha Power Transmission Corporation Limited, Bhubaneswar, a Government Company incorporated under the Companies Act, 1956 has filed the instant petition seeking approval of wheeling charges in respect of Transmission System of OPTCL comprising the 220 kV D/C Rourkela Tarkera-Budhipadar-Korba (Odisha Portion) Line and associated sub-station bays (hereinafter referred to as “the transmission asset”) for the period from 1.4.2019 to 31.3.2024 for transmission of surplus power from NTPC power stations in Eastern Region (ER) to Western Region (WR) based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, (hereinafter referred to as “the 2019 Tariff Regulations”).

2. The Commission vide order dated 26.6.2018 in Petition No. 135/TT/2017 approved the wheeling charges for the four transmission assets under the transmission system and they are - Asset-1: 220 kV Rourkela-Tarkera D/C line including two incoming bays at Tarkera; Asset-2: 220 kV D/C Tarkera-Budhipadar line including two outgoing bays; Asset-3: 2 numbers 220 kV D/C incoming and 2



numbers outgoing bays at Budhipadar Sub-station; and Asset-4: 220 kV D/C Budhipadar-Korba line (Odisha portion) for 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”). The Petitioner has combined these four assets into one transmission asset in the instant petition.

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

“(i) Determine the Wheeling Charges / Transmission Charges in respect of Transmission System of Odisha Power Transmission Corporation Limited (OPTCL) comprising the 220 kV D/C Rourkela-Tarkera-Budhipadar-Korba (Odisha portion) Line and associated Sub-Station Bays for the Tariff Block Period 2019-24 (01.04.2019 to 31.03.2024) for transmission of power from Eastern Region (ER) to Western Region (WR);

(ii) Direct the CTU (PGCIL) to include the Tariff so determined in respect of the above mentioned Transmission Assets in the PoC computation in terms of CERC Regulations, 2010 and disburse the same to OPTCL after collecting from DICs;

(iii) Pass such other order/s, as this Hon’ble Commission deems fit and proper in the facts and circumstances of the case.”

Background

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

(a) The Petitioner is carrying on the business of transmission of electricity as a State Transmission Utility (STU) within the State of Odisha. It commenced the business on 31.3.2005 pursuant to the Transfer Scheme entitled ‘Orissa Electricity Reforms (Transfer of Transmission and Related Activities) Scheme, 2005 by virtue of which the erstwhile transmission business of GRIDCO, with all assets and liabilities, was transferred to the Petitioner with effect from 1.4.2005 by Government Notification No. 6892 dated 9.6.2005. Under Clause 10 of the said scheme, the Petitioner was notified as the STU under Section 39(1) of the Electricity Act, 2003 with effect from 1.4.2005 (i.e. the date on which the said Notification came into force).



- (b) The surplus power from NTPC power stations in Eastern Region (ER) to the constituents of Western Region (WR) is transmitted through the transmission system of the Petitioner comprising of 220 kV D/C Rourkela-Tarkera-Budhipadar-Korba (Odisha Portion) line and associated eight number Sub-station bays with effect from May, 1997.
- (c) The wheeling charges for the 2009-14 tariff period was approved vide order dated 29.5.2015 in Petition No. 185/TT/2013.
- (d) The Commission vide order dated 26.6.2018 in Petition No. 135/TT/2017 has approved the annual wheeling charges for 2014-19 tariff period.
- (e) The scope of the work under the transmission system is as follows:

A. Transmission Lines:

- (a) 220 kV Rourkela-Tarkera D/C line (15.34 km)
- (b) 220 kV Tarkera-Budhipadar (110.21 km) D/C line including two outgoing bays at Tarkera
- (c) 220 kV Budhipadar-Korba (Odisha Portion-60 km) D/C line

B. Sub-station:

- (d) 4 numbers of bays (2 numbers incoming and 2 numbers outgoing) bays at Budhipadar

5. The Respondents are distribution licensees, power departments and transmission licensees, which are procuring transmission services from the Petitioner, mainly beneficiaries of Eastern Region (ER) to Western Region (WR).

6. 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. Madhya Pradesh Power Management Company Limited (MPPMCL), Respondent No. 2, has filed its reply vide affidavit dated 2.11.2022. The Petitioner has not submitted any rejoinder to the reply of MPPMCL.

7. The hearing in this matter was held on 24.11.2022 and the order in the matter was reserved.

8. Having heard the representatives of the Petitioner and after perusal of the materials on record, we proceed to dispose of the petition.

9. MPPMCL has submitted in its reply that the wheeling charges/ transmission charges in respect of the transmission asset should be allowed after prudence check. We have considered the submissions of MPPMCL. The wheeling charges are approved for the transmission asset in accordance with the 2019 Tariff Regulations.

10. As per Regulation 12 of the 2019 Tariff Regulations.....

“12. Truing up of tariff for the period 2014-19: The tariff of the generating stations and the transmission systems for the period 2014-19 shall be trued up in accordance with the provisions of Regulation 8 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 along with the tariff petition for the period 2019-24. The capital cost admitted as on 31.3.2019 based on the truing up shall form the basis of the opening capital cost as on 1.4.2019 for the tariff determination for the period 2019-24.”

11. The Commission in order dated 26.6.2018 in Petition No. 135/TT/2017 observed as follows:

“17. The petitioner is however directed to submit the effective tax rates along with the tax audit report for the period 2014-19 at the time of revision of tariff based on truing up in terms of Regulation 8 of the 2014 Tariff Regulations.”



12. Further, Regulation 25(3) of the 2014 Tariff Regulations provides as follows:

“(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 2014-15 to 2018-19 on actual gross income of any financial year.....”

13. The Petitioner is required to true up the grossed-up RoE at the end of every year based on actual tax as provided under Regulation 25(3) of the 2014 Tariff Regulations. Further, the Commission in order dated 26.6.2018 in Petition No. 135/TT/2017 directed the Petitioner to submit the effective tax rates along with the tax audit report for the period 2014-19 at the time of revision of tariff. However, it is noticed that the Petitioner has not submitted the information as directed in order dated 26.6.2018 in Petition No.135/TT/2017 and has also not prayed for truing-up of tariff of the 2014-19 tariff period. In line with the above regulations and order dated 26.6.2018 in Petition No.135/TT/2017, we true-up the wheeling charges of the transmission assets for 2014-19 tariff period, approved vide order dated 26.6.2018 in Petition No.135/TT/2017.

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

Capital Cost

14. The Commission, vide order dated 29.5.2015 in Petition No. 185/TT/2013, has considered the following capital cost and Notional Date of Commercial Operation (notional COD) for the purpose of computation for wheeling charges for 2009-14 tariff period for the transmission assets:



(₹ in lakh)		
Assets	Notional COD	Cost as on COD
Asset-1: 220 kV Rourkela-Tarkera D/C line including two incoming bays at Tarkera.	1.4.1994	758.18
Asset-2: 220 kV D/C Tarkera- Budhipadar line including two outgoing bays.	1.4.1994	1705.70
Asset-3: 2 numbers 220 kV D/C incoming and 2 numbers outgoing bays at Budhipadar Sub-station	1.4.1994	800.56
Asset-4: 220 kV D/C Budhipadar-Korba line (Odisha portion).	1.4.1994	720.00
Total		3984.44

15. There was no additional capital expenditure (ACE) in respect of the transmission assets during 2009-14 period. Hence, the capital cost considered as on 31.3.2014 vide order dated 29.5.2015 in Petition No. 185/TT/2013 is considered as opening capital cost as on 1.4.2014 for the purpose of truing up of the wheeling charges of the 2014-19 tariff period.

16. The Petitioner has not claimed any ACE during 2014-19 period.

Debt: Equity Ratio

17. The Commission, vide order dated 29.5.2015 in Petition No. 185/TT/2013 has observed as follows:

“20. The debt-equity considered for fixation of “wheeling charges” for the 2004-09 period was 50:50. The same debt-equity ratio of 50:50 has been considered for computation of “wheeling charges” for the 2009-14 tariff period.”

18. Debt-equity ratio considered for fixation of “wheeling charges” for 2009-14 period was 50:50. The same debt-equity ratio of 50:50 has been claimed and considered for computation of “wheeling charges” for the 2014-19 tariff period. The details of the debt: equity ratio as on 1.4.2014 considered for the purpose of truing up of the tariff of 2014-19 tariff period is as follows:



Particulars	Amount (₹ in lakh)	(in %)
Debt	1992.22	50.00
Equity	1992.22	50.00
Total	3984.44	100.00

Depreciation

19. The life of all four assets has been considered as per notional COD as per order dated 22.2.2014 and corrigendum order dated 7.5.2015 in Petition No. 25/TT/2011.

20. In view of above-mentioned orders, depreciation has been considered by spreading the balance depreciable value of the asset over its balance useful life in line with Regulation 27(5) of the 2014 Tariff Regulations. The cumulative depreciation of the transmission assets as on 1.4.2014, has been considered as follows:

Particulars	(₹ in lakh) Cumulative Depreciation as on 1.4.2014
Asset-1	540.98
Asset-2	1175.52
Asset-3	620.97
Asset-4	563.58
Combined Assets (TOTAL)	2901.05

21. The details of trued up depreciation of the transmission assets are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	3984.44	3984.44	3984.44	3984.44	3984.44
ACE	0.00	0.00	0.00	0.00	0.00
Closing Gross block (A+B)	3984.44	3984.44	3984.44	3984.44	3984.44
Average gross block (A+C)/2	3984.44	3984.44	3984.44	3984.44	3984.44
Balance Useful life of the asset (Year)	10	9	8	7	6
Remaining Depreciable Value at the beginning of	684.95	616.45	547.96	479.46	410.97
Depreciation	68.49	68.49	68.49	68.49	68.49



22. Accordingly, depreciation approved vide order dated 26.6.2018 in Petition No. 135/TT/2017 and trued up depreciation in respect of the transmission asset in the instant petition is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 26.6.2018 in Petition No. 135/TT/2017	68.49	68.49	68.49	68.49	68.49
Allowed after true-up in this order	68.49	68.49	68.49	68.49	68.49

Interest on loan

23. Since the loan has already been repaid, IoL component is nil.

Return on Equity (“RoE”)

24. The Commission vide order dated 26.6.2018 in Petition No. 135/TT/2017, has mentioned that the MAT rate applicable during 2013-14 has been considered for the purpose of RoE, which shall be trued up with actual tax rate in accordance with Regulation 25(3) of the 2014 Tariff Regulations.

25. Further, in the said order, the Petitioner was directed to submit the effective tax rates along with the tax audit report for 2014-19 period at the time of revision of tariff based on truing-up in terms of Regulation 8 of the 2014 Tariff Regulations. The Petitioner has not filed the true up petition for 2014-19 tariff period. So, audited financial statement and tax audit reports for 2014-19 period are not available with the Commission.

26. In the absence of audited balance sheets, copies of Income Tax Return, copies of income tax assessment order and tax audit reports, the “effective tax rate” cannot be computed for the purpose of grossing up of RoE for 2014-19 tariff period.



Therefore, the base rate of RoE has been grossed up with the notified MAT rate for the respective years in 2014-19 tariff period for the purpose of truing up. Accordingly, RoE has been computed for the transmission assets as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	1992.22	1992.22	1992.22	1992.22	1992.22
Additions due to ACE	0.00	0.00	0.00	0.00	0.00
Closing Equity (A+B)	1992.22	1992.22	1992.22	1992.22	1992.22
Average Equity (A+C)/2	1992.22	1992.22	1992.22	1992.22	1992.22
Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
MAT rate for the year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-Tax) (in %)	19.610	19.705	19.705	19.705	19.758
Return on Equity (Pre-Tax)	390.67	392.57	392.57	392.57	393.62

27. Accordingly, RoE approved vide order dated 26.6.2018 in Petition No. 135/TT/2017 and trued up RoE in respect of the transmission asset in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 26.6.2018 in Petition No. 135/TT/2017	390.67	390.67	390.67	390.67	390.67
Allowed after true-up in this order	390.67	392.57	392.57	392.57	393.62

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

28. The Petitioner has computed normative O&M Expenses as per Regulation 29(3) of the 2014 Tariff Regulations. Accordingly, the Petitioner’s entitlement to O&M Expenses has been worked out as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
D/C Transmission line (₹ lakh/ckt-km)	0.303	0.313	0.324	0.334	0.346
220 kV bay (₹ lakh/bay)	42.21	43.61	45.06	46.55	48.10



29. The details of O&M Expenses allowed for the transmission assets are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses Allowed	393.90	406.96	420.60	434.38	449.00

30. Accordingly, O&M Expenses approved vide order dated 26.6.2018 in Petition No. 135/TT/2017 and trued up O&M Expenses in respect of the transmission asset in the instant petition is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 26.6.2018 in Petition No. 135/TT/2017	393.90	406.96	420.60	434.38	449.00
Allowed after true-up in this order	393.90	406.96	420.60	434.38	449.00

Interest on Working Capital (“IWC”)

31. IWC has been worked out as per Regulation 28(1)(c) and Regulation 3(5) of the 2014 Tariff Regulations, which specifies as follows:

“28. Interest on Working Capital

(c)(i) Receivables equivalent to two months of fixed cost;

(i) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and

(ii) Operation and maintenance expenses for one month”

“(5) Bank Rate” means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;”

32. In Petition No. 135/TT/2017, the Petitioner has submitted that it has computed IWC @ 13.50% for 2014-19 tariff period considering the SBI Base Rate as on 1.4.2014 plus 350 basis points.



33. IWC is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of IWC considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The trued up IWC approved is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	59.09	61.04	63.09	65.16	67.35
O&M Expenses	32.83	33.91	35.05	36.20	37.42
Receivables	147.57	150.19	152.59	155.01	157.76
Total	239.48	245.14	250.73	256.36	262.53
Rate of Interest (in %)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	32.33	33.09	33.85	34.61	35.44

34. Accordingly, IWC approved vide order dated 26.6.2018 in Petition No. 135/TT/2017 and trued up IWC in respect of the transmission asset in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 26.6.2018 in Petition No. 135/TT/2017	32.33	33.05	33.80	34.57	35.37
Allowed after true-up in this order	32.33	33.09	33.85	34.61	35.44

Approved Annual Fixed Charges for 2014-19 Tariff Period

35. Accordingly, Annual Fixed Charges (AFC) in respect of the transmission assets after truing-up for 2014-19 tariff period are as follows:

(₹ in lakh)					
Annual Fixed Charges	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	68.49	68.49	68.49	68.49	68.49
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	390.67	392.57	392.57	392.57	393.62
Interest on Working Capital	32.33	33.09	33.85	34.61	35.44
O&M Expenses	393.90	406.96	420.60	434.38	449.00
Total	885.39	901.11	915.51	930.05	946.55



36. Accordingly, Annual Wheeling Charges approved vide order dated 26.6.2018 in Petition No. 135/TT/2017 and trued up 'Annual Wheeling Charges' in respect of the transmission asset in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 26.6.2018 in Petition No. 135/TT/2017	885.40	899.18	913.57	928.11	943.54
Allowed after true-up in this order	885.39	901.11	915.51	930.05	946.55

Annual Transmission Charges for 2019-24 Tariff Period

37. The Petitioner has claimed the following wheeling charges for 2019-24 tariff period:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	68.49	68.49	68.49	68.49	68.52
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	393.62	393.62	393.62	393.62	393.62
Interest on Working Capital	17.88	18.26	18.66	19.07	19.49
O&M Expenses	250.03	258.95	267.92	277.43	287.06
Total wheeling charges	730.02	739.33	748.69	758.61	768.70

38. The Petitioner has claimed the following Interest on Working Capital (IWC) for 2019-24 tariff period:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M for one month	20.84	21.58	22.33	23.12	23.92
Maintenance Spare @15% of the O&M expenditure per annum.	37.50	38.84	40.19	41.61	43.06
Receivable for two months (45 days for 2019-24 period)	90.00	91.15	92.30	93.53	94.77
Total	148.34	151.57	154.82	158.26	161.75
Interest on Working Capital (@ 12.05% for 2019-24 period)	17.88	18.26	18.66	19.07	19.49



Date of Commercial Operation (“COD”)

39. The Commission vide order dated 26.6.2018 in Petition No. 135/TT/2017 has determined the wheeling charges of the transmission asset for 2014-19 tariff period based on the following notional COD:

Sl. No.	Name of the Assets	Notional COD	Cost as on COD (₹ in lakh)
1.	Asset-1: 220 kV Rourkela-Tarkera D/C line (15.34 km) including 2 numbers incoming bays at Tarkera	1.4.1994	758.18
2.	Asset-2: 220 kV D/C Tarkera-Budhipadar line (110.21 km) including 2 numbers outgoing bays	1.4.1994	1705.70
3.	Asset-3: 4 Numbers bays (2 numbers 220 kV D/C incoming and 2 numbers outgoing) bays at Budhipadar Sub-station	1.4.1994	800.56
4.	Asset-4: 220 kV D/C Budhipadar-Korba line (Odisha portion-60 km)	1.4.1994	720.00
Total			3894.44

40. For the purpose of computation of wheeling charges of the transmission asset for 2019-24 period, the same notional COD of 1.4.1994 is being considered.

Capital Cost

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

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;*



- (f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;
- (g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;
- (h) Adjustment of revenue earned by the transmission licensee by using the Asset-before the date of commercial operation;
- (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway.
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;
- (n) Expenditure on account of change in law and force majeure events; and
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

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

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

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



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

- (a) The 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.”

42. The Petitioner has not claimed any ACE in 2014-19 tariff period. Hence, the trued-up capital cost as on 31.3.2019 is being considered as opening capital cost as on 1.4.2019 for the purpose of computation for wheeling charges for 2019-24 period in respect of the transmission asset. Accordingly, the capital cost of ₹3984.44 lakh as on 1.4.2019 and 31.3.2024 has been considered for determination of wheeling charges of the transmission asset.

Debt-Equity Ratio

43. Regulations 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.”

44. The Commission vide order dated 26.6.2018 in Petition No. 135/TT/2017 has observed as follows:



“13. The debt-equity considered for fixation of “wheeling charges” for the 2009-14 period was 50:50. The same debt-equity ratio of 50:50 has been claimed and considered for computation of “wheeling charges” for the 2014-19 tariff period. The details of the debt: equity as on 1.4.2014 considered for the purpose of tariff for the 2014-19 tariff period is as follows: -

(₹ in lakh)		
Particular	Amount	(%)
Debt	1992.22	50.00
Equity	1992.22	50.00
Total	3984.84	100.00

45. Accordingly, the same debt-equity ratio has been applied as on 1.4.2019 and 31.3.2024 while determining wheeling charges of the transmission asset during 2019-24 tariff period.

Depreciation

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

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

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

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

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

Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;

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



Provided also that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

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

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

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-I to these regulations for the 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 upto 31.3.2019 from the gross depreciable value of the assets.

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

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

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

(10) Depreciation of the emission control system of an existing or a new generating station or unit thereof where the date of operation of the emission control system is subsequent to the date of commercial operation of the generating station or unit thereof, shall be computed annually from the date of operation of such emission control system based on straight line method, with salvage value of 10%, over a period of

a) twenty-five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or

b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or



c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life.”

47. Depreciation has been worked out as per Regulation 33 of the 2019 Tariff Regulations. As stated the notional COD of the transmission asset is 1.4.1994. Accordingly, the transmission asset has completed 12 years before 1.4.2019 and thus, depreciation has been calculated annually based on spreading the remaining depreciable value of the asset over remaining useful life of the asset. Accordingly, depreciation has been worked out on the basis of capital expenditure as on 1.4.2019 and the same is as follows:

		(₹ in lakh)				
Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	3984.44	3984.44	3984.44	3984.44	3984.44
B	Addition during the year 2019-24 due to projected ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	3984.44	3984.44	3984.44	3984.44	3984.44
D	Average Gross Block (A+C)/2	3984.44	3984.44	3984.44	3984.44	3984.44
E	Average Gross Block (90% depreciable assets)	3984.44	3984.44	3984.44	3984.44	3984.44
F	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00	0.00
G	Depreciable value (excluding IT equipment and software) (E*90%)	3586.00	3586.00	3586.00	3586.00	3586.00
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	3586.00	3586.00	3586.00	3586.00	3586.00
J	Weighted average rate of Depreciation (WAROD) (in %)	1.72	1.72	1.72	1.72	1.72
K	Balance useful life at the beginning of the year (Year)	5	4	3	2	1
L	Depreciation during the year(D*J)	68.50	68.50	68.50	68.50	68.50
M	Aggregate Cumulative Depreciation at the end of the year	3312.00	3380.50	3449.00	3517.50	3586.00
N	Remaining Aggregate Depreciable Value at the end of the year(I-M)	274.00	205.50	137.00	68.50	0.00

Interest on Loan (“IoL”)

48. Since the loans have already been repaid, IoL component is nil.



Return on Equity (“RoE”)

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

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

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

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

Provided further that:

- i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;*
- ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;*
- iii. in case of a thermal generating station, with effect from 1.4.2020:*
 - a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;*
 - b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:*

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

(3) The return on equity in respect of additional capitalization on account of emission control system shall be computed at the base rate of one year marginal cost of



lending rate (MCLR) of the State Bank of India as on 1st April of the year in which the date of operation (ODe) occurs plus 350 basis point, subject to ceiling of 14%;

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

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

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."



50. The Petitioner has submitted that it is liable to pay income tax at MAT rate specified under the Taxation laws (Amendment) Ordinance, 2019. Further, 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, the 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.

51. 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 for the transmission asset for the 2019-24 tariff period is as follows:

(₹ in lakh)						
Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	1992.22	1992.22	1992.22	1992.22	1992.22
B	Addition due to ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A-B)	1992.22	1992.22	1992.22	1992.22	1992.22
D	Average Equity(A+B)/2	1992.22	1992.22	1992.22	1992.22	1992.22
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50



Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (Pre-tax) (%)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (Pre-tax)	374.18	374.18	374.18	374.18	374.18

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

52. O&M Expenses claimed by the Petitioner for 2019-24 tariff period is as follows:

(₹ in lakh)					
Details	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses claimed	250.03	258.95	267.92	277.43	287.06

53. Regulation 35(3)(a) of the 2019 Tariff Regulations provide as follows:

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



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>Norms for HVDC stations</i>					
<i>HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)</i>	834	864	894	925	958
<i>Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)</i>	1,666	1,725	1,785	1,848	1,913
<i>500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)</i>	2,252	2,331	2,413	2,498	2,586
<i>±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)</i>	2,468	2,555	2,645	2,738	2,834
<i>±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)</i>	1,696	1,756	1,817	1,881	1,947
<i>±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)</i>	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (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.”

54. Regulation 35(3)(a) and Regulation 35(4) of the 2019 Tariff Regulations provide as follows:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (₹ lakh per bay)					
220 kV	22.51	23.30	24.12	24.96	25.84
Norms for AC lines (₹ lakh per km)					
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433

55. O&M Expenses approved for the transmission asset for 2019-24 tariff period are as follows:

		(₹ in lakh)				
Sl. No.	Assets	2019-20	2020-21	2021-22	2022-23	2023-24
Name of the line						
A	220 kV Rourkela-Tarkera D/C line (15.34 km)	5.78	5.99	6.19	6.42	6.64
B	220 kV Tarkera-Budhipadar D/C line (110.21 km)	41.54	43.08	44.52	46.17	47.72
C	220 kV Budhipadar-Korba D/C line (Odisha portion-60 km)	22.62	23.46	24.24	25.14	25.98
Total O&M Expenses of Transmission line		69.95	72.55	74.96	77.74	80.34
Sub-stations						
A	2 numbers of incoming bays at Taker	45.02	46.60	48.24	49.92	51.68
B	2 numbers of incoming bays at Taker	45.02	46.60	48.24	49.92	51.68
C	4 numbers of bays at Budhipadar	90.04	93.20	96.48	99.84	103.36
Total O&M Expenses of Sub-station		180.08	186.40	192.96	199.68	206.72
Total O&M Expenses of line and bays allowed (A+B+C)		250.03	258.95	267.92	277.43	287.06



Interest on Working Capital (“IWC”)

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

“34. Interest on Working Capital: (1) *The working capital shall cover:*

.....

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

(i) *Receivables equivalent to 45 days of annual fixed cost;*

(ii) *Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and*

(iii) *Operation and maintenance expenses, including security expenses for one month.”*

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

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

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

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

(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;”

57. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-24 onwards. The components of the working capital and interest



allowed thereon 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)	20.84	21.58	22.33	23.12	23.92
Working Capital for Maintenance Spares (15% of O&M Expenses)	37.50	38.84	40.19	41.61	43.06
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/ annual transmission charges)	87.33	88.57	89.58	90.79	91.77
Total Working Capital	145.67	148.99	152.09	155.53	158.75
Rate of Interest for working capital (in %)	12.05	11.25	10.50	10.50	10.50
Interest of working capital	17.55	16.76	15.97	16.33	16.67

Annual Fixed Charges for 2019-24 Tariff Period

58. The Annual wheeling charges (Annual Fixed Charges) allowed for the transmission asset for 2019-24 tariff period are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	68.50	68.50	68.50	68.50	68.50
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	374.18	374.18	374.18	374.18	374.18
Interest on Working Capital	17.55	16.76	15.97	16.33	16.67
O&M Expenses	250.03	258.95	267.92	277.43	287.06
Total	710.26	718.39	726.57	736.44	746.41

Sharing of transmission charges

59. The billing, collection and disbursement of the wheeling charges approved in this order for the 2019-24 tariff period for the transmission asset shall be governed by the applicable Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

60. This order disposes of Petition No. 166/TT/2022 in terms of the above findings and discussions.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member

