

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 370/TT/2020

Coram:

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

Date of order: 05.09.2022

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for truing up of transmission tariff of the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff for the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for **Asset-1** at Raigarh Sub-station comprising of 1a) 765 kV D/C Raigarh PS (Kotra)-Raigarh PS (Tamnar) Transmission line alongwith associated bays 1b) 765/400 kV, 1500 MVA, ICT-1 at Raigarh Pooling Station (near Tamnar) along with associated bays, 1c) 765 KV, 240 MVA, Bus reactor at Raigarh Pooling Station (near Tamnar) along with associated bays, 1d) 765/400 kV, 1500 MVA ICT-2 at Raigarh Pooling Station (near Tamnar) along with associated bays, 1e) 765/400 kV, 1500 MVA ICT-3 at Raigarh Pooling Station (near Tamnar) along with associated bays; **Asset 2a:** 765 kV D/C Champa Pooling Station-Raipur Pooling Station Transmission Line alongwith associated bays at Raipur PS only; **Asset 2b:** Bay Extension, at 765 kV Raipur Pooling Station with Line shunt reactor for 765 kV Champa-1 Line Bay-Charged as Bus Reactor; **Asset 3a:** 765 kV S/C Champa Pooling Station-Dharamjaygarh Sub-station Transmission Line & Bays at Dharamjaygarh Sub-station only; **Asset 3b:** Raigarh PS (near Kotra) - Champa PS 765 kV S/C Transmission Line along with associated bays and one number bay at Champa PS for one ckt. of Champa PS - Raipur PS 765 kV D/C Transmission Line; **Asset 3c:** 765/400 kV 1500 MVA ICT-1 along with associated bays at Champa PS; **Asset 3d:** 1500 MVA, 765/400 kV Auto Transformer-2 alongwith associated bays at Champa; **Asset 3e:** 765 kV, 3 x 80 MVA Bus Reactor alongwith associated bays at Champa PS; **Asset 3f:** 400 kV, 80 MVA Bus Reactors alongwith associated bays at Champa PS; **Asset 3g:** 765/400 kV 1500 MVA ICT-3 & ICT4 along with associated bays at Champa PS; **Asset 3h:** 765/400 kV 1500 MVA ICT-5 along with associated bays at Champa PS; **Asset 3i:** 765/400 kV 1500 MVA ICT-6 along with associated bays at Champa PS; **Asset 3j:** one number 765 kV Dharamjaygarh line bay for 765 kV S/C Champa PS - Dharamjaygarh Sub-station



Transmission Line at 765/400 kV Champa PS; and **Asset 3k**: One number 765 kV bay at Champa for one ckt. of Champa PS - Raipur PS 765 kV D/C Transmission Line under “Establishment of pooling stations at Champa and Raigarh (near Tamnar) for IPP Generation projects in Chattisgarh (IPP-B)” in the Western Region.

And in the matter of:

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

.....Petitioner

Vs

1. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Rampur,
Jabalpur-482008.
2. Madhya Pradesh Power Transmission Company Limited,
Shakti Bhawan, Rampur,
Jabalpur-482008.
3. Madhya Pradesh Audyogik Kendra,
Vikas Nigam (Indore) Limited,
3/54, Press Complex, Agra-Bombay Road,
Indore-452008.
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-400051.
6. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan,
Race Course Road,
Vadodara-390007.
7. Electricity Department,
Government of Goa, Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa-403001.
8. Electricity Department,



Administration of Daman & Diu,
Daman-396210.

9. Electricity Department,
Administration of Dadra Nagra Haveli,
U.T. Silvassa-396230.

10. Chhattisgarh State Power Transmission Company Limited,
Office of the Executive Director (C&P),
State Load Despatch Building, Dangania,
Raipur – 492013.

11. Chhattisgarh State Power Distribution Company Limited,
P.O. Sunder Nagar, Dangania,
Raipur, Chhattisgarh.

...Respondent(s)

For Petitioner: Shri S.S. Raju, PGCIL
Shri D.K.Biswal, PGCIL
Shri V. P. Rastogi, PGCIL
Shri Amit Yadav, PGCIL

For Respondent: Shri Anindya Khare, MPPMCL

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, a deemed transmission licensee, for truing up of transmission tariff for the 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 determination of tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) for the 2019-24 tariff period in respect of the following “transmission assets” under “Establishment of Pooling Stations at Champa and Raigarh (near Tamnar) for IPP Generation projects in Chattisgarh (IPP-B)” in the Western Region (“the transmission project”):



- i. **Asset-1** 1a) 765 kV D/C Raigarh PS (Kotra)-Raigarh PS (Tamnar) Transmission line alongwith associated bays 1b) 765/400 kV, 1500 MVA, ICT-1 at Raigarh Pooling Station (near Tamnar) along with associated bays, 1c) 765 kV, 240 MVA, Bus reactor at Raigarh pooling station (near Tamnar) along with associated bays, 1d) 765/400 kV, 1500 MVA ICT-2 at Raigarh Pooling Station (near Tamnar) along with associated bays, 1e) 765/400 kV, 1500 MVA ICT-3 at Raigarh Pooling Station (near Tamnar) along with associated bays;
- ii. **Asset 2a:** 765 kV D/C Champa Pooling Station-Raipur Pooling Station Transmission Line alongwith associated bays at Raipur Pooling Station only;
- iii. **Asset 2b:** Bay Extension at 765 kV Raipur Pooling Station with Line shunt reactor for 765 kV Champa-1 Line Bay-Charged as Bus Reactor;
- iv. **Asset 3a:** 765 kV S/C Champa Pooling Station-Dharamjaygarh Sub-staiton Transmission Line & Bays at Dharamjaygarh Sub-station only;
- v. **Asset 3b:**Raigarh PS (near Kotra) - Champa PS 765 kV S/C Transmission Line along with associated bays & one number bay at Champa PS for One ckt. of Champa PS - Raipur PS 765 kV D/C Transmission Line;
- vi. **Asset 3c:** 765/400 kV 1500 MVA ICT-1 along with associated bays at Champa PS;
- vii. **Asset 3d:** 1500 MVA, 765/400 kV Auto Transformer-2 alongwith associated bays at Champa;
- viii. **Asset 3e:** 765 kV, 3 x 80 MVA Bus Reactor alongwith associated bays at Champa PS;
- ix. **Asset 3f:** 400 kV, 80 MVA Bus Reactors alongwith associated bays at Champa PS;
- x. **Asset 3g:** 765/400 kV 1500 MVA ICT-3 & ICT4 along with associated bays at Champa PS;
- xi. **Asset 3h:** 765/400 kV 1500 MVA ICT-5 along with associated bays at Champa PS;
- xii. **Asset 3i:** 765/400 kV 1500 MVA ICT-6 along with associated bays at Champa PS;
- xiii. **Asset 3j:** one number 765 kV Dharamjaygarh line bay for 765 kV S/C Champa PS –Dharamjaygarh Sub-station Transmission Line at 765/400 kV Champa PS; and
- xiv. **Asset 3k:** One number 765 kV bay at Champa for one ckt. of Champa Pooling Station - Raipur PS 765 kV D/C Transmission Line.

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

- “1) Allow the addcap for 2014-19 and 2019-24 tariff block as claimed.
- 2) Allow Additional ROE of 0.5% for Assets 2a,2b and 3a in true up of 2014-19 block as approved in order dated 15.02.2016 in petition No :45/TT/2014 & order dated 31.05.2016 in petition No : 260/TT/2015
- 3) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff



for 2019-24 block for the assets covered under this petition.

- 4) 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 Hon'ble Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019.
- 5) 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.
- 6) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the beneficiaries in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.
- 7) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the beneficiaries.
- 8) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 10.7 above.
- 9) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.
- 10) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the beneficiaries, if GST on transmission is withdrawn from negative list at any time in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

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

Background

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

- a. The Investment Approval (IA) for the transmission scheme was accorded by Board of Directors (BoD) of the Petitioner company vide Memorandum No. C/CP/Chhattisgarh-IPP dated 31.5.2011 at an estimated cost of ₹196187 lakh, including Interest During Construction (IDC) of ₹12572 lakh (based on 4th Quarter, 2010 price level). Subsequently, Revised Cost Estimate (RCE) of the project was approved by BoD on 11.3.2016 at an estimated cost of ₹231058 lakh including



IDC of ₹16500 lakh (based on December, 2015 price level). The scope of project broadly includes:-

Transmission Lines:

- 1) Champa Pooling Station-Raipur Pooling Station 765 kV D/C line : 150 km
- 2) Raigarh Pooling Station (near Kotra)-Raigarh Pooling Station (near Tamnar 765 kV D/C line : 50 km
- 3) Champa Pooling Station-Dharamjaygarh/near Korba Switching Station 765 kV D/C line : 50 km
- 4) Raigarh Pooling Station (near Kotra)-Champa Pooling Station 765 kV S/C line: 105 km

Sub-stations:

- 1) Establishment of 765/400 kV, 6x1500 MVA Champa Pooling Station
- 2) Establishment of 765/400 kV, 3x1500 MVA Raigarh Pooling Station (near Tamnar)
- 3) Bay extensions at 765/400 kV Raigarh Pooling Station (near Kotra), 765 kV Raipur Pooling Station and Dharamjaygarh Pooling Station

b. As per the IA, the transmission scheme was scheduled to be put into commercial operation within 36 months from the date of IA. Accordingly, the scheduled date of commercial operation (SCOD) was 1.6.2014.

c. The details of date of commercial operation (COD) for the transmission assets and the earlier petitions in which the transmission assets were covered are as follows:

Nomenclature of the asset in the instant petition		COD	Order No.	Nomenclature of the asset in the previous petition
Asset-1a	Asset-1	1.11.2013	Order dated 11.9.2017 in Petition No. 96/TT/2017	Asset-A1
Asset-1b		1.12.2013		Asset-A2(a)
Asset-1c		1.12.2013		Asset-A2(b)
Asset-1d		1.3.2014		Asset-B1



Asset-1e		1.11.2013		Asset-B2
Asset-2a		24.5.2014	Order dated 15.2.2016 in Petition No. 45/TT/2014	Asset-1(a)
Asset-2b		26.5.2014		Asset-1(b)
Asset-3a		24.5.2014	Order dated 31.5.2016 in Petition No. 260/TT/2015	Asset-1
Asset-3b		31.5.2015		Asset-2
Asset-3c		13.6.2015		Asset-3
Asset-3d		26.3.2016		Asset-4A
Asset-3e		26.3.2016		Asset-4B
Asset-3f		27.3.2016		Asset-5
Asset-3g		19.12.2016		Asset-6A*
Asset-3h		2.10.2016		Asset-6B*
Asset-3i		2.10.2016		
Asset-3j		25.12.2016		
Asset-3k		25.12.2016		

* The Commission vide order dated 31.5.2016 in Petition No. 260/TT/2015 approved the COD of Asset-6A and Asset-6B as 15.6.2016 on anticipated basis. However, the Petitioner in the instant true-up petition has bifurcated the Asset-6A and Asset-6B into five assets viz. Asset-3g, Asset-3h, Asset-3i, Asset-3j and Asset-3k. The Petitioner has claimed tariff on the basis of the actual COD of Asset-3g to Asset-3k.

d. The complete scope of the transmission scheme as per I.A. is covered in the instant petition. The subject assets have been collectively referred to as "the transmission assets" for 2014-19 tariff period. The transmission assets have been combined as on 1.4.2019 and have been collectively referred to as "Combined Asset" in the 2019-24 tariff period.

e. The tariff for the 2014-19 tariff period for Combined Asset-A was determined vide order dated 11.9.2017 in Petition No. 96/TT/2017; for Asset-2a and Asset-2b vide order dated 15.2.2016 in Petition No. 45/TT/2014; and for Asset-3a to Asset-3k vide order dated 31.5.2016 in Petition No. 260/TT/2015.



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

5. The Petitioner has served the petition on the Respondents and notice of this petition has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003. No comments/ objections have been received from the general public in response to the aforesaid notice published in the newspaper by the Petitioner. M.P. Power Management Co. Ltd. (MPPMCL), Respondent No. 1, *vide* affidavit dated 28.5.2020 has filed its reply and has raised the issues of grossing up of RoE, Initial Spares and effect of CGST. The Petitioner *vide* affidavit dated 1.7.2021 has filed its rejoinder to the reply of MPPMCL. The issues raised by MPPMCL and the clarifications given by the Petitioner are considered in the relevant portions of this order.

6. This order is issued considering the submissions made by the Petitioner *vide* affidavits dated 26.11.2020 and 2.7.2021; MPPMCL's reply *vide* affidavit dated 28.5.2020 and Petitioner's rejoinder to the reply filed by MPPMCL *vide* affidavit dated 1.7.2021.

7. It is observed that MPPMCL has been raising the issue of grossing up of RoE in the instant petition and other petitions earlier. The contentions of MPPMCL on the issue of RoE have already been considered and rejected by the Commission *vide* its orders dated 2.2.2021 and 21.9.2021 in Petition Nos. 312/TT/2020 and 326/TT/2020 respectively. As MPPMCL has not challenged the findings, the same have attained finality. Accordingly, the objections regarding RoE raised by MPPMCL are not being



considered in the instant order. Other issues raised by MPPMCL and clarifications thereto given by the Petitioner have been dealt in the relevant paragraphs of this order.

8. The hearing in this matter was held on 6.7.2021 through video conference and the order was reserved. Having heard the representatives of the Petitioner and the Respondent and after perusal of the materials on record, we proceed to dispose of the petition.

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

9. The details of the transmission charges claimed by the Petitioner in respect of the transmission assets for the 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	Asset-1				
	2014-15 (pro-rata 135 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	2528.71	2640.29	2673.59	2699.47	2717.83
Interest on Loan	2557.33	2487.78	2305.35	2091.73	1890.89
Return on Equity	2958.11	3118.11	3157.67	3188.80	3220.36
Interest on Working Capital	235.28	241.59	240.79	238.96	237.32
O&M Expenses	907.22	937.30	968.44	1000.60	1033.79
Total	9186.65	9425.07	9345.84	9219.56	9100.19

(₹ in lakh)

Particulars	Asset-2a				
	2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	2933.92	3588.71	3625.16	3636.86	3637.44
Interest on Loan	3153.80	3585.40	3299.05	2962.85	2640.89
Return on Equity	3385.11	4160.42	4201.66	4216.12	4227.98
Interest on Working Capital	229.51	274.76	270.41	263.75	257.12
O&M Expenses	207.60	250.89	259.17	267.83	276.73
Total	9909.94	11860.18	11655.45	11347.41	11040.16



(₹ in lakh)

Particulars	Asset-2b				
	2014-15 (Pro-rata 310 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	146.12	178.01	184.40	190.74	191.02
Interest on Loan	168.94	191.57	181.91	169.49	153.53
Return on Equity	172.26	211.81	219.47	226.96	227.89
Interest on Working Capital	15.18	18.20	18.46	18.66	18.49
O&M Expenses	71.70	87.22	90.12	93.11	96.20
Total	574.20	686.81	694.36	698.96	687.13

(₹ in lakh)

Particulars	Asset-3a				
	2014-15 (Pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	552.40	682.61	695.04	700.44	700.75
Interest on Loan	528.07	611.25	568.47	513.11	455.43
Return on Equity	633.81	787.62	801.64	807.87	810.37
Interest on Working Capital	45.10	54.73	54.58	53.81	52.79
O&M Expenses	102.12	123.48	127.54	131.80	136.16
Total	1861.50	2259.69	2247.27	2207.03	2155.50

(₹ in lakh)

Particulars	Asset-3b			
	2015-16 (pro-rata 306 days)	2016-17	2017-18	2018-19
Depreciation	802.19	1060.37	1169.61	1223.11
Interest on Loan	620.17	808.70	869.12	873.89
Return on Equity	1037.78	1358.22	1502.77	1586.18
Interest on Working Capital	71.50	92.66	100.51	104.40
O&M Expenses	269.21	332.63	343.71	355.10
Total	2800.85	3652.58	3985.72	4142.68

(₹ in lakh)

Particulars	Asset-3c			
	2015-16 (pro-rata 293 days)	2016-17	2017-18	2018-19
Depreciation	167.26	326.74	384.18	384.18
Interest on Loan	190.62	337.42	359.78	326.26
Return on Equity	189.00	368.58	433.55	434.71

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Particulars	Asset-3c			
	2015-16 (pro-rata 293 days)	2016-17	2017-18	2018-19
Interest on Working Capital	19.20	32.31	35.92	35.47
O&M Expenses	119.69	154.49	159.62	164.91
Total	685.77	1219.54	1373.05	1345.53

(₹ in lakh)

Particulars	Asset-3d			
	2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
Depreciation	2.16	159.75	194.02	215.39
Interest on Loan	1.65	126.35	156.13	176.24
Return on Equity	2.49	184.36	228.76	267.32
Interest on Working Capital	0.28	19.36	22.14	24.28
O&M Expenses	2.45	154.49	159.62	164.91
Total	9.03	644.31	760.67	848.14

(₹ in lakh)

Particulars	Asset-3e			
	2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
Depreciation	2.84	199.96	226.43	240.34
Interest on Loan	3.58	234.47	235.59	229.14
Return on Equity	3.37	235.53	265.79	282.63
O&M Expenses	1.43	90.12	93.11	96.20
Interest on Working Capital	0.30	20.40	21.90	22.63
Total	11.52	780.48	842.82	870.94

(₹ in lakh)

Particulars	Asset-3f			
	2015-16 (pro-rata- 5 days)	2016-17	2017-18	2018-19
Depreciation	0.99	76.63	82.39	84.95
Interest on Loan	1.26	93.38	93.94	90.50
Return on Equity	1.17	91.09	100.08	104.50
O&M Expenses	0.85	64.37	66.51	68.71
Interest on Working Capital	0.13	9.57	10.04	10.24
Total	4.40	335.04	352.96	358.90



(₹ in lakh)

Particulars	Asset-3g		
	2016-17 (pro-rata 103 days)	2017-18	2018-19
Depreciation	144.67	565.77	602.06
Interest on Loan	164.83	607.31	596.48
Return on Equity	167.64	655.71	701.19
O&M Expenses	87.19	319.24	329.82
Interest on Working Capital	14.96	56.57	58.67
Total	579.29	2204.60	2288.22

(₹ in lakh)

Particulars	Asset-3h		
	2016-17 (pro-rata 181 days)	2017-18	2018-19
Depreciation	168.55	354.67	356.29
Interest on Loan	197.48	391.27	362.19
Return on Equity	192.75	405.65	409.10
O&M Expenses	76.61	159.62	164.91
Interest on Working Capital	16.19	33.45	33.21
Total	651.58	1344.66	1325.70

(₹ in lakh)

Particulars	Asset-3i		
	2016-17 (pro-rata 181 days)	2017-18	2018-19
Depreciation	200.98	428.09	445.40
Interest on Loan	185.37	376.75	369.67
Return on Equity	231.88	494.67	521.68
O&M Expenses	76.61	159.62	164.91
Interest on Working Capital	17.49	36.68	37.77
Total	712.33	1495.81	1539.43

(₹ in lakh)

Particulars	Asset-3j		
	2016-17 (pro-rata 97 days)	2017-18	2018-19
Depreciation	19.72	77.79	80.17
Interest on Loan	22.47	83.85	79.44
Return on Equity	22.57	89.02	91.93
O&M Expenses	47.90	186.22	192.40
Interest on Working Capital	3.92	15.21	15.55
Total	116.58	452.09	459.49



(₹ in lakh)

Particulars	Asset-3k		
	2016-17 (pro-rata 97 days)	2017-18	2018-19
Depreciation	27.36	106.56	107.23
Interest on Loan	31.43	116.73	108.67
Return on Equity	32.65	127.15	128.26
O&M Expenses	47.90	186.22	192.40
Interest on Working Capital	4.50	17.38	17.57
Total	143.84	554.04	554.13

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

(₹ in lakh)

Particulars	Asset-1				
	2014-15 (pro-rata 135 days)	2015-16	2016-17	2017-18	2018-19
WC for O&M Expenses (O&M Expenses for 1 month)	75.60	78.11	80.70	83.38	86.15
WC for Maintenance Spares (15% of O&M Expenses)	136.08	140.60	145.27	150.09	155.07
WC for Receivables (Equivalent to 2 months of annual fixed cost)	1531.11	1570.85	1557.64	1536.59	1516.70
Total Working Capital	1742.79	1789.56	1783.61	1770.06	1757.92
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	235.28	241.59	240.79	238.96	237.32

(₹ in lakh)

Particulars	Asset-2a				
	2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
WC for O&M Expenses (O&M Expenses for 1 month)	20.24	20.91	21.60	22.32	23.06
WC for Maintenance Spares (15% of O&M Expenses)	36.43	37.63	38.88	40.17	41.51
WC for Receivables (Equivalent to 2 months of annual fixed cost)	1932.23	1976.70	1942.58	1891.24	1840.03
Total Working Capital	1988.90	2035.24	2003.60	1953.73	1904.60
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50



Particulars	Asset-2a				
	2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
Interest on Working Capital	229.51	274.76	270.41	263.75	257.12

(₹ in lakh)

Particulars	Asset-2b				
	2014-15 (Pro-rata 310 days)	2015-16	2016-17	2017-18	2018-19
WC for O&M Expenses (O&M Expenses for 1 month)	7.04	7.27	7.51	7.76	8.02
WC for Maintenance Spares (15% of O&M Expenses)	12.66	13.08	13.52	13.97	14.43
WC for Receivables (Equivalent to 2 months of annual fixed cost)	112.68	114.47	115.73	116.49	114.52
Total Working Capital	132.38	134.82	136.76	138.22	136.97
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	15.18	18.20	18.46	18.66	18.49

(₹ in lakh)

Particulars	Asset-3a				
	2014-15 (Pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
WC for O&M Expenses (O&M Expenses for 1 month)	9.96	10.29	10.63	10.98	11.35
WC for Maintenance Spares (15% of O&M Expenses)	17.92	18.52	19.13	19.77	20.42
WC for Receivables (Equivalent to 2 months of annual fixed cost)	362.95	376.62	374.55	367.84	359.25
Total Working Capital	390.83	405.43	404.31	398.59	391.02
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	45.10	54.73	54.58	53.81	52.79

(₹ in lakh)

Particulars	Asset-3b			
	2015-16 (pro-rata 306 days)	2016-17	2017-18	2018-19
WC for O&M Expenses (O&M Expenses for 1 month)	26.83	27.72	28.64	29.59
WC for Maintenance Spares (15% of O&M Expenses)	48.30	49.89	51.56	53.27

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Particulars	Asset-3b			
	2015-16 (pro-rata 306 days)	2016-17	2017-18	2018-19
WC for Receivables (Equivalent to 2 months of annual fixed cost)	558.34	608.76	664.29	690.45
Total Working Capital	633.47	686.37	744.49	773.31
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest on Working Capital	71.50	92.66	100.51	104.40

(₹ in lakh)

Particulars	Asset-3c			
	2015-16 (pro-rata 293 days)	2016-17	2017-18	2018-19
WC for O&M Expenses (O&M Expenses for 1 month)	12.46	12.87	13.30	13.74
WC for Maintenance Spares (15% of O&M Expenses)	22.43	23.17	23.94	24.74
WC for Receivables (Equivalent to 2 months of annual fixed cost)	142.77	203.26	228.84	224.25
Total Working Capital	177.66	239.30	266.08	262.73
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest on Working Capital	19.20	32.31	35.92	35.47

(₹ in lakh)

Particulars	Asset-3d			
	2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
WC for O&M Expenses (O&M Expenses for 1 month)	12.46	12.87	13.30	13.74
WC for Maintenance Spares (15% of O&M Expenses)	22.43	23.17	23.94	24.74
WC for Receivables (Equivalent to 2 months of annual fixed cost)	91.82	107.39	126.78	141.36
Total Working Capital	126.71	143.43	164.02	179.84
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest on Working Capital	0.28	19.36	22.14	24.28



(₹ in lakh)

Particulars	Asset-3e			
	2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
WC for O&M Expenses (O&M Expenses for 1 month)	7.27	7.51	7.76	8.02
WC for Maintenance Spares (15% of O&M Expenses)	13.08	13.52	13.97	14.43
WC for Receivables (Equivalent to 2 months of annual fixed cost)	117.16	130.08	140.47	145.16
Total Working Capital	137.51	151.11	162.20	167.61
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest on Working Capital	0.30	20.40	21.90	22.63

(₹ in lakh)

Particulars	Asset-3f			
	2015-16 (pro-rata- 5 days)	2016-17	2017-18	2018-19
WC for O&M Expenses (O&M Expenses for 1 month)	5.19	5.36	5.54	5.73
WC for Maintenance Spares (15% of O&M Expenses)	9.35	9.66	9.98	10.31
WC for Receivables (Equivalent to 2 months of annual fixed cost)	53.64	55.84	58.83	59.82
Total Working Capital	68.18	70.86	74.35	75.86
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest on Working Capital	0.13	9.57	10.04	10.24

(₹ in lakh)

Particulars	Asset-3g		
	2016-17 (pro-rata 103 days)	2017-18	2018-19
WC for O&M Expenses (O&M Expenses for 1 month)	25.75	26.60	27.49
WC for Maintenance Spares (15% of O&M Expenses)	46.35	47.89	49.47
WC for Receivables (Equivalent to 2 months of annual fixed cost)	342.14	367.43	381.37
Total Working Capital	414.24	441.92	458.33
Rate of Interest (%)	12.80	12.80	12.80
Interest on Working Capital	14.96	56.57	58.67



(₹ in lakh)

Particulars	Asset-3h		
	2016-17 (pro-rata 181 days)	2017-18	2018-19
WC for O&M Expenses (O&M Expenses for 1 month)	12.87	13.30	13.74
WC for Maintenance Spares (15% of O&M Expenses)	23.17	23.94	24.74
WC for Receivables (Equivalent to 2 months of annual fixed cost)	218.99	224.11	220.95
Total Working Capital	255.03	261.35	259.43
Rate of Interest (%)	12.80	12.80	12.80
Interest on Working Capital	16.19	33.45	33.21

(₹ in lakh)

Particulars	Asset-3i		
	2016-17 (pro-rata 181 days)	2017-18	2018-19
WC for O&M Expenses (O&M Expenses for 1 month)	12.87	13.30	13.74
WC for Maintenance Spares (15% of O&M Expenses)	23.17	23.94	24.74
WC for Receivables (Equivalent to 2 months of annual fixed cost)	239.41	249.30	256.57
Total Working Capital	275.45	286.54	295.05
Rate of Interest (%)	12.80	12.80	12.80
Interest on Working Capital	17.49	36.68	37.77

(₹ in lakh)

Particulars	Asset-3j		
	2016-17 (pro-rata 97 days)	2017-18	2018-19
WC for O&M Expenses (O&M Expenses for 1 month)	15.02	15.52	16.03
WC for Maintenance Spares (15% of O&M Expenses)	27.04	27.93	28.86
WC for Receivables (Equivalent to 2 months of annual fixed cost)	73.11	75.35	76.58
Total Working Capital	115.17	118.80	121.47
Rate of Interest (%)	12.80	12.80	12.80
Interest on Working Capital	3.92	15.21	15.55



(₹ in lakh)

Particulars	Asset-3k		
	2016-17 (pro-rata 97 days)	2017-18	2018-19
WC for O&M Expenses (O&M Expenses for 1 month)	15.02	15.52	16.03
WC for Maintenance Spares (15% of O&M Expenses)	27.04	27.93	28.86
WC for Receivables (Equivalent to 2 months of annual fixed cost)	90.21	92.34	92.36
Total Working Capital	132.27	135.79	137.25
Rate of Interest (%)	12.80	12.80	12.80
Interest on Working Capital	4.50	17.38	17.57

Date of Commercial Operation (COD) in respect of transmission assets:

11. The Commission vide order dated 31.5.2016 in Petition No. 260/TT/2015 approved the COD of Asset-6A and Asset-6B as 15.6.2016 on anticipated basis. The Petitioner in the instant true-up petition has bifurcated Asset-6A and Asset-6B (nomenclature in the order dated 31.5.2016) into five assets viz. Asset-3g, Asset-3h, Asset-3i, Asset-3j and Asset-3k.

12. The Petitioner has claimed actual COD in respect of Asset-3g, Asset-3h, Asset-3i, Asset-3j and Asset-3k as 19.12.2016, 2.10.2016, 2.10.2016, 25.12.2016 and 25.12.2016, respectively and in support of the same, the Petitioner has submitted CEA Energisation Certificates dated 26.9.2016, 16.12.2016, RLDC Charging Certificates dated 14.10.2016, 23.12.2016, 6.1.2017 and COD declaration letters dated 3.10.2016, 20.12.2016 and 25.12.2016.

13. Taking into consideration the CEA Energisation Certificate and RLDC Charging Certificate, COD of Asset-3g, Asset-3h, Asset-3i, Asset-3j, and Asset-3k is approved as 19.12.2016, 2.10.2016, 2.10.2016, 25.12.2016, and 25.12.2016 respectively.



Capital Cost

14. The capital cost of the transmission project has been calculated in accordance with the Regulation 9(3) of the 2014 Tariff Regulations.

15. The details of the capital cost considered as on 1.4.2014/COD and capital cost as on 31.3.2019 admitted vide order dated 11.9.2017 in Petition No. 96/TT/2017 (Asset-1), order dated 15.2.2016 in Petition No. 45/TT/2014 (Assets 2a, 2b) and order dated 31.5.2016 in Petition No. 260/TT/2015 (Assets 3a, 3b, 3c, 3d, 3e, 3f, 3g, 3h, 3i, 3j, 3k) is as follows:

Asset	Apportioned Cost as per RCE	Admitted Capital Cost as on 1.4.2014/ COD	ACE					Admitted Capital Cost as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1**	57433.59	48136.62	3971.38	997.90	227.99	0.00	0.00	53333.89
Asset-2a	72086.59	48032.61	0.00	0.00	0.00	0.00	0.00	48032.61
Asset-2b	3973.34	3214.49	165.32	284.73	103.64	0.00	0.00	3768.18
Asset-3a	14489.67	11395.83	1119.74	861.65	422.89	0.00	0.00	13800.11
Asset-3b	31478.63	20143.10	0.00	6905.42	3414.56	0.00	0.00	30463.08
Asset-3c	7349.64	2847.51	0.00	2099.15	783.97	0.00	0.00	5730.63
Asset-3d	10083.47	2561.61	0.00	2.93	1943.77	0.00	0.00	4508.31
Asset-3e		3472.69	0.00	3.11	1102.68	140.58	0.00	4719.06
Asset-3f	1977.08	1386.79	0.00	3.43	237.56	109.26	0.00	1737.04
Asset-3g	11963.24	26871.78	0.00	0.00	5314.24	0.00	0.00	32186.02
Asset-3h	6934.47							
Asset-3i	9552.27							
Asset-3j	1561.56							
Asset-3k	2174.48							

**Combined Asset comprising of Asset-1a to Asset-1b

16. The Petitioner vide Auditor's Certificate has claimed the following capital cost in respect of the transmission assets for true-up in the 2014-19 tariff period:



(₹ in lakh)

Asset	Apportioned Cost as per FR	Apportioned Cost as per RCE	Capital Cost upto 1.4.2014/ COD	ACE					Capital Cost as on 31.3.2019
				2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1**	52318.10	57433.59	48427.14	3680.87	1010.27	381.53	671.68	103.84	54275.33
Asset-2a	48032.61	72086.59	64391.53	3272.25	964.07	451.83	22.04	0.00	69101.72
Asset-2b	3849.35	3973.34	3294.36	165.32	19.28	235.06	10.55	0.00	3724.57
Asset-3a	11986.97	14489.67	11932.25	828.28	280.10	192.08	11.97	0.00	13244.68
Asset-3b	30659.10	31478.63	20331.63	0.00	1499.16	2290.22	2600.25	77.66	26798.92
Asset-3c	5860.30	7349.64	2953.05	0.00	2182.85	2198.03	0.00	0.00	7333.93
Asset-3d	4626.20	4958.15	2587.47	0.00	2.93	1082.29	394.23	885.84	4952.76
Asset-3e	14774.16	5125.32	3594.17	0.00	3.12	895.22	7.18	537.14	5036.83
Asset-3f	21452.98	1977.08	1485.00	0.00	3.43	143.58	122.04	18.00	1772.05
Asset-3g		11944.47	9956.75	0.00	0.00	561.55	1243.85	134.89	11897.04
Asset-3h		6927.78	6558.50	0.00	0.00	302.42	16.07	49.63	6926.62
Asset-3i		9568.92	7671.86	0.00	0.00	585.54	244.25	599.20	9100.85
Asset-3j		1563.58	1442.80	0.00	0.00	34.96	73.29	0.00	1551.05
Asset-3k		2181.28	2115.60	0.00	0.00	27.95	20.26	0.00	2163.81

**Comprising of Asset-1a to Asset-1b

Time over-run

17. As per the investment approval dated 31.5.2011, the project was scheduled to be put into commercial operation within 36 months from the date of investment approval. Hence, the transmission assets were to be commissioned progressively upto 31.5.2014. The transmission assets were put under commercial operation as per the following details:

S. No.	SCOD	COD	Time overrun	Time Over-run Condoned/Not Condoned
Asset 1	31.5.2014	17.11.2013	None	N/A
Asset 2a		24.5.2014	None	N/A
Asset 2b		26.5.2014	None	N/A
Asset 3a		24.5.2014	None	N/A
Asset 3b		31.5.2015	12 months	Fully condoned
Asset 3c		13.6.2015	12 months & 13 days	
Asset 3d		26.3.2016	21 months & 26 days	



S. No.	SCOD	COD	Time overrun	Time Over-run Condoned/Not Condoned
Asset 3e		26.3.2016		
Asset 3f		27.3.2016	21 months & 27 days	
Asset 3g		19.12.2016*	30 months & 19 days	*Decided in this order on the basis of actual COD
Asset 3h		2.10.2016*	28 months & 2 days	
Asset 3i		2.10.2016*		
Asset 3j		25.12.2016*	30 months & 25 days	
Asset 3k		25.12.2016*		

**Earlier vide order dated 31.5.2016 in Petition No. 260/TT/2015 tariff for Asset-6A and Asset-6B (Assets 3g, 3h, 3i, 3j & 3k in the instant petition) were approved based on the anticipated COD of 15.6.2016 and accordingly, the time over-run of 24 months 15 days was condoned by the Commission. As the Petitioner has claimed the the tariff bifurcating Asset-6A and Asset-6B into Asset-3g to Asset-3k based on the actual COD, therefore, time over-run is decided in this order.*

18. The Petitioner has submitted that Assets-3g to 3k (Asset-6A and 6B in previous Petition) were covered in original Petition No. 260/TT/2015 which was filed on anticipated COD of 15.6.2016 (delay 24 months 15 days w.r.t SCOD 31.5.2014) and the Commission had condoned the entire delay of 24 months and 15 days in Petition No. 260/TT/2015. However, the said transmission assets comprise of 4 numbers ICTS and line bay extensions could not be put under commercial operation together and actually put under commercial operation progressively as per the following details:

Asset	Asset Name	Actual COD	Delay from SCOD
Asset-3g	765/400 kV 1500 MVA ICT-3 along with associated bays at Champa PS	19.12.2016	30 months 18 days
	765/400 kV 1500 MVA ICT-4 along with associated bays at Champa PS		
Asset-3h	765/400 kV 1500 MVA ICT-5 along with associated bays at Champa PS	2.10.2016	28 months 1 day
Asset-3i	765/400 kV 1500 MVA ICT-6 along with associated bays at Champa PS	2.10.2016	28 months 1 day
Asset-3j	One number 765 kV Dharamjaygarh line bay for 765 kV S/C Champa PS - Dharamjaygarh Sub-station T/L at 765/400 kV Champa PS	25.12.2016	30 months 24 days
Asset-3k	One number 765 kV bay at Champa for one ckt. of Champa PS - Raipur PS 765 kV D/C T/L	25.12.2016	30 months 24 days



19. The Petitioner has further submitted that the Commission had taken a view that 36 months delay in land acquisition was not attributable to the Petitioner and accordingly condoned the entire delay based on anticipated COD. The Petitioner has further submitted the actual COD of the assets resulted in a delay of maximum 30 months which is well within 36 months condoned by the Commission on account of land acquisition, which is beyond the control of Petitioner. Thus, the Petitioner has prayed to condone the delay.

20. We have considered the submissions of the Petitioner and perused the documents available on record. Asset-3g, Asset-3h, Asset-3i, Asset-3j, and Asset-3k have been put under commercial operation with effect from 19.12.2016, 2.10.2016, 2.10.2016, 25.12.2016, and 25.12.2016 respectively. Hence, Asset-3g, Asset-3h, Asset-3i, Asset-3j, and Asset-3k were put under commercial operation with a time over-run of 30 months 18 days, 28 months 1 day, 28 months 1 day, 30 months 24 days, and 30 months 24 days respectively. The Petitioner has submitted that the time over-run in case of Asset-3g, Asset-3h, Asset-3i, Asset-3j, and Asset-3k was attributable to land acquisition problem at Champa Sub-station.

21. The Commission vide order dated 31.5.2016 in Petition No. 260/TT/2015 had held as follows:

"21. The Hon'ble Appellate Tribunal for Electricity in its Judgment dated 27.4.2011 in Appeal No.72/2010 has held that the additional cost due to time over-run due to the factors beyond the control of project developer shall be capitalized. As discussed in above, the time over-run of 36 months on account of delay in land acquisition, serious ROW issues and court cases against POWERGRID is beyond the control of the petitioner and it cannot be attributed to the petitioner. As per the judgement of Hon'ble Tribunal, the additional cost due to time over-run not attributable to the petitioner shall be capitalized. Accordingly, the entire time



over-run in all the assets is condoned and accordingly IDC and IEDC for the delay are allowed to be capitalised.”

22. The Commission vide dated 31.5.2016 in Petition No. 260/TT/2015 had already held that 36 months delay in land acquisition for the Sub-station was not attributable to the Petitioner. Therefore, we observe that that the delay of 30 months 18 days, 28 months 1 day, 28 months 1 day, 30 months 24 days, and 30 months 24 days in case of Asset-3g, Asset-3h, Asset-3i, Asset-3j, and Asset-3k, respectively, which were mainly because of the delay in land acquisition, were beyond the control of the petitioner and for the detailed reasons given in the aforesaid order, it is hereby condoned.

Cost over-run

23. The Commission vide order dated 12.5.2016 in Petition No 45/TT/2014 had held as follows:

“18. We have considered the submissions of the petitioner. The cost of Asset-1(a) is restricted to apportioned approved cost of ₹48032.61 lakh. The petitioner vide affidavit dated 15.12.2015 has submitted that the RCE for the project is under approval and shall be submitted after approval of the same. The cost of Asset-1(a) will be reviewed at the time of truing-up, if RCE is submitted by the petitioner.”

24. The Petitioner in the instant petition has submitted the Revised Cost Estimate (RCE) duly approved by the BoD in its 326th meeting held on 9.3.2016. The estimated completion cost of Asset-1, Asset-2a, Asset-2b, Asset-3a, Asset-3b, Asset-3c, Asset-3d, Asset-3e, Asset-3f, Asset-3g, Asset-3h, Asset-3i, Asset-3j and Asset-3k is within the RCE cost. It is further observed that the total project cost as on 31.3.2019 submitted by the Petitioner along with the petition is within the RCE cost.



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

25. The Petitioner has claimed IDC for the following transmission assets covered in the instant petition and has submitted the statement showing IDC claim, discharge of IDC liability as on COD as follows:

(₹ in lakh)

Asset	IDC as per Auditor Certificate	IDC discharged upto COD	IDC discharged during 2014-15	IDC discharged during 2015-16	IDC discharged during 2016-17	IDC discharged during 2017-18
Asset-1	2869.29	2608.67	260.62	0.00	0.00	0.00
Asset-2a	5522.82	3794.14	1726.07	2.61	0.00	0.00
Asset-2b	233.21	153.78	79.43	0.00	0.00	0.00
Asset-3a	848.72	557.26	291.46	0.00	0.00	0.00
Asset-3b	1174.89	986.36	0.00	188.53	0.00	0.00
Asset-3c	275.06	169.52	0.00	105.54	0.00	0.00
Asset-3d	194.61	168.75	0.00	0.00	25.86	0.00
Asset-3e	487.69	366.21	0.00	0.00	121.48	0.00
Asset-3f	124.42	85.73	0.00	0.00	38.69	0.00
Asset-3g	923.75	643.36	0.00	0.00	184.10	96.29
Asset-3h	762.98	507.58	0.00	0.00	241.59	13.81
Asset-3i	632.60	546.79	0.00	0.00	62.83	22.98
Asset-3j	164.46	134.20	0.00	0.00	13.24	17.02
Asset-3k	213.11	116.49	0.00	0.00	91.03	5.59

26. The Petitioner has submitted IDC computation statement which contains name of the loan, drawl date, loan amount, interest rate and interest claimed. IDC is worked out based on the details given in IDC statement. Further, loan amount as on COD has been mentioned in Forms 6 and 9C. On scrutiny of these documents, certain discrepancies have been observed such as mis-match in loan amount between IDC statement and Forms 6 and 9C. The allowable IDC has been worked out based on the information available on record and relying on loan amount as per Form 9C. IDC



considered as on COD and summary of discharge of IDC liability up to COD and thereafter for the purpose of tariff determination is as follows:

(₹ in lakh)

Asset	IDC as per Auditor Certificate	IDC disallowed due to computational difference	IDC Allowed
Asset-1	2869.29	0.00	2869.29
Asset-2a	5522.82	0.00	5522.82
Asset-2b	233.21	0.00	233.21
Asset-3a	848.72	0.00	848.72
Asset-3b	1174.89	0.00	1174.89
Asset-3c	275.06	0.00	275.06
Asset-3d	194.61	0.00	194.61
Asset-3e	487.69	17.09	470.60
Asset-3f	124.42	0.00	124.42
Asset-3g	923.75	14.99	908.76
Asset-3h	762.98	1.11	761.87
Asset-3i	632.60	105.82	526.78
Asset-3j	164.46	0.00	164.46
Asset-3k	213.11	1.11	212.00

27. The discharge details of IDC allowed are as follows:

Asset	IDC allowed in this order	IDC Discharged upto COD	IDC discharged during 2014-15	IDC discharged during 2015-16	IDC discharged during 2016-17	IDC discharged during 2017-18
Asset-1	2869.29	2608.67	260.62	0.00	0.00	0.00
Asset-2a	5522.82	3794.14	1726.07	2.61	0.00	0.00
Asset-2b	233.21	153.34	79.87	0.00	0.00	0.00
Asset-3a	848.72	552.03	296.69	0.00	0.00	0.00
Asset-3b	1174.89	986.36	0.00	188.53	0.00	0.00
Asset-3c	275.06	167.89	0.00	107.17	0.00	0.00
Asset-3d	194.61	168.75	0.00	0.00	25.86	0.00
Asset-3e	470.60	366.21	0.00	0.00	104.39	0.00
Asset-3f	124.42	85.73	0.00	0.00	38.69	0.00
Asset-3g	908.76	630.91	0.00	0.00	184.10	93.75
Asset-3h	761.87	507.58	0.00	0.00	241.59	12.70
Asset-3i	526.78	460.92	0.00	0.00	62.83	3.03
Asset-3j	164.46	134.20	0.00	0.00	13.24	17.02
Asset-3k	212.00	116.24	0.00	0.00	91.03	4.73



28. The Petitioner has claimed IEDC for following transmission assets covered in the instant petition as follows:

(₹ in lakh)

Asset	IEDC as per Auditor Certificate	IEDC Discharged upto COD
Asset-1	500.85	500.85
Asset-2a	796.67	796.67
Asset-2b	26.96	26.96
Asset-3a	139.79	139.79
Asset-3b	272.23	272.23
Asset-3c	99.12	99.12
Asset-3d	86.01	86.01
Asset-3e	230.39	230.39
Asset-3f	46.76	46.76
Asset-3g	429.52	429.52
Asset-3h	269.85	269.85
Asset-3i	327.63	327.63
Asset-3j	59.25	59.25
Asset-3k	89.28	89.28

29. We have considered the submissions of the Petitioner. The IEDC claimed and considered as on the COD and summary of discharge of IEDC liability up to COD for the purpose of tariff determination is as follows:

(₹ in lakh)

Asset	IEDC as per Auditor Certificate	IEDC Allowed
Asset-1	500.85	500.85
Asset-2a	796.67	796.67
Asset-2b	26.96	26.96
Asset-3a	139.79	139.79
Asset-3b	272.23	272.23
Asset-3c	99.12	99.12
Asset-3d	86.01	86.01
Asset-3e	230.39	230.39
Asset-3f	46.76	46.76
Asset-3g	429.52	429.52
Asset-3h	269.85	269.85
Asset-3i	327.63	327.63
Asset-3j	59.25	59.25
Asset-3k	89.28	89.28



Initial Spares

30. Regulation 8 (iv) of the 2009 Tariff Regulations provides that Initial Spares shall be capitalised as a percentage of the original capital cost, subject to the following ceiling norms:

- “(iv) Transmission System
(a) Transmission line: 0.75%
(b) Transmission sub-station: 2.50%
(c) Series Compensation devices and HVDC station: 3.50%”*

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

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

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

(₹ in lakh)

Asset	Particulars	Plant and Machinery Cost (excluding IDC, IEDC, land cost and cost of civil works)	Initial spares as per certificate	Initial spare as percent of capital cost	ceiling % as per regulation	ceiling amount as per regulation	Excess spares claimed
Asset-1a	Sub-station	7826.3	196.93	2.52%	2.50%	195.62	1.31
Asset-1b	Sub-station	3312.94	100.85	3.06%	2.50%	82.36	18.49
Asset-1c	Sub-station	5055.43	132.38	2.62%	2.50%	126.23	6.15
Asset-1d	Sub-station	4845.73	110.92	2.28%	2.50%	121.41	-10.49
Asset-1e	Tranmission Line	22770	173.64	0.76%	0.75%	170.75	2.89
	Sub-station	7738.17	268.99	3.51%	2.50%	191.52	77.47
Asset-2a	Tranmission Line	60364.26	792.83	1.32%	1.00%	601.73	191.1
	Sub-station	2961.35	0	0.00%	4.00%	123.39	-123.39



Asset	Particulars	Plant and Machinery Cost (excluding IDC, IEDC, land cost and cost of civil works)	Initial spares as per certificate	Initial spare as percent of capital cost	ceiling % as per regulation	ceiling amount as per regulation	Excess spares claimed
Asset-3a	Tranmission Line	11895.36	94.73	0.80%	1.00%	119.2	-24.47
	Sub-station	1272.03	39.64	3.09%	4.00%	51.35	-11.71
Asset-3b	Tranmission Line	14236.34	139.17	0.98%	1.00%	142.4	-3.23
	Sub-station	4401.36	137.16	3.09%	4.00%	177.68	-40.52
Asset-3c	Sub-station	6674.1	207.98	3.09%	4.00%	269.42	-61.44
Asset-3d	Sub-station	2973.67	92.67	3.09%	4.00%	120.04	-27.37
Asset-3e	Sub-station	3977.19	123.94	3.09%	4.00%	160.55	-36.61
Asset-3f	Sub-station	1135.01	35.37	3.09%	4.00%	45.82	-10.45
Asset-3g	Sub-station	11067	344.88	3.09%	4.00%	446.76	-101.88
Asset-3h	Sub-station	6239.47	194.44	3.09%	4.00%	251.88	-57.44
Asset-3i	Sub-station	7571.74	235.96	3.09%	4.00%	305.66	-69.7
Asset-3j	Sub-station	1200.76	37.42	3.09%	4.00%	48.47	-11.05
Asset-3k	Sub-station	1738.16	54.17	3.09%	4.00%	70.17	-16
TOTAL			3514.07			3822.41	

33. MPPMCL has submitted that the Initial Spares as per Auditor certificate are in excess of ceiling limit in case of Asset 1a, 1b, 1c, 1e and 2a for TranmissionLine. Though, the Petitioner itself has admitted that the amount of Initial Spares has been exceeded in certain assets when considered individual asset-wise, yet the Petitioner has requested to allow the same on the plea that the Initial Spares may be considered combined in totality which is not admissible.

34. In response, the Petitioner has submitted that the cost of initial spares considering project as a whole is within the specified limit under Regulation 13 of the 2014 CERC Regulations which states that all elements are to be clubbed for the purpose of tariff of the project as a whole. In this case the identity of individual elements will be lost after clubbing of all the elements as per Commission's directions and



therefore restricting spares on individual elements becomes infructuous. Hence it is prayed to apply ceiling limit of spares for the project as whole as claimed in petition. The Petitioner has further submitted that said claim of initial spares on overall project basis has also been endorsed by Appellate Tribunal vide order dated 14.9.2018 in Appeal No 74/2017.

35. We have considered the submissions of the Petitioner and the Respondent, MPPMCL. In terms of the APTEL's judgment dated 14.9.2019 in Appeal No. 74 of 2017, Initial Spares are to be allowed as per the ceiling on overall project cost. The APTEL vide judgement dated 14.9.2019 in Appeal No. 74 of 2017 held as follows:

"8.13...We do not agree with this methodology of restricting initial spares asset/element wise as adopted by the Central Commission. The Central Commission to have a prudence check on the initial spares, being restricted based on the individual asset wise cost initially, but subsequently ought to have allowed as per the ceiling limits on the overall project cost basis during the trueup"

36. In terms of the above, Initial Spares are to be allowed as percentage of the project cost as a whole when all the transmission assets are combined. The transmission project was completed during 2014-19 tariff period and the overall project cost of the transmission assets is arrived at only when all the transmission assets are combined while claiming the tariff for the 2019-24 tariff period. Therefore, Initial Spares are allowed on the basis of the overall project cost in the 2019-24 tariff period when all the transmission assets are combined and the overall project cost is arrived at. However, as the Asset-1a to Asset-1e have been combined as Asset-1 as on 1.4.2014, the initial spares have been allowed on combined cost of Asset-1a to Asset-1e. The Initial Spares allowed for the transmission assets are as follows:



Transmission Assets put into commercial operation during 2009-14 tariff period

Asset	Particulars	Capital Cost upto cut-off date	Initial Spares as claimed	Ceiling % as per Regulation	Ceiling amount as per Regulation	Excess Spares c
Asset-1	Transmission Line	22770.00	173.64	0.75%	170.75	2.89
	Sub-station	30348.28	809.97	2.50%	757.39	52.58

Transmission Assets put into commercial operation during 2014-19 tariff period

(₹ in lakh)

Asset	Element	Plant and machinery cost (excluding IDC, IEDC, land cost and cost of civil works for the purpose of Initial Spares)	Apportioned initial spares claimed	Ceiling limits as per 2014 Tariff Regulations (in %)	Ceiling limit of Initial spares	Excess initial spares claimed	Initial Spares allowed
Asset-2a	Transmission Line	60364.26	792.83	1	601.73	191.10	601.73
Asset-3a	Transmission Line	11895.36	94.73	1	119.20	0.00	94.73
	Sub-station	1272.03	39.64	4	51.35	0.00	39.64
Asset-3b	Transmission Line	14236.34	139.17	1	142.40	0.00	139.17
	Sub-station	4401.36	137.16	4	177.68	0.00	137.16
Asset-3c	Sub-station	6674.1	207.98	4	269.42	0.00	207.98
Asset-3d	Sub-station	2973.67	92.67	4	120.05	0.00	92.67
Asset-3e	Sub-station	3977.19	123.94	4	160.55	0.00	123.94
Asset-3f	Sub-station	1135.01	35.37	4	45.82	0.00	35.37
Asset-3g	Sub-station	11067.00	344.88	4	446.76	0.00	344.88
Asset-3h	Sub-station	6239.47	194.44	4	251.88	0.00	194.44
Asset-3i	Sub-station	7571.74	235.96	4	305.66	0.00	235.96
Asset-3j	Sub-station	1200.76	37.42	4	48.47	0.00	37.42
Asset-3k	Sub-station	1738.16	54.17	4	70.17	0.00	54.17

37. The details of the capital cost now approved as on the COD / 1.4.2014 are as follows:



(₹ in lakh)

Asset	Capital Cost claimed as on COD/1.4.2014 (Auditor Certificate) (A)	IDC disallowed (B)	Excess Initial Spares Disallowed (C)	Undischarged IDC as on COD (D)	Capital cost approved as on COD (E=A-B-C-D)
Asset-1	48273.21**	0.00	55.46	0.00	48217.75
Asset-2a	64391.53	0.00	191.10	1728.68	62471.75
Asset-2b	3294.36	0.00	0.00	79.87	3214.49
Asset-3a	11932.25	0.00	0.00	296.69	11635.56
Asset-3b	20331.63	0.00	0.00	188.53	20143.10
Asset-3c	2953.05	0.00	0.00	107.17	2845.88
Asset-3d	2587.47	0.00	0.00	25.86	2561.61
Asset-3e	3594.17	17.09	0.00	104.39	3472.69
Asset-3f	1485.00	0.00	0.00	38.69	1446.31
Asset-3g	9956.75	14.99	0.00	277.85	9663.91
Asset-3h	6558.50	1.11	0.00	254.29	6303.10
Asset-3i	7671.86	105.82	0.00	65.86	7500.18
Asset-3j	1442.80	0.00	0.00	30.26	1412.54
Asset-3k	2115.60	1.11	0.00	95.76	2018.73

**On cash basis excluding un-discharged IDC

Additional Capital Expenditure (ACE)

38. The Petitioner has claimed the following ACE based on actual expenditure:

(₹ in lakh)

Asset	ACE (excluding IDC Discharged)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1	3680.87	1010.27	381.53	671.68	103.84
Asset-2a	3272.25	964.07	451.83	22.04	0.00
Asset-2b	165.32	19.28	235.06	10.55	0.00
Asset-3a	828.28	280.10	192.08	11.97	0.00
Asset-3b	0.00	1499.16	2290.22	2600.25	77.66
Asset-3c	0.00	2182.85	2198.03	0.00	0.00
Asset-3d	0.00	2.93	1082.29	394.23	885.84
Asset-3e	0.00	3.12	895.22	7.18	537.14
Asset-3f	0.00	3.43	143.58	122.04	18.00
Asset-3g	0.00	0.00	561.55	1243.85	134.89
Asset-3h	0.00	0.00	302.42	16.07	49.63
Asset-3i	0.00	0.00	585.54	244.25	599.20
Asset-3j	0.00	0.00	34.96	73.29	0.00
Asset-3k	0.00	0.00	27.95	20.26	0.00



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

Asset	COD	Cut-off date
Asset-1a	1.11.2013	31.3.2016
Asset-1b	1.12.2013	31.3.2016
Asset-1c	1.12.2013	31.3.2016
Asset-1d	1.3.2014	31.3.2017
Asset-1e	1.11.2013	31.3.2016
Asset-2a	24.5.2014	31.3.2017
Asset-2b	26.5.2014	31.3.2017
Asset-3a	24.5.2014	31.3.2017
Asset-3b	31.5.2015	31.3.2018
Asset-3c	13.6.2015	31.3.2018
Asset-3d	26.3.2016	31.3.2019
Asset-3e	26.3.2016	31.3.2019
Asset-3f	27.3.2016	31.3.2019
Asset-3g	19.12.2016	31.3.2019
Asset-3h	2.10.2016	31.3.2019
Asset-3i	2.10.2016	31.3.2019
Asset-3j	25.12.2016	31.3.2019
Asset-3k	25.12.2016	31.3.2019

40. The Petitioner has submitted the following details of ACE incurred after cut-off date:

Asset	Package / Scope of works	Party	Balance payments(₹)			
			2016-17	2017-18	2018-19	2019-20
1a	Supply ad supervision of 765KV Circuit Breaker	SIEMENS	908866	-	-	-
1a	765/400 KV Substation Package (P248-SS02) : 765/400 KV Raigarh Pooling Station (Near Tamnar) and Extension of 400 kV Raigarh S/S under consultancy to JPL. - SUPPLY	SIEMENS	-	7500000	-	-
			908866	7500000	-	-
Asset	Package / Scope of works	Party	2016-17	2017-18	2018-19	2019-20
1b	Supply ad supervision of 765KV Circuit Breaker	SIEMENS	409314	-	-	-
1b	Off-shore contract for CIF suply of 765kV Reactor package-P247-R02 for 4x80MVAR, 1Ph 765kV Raigarh Pooling Statation (Near Tamnar)	Boding TianweiBaobianElectric Co. Ltd.	2748035	13132829	-	-
1b	On-shore Services contract for CIF suply of 765kV Reactor package-P238-SR01 for 4x80MVAR, 1Ph 765kV Raigarh Pooling Station (Near Tamnar)	Boding TianweiBaobian Electric Co. Ltd.	-	8899236	-	-
1b	765/400 KV Substation Package (P248-SS02) : 765/400 KV	SIEMENS	-	7500000	-	-



			Balance payments(₹)			
	Raigarh Pooling Station (Near Tamnar) and Extension of 400 kV Raigarh S/S under consultancy to JPL. - SUPPLY					
			3157349	29532065	-	-
Asset	Package / Scope of works	Party	2016-17	2017-18	2018-19	2019-20
1c	supply ad supervision of 765KV Circuit Breaker	SIEMENS	908866	-	-	-
1c	765/400 kV Substation Package (P248-SS02) : 765/400 kV Raigarh Pooling Station (Near Tamnar) and Extension of 400 kV Raigarh S/S under consultancy to JPL. - SUPPLY	SIEMENS	-	7500000	-	-
			908866	7500000	-	-
Asset	Package / Scope of works	Party	2016-17	2017-18	2018-19	2019-20
1d	765/400 kV Substation Package (P248-SS02) : 765/400 kV Raigarh Pooling Station (Near Tamnar) and Extension of 400 kV Raigarh S/S under consultancy to JPL. - SUPPLY	SIEMENS	-	7500000	-	-
			-	7500000	-	-
Asset	Package / Scope of works	Party	2016-17	2017-18	2018-19	2019-20
1e	Tower Package-TW03 : 765 kV D/C Raigarh Pooling Station (Near Kotra)- Raigarh Pooling Station (Near Tamnar) + Supply	Gammon India	886086	-	-	-
1e	Conductor Package-CD02 (for Tower Package-TW03, TW04 & TW05)	APAR	24502	-	-	-
1e	Supply ad supervision of 765kV Circuit Breaker – SIEMENS(Diverted from Champa)	SIEMENS	1240029	-	-	-
1e	Construction of Boundary wall, security post, store shed cum TL office and open store yard at 765/400kV Sub-station at Raipur (Durg)	Sweta Constructions	2191057	3713070	2212083	-
1e	Transit Camp, Field hostel & Stone Pitching	Sweta Constructions	7505551	6224515	7300277	-
1e	Extn of 765kV Raigarh PS (P247-SS01)-Erection Portion	TECHNO	130185	-	-	-
1e	Supply of Circuit Breaker	AREVA	29249	-	-	-
1e	765/400 kV Sub-station Package (P248-SS02) : 765/400 kV Raigarh Pooling Station (Near Tamnar) and Extension of 400 kV Raigarh Sub-station under consultancy to JPL. - supply	SIEMENS	20171174	5198426	-	-
1e	R&R / IGS - TAMNAR PS		-	-	871626	-
			32177833	15136011	10383986	-
Asset	Package / Scope of works	Party	2016-17	2017-18	2018-19	2019-20



			Balance payments(₹)			
2a	Tower Package-TW02 : 765 kV D/C Champa Pooling Station -Raipur Pooling Station (Durg) Part-2 + Services	GAMMON	-	2203800	-	-
			-	2203800	-	-
Asset	Package / Scope of works	Party	2016-17	2017-18	2018-19	2019-20
2b	765 kV Circuit Breaker Package-A1: Supply ad supervision of 765kV Circuit Breaker	SIEMENS	-	1054514	-	-
			-	1054514	-	-
Asset	Package / Scope of works	Party	2016-17	2017-18	2018-19	2019-20
3a	Extension of 765 kV Dharamjaygarh Station under Part-B-Supply	JSL	-	1196800	-	-
			-	1196800	-	-
Asset	Package / Scope of works	Party	2016-17	2017-18	2018-19	2019-20
3b	Land for Champa Pooling Station		-	-	2735033	-
3b	Boundary wall, Security post, Store Shed cum TL Office, Open Store Yard & Site Office	Shreejkrupa Project Ltd, Raipur	-	-	716408	-
3b	Construction of RCC Drain and Box Culverts	SAN Associates, Vadodara	-	-	1435437	-
3b	Construction of Transit Camp Building	Chandra Nirman Pvt Ltd., Raipur	-	-	2878745	-
			-	-	7765623	-

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

42. We have considered the submissions of the Petitioner. The ACE claimed towards balance and retentions payments and un executed works is within the cut-off date and has been allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) and ACE incurred after cut-off date has been allowed under Regulation 14(2)(i) and Regulation 14(2)(iv) of the 2014 Tariff Regulations. Further, un-discharged IDC has been considered as



ACE in the respective year in which it is discharged. The capital cost allowed for the 2014-19 tariff period is as follows:

(₹ in lakh)

Asset	Expenditure up to COD/2014	ACE (including IDC discharged)					Capital Cost as on 31.3.2019
		2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1	48217.75	3954.91	996.85	381.53	671.68	103.84	54326.56
Asset-2a	62471.75	4998.32	966.68	451.83	22.04	0.00	68910.62
Asset-2b	3214.49	245.19	19.28	235.06	10.55	0.00	3724.57
Asset-3a	11635.56	1124.97	280.10	192.08	11.97	0.00	13244.68
Asset-3b	20143.10		1687.69	2290.22	2600.25	77.66	26798.92
Asset-3c	2845.88		2290.02	2198.03	0.00	0.00	7333.93
Asset-3d	2561.61		2.93	1108.15	394.23	885.84	4952.76
Asset-3e	3472.69		3.12	999.61	7.18	537.14	5019.74
Asset-3f	1446.31		3.43	182.27	122.04	18.00	1772.05
Asset-3g	9663.91			745.65	1337.60	134.89	11882.05
Asset-3h	6303.10			544.01	28.77	49.63	6925.51
Asset-3i	7500.18			648.37	247.28	599.20	8995.03
Asset-3j	1412.54			48.20	90.31	0.00	1551.05
Asset-3k	2018.73			118.98	24.99	0.00	2162.70

Debt-Equity ratio

43. The debt-equity ratio has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations. As per Regulation 19(3) of the 2014 Tariff Regulations, the debt-equity ratio allowed by the Commission for determination of tariff for the period ending on 31.3.2014/ as on COD for transmission assets. The details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 are as follows:

Asset-1

Funding	Capital Cost as on 1.4.2014	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	33752.42	70.00	38028.59	70.00
Equity	14465.32	30.00	16297.97	30.00
Total	48217.75	100.00	54326.56	100.00



Asset-2a

Funding	Capital Cost as on COD	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	43730.23	70.00	48237.44	70.00
Equity	18741.53	30.00	20673.19	30.00
Total	62471.75	100.00	68910.62	100.00

Asset-2b

Funding	Capital Cost as on COD	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	2250.14	70.00	2607.20	70.00
Equity	964.35	30.00	1117.37	30.00
Total	3214.49	100.00	3724.57	100.00

Asset-3a

Funding	Capital Cost as on COD	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	8144.89	70.00	9271.28	70.00
Equity	3490.67	30.00	3973.40	30.00
Total	11635.56	100.00	13244.68	100.00

Asset-3b

Funding	Capital Cost as on COD	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	14100.17	70.00	18759.24	70.00
Equity	6042.93	30.00	8039.68	30.00
Total	20143.10	100.00	26798.92	100.00



Asset-3c

Funding	Capital Cost as on COD	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	1992.12	70.00	5133.75	70.00
Equity	853.76	30.00	2200.18	30.00
Total	2845.88	100.00	7333.93	100.00

Asset-3d

Funding	Capital Cost as on COD	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	1793.13	70.00	3466.93	70.00
Equity	768.48	30.00	1485.83	30.00
Total	2561.61	100.00	4952.76	100.00

Asset-3e

Funding	Capital Cost as on 1.4.2014	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	2430.88	70.00	3513.82	70.00
Equity	1041.81	30.00	1505.92	30.00
Total	3472.69	100.00	5019.74	100.00

Asset-3f

Funding	Capital Cost as on 1.4.2014	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	1012.42	70.00	1240.44	70.00
Equity	433.89	30.00	531.62	30.00
Total	1446.31	100.00	1772.05	100.00



Asset-3g

Funding	Capital Cost as on 1.4.2014	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	6764.74	70.00	8317.43	70.00
Equity	2899.17	30.00	3564.61	30.00
Total	9663.91	100.00	11882.05	100.00

Asset-3h

Funding	Capital Cost as on 1.4.2014	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	4412.17	70.00	4847.85	70.00
Equity	1890.93	30.00	2077.65	30.00
Total	6303.10	100.00	6925.51	100.00

Asset-3i

Funding	Capital Cost as on 1.4.2014	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	5250.13	70.00	6296.52	70.00
Equity	2250.06	30.00	2698.51	30.00
Total	7500.18	100.00	8995.03	100.00

Asset-3j

Funding	Capital Cost as on 1.4.2014	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	988.78	70.00	1085.74	70.00
Equity	423.76	30.00	465.32	30.00
Total	1412.54	100.00	1551.05	100.00



Asset-3k

Funding	Capital Cost as on 1.4.2014	(in %)	Capital Cost as on 31.3.2019	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	1413.11	70.00	1513.89	70.00
Equity	605.62	30.00	648.81	30.00
Total	2018.73	100.00	2162.70	100.00

Depreciation

44. The Petitioner's claim towards depreciation in this petition was found to be higher than the depreciation allowed in vide order dated 11.9.2017 in Petition No. 96/TT/2017, order dated 15.2.2016 in Petition No. 45/TT/2014, and order dated 31.5.2016 in Petition No. 260/TT/2015. The Petitioner has neither given any justification for claiming higher depreciation than what was not allowed in previous orders nor has made any specific prayer for allowing higher depreciation in this petition. Similar issue was dealt vide order dated 9.5.2020 Petition No. 19/TT/2020.

45. In line with the decision in order dated 9.5.2020 Petition No. 19/TT/2020, depreciation @5.28% has been considered for IT Equipment as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for the 2014-19 tariff period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 of the 2019 Tariff Regulations. The Gross Block during the 2014-19 tariff period has been depreciated at weighted average rate of depreciation (WAROD). WAROD at Annexure-I has been worked out after taking into account the depreciation rates of asset as specified in the 2014 Tariff Regulations and depreciation allowed during the 2014-19 tariff period is as follows:



(₹ in lakh)

Asset-1						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	48217.75	52172.66	53169.51	53551.04	54222.72
B	Additional Capitalisation	3954.91	996.85	381.53	671.68	103.84
C	Closing Gross Block (A+B)	52172.66	53169.51	53551.04	54222.72	54326.56
D	Average Gross Block (A+C)/2	50195.20	52671.08	53360.27	53886.88	54274.64
E	Freehold land	1438.31	1579.70	1579.70	1579.70	1584.06
F	Weighted Average Rate of Depreciation (%)	5.00	4.98	4.98	4.98	4.97
G	Balance useful life of the asset	29	28	27	26	25
H	Elapsed Life	0	1	2	3	4
I	Aggregate Depreciable Value	43881.21	45982.24	46602.51	47076.46	47421.52
J	Depreciation during the year	2511.33	2622.79	2655.65	2681.54	2699.90
K	Cumulative depreciation	3332.41	5955.20	8610.86	11292.40	13992.30
L	Remaining Depreciable Value (I-K)	40548.80	40027.04	37991.66	35784.06	33429.22

(₹ in lakh)

Asset-2a						
	Particulars	2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	62471.75	67470.07	68436.75	68888.58	68910.62
B	Additional Capitalisation	4998.32	966.68	451.83	22.04	0.00
C	Closing Gross Block (A+B)	67470.07	68436.75	68888.58	68910.62	68910.62
D	Average Gross Block (A+C)/2	64970.91	67953.41	68662.67	68899.60	68910.62
E	Freehold land	0.00	0.00	0.00	0.00	0.00
F	Weighted average rate of Depreciation (WAROD) (%)	5.26	5.26	5.26	5.26	5.26
G	Balance useful life of the asset	34	34	33	32	31
H	Elapsed life at the beginning of the year	0	0	1	2	3
I	Aggregate Depreciable Value	58473.82	61158.07	61796.40	62009.64	62019.56



Asset-2a						
	Particulars	2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
J	Depreciation during the year	2923.30	3576.23	3612.68	3624.38	3624.96
K	Aggregate Cumulative Depreciation	2923.30	6499.52	10112.21	13736.59	17361.55
L	Remaining Aggregate Depreciable Value	55550.53	54658.55	51684.19	48273.05	44658.01

(₹ in lakh)

Asset-2b						
	Particulars	2014-15 (Pro-rata 310 days)	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	3214.49	3459.68	3478.96	3714.02	3724.57
B	Additional Capitalisation	245.19	19.28	235.06	10.55	0.00
C	Closing Gross Block (A+B)	3459.68	3478.96	3714.02	3724.57	3724.57
D	Average Gross Block (A+C)/2	3337.08	3469.32	3596.49	3719.30	3724.57
E	Weighted average rate of Depreciation (WAROD) (%)	5.13	5.11	5.10	5.11	5.11
F	Balance useful life of the asset	25.00	25.00	24.00	23.00	22.00
G	Elapsed life at the beginning of the year	0.00	0.00	1.00	2.00	3.00
H	Aggregate Depreciable Value	3003.38	3122.39	3236.84	3347.37	3352.11
I	Depreciation during the year	145.45	177.21	183.60	189.95	190.22
J	Aggregate Cumulative Depreciation	145.45	322.66	506.26	696.20	886.43
K	Remaining Aggregate Depreciable Value	2857.93	2799.73	2730.58	2651.16	2465.68

(₹ in lakh)

Asset-3a						
	Particulars	2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	11635.56	12760.53	13040.63	13232.71	13244.68
B	Additional Capitalisation	1124.97	280.10	192.08	11.97	0.00



	Particulars	Asset-3a				
		2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
C	Closing Gross Block	12760.53	13040.63	13232.71	13244.68	13244.68
D	Average Gross Block	12198.04	12900.58	13136.67	13238.70	13244.68
E	Weighted average rate of Depreciation (WAROD) (%)	5.27	5.27	5.27	5.27	5.27
F	Balance useful life of the asset	34.00	34.00	33.00	32.00	31.00
G	Elapsed life at the beginning of the year	0.00	0.00	1.00	2.00	3.00
H	Aggregate Depreciable Value	10978.24	11610.52	11823.00	11914.83	11920.21
I	Combined Depreciation during the year	549.52	679.34	691.78	697.16	697.48
J	Aggregate Cumulative Depreciation	549.52	1228.86	1920.64	2617.80	3315.28
K	Remaining Aggregate Depreciable Value	10428.72	10381.66	9902.37	9297.03	8604.93

(₹ in lakh)

	Particulars	Asset-3b			
		2015-16 (pro-rata 306 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	20143.10	21830.79	24121.01	26721.26
B	Additional Capitalisation	1687.69	2290.22	2600.25	77.66
C	Closing Gross Block	21830.79	24121.01	26721.26	26798.92
D	Average Gross Block	20986.95	22975.90	25421.14	26760.09
E	Freehold Land	2363.23	2363.23	2561.99	2774.42
F	Weighted average rate of Depreciation (WAROD) (%)	4.56	4.61	4.59	4.56
G	Balance useful life of the asset	32	32	31	30
H	Elapsed life at the beginning of the year	0	0	1	2
I	Aggregate Depreciable Value	16761.34	18551.40	20573.24	21587.11
J	Combined Depreciation during the year	800.42	1058.26	1167.49	1221.00
K	Aggregate Cumulative Depreciation	800.42	1858.69	3026.18	4247.17
L	Remaining Aggregate Depreciable Value	15960.92	16692.72	17547.06	17339.94



(₹ in lakh)

	Particulars	Asset-3c			
		2015-16 (pro-rata 293 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	2845.88	5135.90	7333.93	7333.93
B	Additional Capitalisation	2290.02	2198.03	0.00	0.00
C	Closing Gross Block	5135.90	7333.93	7333.93	7333.93
D	Average Gross Block	3990.89	6234.92	7333.93	7333.93
E	Weighted average rate of Depreciation (WAROD) (%)	5.17	5.20	5.20	5.20
F	Balance useful life of the asset	25.00	25.00	24.00	23.00
G	Elapsed life at the beginning of the year	0.00	0.00	1.00	2.00
H	Aggregate Depreciable Value	3591.80	5611.42	6600.54	6600.54
I	Combined Depreciation during the year	165.27	324.25	381.70	381.70
J	Aggregate Cumulative Depreciation	165.27	489.52	871.22	1252.92
K	Remaining Aggregate Depreciable Value	3426.53	5121.90	5729.32	5347.62

(₹ in lakh)

	Particulars	Asset-3d			
		2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	2561.61	2564.54	3672.69	4066.92
B	Additional Capitalisation	2.93	1108.15	394.23	885.84
C	Closing Gross Block	2564.54	3672.69	4066.92	4952.76
D	Average Gross Block	2563.08	3118.62	3869.81	4509.84
E	Weighted average rate of Depreciation (WAROD) (%)	5.06	5.04	4.95	4.72
F	Balance useful life of the asset	25	25	24	23
G	Elapsed life at the beginning of the year	0	0	1	2
H	Aggregate Depreciable Value	2306.77	2806.75	3482.82	4058.86
I	Combined Depreciation during the year	2.12	157.30	191.54	212.92
J	Aggregate Cumulative Depreciation	2.12	159.42	350.96	563.88
K	Remaining Aggregate Depreciable Value	2304.64	2647.33	3131.86	3494.97



(₹ in lakh)

	Particulars	Asset-3e			
		2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	3472.69	3475.81	4475.42	4482.60
B	Additional Capitalisation	3.12	999.61	7.18	537.14
C	Closing Gross Block (A+B)	3475.81	4475.42	4482.60	5019.74
D	Average Gross Block (A+C)/2	3474.25	3975.62	4479.01	4751.17
E	Weighted Average Rate of Depreciation (%)	4.98	5.01	5.03	5.03
F	Aggregate Depreciable Value	3126.83	3578.06	4031.11	4276.06
G	Balance useful life of the asset	25.00	25.00	24.00	23.00
H	Elapsed life	0.00	0.00	1.00	2.00
I	Depreciation during the year	2.84	199.05	225.09	239.00
J	Cumulative depreciation	2.84	201.89	426.98	665.98
K	Remaining Depreciable Value (F-J)	3123.99	3376.17	3604.13	3610.08

(₹ in lakh)

	Particulars	Asset-3f			
		2015-16 (pro-rata 5 days)	2016-17	2017-18	2018-19
	Depreciation				
A	Opening Gross Block	1446.31	1449.74	1632.01	1754.05
B	Additional Capitalisation	3.43	182.27	122.04	18.00
C	Closing Gross Block (A+B)	1449.74	1632.01	1754.05	1772.05
D	Average Gross Block (A+C)/2	1448.03	1540.88	1693.03	1763.05
E	Weighted Average Rate of Depreciation (%)	4.95	4.88	4.78	4.73
F	Aggregate Depreciable Value	1303.22	1386.79	1523.73	1586.75
G	Balance useful life of the asset	25.00	25.00	24.00	23.00
H	Elapsed life	0.00	0.00	1.00	2.00
I	Depreciation during the year	0.98	75.17	80.91	83.47
J	Cumulative depreciation	0.98	76.15	157.06	240.53
K	Remaining Depreciable Value (F-J)	1302.24	1310.64	1366.67	1346.21



(₹ in lakh)

	Particulars	Asset-3g		
		2016-17 (pro-rata 103 days)	2017-18	2018-19
	Depreciation			
A	Opening Gross Block	9663.91	10409.56	11747.16
B	Additional Capitalisation	745.65	1337.60	134.89
C	Closing Gross Block (A+B)	10409.56	11747.16	11882.05
D	Average Gross Block (A+C)/2	10036.73	11078.36	11814.60
E	Weighted Average Rate of Depreciation (%)	5.07	5.07	5.06
F	Aggregate Depreciable Value	9033.06	9970.52	10633.14
G	Balance useful life of the asset	20.00	20.00	19.00
H	Elapsed life	0.00	0.00	1.00
I	Depreciation during the year	143.67	562.13	598.34
J	Cumulative depreciation	143.67	705.80	1304.14
K	Remaining Depreciable Value (F-J)	8889.39	9264.73	9329.00

(₹ in lakh)

	Particulars	Asset-3h		
		2016-17 (pro-rata 181 days)	2017-18	2018-19
	Depreciation			
A	Opening Gross Block	6303.10	6847.11	6875.88
B	Additional Capitalisation	544.01	28.77	49.63
C	Closing Gross Block (A+B)	6847.11	6875.88	6925.51
D	Average Gross Block (A+C)/2	6575.11	6861.49	6900.69
E	Weighted Average Rate of Depreciation (%)	5.14	5.14	5.13
F	Aggregate Depreciable Value	5917.59	6175.34	6210.62
G	Balance useful life of the asset	20.00	20.00	19.00
H	Elapsed life	0.00	0.00	1.00
I	Depreciation during the year	167.59	352.67	354.25
J	Cumulative depreciation	167.59	520.27	874.52
K	Remaining Depreciable Value (F-J)	5750.00	5655.08	5336.10



(₹ in lakh)

	Particulars	Asset-3i		
		2016-17 (pro-rata 181 days)	2017-18	2018-19
	Depreciation			
A	Opening Gross Block	7500.18	8148.55	8395.83
B	Additional Capitalisation	648.37	247.28	599.20
C	Closing Gross Block (A+B)	8148.55	8395.83	8995.03
D	Average Gross Block (A+C)/2	7824.37	8272.19	8695.43
E	Weighted Average Rate of Depreciation (%)	5.09	5.08	5.03
F	Aggregate Depreciable Value	7041.93	7444.97	7825.89
G	Balance useful life of the asset	20.00	20.00	19.00
H	Elapsed life	0.00	0.00	1.00
I	Depreciation during the year	197.35	420.27	437.06
J	Cumulative depreciation	197.35	617.62	1054.68
K	Remaining Depreciable Value (F-J)	6844.58	6827.35	6771.21

(₹ in lakh)

	Particulars	Asset-3j		
		2016-17 (pro-rata 97 days)	2017-18	2018-19
	Depreciation			
A	Opening Gross Block	1412.54	1460.74	1551.05
B	Additional Capitalisation	48.20	90.31	0.00
C	Closing Gross Block (A+B)	1460.74	1551.05	1551.05
D	Average Gross Block (A+C)/2	1436.64	1505.90	1551.05
E	Weighted Average Rate of Depreciation (%)	5.13	5.13	5.14
F	Aggregate Depreciable Value	1292.98	1355.31	1395.95
G	Balance useful life of the asset	20.00	20.00	19.00
H	Elapsed life	0.00	0.00	1.00
I	Depreciation during the year	19.59	77.30	79.67
J	Cumulative depreciation	19.59	96.89	176.56
K	Remaining Depreciable Value (F-J)	1273.39	1258.42	1219.39

(₹ in lakh)

	Particulars	Asset-3k		
		2016-17 (pro-rata 97 days)	2017-18	2018-19
	Depreciation			
A	Opening Gross Block	2018.73	2137.71	2162.70
B	Additional Capitalisation	118.98	24.99	0.00
C	Closing Gross Block (A+B)	2137.71	2162.70	2162.70

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	Particulars	Asset-3k		
		2016-17 (pro-rata 97 days)	2017-18	2018-19
D	Average Gross Block (A+C)/2	2078.22	2150.21	2162.70
E	Weighted Average Rate of Depreciation (%)	4.93	4.93	4.93
F	Aggregate Depreciable Value	1870.40	1935.19	1946.43
G	Balance useful life of the asset	19.00	19.00	18.00
H	Elapsed life	0.00	0.00	1.00
I	Depreciation during the year	27.22	106.04	106.69
J	Cumulative depreciation	27.22	133.26	239.95
K	Remaining Depreciable Value (F-J)	1843.18	1801.92	1706.48

46. The details of depreciation allowed vide order dated 11.9.2017 in Petition No. 96/TT/2017, vide order dated 15.2.2016 in Petition No. 45/TT/2014, and vide order dated 31.5.2016 in Petition No. 260/TT/2015, claimed by the Petitioner in the instant petition and true-up depreciation in the instant order are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1					
Allowed vide order dated 11.9.2017 in Petition No. 96/TT/2017	2505.68	2615.68	2645.02	2651.34	2651.34
Claimed by the Petitioner in the instant petition	2528.71	2640.29	2673.59	2699.47	2717.83
Approved after true-up in this order	2511.33	2622.79	2655.65	2681.54	2699.90
Asset-2a					
Allowed vide order dated 15.2.2016 in Petition No. 45/TT/2014	2161.09	2528.19	2528.19	2528.19	2528.19
Claimed by the Petitioner in the instant petition	2933.92	3588.71	3625.16	3636.86	3637.44
Approved after true-up in this order	2923.30	3576.23	3612.68	3624.38	3624.96
Asset-2b					
Allowed vide order dated 15.2.2016 in Petition No. 45/TT/2014	143.70	179.67	188.93	191.29	191.29
Claimed by the Petitioner in the instant petition	146.12	178.01	184.40	190.74	191.02



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved after true-up in this order	145.45	177.21	183.60	189.95	190.22
Asset-3a					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015	538.58	681.87	715.77	726.85	726.85
Claimed by the Petitioner in the instant petition	552.40	682.61	695.04	700.44	700.75
Approved after true-up in this order	549.52	679.34	691.78	697.16	697.48
Asset-3b					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		878.46	1241.82	1296.39	1296.39
Claimed by the Petitioner in the instant petition		802.19	1060.37	1169.61	1223.11
Approved after true-up in this order		800.42	1058.26	1167.49	1221.00
Asset-3c					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		159.40	271.68	291.32	291.32
Claimed by the Petitioner in the instant petition		167.26	326.74	384.18	384.18
Approved after true-up in this order		165.27	324.25	381.70	381.70
Asset-3d					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		#	#	#	#
Claimed by the Petitioner in the instant petition		2.16	159.75	194.02	215.39
Approved after true-up in this order		2.12	157.30	191.54	212.92
Asset-3e					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		#	#	#	#
Claimed by the Petitioner in the instant petition		2.84	199.96	226.43	240.34
Approved after true-up in this order		2.84	199.05	225.09	239.00
Asset-3f					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		0.94	74.27	82.36	84.74
Claimed by the Petitioner in the instant petition		0.99	76.63	82.39	84.95
Approved after true-up in this order		0.98	75.17	80.91	83.47
	Asset-3g				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			144.67	565.77	602.06
Approved after true-up in this order			143.67	562.13	598.34
	Asset-3h				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			168.55	354.67	356.29
Approved after true-up in this order			167.59	352.67	354.25
	Asset-3i				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			200.98	428.09	445.40
Approved after true-up in this order			197.35	420.27	437.06
	Asset-3j				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			19.72	77.79	80.17
Approved after true-up in this order			19.59	77.30	79.67
	Asset-3k				



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			27.36	106.56	107.23
Approved after true-up in this order			27.22	106.04	106.69

Tariff for Asset-3d and 3e was allowed as a combined asset vide order dated 31.5.2016 in Petition No. 260/TT/2015.

* Tariff for Asset-3g, 3h, 3i, 3j and 3k was allowed as a combined asset vide order dated 31.5.2016 in Petition No. 260/TT/2015.

Interest on Loan (IoL)

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

		(₹ in lakh)				
Particulars	Asset-1					
	2014-15	2015-16	2016-17	2017-18	2018-19	
Interest on Loan						
A Gross Normative Loan	33752.42	36520.86	37218.65	37485.73	37955.90	
B Cumulative Repayments upto Previous Year	821.08	3332.41	5955.20	8610.86	11292.40	
C Net Loan-Opening (A-B)	32931.34	33188.45	31263.45	28874.87	26663.50	
D Additions	2768.44	697.80	267.07	470.18	72.69	
E Repayment during the year	2511.33	2622.79	2655.65	2681.54	2699.90	
F Net Loan-Closing (C+D-E)	33188.45	31263.45	28874.87	26663.50	24036.29	
G Average Loan (C+F)/2	33059.90	32225.95	30069.16	27769.19	25349.90	
H Weighted Average Rate of Interest on Loan (%)	7.7295	7.7179	7.6681	7.5388	7.4712	
H Interest on Loan (G*H)	2555.38	2487.16	2305.72	2093.47	1893.94	



(₹ in lakh)

	Particulars	Asset-2a				
		2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	43730.23	47229.05	47905.73	48222.01	48237.44
B	Cumulative Repayments upto Previous Year	0.00	2923.30	6499.52	10112.21	13736.59
C	Net Loan-Opening (A-B)	43730.23	44305.76	41406.20	38109.80	34500.85
D	Additions	3498.82	676.68	316.28	15.43	0.00
E	Repayment during the year	2923.30	3576.23	3612.68	3624.38	3624.96
F	Net Loan-Closing (C+D-E)	44305.76	41406.20	38109.80	34500.85	30875.88
G	Average Loan (C+F)/2	44017.99	42855.98	39758.00	36305.32	32688.36
H	Weighted Average Rate of Interest on Loan (%)	8.3575	8.3434	8.2761	8.1403	8.0594
H	Interest on Loan (G*H)	3144.61	3575.65	3290.42	2955.37	2634.49

(₹ in lakh)

	Particulars	Asset-2b				
		2014-15 (Pro-rata 310 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	2250.14	2421.78	2435.27	2599.81	2607.20
B	Cumulative Repayments upto Previous Year	0.00	145.45	322.66	506.26	696.20
C	Net Loan-Opening (A-B)	2250.14	2276.33	2112.61	2093.56	1911.00
D	Additions	171.63	13.50	164.54	7.39	0.00
E	Repayment during the year	145.45	177.21	183.60	189.95	190.22
F	Net Loan-Closing (C+D-E)	2276.33	2112.61	2093.56	1911.00	1720.77
G	Average Loan (C+F)/2	2263.23	2194.47	2103.09	2002.28	1815.88
H	Weighted Average Rate of Interest on Loan (%)	8.7893	8.7338	8.6575	8.4760	8.4707
H	Interest on Loan (G*H)	168.95	191.66	182.07	169.71	153.82

(₹ in lakh)

	Particulars	Asset-3a				
		2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	8144.89	8932.37	9128.44	9262.90	9271.28



	Particulars	Asset-3a				
		2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
B	Cumulative Repayments upto Previous Year	0.00	549.52	1228.86	1920.64	2617.80
C	Net Loan-Opening (A-B)	8144.89	8382.85	7899.58	7342.26	6653.48
D	Additions	787.48	196.07	134.46	8.38	0.00
E	Repayment during the year	549.52	679.34	691.78	697.16	697.48
F	Net Loan-Closing (C+D-E)	8382.85	7899.58	7342.26	6653.48	5956.00
G	Average Loan (C+F)/2	8263.87	8141.22	7620.92	6997.87	6304.74
H	Weighted Average Rate of Interest on Loan (%)	7.4752	7.5122	7.4670	7.3440	7.2400
H	Interest on Loan (G*H)	528.04	611.58	569.06	513.92	456.46

(₹ in lakh)

	Particulars	Asset-3b			
		2015-16 (pro-rata 306 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	14100.17	15281.55	16884.71	18704.88
B	Cumulative Repayments upto Previous Year	0.00	800.42	1858.69	3026.18
C	Net Loan-Opening (A-B)	14100.17	14481.13	15026.02	15678.71
D	Additions	1181.38	1603.15	1820.18	54.36
E	Repayment during the year	800.42	1058.26	1167.49	1221.00
F	Net Loan-Closing (C+D-E)	14481.13	15026.02	15678.71	14512.07
G	Average Loan (C+F)/2	14290.65	14753.57	15352.36	15095.39
H	Weighted Average Rate of Interest on Loan (%)	5.1909	5.4823	5.6630	5.7918
H	Interest on Loan (G*H)	620.20	808.84	869.40	874.30

(₹ in lakh)

	Particulars	Asset-3c			
		2015-16 (pro-rata 293 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	1992.12	3595.13	5133.75	5133.75
B	Cumulative Repayments upto Previous Year	0.00	165.27	489.52	871.22
C	Net Loan-Opening (A-B)	1992.12	3429.86	4644.23	4262.53



	Particulars	Asset-3c			
		2015-16 (pro-rata 293 days)	2016-17	2017-18	2018-19
D	Additions	1603.01	1538.62	0.00	0.00
E	Repayment during the year	165.27	324.25	381.70	381.70
F	Net Loan-Closing (C+D-E)	3429.86	4644.23	4262.53	3880.83
G	Average Loan (C+F)/2	2710.99	4037.04	4453.38	4071.68
H	Weighted Average Rate of Interest on Loan (%)	8.7847	8.3648	8.0891	8.0290
H	Interest on Loan (G*H)	190.65	337.69	360.24	326.92

(₹ in lakh)

	Particulars	Asset-3d			
		2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	1793.13	1795.18	2570.88	2846.84
B	Cumulative Repayments upto Previous Year	0.00	2.12	159.42	350.96
C	Net Loan-Opening (A-B)	1793.13	1793.05	2411.46	2495.88
D	Additions	2.05	775.71	275.96	620.09
E	Repayment during the year	2.12	157.30	191.54	212.92
F	Net Loan-Closing (C+D-E)	1793.05	2411.46	2495.88	2903.05
G	Average Loan (C+F)/2	1793.09	2102.26	2453.67	2699.46
H	Weighted Average Rate of Interest on Loan (%)	5.6072	6.0138	6.3728	6.5439
H	Interest on Loan (G*H)	1.65	126.43	156.37	176.65

(₹ in lakh)

	Particulars	Asset-3e			
		2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	2430.88	2433.07	3132.80	3137.82
B	Cumulative Repayments upto Previous Year	0.00	2.84	201.89	426.98
C	Net Loan-Opening (A-B)	2430.88	2430.23	2930.91	2710.84
D	Additions	2.18	699.73	5.03	376.00
E	Repayment during the year	2.84	199.05	225.09	239.00
F	Net Loan-Closing (C+D-E)	2430.23	2930.91	2710.84	2847.84



	Particulars	Asset-3e			
		2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
G	Average Loan (C+F)/2	2430.56	2680.57	2820.88	2779.34
H	Weighted Average Rate of Interest on Loan (%)	8.9898	8.7289	8.3209	8.2178
H	Interest on Loan (G*H)	3.58	233.98	234.72	228.40

(₹ in lakh)

	Particulars	Asset-3f			
		2015-16 (pro-rata 5 days)	2016-17	2017-18	2018-19
	Interest on Loan				
A	Gross Normative Loan	1012.42	1014.82	1142.41	1227.84
B	Cumulative Repayments upto Previous Year	0.00	0.98	76.15	157.06
C	Net Loan-Opening (A-B)	1012.42	1013.84	1066.26	1070.78
D	Additions	2.40	127.59	85.43	12.60
E	Repayment during the year	0.98	75.17	80.91	83.47
F	Net Loan-Closing (C+D-E)	1013.84	1066.26	1070.78	999.90
G	Average Loan (C+F)/2	1013.13	1040.05	1068.52	1035.34
H	Weighted Average Rate of Interest on Loan (%)	9.0964	8.9849	8.8096	8.7727
H	Interest on Loan (G*H)	1.26	93.45	94.13	90.83

(₹ in lakh)

	Particulars	Asset-3g		
		2016-17 (pro-rata 103 days)	2017-18	2018-19
	Interest on Loan			
A	Gross Normative Loan	6764.74	7286.69	8223.01
B	Cumulative Repayments upto Previous Year	0.00	143.67	705.80
C	Net Loan-Opening (A-B)	6764.74	7143.02	7517.21
D	Additions	521.96	936.32	94.42
E	Repayment during the year	143.67	562.13	598.34
F	Net Loan-Closing (C+D-E)	7143.02	7517.21	7013.29
G	Average Loan (C+F)/2	6953.88	7330.12	7265.25
H	Weighted Average Rate of Interest on Loan (%)	8.3899	8.2774	8.2055



	Particulars	Asset-3g		
		2016-17 (pro-rata 103 days)	2017-18	2018-19
H	Interest on Loan (G*H)	164.64	606.74	596.15

(₹ in lakh)

	Particulars	Asset-3h		
		2016-17 (pro-rata 181 days)	2017-18	2018-19
	Interest on Loan			
A	Gross Normative Loan	4412.17	4792.98	4813.11
B	Cumulative Repayments upto Previous Year	0.00	167.59	520.27
C	Net Loan-Opening (A-B)	4412.17	4625.38	4292.85
D	Additions	380.81	20.14	34.74
E	Repayment during the year	167.59	352.67	354.25
F	Net Loan-Closing (C+D-E)	4625.38	4292.85	3973.34
G	Average Loan (C+F)/2	4518.78	4459.11	4133.09
H	Weighted Average Rate of Interest on Loan (%)	8.8138	8.7778	8.7699
H	Interest on Loan (G*H)	197.50	391.41	362.47

(₹ in lakh)

	Particulars	Asset-3i		
		2016-17 (pro-rata 181 days)	2017-18	2018-19
	Interest on Loan			
A	Gross Normative Loan	5250.13	5703.99	5877.08
B	Cumulative Repayments upto Previous Year	0.00	197.35	617.62
C	Net Loan-Opening (A-B)	5250.13	5506.63	5259.46
D	Additions	453.86	173.09	419.44
E	Repayment during the year	197.35	420.27	437.06
F	Net Loan-Closing (C+D-E)	5506.63	5259.46	5241.84
G	Average Loan (C+F)/2	5378.38	5383.05	5250.65
H	Weighted Average Rate of Interest on Loan (%)	6.8757	6.9223	6.9621
H	Interest on Loan (G*H)	183.38	372.63	365.56



(₹ in lakh)

	Particulars	Asset-3j		
		2016-17 (pro-rata 97 days)	2017-18	2018-19
	Interest on Loan			
A	Gross Normative Loan	988.78	1022.52	1085.74
B	Cumulative Repayments upto Previous Year	0.00	19.59	96.89
C	Net Loan-Opening (A-B)	988.78	1002.93	988.85
D	Additions	33.74	63.22	0.00
E	Repayment during the year	19.59	77.30	79.67
F	Net Loan-Closing (C+D-E)	1002.93	988.85	909.18
G	Average Loan (C+F)/2	995.85	995.89	949.01
H	Weighted Average Rate of Interest on Loan (%)	8.4902	8.4230	8.3778
H	Interest on Loan (G*H)	22.47	83.88	79.51

(₹ in lakh)

	Particulars	Asset-3k		
		2016-17 (pro-rata 97 days)	2017-18	2018-19
	Interest on Loan			
A	Gross Normative Loan	1413.11	1496.40	1513.89
B	Cumulative Repayments upto Previous Year	0.00	27.22	133.26
C	Net Loan-Opening (A-B)	1413.11	1469.17	1380.63
D	Additions	83.29	17.49	0.00
E	Repayment during the year	27.22	106.04	106.69
F	Net Loan-Closing (C+D-E)	1469.17	1380.63	1273.94
G	Average Loan (C+F)/2	1441.14	1424.90	1327.29
H	Weighted Average Rate of Interest on Loan (%)	8.2057	8.1914	8.1882
H	Interest on Loan (G*H)	31.43	116.72	108.68

48. The details of IoL allowed vide order dated 11.9.2017 in Petition No. 96/TT/2017, vide order dated 15.2.2016 in Petition No. 45/TT/2014, and vide order dated 31.5.2016 in Petition No. 260/TT/2015, claimed by the Petitioner in the instant petition and trued-up IoL in the instant order are as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1					
Allowed <i>vide</i> order dated 11.9.2017 in Petition No. 96/TT/2017	2552.87	2501.46	2322.31	2109.38	1885.71
Claimed by the Petitioner in the instant petition	2557.33	2487.78	2305.35	2091.73	1890.89
Approved after true-up in this order	2555.38	2487.16	2305.72	2093.47	1893.94
Asset-2a					
Allowed <i>vide</i> order dated 15.2.2016 in Petition No. 45/TT/2014	2328.66	2534.13	2316.33	2095.12	1871.87
Claimed by the Petitioner in the instant petition	3153.80	3585.40	3299.05	2962.85	2640.89
Approved after true-up in this order	3144.61	3575.65	3290.42	2955.37	2634.49
Asset-2b					
Allowed <i>vide</i> order dated 15.2.2016 in Petition No. 45/TT/2014	167.11	196.64	192.20	178.62	162.04
Claimed by the Petitioner in the instant petition	168.94	191.57	181.91	169.49	153.53
Approved after true-up in this order	168.95	191.66	182.07	169.71	153.82
Asset-3a					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015	519.32	618.42	597.63	551.28	489.72
Claimed by the Petitioner in the instant petition	528.07	611.25	568.47	513.11	455.43
Approved after true-up in this order	528.04	611.58	569.06	513.92	456.46
Asset-3b					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		680.41	942.99	940.77	874.94
Claimed by the Petitioner in the instant petition		620.17	808.70	869.12	873.89
Approved after true-up in this order		620.20	808.84	869.40	874.30



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	Asset-3c				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		194.06	315.05	314.40	289.40
Claimed by the Petitioner in the instant petition		190.62	337.42	359.78	326.26
Approved after true-up in this order		190.65	337.69	360.24	326.92
	Asset-3d				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		#	#	#	#
Claimed by the Petitioner in the instant petition		1.65	126.35	156.13	176.24
Approved after true-up in this order		1.65	126.43	156.37	176.65
	Asset-3e				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		#	#	#	#
Claimed by the Petitioner in the instant petition		3.58	234.47	235.59	229.14
Approved after true-up in this order		3.58	233.98	234.72	228.40
	Asset-3f				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		1.21	92.63	96.55	92.47
Claimed by the Petitioner in the instant petition		1.26	93.38	93.94	90.50
Approved after true-up in this order		1.26	93.45	94.13	90.83
	Asset-3g				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			164.83	607.31	596.48
Approved after true-up in this order			164.64	606.74	596.15
	Asset-3h				



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			197.48	391.27	362.19
Approved after true-up in this order			197.50	391.41	362.47
Asset-3i					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			185.37	376.75	369.67
Approved after true-up in this order			183.38	372.63	365.56
Asset-3j					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			22.47	83.85	79.44
Approved after true-up in this order			22.47	83.88	79.51
Asset-3k					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			31.43	116.73	108.67
Approved after true-up in this order			31.43	116.72	108.68

Tariff for Asset-3d and 3e was allowed as a combined asset *vide* order dated 31.5.2016 in Petition No. 260/TT/2015* Tariff for Asset-3g, 3h, 3i, 3j and 3k was allowed as a combined asset *vide* order dated 31.5.2016 in Petition No. 260/TT/2015

Return on Equity (RoE)

49. The Petitioner has claimed RoE for the transmission assets in accordance with Regulation 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that



they are liable to pay income tax at MAT rates and has claimed following effective tax rates for the 2014-19 tariff period:

Year	Claimed effective tax rate (in %)	Grossed-up ROE [(Base Rate)/(1-t)] (in %)
2014-15	21.018	19.625
2015-16	21.382	19.715
2016-17	21.338	19.705
2017-18	21.337	19.705
2018-19	21.549	19.758

50. We have considered the submissions of the Petitioner. The Commission, *vide* order dated 27.4.2020 in Petition No.274/TT/2019, had arrived at the effective tax rate for the Petitioner based on the notified MAT rates. The MAT rates considered in order dated 27.4.2020 in Petition No. 274/TT/2019 are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations, which are as follows:

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

51. The Petitioner has submitted that the Commission *vide* order dated 15.2.2016 in Petition No. 45/TT/2014 had allowed additional RoE of 0.5% for Asset-2a and Asset-2b, and *vide* order dated 31.5.2016 in Petition No. 260/TT/2015 had allowed additional RoE of 0.5% for Asset-3a covered in the instant petition for putting them into commercial



operation within the timeline specified in the Tariff Regulations. The effective tax rate claimed by the Petitioner and grossed-up RoE claimed by the Petitioner considering base rate of RoE @16% is as follows:

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Base rate of RoE (in %)	Grossed-up ROE [(Base Rate)/(1-t)] (in %)
2014-15	20.961	16.00	20.258
2015-16	21.342	16.00	20.351
2016-17	21.342	16.00	20.341
2017-18	21.342	16.00	20.341
2018-19	21.549	16.00	20.395

52. Trued-up RoE is approved on the basis of the MAT rate applicable in the respective years for the 2014-19 tariff period and it is as follows:

(₹ in lakh)

	Particulars	Asset-1				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	14465.32	15651.80	15950.85	16065.31	16266.81
B	Additions	1186.47	299.06	114.46	201.50	31.15
C	Closing Equity (A+B)	15651.80	15950.85	16065.31	16266.81	16297.97
D	Average Equity (A+C)/2	15058.56	15801.32	16008.08	16166.06	16282.39
E	Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (%)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	2952.98	3113.65	3154.39	3185.52	3217.07

(₹ in lakh)

	Particulars	Asset-2a				
		2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	18741.53	20241.02	20531.03	20666.57	20673.19
B	Additions	1499.50	290.00	135.55	6.61	0.00
C	Closing Equity (A+B)	20241.02	20531.03	20666.57	20673.19	20673.19
D	Average Equity (A+C)/2	19491.27	20386.02	20598.80	20669.88	20673.19



	Particulars	Asset-2a				
		2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
E	Return on Equity (Base Rate) (%)	16.00	16.00	16.00	16.00	16.00
F	MAT Rate for respective year (%)	20.96	21.34	21.34	21.34	21.55
G	Rate of Return on Equity (%)	20.24	20.34	20.34	20.34	20.40
H	Return on Equity (D*G)	3372.69	4146.72	4190.00	4204.46	4216.30

(₹ in lakh)

	Particulars	Asset-2b				
		2014-15 (Pro-rata 310 days)	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	964.35	1037.90	1043.69	1114.21	1117.37
B	Additions	73.56	5.78	70.52	3.17	0.00
C	Closing Equity (A+B)	1037.90	1043.69	1114.21	1117.37	1117.37
D	Average Equity (A+C)/2	1001.13	1040.80	1078.95	1115.79	1117.37
E	Return on Equity (Base Rate) (%)	16.00	16.00	16.00	16.00	16.00
F	MAT Rate for respective year (%)	20.96	21.34	21.34	21.34	21.55
G	Rate of Return on Equity (%)	20.24	20.34	20.34	20.34	20.40
H	Return on Equity (D*G)	172.12	211.71	219.47	226.96	227.89

(₹ in lakh)

	Particulars	Asset-3a				
		2014-15 (Pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	3490.67	3828.16	3912.19	3969.81	3973.40
B	Additions	337.49	84.03	57.62	3.59	0.00
C	Closing Equity (A+B)	3828.16	3912.19	3969.81	3973.40	3973.40
D	Average Equity (A+C)/2	3659.41	3870.17	3941.00	3971.61	3973.40
E	Return on Equity (Base Rate) (%)	16.00	16.00	16.00	16.00	16.00
F	MAT Rate for respective year (%)	20.96	21.34	21.34	21.34	21.55



	Particulars	Asset-3a				
		2014-15 (Pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
G	Rate of Return on Equity (%)	20.24	20.34	20.34	20.34	20.40
H	Return on Equity (D*G)	633.21	787.23	801.64	807.86	810.38

(₹ in lakh)

	Particulars	Asset-3b			
		2015-16 (pro-rata 306 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	6042.93	6549.24	7236.30	8016.38
B	Additions	506.31	687.07	780.08	23.30
C	Closing Equity (A+B)	6549.24	7236.30	8016.38	8039.68
D	Average Equity (A+C)/2	6296.08	6892.77	7626.34	8028.03
E	Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50
F	MAT Rate for respective year (%)	21.34	21.34	21.34	21.55
G	Rate of Return on Equity (%)	19.71	19.71	19.71	19.76
H	Return on Equity (D*G)	1037.26	1358.22	1502.77	1586.18

(₹ in lakh)

	Particulars	Asset-3c			
		2015-16 (pro-rata 293 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	853.76	1540.77	2200.18	2200.18
B	Additions	687.01	659.41	0.00	0.00
C	Closing Equity (A+B)	1540.77	2200.18	2200.18	2200.18
D	Average Equity (A+C)/2	1197.27	1870.47	2200.18	2200.18
E	Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50
F	MAT Rate for respective year (%)	21.34	21.34	21.34	21.55
G	Rate of Return on Equity (%)	19.71	19.71	19.71	19.76
H	Return on Equity (D*G)	188.87	368.58	433.55	434.71



(₹ in lakh)

	Particulars	Asset-3d			
		2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	768.48	769.36	1101.81	1220.08
B	Additions	0.88	332.45	118.27	265.75
C	Closing Equity (A+B)	769.36	1101.81	1220.08	1485.83
D	Average Equity (A+C)/2	768.92	935.58	1160.94	1352.95
E	Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (%)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (%)	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	2.48	184.36	228.76	267.32

(₹ in lakh)

	Particulars	Asset-3e			
		2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	1041.81	1042.74	1342.63	1344.78
B	Additions	0.94	299.88	2.15	161.14
C	Closing Equity (A+B)	1042.74	1342.63	1344.78	1505.92
D	Average Equity (A+C)/2	1042.28	1192.69	1343.70	1425.35
E	Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50
F	MAT Rate for respective year (%)	21.34	21.34	21.34	21.55
G	Rate of Return on Equity (%)	19.71	19.71	19.71	19.76
H	Return on Equity (D*G)	3.37	235.02	264.78	281.62

(₹ in lakh)

	Particulars	Asset-3f			
		2015-16 (pro-rata 5 days)	2016-17	2017-18	2018-19
	Return on Equity				
A	Opening Equity	433.89	434.92	489.60	526.22
B	Additions	1.03	54.68	36.61	5.40
C	Closing Equity (A+B)	434.92	489.60	526.22	531.62
D	Average Equity (A+C)/2	434.41	462.26	507.91	528.92
E	Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50
F	MAT Rate for respective year (%)	21.34	21.34	21.34	21.55
G	Rate of Return on Equity (%)	19.71	19.71	19.71	19.76



	Particulars	Asset-3f			
		2015-16 (pro-rata 5 days)	2016- 17	2017-18	2018-19
H	Return on Equity (D*G)	1.17	91.09	100.08	104.50

(₹ in lakh)

	Particulars	Asset-3g		
		2016-17 (pro-rata 103 days)	2017-18	2018-19
	Return on Equity			
A	Opening Equity	2899.17	3122.87	3524.15
B	Additions	223.70	401.28	40.47
C	Closing Equity (A+B)	3122.87	3524.15	3564.61
D	Average Equity (A+C)/2	3011.02	3323.51	3544.38
E	Return on Equity (Base Rate) (%)	15.50	15.50	15.50
F	MAT Rate for respective year (%)	21.34	21.34	21.55
G	Rate of Return on Equity (%)	19.71	19.71	19.76
H	Return on Equity (D*G)	167.43	654.90	700.30

(₹ in lakh)

	Particulars	Asset-3h		
		2016-17 (pro-rata 181 days)	2017-18	2018-19
	Return on Equity			
A	Opening Equity	1890.93	2054.13	2062.76
B	Additions	163.20	8.63	14.89
C	Closing Equity (A+B)	2054.13	2062.76	2077.65
D	Average Equity (A+C)/2	1972.53	2058.45	2070.21
E	Return on Equity (Base Rate) (%)	15.50	15.50	15.50
F	MAT Rate for respective year (%)	21.34	21.34	21.55
G	Rate of Return on Equity (%)	19.71	19.71	19.76
H	Return on Equity (D*G)	192.75	405.62	409.03

(₹ in lakh)

	Particulars	Asset-3i		
		2016-17 (pro-rata 181 days)	2017-18	2018-19
	Return on Equity			
A	Opening Equity	2250.06	2444.57	2518.75
B	Additions	194.51	74.18	179.76
C	Closing Equity (A+B)	2444.57	2518.75	2698.51



	Particulars	Asset-3i		
		2016-17 (pro-rata 181 days)	2017-18	2018-19
D	Average Equity (A+C)/2	2347.31	2481.66	2608.63
E	Return on Equity (Base Rate) (%)	15.50	15.50	15.50
F	MAT Rate for respective year (%)	21.34	21.34	21.55
G	Rate of Return on Equity (%)	19.71	19.71	19.76
H	Return on Equity (D*G)	229.37	489.01	515.41

(₹ in lakh)

	Particulars	Asset-3j		
		2016-17 (pro-rata 97 days)	2017-18	2018-19
	Return on Equity			
A	Opening Equity	423.76	438.22	465.32
B	Additions	14.46	27.09	0.00
C	Closing Equity (A+B)	438.22	465.32	465.32
D	Average Equity (A+C)/2	430.99	451.77	465.32
E	Return on Equity (Base Rate) (%)	15.50	15.50	15.50
F	MAT Rate for respective year (%)	21.34	21.34	21.55
G	Rate of Return on Equity (%)	19.71	19.71	19.76
H	Return on Equity (D*G)	22.57	89.02	91.94

(₹ in lakh)

	Particulars	Asset-3k		
		2016-17 (pro-rata 97 days)	2017-18	2018-19
	Return on Equity			
A	Opening Equity	605.62	641.31	648.81
B	Additions	35.69	7.50	0.00
C	Closing Equity (A+B)	641.31	648.81	648.81
D	Average Equity (A+C)/2	623.47	645.06	648.81
E	Return on Equity (Base Rate) (%)	15.50	15.50	15.50
F	MAT Rate for respective year (%)	21.34	21.34	21.55
G	Rate of Return on Equity (%)	19.71	19.71	19.76
H	Return on Equity (D*G)	32.65	127.11	128.19

53. The details of RoE allowed vide order dated 11.9.2017 in Petition No. 96/TT/2017, vide order dated 15.2.2016 in Petition No. 45/TT/2014, and vide order



dated 31.5.2016 in Petition No. 260/TT/2015, claimed by the Petitioner in the instant petition and trued-up RoE in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1					
Allowed <i>vide</i> order dated 11.9.2017 in Petition No. 96/TT/2017	2948.68	3094.85	3130.91	3137.62	3137.62
Claimed by the Petitioner in the instant petition	2958.11	3118.11	3157.67	3188.80	3220.36
Approved after true-up in this order	2952.98	3113.65	3154.39	3185.52	3217.07
Asset-2a					
Allowed <i>vide</i> order dated 15.2.2016 in Petition No. 45/TT/2014	2493.41	2916.97	2916.97	2916.97	2916.97
Claimed by the Petitioner in the instant petition	3385.11	4160.42	4201.66	4216.12	4227.98
Approved after true-up in this order	3372.69	4146.72	4190.00	4204.46	4216.30
Asset-2b					
Allowed <i>vide</i> order dated 15.2.2016 in Petition No. 45/TT/2014	170.06	213.90	225.69	228.84	228.84
Claimed by the Petitioner in the instant petition	172.26	211.81	219.47	226.96	227.89
Approved after true-up in this order	172.12	211.71	219.47	226.96	227.89
Asset-3a					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015	620.63	786.22	825.22	838.07	838.07
Claimed by the Petitioner in the instant petition	633.81	787.62	801.64	807.87	810.37
Approved after true-up in this order	633.21	787.23	801.64	807.86	810.38
Asset-3b					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		1160.58	1691.70	1792.14	1792.14
Claimed by the Petitioner in the instant petition		1037.78	1358.22	1502.77	1586.18



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved after true-up in this order		1037.26	1358.22	1502.77	1586.18
	Asset-3c				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		183.54	314.07	337.13	337.13
Claimed by the Petitioner in the instant petition		189.00	368.58	433.55	434.71
Approved after true-up in this order		188.87	368.58	433.55	434.71
	Asset-3d				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		#	#	#	#
Claimed by the Petitioner in the instant petition		2.49	184.36	228.76	267.32
Approved after true-up in this order		2.48	184.36	228.76	267.32
	Asset-3e				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		#	#	#	#
Claimed by the Petitioner in the instant petition		3.37	235.53	265.79	282.63
Approved after true-up in this order		3.37	235.02	264.78	281.62
	Asset-3f				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		1.12	88.77	98.98	102.19
Claimed by the Petitioner in the instant petition		1.17	91.09	100.08	104.50
Approved after true-up in this order		1.17	91.09	100.08	104.50
	Asset-3g				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			167.64	655.71	701.19
Approved after true-up in this order			167.43	654.90	700.30
	Asset-3h				



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			192.75	405.65	409.10
Approved after true-up in this order			192.75	405.62	409.03
Asset-3i					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			231.88	494.67	521.68
Approved after true-up in this order			229.37	489.01	515.41
Asset-3j					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			22.57	89.02	91.93
Approved after true-up in this order			22.57	89.02	91.94
Asset-3k					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			32.65	127.15	128.26
Approved after true-up in this order			32.65	127.11	128.19

Tariff for Asset-3d and 3e was allowed as a combined asset *vide* order dated 31.5.2016 in Petition No. 260/TT/2015* Tariff for Asset-3g, 3h, 3i, 3j and 3k was allowed as a combined asset *vide* order dated 31.5.2016 in Petition No. 260/TT/2015

Operation & Maintenance Expenses (O&M Expenses)

54. The O&M Expenses claimed by the Petitioner for the transmission assets for the 2014-19 period are as follows:



Particulars	Asset-1				
	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission line					
(i) 765 kV Raigarh (Kotra) – Raigarh (Tamnar) (95.972 km)					
Bays (s)					
(ii) 11 Nos. of 765 kV bays					
(iii) 3 Nos. of 400 kV bays					
765 kV Bays	11	11	11	11	11
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
765 kV Bays	3	3	3	3	3
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
D/C 4 conductors (km)	47.986	47.986	47.986	47.986	47.986
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
Total O&M Expense (₹ in lakh)	907.22	937.30	968.44	1000.60	1033.79

Particulars	Asset-2a				
	2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
Bay(s)					
(i) Champa-Raipur PS:765 kV bay					
Transmission Lines					
(i) 765 kV D/C Champa Pooling station – Dharamjaygarh (Near Kobra) Line (298.404 kms)					
765 kV Bays	1	1	1	1	1
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
D/C 4 conductors (km)	149.202	149.202	149.202	149.202	149.202
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
Total O&M Expense (₹ in lakh)	207.60	250.89	259.17	267.83	276.73

Particulars	Asset-2b				
	2014-15 (Pro-rata 310 days)	2015-16	2016-17	2017-18	2018-19
Bay(s)					
(ii) Raipur-ChampaPS :765 kV bay 2					
765 kV Bays	1	1	1	1	1
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
Total O&M Expense (₹ in lakh)	71.70	87.22	90.12	93.11	96.20



Particulars	Asset-3a				
	2014-15 (Pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
Bay(s)					
(iii) Champa-Raigarh (Kotra):765 kV bay					
(iv) Champa-Raipur:765 kV bay					
(v) Champa-Kotra:765 kV bay					
Transmission Lines					
(ii) 765 kV S/C Champa Pooling station – Dharamjaygarh (Near Kobra) Line (57.830kms)					
765 kV Bays	1		1	1	1
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
S/C 4 conductors (km)	57.830	57.830	57.830	57.830	57.830
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
Total O&M Expense (₹ in lakh)	102.12	123.48	127.54	131.80	136.16

Particulars	Asset-3b			
	2015-16 (pro-rata 306 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Champa-Raigarh (Kotra):765 kV bay				
(ii) Champa-Raipur:765 kV bay				
(iii) Champa-Kotra:765 kV bay				
Transmission Lines				
(i) 765 kV S/C Raigarh (Kotra) -Champa PS (96.240kms)				
765 kV Bays	3	3	3	3
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
S/C 4 conductors (km)	96.240	96.240	96.240	96.240
Norms (₹ lakh/km)	0.627	0.647	0.669	0.691
Total O&M Expense (₹ in lakh)	269.21	332.63	343.71	355.10

Particulars	Asset-3c			
	2015-16 (pro-rata 293 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Champa-Raigarh (Kotra):765 kV bays				
(ii) Champa 400 kV ICT-2 bays				
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
400 kV Bays	1		1	1



Particulars	Asset-3c			
	2015-16 (pro-rata 293 days)	2016-17	2017-18	2018-19
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
Total O&M Expense (₹ in lakh)	119.69	154.49	159.62	164.91

Particulars	Asset-3d			
	2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Champa-Raigarh (Kotra):765 kV bays				
(ii) Champa 400kV ICT-2 bays				
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
400 kV Bays	1		1	1
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
Total O&M Expense (₹ in lakh)	2.45	154.49	159.62	164.91

Particulars	Asset-3e			
	2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Champa:765 kV bay for 3x80 MVAR bus reactor				
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
Total O&M Expenses (₹ in lakh)	1.43	90.12	93.11	96.20

Particulars	Asset-3f			
	2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
Bay(s)				
(i) Champa:420 kV 80 MVAR bus reactor				
400 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	1.43	90.12	93.11	96.20



Particulars	Asset-3g		
	2016-17 (pro-rata 103 days)	2017-18	2018-19
Bay(s)			
(i) Champa:765 kV bays for ICT3 & ICT4			
(ii) Champa:400 kV bays for ICT-3 & ICT-4			
765 kV Bays	2	2	2
Norms (₹ lakh/Bay)	90.12	93.11	96.20
400 kV Bays	2	2	2
Norms (₹ lakh/Bay)	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	87.19	319.24	329.82

Particulars	Asset-3h		
	2016-17 (pro-rata 181 days)	2017-18	2018-19
Bay(s)			
(i) Champa:765 kV bays for ICT5			
(ii) Champa:400 kV bays for ICT5			
765 kV Bays	1	1	1
Norms (₹ lakh/Bay)	90.12	93.11	96.20
400 kV Bays	1	1	1
Norms (₹ lakh/Bay)	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	76.61	159.62	164.91

Particulars	Asset-3i		
	2016-17 (pro-rata 181 days)	2017-18	2018-19
Bay(s)			
(i) Champa:765 kV bays for ICT6			
(ii) Champa:400 kV bays for ICT6			
765 kV Bays	1	1	1
Norms (₹ lakh/Bay)	90.12	93.11	96.20
400 kV Bays	1	1	1
Norms (₹ lakh/Bay)	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	76.61	159.62	164.91

Particulars	Asset-3j		
	2016-17 (pro-rata 97 days)	2017-18	2018-19
Bay(s)			
(i) Champa:765 kV line bay for Champa-DharamjaygarhTL			



Particulars	Asset-3j		
	2016-17 (pro-rata 97 days)	2017-18	2018-19
(ii) Champa:765 kV bus sectionaliser 1			
765 kV Bays	2	2	2
Norms (₹ lakh/Bay)	90.12	93.11	96.20
Total O&M Expense (₹ in lakh)	47.90	186.22	192.40

Particulars	Asset-3k		
	2016-17 (pro-rata 97 days)	2017-18	2018-19
Bay(s)			
(i) Champa:765 kV line bay for Champa-Raipur TL			
(ii) Champa:765 kV bus sectionaliser 2			
765 kV Bays	2	2	2
Norms (₹ lakh/Bay)	90.12	93.11	96.20
Total O&M Expense (₹ in lakh)	47.90	186.22	192.40

55. The applicable norms for the O&M Expenses as per the 2014 Tariff Regulations are as follows:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
D/C Bundled Conductor with four or more subconductors					
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
D/C Twin/Triple Conductor					
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
D/C Single Conductor					
Norms (₹ lakh/km)	0.303	0.313	0.324	0.334	0.346
S/C Bundled Conductor with four subconductors					
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
765 kV Bays					
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
400 kV Bays					
Norms (₹ lakh/Bay)	60.3	62.30	64.37	66.51	68.71
220 kV Bays					
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.1



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

Particulars	Asset-1				
	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission line					
(iv) 765 kV Raigarh (Kotra) – Raigarh (Tamnar) (95.972 km)					
Bays (s)					
(v) 11 Nos. of 765 kV bays					
(vi) 3 Nos. of 400 kV bays					
765 kV Bays	11	11	11	11	11
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
765 kV Bays	3	3	3	3	3
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
D/C 4 conductors (km)	47.986	47.986	47.986	47.986	47.986
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
Total O&M Expense (₹ in lakh)	907.22	937.30	968.44	1000.60	1033.79

Particulars	Asset-2a				
	2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
Bay(s)					
(vi) Champa-Raipur PS:765 kV bay					
Transmission Lines					
(iii) 765 kV D/C Champa Pooling station – Dharamjaygarh (Near Kobra) Line (298.404 kms)					
765 kV Bays	1	1	1	1	1
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
D/C 4 conductors (km)	149.202	149.202	149.202	149.202	149.202
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
Total O&M Expenses (₹ in lakh)	207.61	250.89	259.17	267.83	276.73

Particulars	Asset-2b				
	2014-15	2015-16	2016-17	2017-18	2018-19
Bay(s)					
(vii) Raipur-ChampaPS :765 kV bay 2					
765 kV Bays	1	1	1	1	1
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20



Particulars	Asset-2b				
	2014-15	2015-16	2016-17	2017-18	2018-19
Total O&M Expenses (₹ in lakh)	71.70	87.22	90.12	93.11	96.20

Particulars	Asset-3a				
	2014-15	2015-16	2016-17	2017-18	2018-19
Bay(s)					
(viii) Champa-Raigarh (Kotra):765 kV bay					
(ix) Champa-Raipur:765 kV bay					
(x) Champa-Kotra:765 kV bay					
Transmission Lines					
(iv) 765 kV S/C Champa Pooling station – Dharamjaygarh (Near Kobra) Line (57.830kms)					
765 kV Bays	1		1	1	1
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
S/C 4 conductors (km)	57.830	57.830	57.830	57.830	57.830
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
Total O&M Expenses (₹ in lakh)	102.12	123.48	127.54	131.80	136.16

Particulars	Asset-3b			
	2015-16 (pro-rata 306 days)	2016-17	2017-18	2018-19
Bay(s)				
(iv) Champa-Raigarh (Kotra):765 kV bay				
(v) Champa-Raipur:765 kV bay				
(vi) Champa-Kotra:765 kV bay				
Transmission Lines				
(ii) 765 kV S/C Raigarh (Kotra) -Champa PS (96.240kms)				
765 kV Bays	3	3	3	3
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
S/C 4 conductors (km)	96.240	96.240	96.240	96.240
Norms (₹ lakh/km)	0.627	0.647	0.669	0.691
Total O&M Expenses (₹ in lakh)	269.22	332.63	343.71	355.10

Particulars	Asset-3c			
	2015-16 (pro-rata 293 days)	2016-17	2017-18	2018-19
Bay(s)				
(iii) Champa-Raigarh (Kotra):765 kV bays				



Particulars	Asset-3c			
	2015-16 (pro-rata 293 days)	2016-17	2017-18	2018-19
(iv) Champa 400kV ICT-2 bays				
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
400 kV Bays	1		1	1
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	119.70	154.49	159.62	164.91

Particulars	Asset-3d			
	2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
Bay(s)				
(iii) Champa-Raigarh (Kotra):765 kV bays				
(iv) Champa 400kV ICT-2 bays				
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
400 kV Bays	1		1	1
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	2.45	154.49	159.62	164.91

Particulars	Asset-3e			
	2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
Bay(s)				
(ii) Champa:765 kV bay for 3x80MVAR bus reactor				
765 kV Bays	1	1	1	1
Norms (₹ lakh/Bay)	87.22	90.12	93.11	96.20
Total O&M Expenses (₹ in lakh)	1.43	90.12	93.11	96.20

Particulars	Asset-3f			
	2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
Bay(s)				
(ii) Champa:420 kV 80 MVAR bus reactor				
400 kV Bays	1	1	1	1



Particulars	Asset-3f			
	2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
Norms (₹ lakh/Bay)	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	1.43	90.12	93.11	96.20

Particulars	Asset-3g		
	2016-17 (pro-rata 103 days)	2017-18	2018-19
Bay(s) (iii) Champa:765 kV bays for ICT3 & ICT4 (iv) Champa:400 kV bays for ICT-3 & ICT-4			
765 kV Bays	2	2	2
Norms (₹ lakh/Bay)	90.12	93.11	96.20
400 kV Bays	2	2	2
Norms (₹ lakh/Bay)	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	87.19	319.24	329.82

Particulars	Asset-3h		
	2016-17 (pro-rata 181 days)	2017-18	2018-19
Bay(s) (iii) Champa:765 kV bays for ICT5 (iv) Champa:400 kV bays for ICT5			
765 kV Bays	1	1	1
Norms (₹ lakh/Bay)	90.12	93.11	96.20
400 kV Bays	1	1	1
Norms (₹ lakh/Bay)	64.37	66.51	68.71
Total O&M Expense (₹ in lakh)	76.61	159.62	164.91

Particulars	Asset-3i		
	2016-17 (pro-rata 181 days)	2017-18	2018-19
Bay(s) (iii) Champa:765 kV bays for ICT6 (iv) Champa:400 kV bays for ICT6			
765 kV Bays	1	1	1
Norms (₹ lakh/Bay)	90.12	93.11	96.20



Particulars	Asset-3i		
	2016-17 (pro-rata 181 days)	2017-18	2018-19
400 kV Bays	1	1	1
Norms (₹ lakh/Bay)	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	76.61	159.62	164.91

Particulars	Asset-3j		
	2016-17 (pro-rata 97 days)	2017-18	2018-19
Bay(s)			
(iii) Champa:765 kV line bay for Champa-Dharamjaygarh TL			
(iv) Champa:765 kV bus sectionaliser 1			
765 kV Bays	2	2	2
Norms (₹ lakh/Bay)	90.12	93.11	96.20
Total O&M Expenses (₹ in lakh)	47.90	186.22	192.40

Particulars	Asset-3k		
	2016-17 (pro-rata 97 days)	2017-18	2018-19
Bay(s)			
(iii) Champa:765 kV line bay for Champa-Raipur TL			
(iv) Champa:765 kV bus sectionaliser 2			
765 kV Bays	2	2	2
Norms (₹ lakh/Bay)	90.12	93.11	96.20
Total O&M Expense (₹ in lakh)	47.90	186.22	192.40

57. The details of O&M Expenses allowed vide order dated 11.9.2017 in Petition No. 96/TT/2017, vide order dated 15.2.2016 in Petition No. 45/TT/2014, and vide order dated 31.5.2016 in Petition No. 260/TT/2015, claimed by the Petitioner in the instant petition and trued-up O&M Expenses in the instant order are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1					
Allowed vide order dated 11.9.2017 in Petition No. 96/TT/2017	907.22	937.30	968.44	1000.60	1033.79



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition	907.22	937.30	968.44	1000.60	1033.79
Approved after true-up in this order	907.22	937.30	968.44	1000.60	1033.79
	Asset-2a				
Allowed <i>vide</i> order dated 15.2.2016 in Petition No. 45/TT/2014	207.60	250.89	259.17	267.83	276.73
Claimed by the Petitioner in the instant petition	207.60	250.89	259.17	267.83	276.73
Approved after true-up in this order	207.61	250.89	259.17	267.83	276.73
	Asset-2b				
Allowed <i>vide</i> order dated 15.2.2016 in Petition No. 45/TT/2014	71.71	87.22	90.12	93.11	96.20
Claimed by the Petitioner in the instant petition	71.70	87.22	90.12	93.11	96.20
Approved after true-up in this order	71.70	87.22	90.12	93.11	96.20
	Asset-3a				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015	102.12	123.48	127.54	131.80	136.16
Claimed by the Petitioner in the instant petition	102.12	123.48	127.54	131.80	136.16
Approved after true-up in this order	102.12	123.48	127.54	131.80	136.16
	Asset-3b				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		269.22	332.63	343.71	355.10
Claimed by the Petitioner in the instant petition		269.21	332.63	343.71	355.10
Approved after true-up in this order		269.22	332.63	343.71	355.10
	Asset-3c				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		119.70	154.49	159.62	164.91
Claimed by the Petitioner in the instant petition		119.69	154.49	159.62	164.91



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved after true-up in this order		119.70	154.49	159.62	164.91
Asset-3d					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		#	#	#	#
Claimed by the Petitioner in the instant petition		2.45	154.49	159.62	164.91
Approved after true-up in this order		2.45	154.49	159.62	164.91
Asset-3e					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		#	#	#	#
Claimed by the Petitioner in the instant petition		1.43	90.12	93.11	96.20
Approved after true-up in this order		1.43	90.12	93.11	96.20
Asset-3f					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		0.85	64.37	66.51	68.71
Claimed by the Petitioner in the instant petition		0.85	64.37	66.51	68.71
Approved after true-up in this order		0.85	64.37	66.51	68.71
Asset-3g					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			87.19	319.24	329.82
Approved after true-up in this order			87.19	319.24	329.82
Asset-3h					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			76.61	159.62	164.91
Approved after true-up in this order			76.61	159.62	164.91
Asset-3i					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			76.61	159.62	164.91
Approved after true-up in this order			76.61	159.62	164.91
	Asset-3j				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			47.90	186.22	192.40
Approved after true-up in this order			47.90	186.22	192.40
	Asset-3k				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			47.90	186.22	192.40
Approved after true-up in this order			47.90	186.22	192.40

* Tariff for Asset-3g, 3h, 3i, 3j and 3k was allowed as a combined asset *vide* order dated 31.5.2016 in Petition No. 260/TT/2015.

Interest on Working Capital (IWC)

58. The IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and the following IWC is allowed:

		(₹ in lakh)				
Particulars	Asset-1					
	2014-15	2015-16	2016-17	2017-18	2018-19	
Interest on Working Capital						
A Working Capital for O&M Expenses (O&M Expenses for 1 month)	75.60	78.11	80.70	83.38	86.15	
B Working Capital for Maintenance Spares	136.08	140.60	145.27	150.09	155.07	



	Particulars	Asset-1				
		2014-15	2015-16	2016-17	2017-18	2018-19
	(15% of O&M Expenses)					
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	1526.94	1567.00	1554.09	1533.27	1513.60
D	Total Working Capital (A+B+C)	1738.62	1785.70	1780.05	1766.75	1754.82
E	Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	234.71	241.07	240.31	238.51	236.90

(₹ in lakh)

	Particulars	Asset-2a				
		2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	20.24	20.91	21.60	22.32	23.06
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	36.43	37.63	38.87	40.17	41.51
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	1925.80	1970.57	1936.99	1885.84	1834.82
D	Total Working Capital (A+B+C)	1982.47	2029.11	1997.46	1948.34	1899.39
E	Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	228.77	273.93	269.66	263.03	256.42



(₹ in lakh)

	Particulars	Asset-2b				
		2014-15 (pro-rata 310 days)	2015- 16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	7.04	7.27	7.51	7.76	8.02
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	12.66	13.08	13.52	13.97	14.43
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	112.52	114.33	115.62	116.40	114.43
D	Total Working Capital (A+B+C)	132.22	134.68	136.65	138.12	136.88
E	Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	15.16	18.18	18.45	18.65	18.48

(₹ in lakh)

	Particulars	Asset-3a				
		2014-15 (pro-rata 312 days)	2015- 16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	9.96	10.29	10.63	10.98	11.35
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	17.92	18.52	19.13	19.77	20.42
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	362.25	376.05	374.09	367.42	358.87
D	Total Working Capital (A+B+C)	390.13	404.86	403.85	398.17	390.64

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	Particulars	Asset-3a				
		2014-15 (pro-rata 312 days)	2015- 16	2016-17	2017-18	2018-19
E	Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	45.02	54.66	54.52	53.75	52.74

(₹ in lakh)

	Particulars	Asset-3b			
		2015- 16 (pro- rata 306 days)	2016- 17	2017- 18	2018- 19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	26.83	27.72	28.64	29.59
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	48.30	49.89	51.56	53.27
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	557.88	608.43	663.97	690.15
D	Total Working Capital (A+B+C)	633.01	686.04	744.17	773.01
E	Rate of Interest (%)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	71.45	92.62	100.46	104.36

(₹ in lakh)

	Particulars	Asset-3c			
		2015-16 (pro-rata 293 days)	2016- 17	2017- 18	2018- 19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	12.46	12.87	13.30	13.74
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	22.43	23.17	23.94	24.74
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	142.33	202.88	228.50	223.94
D	Total Working Capital (A+B+C)	177.22	238.92	265.74	262.42
E	Rate of Interest (%)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	19.15	32.25	35.88	35.43



(₹ in lakh)

	Particulars	Asset-3d			
		2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	12.46	12.87	13.30	13.74
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	22.43	23.17	23.94	24.74
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	91.37	106.98	126.40	141.00
D	Total Working Capital (A+B+C)	126.26	143.03	163.64	179.48
E	Rate of Interest (%)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	0.28	19.31	22.09	24.23

(₹ in lakh)

	Particulars	Asset-3e			
		2015-16 (pro-rata 6 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	7.27	7.51	7.76	8.02
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	13.08	13.52	13.97	14.43
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	117.13	129.75	139.92	144.63
D	Total Working Capital (A+B+C)	137.48	150.78	161.65	167.08
E	Rate of Interest (%)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	0.30	20.36	21.82	22.56

(₹ in lakh)

	Particulars	Asset-3f			
		2015-16 (pro-rata 5 days)	2016-17	2017-18	2018-19
	Interest on Working Capital				
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	5.19	5.36	5.54	5.73



	Particulars	Asset-3f			
		2015-16 (pro-rata 5 days)	2016-17	2017-18	2018-19
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	9.35	9.66	9.98	10.31
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	53.48	55.60	58.61	59.62
D	Total Working Capital (A+B+C)	68.02	70.62	74.13	75.65
E	Rate of Interest (%)	13.50	13.50	13.50	13.50
F	Interest of Working Capital (D*E)	0.13	9.53	10.01	10.21

(₹ in lakh)

	Particulars	Asset-3g		
		2016-17 (pro-rata 103 days)	2017-18	2018-19
	Interest on Working Capital			
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	25.75	26.60	27.49
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	46.35	47.89	49.47
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	341.29	366.58	380.53
D	Total Working Capital (A+B+C)	413.39	441.07	457.49
E	Rate of Interest (%)	12.80	12.80	12.80
F	Interest of Working Capital (D*E)	14.93	56.46	58.56

(₹ in lakh)

	Particulars	Asset-3h		
		2016-17 (pro-rata 181 days)	2017-18	2018-19
	Interest on Working Capital			
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	12.87	13.30	13.74
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	23.17	23.94	24.74
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	218.67	223.79	220.64
D	Total Working Capital (A+B+C)	254.72	261.03	259.12
E	Rate of Interest (%)	12.80	12.80	12.80
F	Interest of Working Capital (D*E)	16.17	33.41	33.17

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(₹ in lakh)

	Particulars	Asset-3i		
		2016-17 (pro-rata 181 days)	2017-18	2018-19
	Interest on Working Capital			
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	12.87	13.30	13.74
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	23.17	23.94	24.74
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	236.62	246.30	253.38
D	Total Working Capital (A+B+C)	272.67	283.55	291.86
E	Rate of Interest (%)	12.80	12.80	12.80
F	Interest of Working Capital (D*E)	17.31	36.29	37.36

(₹ in lakh)

	Particulars	Asset-3j		
		2016-17 (pro-rata 97 days)	2017-18	2018-19
	Interest on Working Capital			
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	15.02	15.52	16.03
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	27.04	27.93	28.86
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	73.02	75.27	76.51
D	Total Working Capital (A+B+C)	115.08	118.72	121.40
E	Rate of Interest (%)	12.80	12.80	12.80
F	Interest of Working Capital (D*E)	3.91	15.20	15.54

(₹ in lakh)

	Particulars	Asset-3k		
		2016-17 (pro-rata 97 days)	2017-18	2018-19
	Interest on Working Capital			
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	15.02	15.52	16.03
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	27.04	27.93	28.86
C	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	90.12	92.24	92.25



	Particulars	Asset-3k		
		2016-17 (pro-rata 97 days)	2017-18	2018-19
D	Total Working Capital (A+B+C)	132.17	135.69	137.15
E	Rate of Interest (%)	12.80	12.80	12.80
F	Interest of Working Capital (D*E)	4.50	17.37	17.55

59. The details of IWC allowed vide order dated 11.9.2017 in Petition No. 96/TT/2017, order dated 15.2.2016 in Petition No. 45/TT/2014, and order dated 31.5.2016 in Petition No. 260/TT/2015, claimed by the Petitioner in the instant petition and trued-up IWC in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1					
Allowed vide order dated 11.9.2017 in Petition No. 96/TT/2017	234.43	240.80	239.90	237.08	233.76
Claimed by the Petitioner in the instant petition	235.28	241.59	240.79	238.96	237.32
Approved after true-up in this order	234.71	241.07	240.31	238.51	236.90
Asset-2a					
Allowed vide order dated 15.2.2016 in Petition No. 45/TT/2014	172.21	197.53	192.97	188.36	183.71
Claimed by the Petitioner in the instant petition	229.51	274.76	270.41	263.75	257.12
Approved after true-up in this order	228.77	273.93	269.66	263.03	256.42
Asset-2b					
Allowed vide order dated 15.2.2016 in Petition No. 45/TT/2014	15.03	18.40	18.95	18.93	18.71
Claimed by the Petitioner in the instant petition	15.18	18.20	18.46	18.66	18.49
Approved after true-up in this order	15.16	18.18	18.45	18.65	18.48
Asset-3a					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015	44.28	54.85	56.27	55.99	54.82
Claimed by the Petitioner in the instant petition	45.10	54.73	54.58	53.81	52.79
Approved after true-up in this order	45.02	54.66	54.52	53.75	52.74
Asset-3b					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		77.47	107.60	111.73	110.85
Claimed by the Petitioner in the instant petition		71.50	92.66	100.51	104.40
Approved after true-up in this order		71.45	92.62	100.46	104.36
Asset-3c					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		18.97	29.27	30.52	30.24
Claimed by the Petitioner in the instant petition		19.20	32.31	35.92	35.47
Approved after true-up in this order		19.15	32.25	35.88	35.43
Asset-3d					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		#	#	#	#
Claimed by the Petitioner in the instant petition		0.28	19.36	22.14	24.28
Approved after true-up in this order		0.28	19.31	22.09	24.23
Asset-3e					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		#	#	#	#
Claimed by the Petitioner in the instant petition		0.30	20.40	21.90	22.63
Approved after true-up in this order		0.30	20.36	21.82	22.56
Asset-3f					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		0.12	9.44	10.07	10.23



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition		0.13	9.57	10.04	10.24
Approved after true-up in this order		0.13	9.53	10.01	10.21
	Asset-3g				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			14.96	56.57	58.67
Approved after true-up in this order			14.93	56.46	58.56
	Asset-3h				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			16.19	33.45	33.21
Approved after true-up in this order			16.17	33.41	33.17
	Asset-3i				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			17.49	36.68	37.77
Approved after true-up in this order			17.31	36.29	37.36
	Asset-3j				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			3.92	15.21	15.55
Approved after true-up in this order			3.91	15.20	15.54
	Asset-3k				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			4.50	17.38	17.57



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved after true-up in this order			4.50	17.37	17.55

Tariff for Asset-3d and 3e was allowed as a combined asset vide order dated 31.5.2016 in Petition No. 260/TT/2015

* Tariff for Asset-3g, 3h, 3i, 3j and 3k was allowed as a combined asset vide order dated 31.5.2016 in Petition No. 260/TT/2015

Approved Annual Fixed Charges for the 2014-19 Tariff Period

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

		(₹ in lakh)				
Particulars	Asset-1					
	2014-15	2015-16	2016-17	2017-18	2018-19	
AFC						
A Depreciation	2511.33	2622.79	2655.65	2681.54	2699.90	
B Interest on Loan	2555.38	2487.16	2305.72	2093.47	1893.94	
C Return on Equity	2952.98	3113.65	3154.39	3185.52	3217.07	
D O & M Expenses	907.22	937.30	968.44	1000.60	1033.79	
E Interest on Working Capital	234.71	241.07	240.31	238.51	236.90	
F Total (A+B+C+D+E)	9161.62	9401.97	9324.51	9199.64	9081.60	

		(₹ in lakh)				
Particulars	Asset-2a					
	2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19	
AFC						
A Depreciation	2923.30	3576.23	3612.68	3624.38	3624.96	
B Interest on Loan	3144.61	3575.65	3290.42	2955.37	2634.49	
C Return on Equity	3372.69	4146.72	4190.00	4204.46	4216.30	
D O & M Expenses	207.61	250.89	259.17	267.83	276.73	
E Interest on Working Capital	228.77	273.93	269.66	263.03	256.42	
F Total (A+B+C+D+E)	9876.98	11823.42	11621.93	11315.07	11008.90	



(₹ in lakh)

	Particulars	Asset-2b				
		2014-15 (pro-rata 310 days)	2015-16	2016-17	2017-18	2018-19
	AFC					
A	Depreciation	145.45	177.21	183.60	189.95	190.22
B	Interest on Loan	168.95	191.66	182.07	169.71	153.82
C	Return on Equity	172.12	211.71	219.47	226.96	227.89
D	O & M Expenses	71.70	87.22	90.12	93.11	96.20
E	Interest on Working Capital	15.16	18.18	18.45	18.65	18.48
F	Total (A+B+C+D+E)	573.38	685.98	693.71	698.38	686.61

(₹ in lakh)

	Particulars	Asset-3a				
		2014-15 (pro-rata 312 days)	2015-16	2016-17	2017-18	2018-19
	AFC					
A	Depreciation	549.52	679.34	691.78	697.16	697.48
B	Interest on Loan	528.04	611.58	569.06	513.92	456.46
C	Return on Equity	633.21	787.23	801.64	807.86	810.38
D	O & M Expenses	102.12	123.48	127.54	131.80	136.16
E	Interest on Working Capital	45.02	54.66	54.52	53.75	52.74
F	Total (A+B+C+D+E)	1857.91	2256.29	2244.54	2204.49	2153.22

(₹ in lakh)

	Particulars	Asset-3b			
		2015-16 (pro-rata 306 days)	2016- 17	2017- 18	2018-19
	AFC				
A	Depreciation	800.42	1058.26	1167.49	1221.00
B	Interest on Loan	620.20	808.84	869.40	874.30
C	Return on Equity	1037.26	1358.22	1502.77	1586.18
D	O & M Expenses	269.22	332.63	343.71	355.10
E	Interest on Working Capital	71.45	92.62	100.46	104.36
F	Total (A+B+C+D+E)	2798.55	3650.57	3983.83	4140.94



(₹ in lakh)

	Particulars	Asset-3c			
		2015-16 (pro-rata 293 days)	2016- 17	2017- 18	2018- 19
	AFC				
A	Depreciation	165.27	324.25	381.70	381.70
B	Interest on Loan	190.65	337.69	360.24	326.92
C	Return on Equity	188.87	368.58	433.55	434.71
D	O & M Expenses	119.70	154.49	159.62	164.91
E	Interest on Working Capital	19.15	32.25	35.88	35.43
F	Total (A+B+C+D+E)	683.64	1217.26	1370.99	1343.67

(₹ in lakh)

	Particulars	Asset-3d			
		2015-16 (pro-rata 6 days)	2016- 17	2017- 18	2018- 19
	AFC				
A	Depreciation	2.12	157.30	191.54	212.92
B	Interest on Loan	1.65	126.43	156.37	176.65
C	Return on Equity	2.48	184.36	228.76	267.32
D	O & M Expenses	2.45	154.49	159.62	164.91
E	Interest on Working Capital	0.28	19.31	22.09	24.23
F	Total (A+B+C+D+E)	8.98	641.89	758.38	846.03

(₹ in lakh)

	Particulars	Asset-3e			
		2015-16 (pro-rata 6 days)	2016- 17	2017- 18	2018- 19
	AFC				
A	Depreciation	2.84	199.05	225.09	239.00
B	Interest on Loan	3.58	233.98	234.72	228.40
C	Return on Equity	3.37	235.02	264.78	281.62
D	O & M Expenses	1.43	90.12	93.11	96.20
E	Interest on Working Capital	0.30	20.36	21.82	22.56
F	Total (A+B+C+D+E)	11.52	778.53	839.52	867.78



(₹ in lakh)

	Particulars	Asset-3f			
		2015-16 (pro-rata 5 days)	2016- 17	2017- 18	2018- 19
	AFC				
A	Depreciation	0.98	75.17	80.91	83.47
B	Interest on Loan	1.26	93.45	94.13	90.83
C	Return on Equity	1.17	91.09	100.08	104.50
D	O & M Expenses	0.85	64.37	66.51	68.71
E	Interest on Working Capital	0.13	9.53	10.01	10.21
F	Total (A+B+C+D+E)	4.39	333.61	351.64	357.72

(₹ in lakh)

	Particulars	Asset-3g		
		2016-17 (pro-rata 103 days)	2017-18	2018-19
	AFC			
A	Depreciation	143.67	562.13	598.34
B	Interest on Loan	164.64	606.74	596.15
C	Return on Equity	167.43	654.90	700.30
D	O & M Expenses	87.19	319.24	329.82
E	Interest on Working Capital	14.93	56.46	58.56
F	Total (A+B+C+D+E)	577.86	2199.47	2283.17

(₹ in lakh)

	Particulars	Asset-3h		
		2016-17 (pro-rata 181 days)	2017-18	2018-19
	AFC			
A	Depreciation	167.59	352.67	354.25
B	Interest on Loan	197.50	391.41	362.47
C	Return on Equity	192.75	405.62	409.03
D	O & M Expenses	76.61	159.62	164.91
E	Interest on Working Capital	16.17	33.41	33.17
F	Total (A+B+C+D+E)	650.62	1342.73	1323.83

(₹ in lakh)

	Particulars	Asset-3i		
		2016-17 (pro-rata 181 days)	2017-18	2018-19
	AFC			
A	Depreciation	197.35	420.27	437.06
B	Interest on Loan	183.38	372.63	365.56



	Particulars	Asset-3i		
		2016-17 (pro-rata 181 days)	2017-18	2018-19
C	Return on Equity	229.37	489.01	515.41
D	O & M Expenses	76.61	159.62	164.91
E	Interest on Working Capital	17.31	36.29	37.36
F	Total (A+B+C+D+E)	704.02	1477.82	1520.30

(₹ in lakh)

	Particulars	Asset-3j		
		2016-17 (pro-rata 97 days)	2017-18	2018-19
	AFC			
A	Depreciation	19.59	77.30	79.67
B	Interest on Loan	22.47	83.88	79.51
C	Return on Equity	22.57	89.02	91.94
D	O & M Expenses	47.90	186.22	192.40
E	Interest on Working Capital	3.91	15.20	15.54
F	Total (A+B+C+D+E)	116.44	451.62	459.06

(₹ in lakh)

	Particulars	Asset-3k		
		2016-17 (pro-rata 97 days)	2017-18	2018-19
	AFC			
A	Depreciation	27.22	106.04	106.69
B	Interest on Loan	31.43	116.72	108.68
C	Return on Equity	32.65	127.11	128.19
D	O & M Expenses	47.90	186.22	192.40
E	Interest on Working Capital	4.50	17.37	17.55
F	Total (A+B+C+D+E)	143.70	553.46	553.51

61. Accordingly, the AFC as allowed vide order dated 11.9.2017 in Petition No. 96/TT/2017, vide order dated 15.2.2016 in Petition No. 45/TT/2014, and vide order dated 31.5.2016 in Petition No. 260/TT/2015, as claimed by the Petitioner and as approved after truing up in the instant order is as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1					
Allowed <i>vide</i> order dated 11.9.2017 in Petition No. 96/TT/2017	9148.88	9390.09	9306.59	9136.02	8942.22
Claimed by the Petitioner in the instant petition	9186.65	9425.07	9345.84	9219.56	9100.19
Approved after true-up in this order	9161.62	9401.97	9324.51	9199.64	9081.61
Asset-2a					
Allowed <i>vide</i> order dated 15.2.2016 in Petition No. 45/TT/2014	7362.98	8427.71	8213.63	7996.47	7777.48
Claimed by the Petitioner in the instant petition	9909.94	11860.18	11655.45	11347.41	11040.16
Approved after true-up in this order	9876.98	11823.42	11621.93	11315.07	11008.90
Asset-2b					
Allowed <i>vide</i> order dated 15.2.2016 in Petition No. 45/TT/2014	567.72	695.83	715.89	710.78	697.08
Claimed by the Petitioner in the instant petition	574.20	686.81	694.36	698.96	687.13
Approved after true-up in this order	573.38	685.98	693.71	698.38	686.61
Asset-3a					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015	1824.93	2264.83	2322.44	2303.98	2245.61
Claimed by the Petitioner in the instant petition	1861.50	2259.69	2247.27	2207.03	2155.50
Approved after true-up in this order	1857.91	2256.29	2244.54	2204.49	2153.22
Asset-3b					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		3066.13	4316.75	4484.76	4429.43
Claimed by the Petitioner in the instant petition		2800.85	3652.58	3985.72	4142.68
Approved after true-up in this order		2798.55	3650.57	3983.83	4140.94
Asset-3c					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		675.67	1084.56	1132.99	1113.00
Claimed by the Petitioner in the instant petition		685.77	1219.54	1373.05	1345.53
Approved after true-up in this order		683.64	1217.26	1370.99	1343.67
Asset-3d					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		#	#	#	#
Claimed by the Petitioner in the instant petition		9.03	644.31	760.67	848.14
Approved after true-up in this order		8.98	641.89	758.38	846.03
Asset-3e					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		#	#	#	#
Claimed by the Petitioner in the instant petition		11.52	780.48	842.82	870.94
Approved after true-up in this order		11.52	778.53	839.52	867.78
Asset-3f					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015		4.23	329.48	354.46	358.34
Claimed by the Petitioner in the instant petition		4.40	335.04	352.96	358.90
Approved after true-up in this order		4.39	333.61	351.64	357.72
Asset-3g					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			579.29	2204.60	2288.22
Approved after true-up in this order			577.86	2199.47	2283.17
Asset-3h					
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition			651.58	1344.66	1325.70
Approved after true-up in this order			650.62	1342.73	1323.83
	Asset-3i				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			712.33	1495.81	1539.43
Approved after true-up in this order			704.02	1477.82	1520.30
	Asset-3j				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			116.58	452.09	459.49
Approved after true-up in this order			116.44	451.62	459.06
	Asset-3k				
Allowed <i>vide</i> order dated 31.5.2016 in Petition No. 260/TT/2015			*	*	*
Claimed by the Petitioner in the instant petition			143.84	554.04	554.13
Approved after true-up in this order			143.70	553.46	553.51

Tariff for Asset-3d and 3e was allowed as a combined asset *vide* order dated 31.5.2016 in Petition No. 260/TT/2015* Tariff for Asset-3g, 3h, 3i, 3j and 3k was allowed as a combined asset *vide* order dated 31.5.2016 in Petition No. 260/TT/2015

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

62. All assets are combined w.e.f. 1.4.2019 into a single asset (hereinafter referred to as “Combined Asset”). The Petitioner has claimed the following transmission charges in respect of the Combined Asset for the 2019-24 tariff period:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	11048.24	11064.42	11040.57	11003.90	11003.90



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Interest on Loan	7540.55	6664.87	5797.52	5308.89	4885.46
Return on Equity	12304.13	12325.60	12325.60	12325.60	12325.60
O&M Expenses	8463.69	8757.31	9066.54	9391.81	9719.24
Interest on Working Capital	833.41	835.24	835.29	841.55	847.85
Total	40190.02	39647.44	39065.52	38871.75	38782.05

63. The details of the IWC claimed by the Petitioner for the 2019-24 period are as follows:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for 1 month)	705.31	729.78	755.55	782.65	809.94
Working Capital for Maintenance Spares (15% of O&M Expenses)	1269.55	1313.60	1359.98	1408.77	1457.89
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	4941.40	4888.04	4816.30	4792.41	4768.29
Total Working Capital	6916.26	6931.42	6931.83	6983.83	7036.12
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	833.41	835.24	835.29	841.55	847.85

Effective Date of Commercial Operation (E-COD)

64. The Petitioner has stated that E-COD of the Combined Asset works out to be 22.11.2014. E-COD of the Combined Asset has been worked out based on the trued-up capital cost and dates of commercial operation of the individual assets which is as under:



Asset	Trued-up Capital Cost as on 31.3.2019	COD	No. of days from COD of Asset from COD of Project	Weight of Cost	Weighted days
	(₹ in lakh)				
Asset-1	54326.56	17.11.2013	1134	24.97%	283.05
Asset-2a	68910.62	24.5.2014	946	31.67%	299.58
Asset-2b	3724.57	26.5.2014	944	1.71%	16.16
Asset-3a	13244.68	24.5.2014	946	6.09%	57.58
Asset-3b	26798.92	31.5.2015	574	12.32%	70.69
Asset-3c	7333.93	13.6.2015	561	3.37%	18.91
Asset-3d	4952.76	26.3.2016	274	2.28%	6.24
Asset-3e	5019.74	26.3.2016	274	2.31%	6.32
Asset-3f	1772.05	27.3.2016	273	0.81%	2.22
Asset-3g	11882.05	19.12.2016	6	5.46%	0.33
Asset-3h	6925.51	2.10.2016	84	3.18%	2.67
Asset-3i	8995.03	2.10.2016	84	4.13%	3.47
Asset-3j	1551.05	25.12.2016	0	0.71%	0.00
Asset-3k	2162.70	25.12.2016	0	0.99%	0.00
Total	217600.17				767.22
Effective COD (latest COD – total weighted days)					18.11.2014

65. The E-COD is used to determine the lapsed life of the project as a whole which works out as 4 (four) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).

Weighted Average Life (WAL) of the Project

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



67. The WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as specified in the 2019 Tariff Regulations. Accordingly, the WAL of all the transmission assets put into commercial operation induring 2014-19 period has been worked out as 30 years as shown in the following table:

Particulars	Life (in years) (1)	Capital Cost as on 31.3.2019 (₹ in lakh) (2)	Weighted Cost (₹ in lakh) (3) = (1) * (2)	Weighted Avg. Life of Asset (in years) (4) = (3) / (2)
Building Civil Works & Colony	25.00	15025.53	375638.34	30.30 years (rounded off to 30 years)
Transmission Line	35.00	114527.75	4008471.42	
Sub Station	25.00	82696.13	2067403.14	
PLCC	15.00	557.85	8367.73	
I.T. Equipment	6.67	416.39	2775.96	
Total		213223.66	6462656.59	

68. The WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed above, the E-COD of the assets is 18.11.2014 and the lapsed life of the project as a whole works out as 4 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 26 years.

Capital Cost

69. Regulation 19 of the 2019 Tariff Regulations provide as follows:

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



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

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

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

- (a) *Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
- (b) *Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
- (c) *Capital expenditure on account of 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 upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
 - (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.
- (4) The capital cost in case of existing or new hydro generating station shall also include:
- (a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and
 - (b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.
- (5) The following shall be excluded from the capital cost of the existing and new projects:
- (a) The assets forming part of the project, but not in use, as declared in the tariff petition;
 - (b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:
- Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be de-capitalised only after its redeployment;*
- Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.*
- (c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;
 - (d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and
 - (e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”

70. The Petitioner has claimed capital cost of ₹217986.81 lakh as on 31.3.2019.

Admitted capital cost of ₹217600.17 lakh has been considered as opening capital cost



as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Initial Spares

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

Transmission Line:

Asset	Element	Capital Cost/ Plant and machinery cost (excluding IDC, IEDC, land cost and cost of civil works for the purpose of Initial Spares)	Initial Spares claimed	Ceiling limits as per 2009 / 2014 Tariff Regulati ons (in %)	Allowable Initial Spares	Initial Spares allowed in 2014- 19 period (₹ in lakh)	Additional Initial Spares allowed on Combined Asset(₹ in lakh)
		A	B	C	D=(A- B)*C/(100- C)	E	F=D-E
Asset-1	Transmis sion Line	22770.00	173.64	0.75%	170.75		
Asset-2a	Tranmissi on Line	60364.26	792.83	1%	601.73		
Asset-3a	Tranmissi on Line	11895.36	94.73	1%	119.20		
Asset-3b	Tranmissi on Line	14236.34	139.17	1%	142.40		
		109265.96	1200.37		1034.08	1006.38	27.69



Sub-station:

Asset	Element	Capital Cost/ Plant and machinery cost (excluding IDC, IEDC, land cost and cost of civil works for the purpose of Initial Spares)	Initial Spares claimed	Ceiling limits as per 2009 / 2014 Tariff Regula tions (in %)	Allowabl e Initial spares	Initial Spares allowed in 2014- 19 period (₹ in lakh)	Additional Initial Spares allowed on Combined Asset(₹ in lakh)
		A	B	C	D =(A- B)*C/(10 0- C)	E	F=D-E
Asset-1	Sub- station	30348.28	809.97	2.50%	757.39		
Asset-2a	Sub- station	2961.35	0.00	4%	123.39		
Asset-3a	Sub- station	1272.03	39.64	4%	51.35		
Asset-3b	Sub- station	4401.36	137.16	4%	177.68		
Asset-3c	Sub- station	6674.10	207.98	4%	269.42		
Asset-3d	Sub- station	2973.67	92.67	4%	120.05		
Asset-3e	Sub- station	3977.19	123.94	4%	160.55		
Asset-3f	Sub- station	1135.01	35.37	4%	45.82		
Asset-3g	Sub- station	11067.00	344.88	4%	446.76		
Asset-3h	Sub- station	6239.47	194.44	4%	251.88		
Asset-3i	Sub- station	7571.74	235.96	4%	305.66		
Asset-3j	Sub- station	1200.76	37.42	4%	48.47		
Asset-3k	Sub- station	1738.16	54.17	4%	70.17		
		81560.12	2313.60		2828.59	2261.02	52.58

72. Thus, in line with the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017 additional Initial Spares of ₹80.27 lakh (₹27.69lakh for T/L + ₹52.58 lakh for sub-stations) are admissible. Capital cost as on 1.4.2019 for the Combined Asset allowed after adding Initial Spares is as follows:



(₹ in lakh)

Capital Cost as on 31.3.2019	Additional Initial Spares as per APTEL's Judgment dated 14.9.2019	Capital Cost as on 1.4.2019
217600.17	80.27	217680.44

Additional Capital Expenditure (ACE)

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

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

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

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

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

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

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

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

- a) *Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;*
- b) *Change in law or compliance of any existing law;*
- c) *Deferred works relating to ash pond or ash handling system in the original scope of work;*
- d) *Liability for works executed prior to the cut-off date;*
- e) *Force Majeure events;*



- f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; 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

(d) The replacement of such asset or equipment has otherwise been allowed by the Commission.”

74. The Petitioner has claimed the following ACE for the Combined Asset for the 2019-24 tariff period:

Asset	Projected ACE
	2019-20
Asset-3e	82.24
Asset-3f	203.46
Asset-3g	43.49
Asset-3i	432.80
Combined Asset	761.99

75. The Petitioner has further submitted that the ACE projected to be incurred during 2019-20 is on account of undischarged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date. The Petitioner has further submitted that the expenditure for 2019-20 is towards balance and retention payments towards building and civil works and sub-station. The details of the ACE claimed is as follows:



Asset No	Package / Scope of works	Party	2019-20
3e	On-shore Services contract for CIF suply of 765kV Reactor package-P238-SR01 for 4x80MVAR, 1Ph 765kV CHAMPA Pooling Station	Boding TianweiBaobian Electric Co. Ltd.	8223864
			8223864
Asset No	Package / Scope of works	Party	2019-20
3f	Residential Quarters including community centre	Singhal Enterprises	20346089
			20346089
Asset No	Package / Scope of works	Party	2019-20
3g	Miscellaneous Civil works	Arihant Industrial Corp Ltd	19853
3g	Construction of Perepheral Road along Boundary Wall	Estimated	3170939
3g	Laying of GI pipe line for water	Chandra Constrction	1158575
			4349367
Asset No	Package / Scope of works	Party	2019-20
3h	NIL	NIL	-
			-
Asset No	Package / Scope of works	Party	2019-20
3i	Off-shore contract for CIF suply of 765kV Reactor package-P247-R02 for 4x80MVAR, 1Ph 765kV Champa Pooling Station	Boding TianweiBaobian Electric Co. Ltd.	33751094
3i	On-shore Services contract for CIF suply of 765kV Reactor package-P238-SR01 for 4x80MVAR, 1Ph 765kV CHAMPA Pooling Station	Boding TianweiBaobian Electric Co. Ltd.	102737
3i	Construction of RCC storm water drain	Radha Enterprises, Bilaspur	1886847
3i	Roads, drains for colony & Water Supply	SriSai Infrastructure	7307361
3i	Misc Civil works	Shreeji Constructions	232044
			43280083

76. We have considered the submissions made by the Petitioner. The ACE claimed by the Petitioner has been allowed under Regulation 25(1)(a) of the 2019 Tariff Regulations on account of liabilities for works executed prior to the cut-off date, subject to true-up as per actuals and on submission of documentary evidence(s). Accordingly,



the capital cost considered for the Combined Asset for the 2019-24 tariff period is as follows:

Capital Cost as on 1.4.2019	ACE 2019-24					Capital Cost as on 31.3.2024
	2019-20	2020-21	2021-22	2022-23	2023-24	
217680.44	761.99	0.00	0.00	0.00	0.00	218442.43

The capital cost as on 31.3.2024 now allowed is within the RCE cost.

Debt-Equity ratio

77. 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.”

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

Funding	Capital Cost as on 1.4.2019 (₹ in lakh)	(%)	Capital Cost as on 31.3.2024 (₹ in lakh)	(%)
Debt	152376.31	70.00	152909.70	70.00
Equity	65304.13	30.00	65532.73	30.00
Total	217680.44	100.00	218442.43	100.00

Depreciation

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

“33. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which



a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:

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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

80. The IT equipment has been considered as part of the Gross Block and depreciated using WAROD. WAROD at Annexure-II has been worked out after taking into account the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations. The salvage value of IT equipment has been considered as NIL, i.e. IT asset has been considered as 100 per cent depreciable. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and



accumulated depreciation up to 31.3.2019. The depreciation allowed for the Combined Asset is as follows:

		(₹ in lakh)				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation					
A	Opening Gross Block	217680.44	218442.43	218442.43	218442.43	218442.43
B	Additional Capitalisation	761.99	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	218442.43	218442.43	218442.43	218442.43	218442.43
E	Average Gross Block (A+C)/2	218061.43	218442.43	218442.43	218442.43	218442.43
D	Freehold Land	4376.51	4376.51	4376.51	4376.51	4376.51
F	Weighted average rate of Depreciation (WAROD) (%)	5.06	5.06	5.06	5.06	5.06
G	Balance useful life of the asset	26	25	24	23	22
H	Elapsed life at the beginning of the year	4	5	6	7	8
I	Aggregate Depreciable Value	192358.07	192700.97	192700.97	192700.97	192700.97
J	Depreciation during the year	11033.47	11049.66	11049.66	11049.66	11049.66
K	Cumulative Depreciation	57209.36	68259.02	79308.68	90358.34	101408.00
L	Remaining Depreciable Value (I-K)	135148.71	124441.95	113392.29	102342.63	91292.97

Interest on Loan (IoL)

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

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

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

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



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

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

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

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

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

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

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

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

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

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Loan					
A	Gross Normative Loan	152376.31	152909.70	152909.70	152909.70	152909.70
B	Cumulative Repayments upto Previous Year	46175.89	57209.36	68259.02	79308.68	90358.34



	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
C	Net Loan-Opening (A-B)	106200.42	95700.34	84650.68	73601.02	62551.36
D	Additions	533.39	0.00	0.00	0.00	0.00
E	Repayment during the year	11033.47	11049.66	11049.66	11049.66	11049.66
F	Net Loan-Closing (C+D-E)	95700.34	84650.68	73601.02	62551.36	51501.70
G	Average Loan (C+F)/2	100950.38	90175.51	79125.85	68076.19	57026.53
H	Weighted Average Rate of Interest on Loan (%)	7.4718	7.3945	7.3313	7.8006	8.5630
I	Interest on Loan (G*H)	7542.81	6668.06	5800.94	5310.37	4883.17

Return on Equity (RoE)

84. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provides as follows:

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

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

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

Provided further that:

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



- ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;
- iii. in case of a thermal generating station, with effect from 1.4.2020:
 - a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;
 - b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:

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

(3) The return on equity in respect of additional capitalization on account of emission control system shall be computed at the base rate of one-year marginal cost of lending rate (MCLR) of the State Bank of India as on 1st April of the year in which the date of operation (ODe) occurs plus 350 basis point, subject to ceiling of 14%;”

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

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

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

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

Illustration-

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



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

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

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

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

85. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. Accordingly, the 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 is as follows:

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Return on Equity					
A	Opening Equity	65304.13	65532.73	65532.73	65532.73	65532.73
B	Additions	228.60	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	65532.73	65532.73	65532.73	65532.73	65532.73
D	Average Equity (A+C)/2	65418.43	65532.73	65532.73	65532.73	65532.73
E	Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (%)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (%)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (D*G)	12286.89	12308.36	12308.36	12308.36	12308.36



Operation & Maintenance Expenses (O&M Expenses)

86. The O&M Expenses claimed by the Petitioner for the Combined Asset for the 2019-24 period are as follows:

Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
400 kV Bays	10	10	10	10	10
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
765 kV Bays	25	25	25	25	25
Norms (₹ lakh/km)	45.01	46.60	48.23	49.93	51.68
(S/C (Bundle Conductor- 4 sub-conductor) (km)	154.07	154.07	154.07	154.07	154.07
Norms (₹ lakh/km)	0.755	0.781	0.809	0.837	0.867
(D/C (Bundle Conductor- 4 sub-conductor)	197.188	197.188	197.188	197.188	197.188
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
765 kV (MVA)	13500	13500	13500	13500	13500
Norms (₹ lakh/MVA)	0.491	0.508	0.526	0.545	0.564
PLCC (@ 2% of capital cost)					
Capital cost for PLCC	571.28	571.28	571.28	571.28	571.28
Total O&M Expense (₹ in lakh)	8463.69	8757.31	9066.54	9391.81	9719.24

87. The norms specified under Regulation 35(3)(a) of the 2019 Tariff Regulations provide that:

“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



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
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.”



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

Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
400 kV Bays	10	10	10	10	10
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
765 kV Bays	25	25	25	25	25
Norms (₹ lakh/km)	45.01	46.60	48.23	49.93	51.68
(S/C (Bundle Conductor- 4 sub-conductor) (km)	154.07	154.07	154.07	154.07	154.07
Norms (₹ lakh/km)	0.755	0.781	0.809	0.837	0.867
(D/C (Bundle Conductor- 4 sub-conductor)	197.188	197.188	197.188	197.188	197.188
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
765 kV (MVA)	13500	13500	13500	13500	13500
Norms (₹ lakh/MVA)	0.491	0.508	0.526	0.545	0.564
Total O&M Expense (₹ in lakh)	8452.26	8745.88	9055.11	9380.38	9707.81

Interest on Working Capital (IWC)

89. Regulation 34 and Regulation 3(7) of the 2019 Tariff Regulations specifies 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*

Operation and maintenance expenses, including security expenses for one month.

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

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

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

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

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

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



(₹ in lakh)

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Working Capital					
A	Working Capital for O&M Expenses(O&M Expenses for 1 month)	704.35	728.82	754.59	781.70	808.98
B	Working Capital for Maintenance Spares(15% of O&M Expenses)	1267.84	1311.88	1358.27	1407.06	1456.17
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	4936.22	4876.04	4800.82	4781.17	4756.51
D	Total Working Capital	6908.41	6916.74	6913.68	6969.93	7021.66
E	Rate of Interest (%)	12.05	11.25	10.50	10.50	10.50
F	Interest on Working Capital	832.46	778.13	725.94	731.84	737.27

Annual Fixed Charges of the 2019-24 Tariff Period

91. The transmission charges allowed for the 2019-24 tariff period are summarised as follows:

(₹ in lakh)

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Annual Transmission Charges					
A	Depreciation	11033.47	11049.66	11049.66	11049.66	11049.66
B	Interest on Loan	7542.81	6668.06	5800.94	5310.37	4883.17
C	Return on Equity	12286.89	12308.36	12308.36	12308.36	12308.36
D	O & M Expenses	8452.26	8745.88	9055.11	9380.38	9707.81
E	Interest on Working Capital	832.46	778.13	725.94	731.84	737.27
F	Total (A+B+C+D+E)	40147.89	39550.09	38940.01	38780.61	38686.27

Filing Fee and the Publication Expenses

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

93. We have considered the submissions of the Petitioner. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with



the present Petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

Licence Fee & RLDC Fees and Charges

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

Goods and Services Tax

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

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



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

Security Expenses

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

99. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses on projected basis for 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The said petition has already been disposed of by the Commission *vide* order dated 3.8.2021. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

Capital Spares

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

Sharing of Transmission Charges

101. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the provisions of the 2010 Sharing Regulations.



However, with effect from 1.11.2020, sharing of transmission charges is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 (in short “the 2020 Sharing Regulations”). Accordingly, the liabilities of the DICs for arrears of the transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and shall be recovered from the concerned DICs through Bill 2 under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of transmission charges for subsequent period shall be recovered in terms of the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

102. To summarize:

a) The trued-up AFC approved for the 2014-19 tariff period is as follows:

(₹ in lakh)					
Assets	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1	9161.62	9401.97	9324.51	9199.64	9081.60
Asset-2a	9876.98	11823.42	11621.93	11315.07	11008.90
Asset-2b	573.38	685.98	693.71	698.38	686.61
Asset-3a	1857.91	2256.29	2244.54	2204.49	2153.22
Asset-3b		2798.55	3650.57	3983.83	4140.94
Asset-3c		683.64	1217.26	1370.99	1343.67
Asset-3d		8.98	641.89	758.38	846.03
Asset-3e		11.52	778.53	839.52	867.78
Asset-3f		4.39	333.61	351.64	357.72
Asset-3g			577.86	2199.47	2283.17
Asset-3h			650.62	1342.73	1323.83
Asset-3i			704.02	1477.82	1520.30
Asset-3j			116.44	451.62	459.06
Asset-3k			143.70	553.46	553.51

b) AFC allowed for the 2019-24 tariff period in this order is as follows:



					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	40147.89	39550.09	38940.01	38780.61	38686.27

103. The Annexures to this order shall form part of the order.

104. This order disposes of Petition No. 370/TT/2020 in terms of the above discussion and findings.

sd/-
(P.K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I.S. Jha)
Member



Annexure-I

Asset-1

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/ COD (₹ in lakh)	ACE (₹ in lakh)						Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)					
		2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19	
Land - Freehold	1296.91	282.79	-	-	-	8.72	291.51	1588.42	-	-	-	-	-	-	
Building Civil Works & Colony	2850.52	957.94	265.67	98.27	99.38	95.12	1516.38	4366.90	3.34%	111.20	131.64	137.72	141.02	144.27	
Transmission Line	21379.27	1100.23	293.48	9.11	-	-	1402.82	22782.08	5.28%	1157.87	1194.67	1202.65	1202.89	1202.89	
Sub Station	22397.64	1585.90	437.70	274.15	572.30	-	2870.05	25267.69	5.28%	1224.46	1277.89	1296.68	1319.03	1334.13	
PLCC	141.49	13.78	-	-	-	-	13.78	155.27	6.33%	9.39	9.83	9.83	9.83	9.83	
IT Equipment (Incl. Software)	151.93	14.26	-	-	-	-	14.26	166.19	5.28%	8.40	8.77	8.77	8.77	8.77	
Total	48217.75	3954.91	996.85	381.53	671.68	103.84	6108.81	54326.56		2511.33	2622.79	2655.65	2681.54	2699.90	
										Average Gross Block (₹ in lakh)	50195.20	52671.08	53360.27	53886.88	54274.64
										Weighted Average Rate of Depreciation	5.00%	4.98%	4.98%	4.98%	4.97%



Asset-2a

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/CO D (₹ in lakh)	Claimed Additional Capitlisatio n Total Claimed	ACE (₹ in lakh)						Admitted Capital Cost as on 31.3.201 9 (₹ in lakh)	Rate of Depreciatio n as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)					
			2014-15	2015- 16	2016- 17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19	
Building Civil Works & Colony	536.68	-	98.07	19.23	83.44	-	-	200.75	737.43	3.34%	19.56	21.52	23.24	24.63	24.63	
Transmissio n Line	58952.96	-	4734.02	869.4 4	172.63	22.04	-	5798.14	64751.10	5.28%	3237.69	3385.63	3413.14	3418.28	3418.86	
Sub Station	2885.05	-	163.55	78.00	195.76	-	-	437.31	3322.36	5.28%	156.65	163.03	170.25	175.42	175.42	
PLCC	73.21	-	2.02	0.00	-	-	-	2.02	75.23	6.33%	4.70	4.76	4.76	4.76	4.76	
IT Equipment (Incl. Software)	23.84	-	0.66	0.00	-	-	-	0.66	24.50	5.28%	1.28	1.29	1.29	1.29	1.29	
Total	62471.75	-	4998.32	966.6 8	451.83	22.04	-	6438.87	68910.62		3419.88	3576.23	3612.68	3624.38	3624.96	
											Average Gross Block (₹ in lakh)	64970.9 1	67953.4 1	68662.6 7	68899.6 0	68910.6 2
											Weighted Average Rate of Depreciation	5.26%	5.26%	5.26%	5.26%	5.26%



Asset-2b

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/CO D (₹ in lakh)	Claimed Additional Capitlisatio n Total Claimed	ACE (₹ in lakh)						Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciatio n as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
			2014- 15	2015 -16	2016- 17	2017 -18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Building Civil Works & Colony	211.65	-	86.50	19.21	14.21	-	-	119.92	331.57	3.34%	8.51	10.28	10.84	11.07	11.07
Sub Station	2994.86	-	158.50	0.07	220.85	10.55	-	389.97	3384.83	5.28%	162.31	166.50	172.33	178.44	178.72
IT Equipment (Incl. Software)	7.97	-	0.20	-	-	-	-	0.20	8.17	5.28%	0.43	0.43	0.43	0.43	0.43
Total	3214.49	-	245.19	19.28	235.06	10.55	-	510.08	3724.57		171.25	177.21	183.60	189.95	190.22
Average Gross Block (₹ in lakh)											3337.08	3469.32	3596.49	3719.30	3724.57
Weighted Average Rate of Depreciation											5.13%	5.11%	5.10%	5.11%	5.11%



Asset-3a

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/CO D (₹ in lakh)	Claimed Additional Capitalisation Total Claimed	ACE (₹ in lakh)						Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)					
			2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19	
Building Civil Works & Colony	51.72	-	61.51	3.02	-	-	-	64.53	116.25	3.34%	2.75	3.83	3.88	3.88	3.88	
Transmission Line	10657.57	-	748.21	255.77	85.71	-	-	1089.69	11747.26	5.28%	582.47	608.98	617.99	620.26	620.26	
Sub Station	854.90	-	313.43	21.31	106.37	11.97	-	453.08	1307.98	5.28%	53.41	62.25	65.62	68.75	69.06	
PLCC	38.60	-	0.98	-	-	-	-	0.98	39.58	6.33%	2.47	2.51	2.51	2.51	2.51	
IT Equipment (Incl. Software)	32.77	-	0.84	-	-	-	-	0.84	33.61	5.28%	1.75	1.77	1.77	1.77	1.77	
Total	11635.56	-	1124.97	280.10	192.08	11.97	-	1609.12	13244.68		642.87	679.34	691.78	697.16	697.48	
											Average Gross Block (₹ in lakh)	12198.04	12900.58	13136.67	13238.70	13244.68
											Weighted Average Rate of Depreciation	5.27%	5.27%	5.27%	5.27%	5.27%



Asset-3b

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)					Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2015-16	2016-17	2017-18	2018-19	Total			2015-16	2016-17	2017-18	2018-19	
Land - Freehold	2363.23	-	-	397.51	27.35	424.86	2788.09	-	-	-	-	-	
Building Civil Works & Colony	1376.14	24.54	441.44	603.66	50.31	1119.95	2496.09	3.34%	46.37	54.15	71.61	82.53	
Transmission Line	12690.34	1321.65	424.77	810.55	-	2556.97	15247.31	5.28%	704.94	751.05	783.66	805.06	
Sub Station	3599.65	340.29	1350.21	718.63	-	2409.13	6008.78	5.28%	199.05	243.67	298.29	317.26	
PLCC	92.27	0.98	73.80	69.90	-	144.68	236.95	6.33%	5.87	8.24	12.79	15.00	
IT Equipment (Incl. Software)	21.47	0.23	-	-	-	0.23	21.70	5.28%	1.14	1.15	1.15	1.15	
Total	20143.10	1687.69	2290.22	2600.25	77.66	6655.82	26798.92		957.37	1058.26	1167.49	1221.00	
									Average Gross Block (₹ in lakh)	20986.95	22975.90	25421.14	26760.09
									Weighted Average Rate of Depreciation	4.56%	4.61%	4.59%	4.56%

Asset-3c

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)					Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2015-16	2016-17	2017-18	2018-19	Total			2015-16	2016-17	2017-18	2018-19	
Building Civil Works & Colony	214.27	11.39	59.51	-	-	70.90	285.17	3.34%	7.35	8.53	9.52	9.52	
Sub Station	2606.93	2277.70	2138.52	-	-	4416.22	7023.15	5.28%	197.78	314.37	370.82	370.82	
IT Equipment (Incl. Software)	24.68	0.93	-	-	-	0.93	25.61	5.28%	1.33	1.35	1.35	1.35	
Total	2845.88	2290.02	2198.03	-	-	4488.05	7333.93		206.45	324.25	381.70	381.70	
									Average Gross Block (₹ in lakh)	3990.89	6234.92	7333.93	7333.93
									Weighted Average Rate of Depreciation	5.17%	5.20%	5.20%	5.20%



Asset-3d

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)					Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)					
		2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19	
Building Civil Works & Colony	295.16	2.50	164.11	394.23	885.84	1446.68	1741.84	3.34%	0.00	9.90	12.68	22.01	43.38	
Sub Station	2241.31	0.43	943.79	-	-	944.22	3185.53	5.28%	0.00	118.35	143.28	168.20	168.20	
IT Equipment (Incl. Software)	25.14	-	0.25	-	-	0.25	25.39	5.28%	0.00	1.33	1.33	1.34	1.34	
Total	2561.61	2.93	1108.15	394.23	885.84	2391.15	4952.76		0.00	129.58	157.30	191.54	212.92	
									Average Gross Block (₹ in lakh)	0.00	2563.08	3118.62	3869.81	4509.84
									Weighted Average Rate of Depreciation	0.00%	5.06%	5.04%	4.95%	4.72%

Asset-3e

2014-19		ACE (₹ in lakh)						Depreciation as per Regulations				
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2015-16	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Deprn.	2015-16	2016-17	2017-18	2018-19
Building Civil Works & Colony	529.62	2.88	55.07	0.00	47.98	105.93	635.55	3.34%	17.74	18.71	19.62	20.43
Sub Station	2938.16	0.24	944.40	7.18	489.16	1440.98	4379.13	5.28%	155.14	180.08	205.20	218.30



IT Equipment (Incl. Software)	4.91	0.00	0.15	0.00	0.00	0.15	5.06	5.28%	0.26	0.26	0.27	0.27
Total	3472.69	3.12	999.61	7.18	537.14	1547.05	5019.74	Total	173.14	199.05	225.09	239.00
									Average Gross Block (₹ in lakh)			
									3474.25	3975.62	4479.01	4751.17
									Weighted Average Rate of Depreciation			
									4.98%	5.01%	5.03%	5.03%

Asset-3f

2014-19		ACE (₹ in lakh)						Depreciation as per Regulations				
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2015-16	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Deprn.	2015-16	2016-17	2017-18	2018-19
Building Civil Works & Colony	246.76	2.99	138.27	98.56	18.00	257.82	504.58	3.34%	8.29	10.65	14.61	16.55
Sub Station	1184.72	0.44	43.60	23.48	0.00	67.52	1252.24	5.28%	62.56	63.73	65.50	66.12
IT Equipment (Incl. Software)	14.83	0.00	0.40	0.00	0.00	0.40	15.23	5.28%	0.78	0.79	0.80	0.80
Total	1446.31	3.43	182.27	122.04	18.00	325.74	1772.05	Total	71.64	75.17	80.91	83.47
									Average Gross Block (₹ in lakh)			
									1448.03	1540.88	1693.03	1763.05
									Weighted Average Rate of Depreciation			
									4.95%	4.88%	4.78%	4.73%



Asset-3g

2014-19		ACE (₹ in lakh)					Depreciation as per Regulations			
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depn.	2016-17	2017-18	2018-19
Building Civil Works & Colony	1055.98	33.96	171.82	101.96	307.74	1363.72	3.34%	35.84	39.27	43.85
Sub Station	8578.35	711.13	1165.49	32.93	1909.55	10487.90	5.28%	471.71	521.25	552.89
IT Equipment (Incl. Software)	29.57	0.56	0.29	0.00	0.85	30.42	5.28%	1.58	1.60	1.61
Total	9663.91	745.65	1337.60	134.89	2218.14	11882.05	Total	509.12	562.13	598.34
Average Gross Block (₹ in lakh)								10036.73	11078.36	11814.60
Weighted Average Rate of Depreciation								5.07%	5.07%	5.06%



Asset-3h

2014-19		ACE (₹ in lakh)					Depreciation as per Regulations				
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depn.	2016-17	2017-18	2018-19	
Building Civil Works & Colony	453.16	41.98	0.91	49.63	92.52	545.68	3.34%	15.84	16.55	17.40	
Sub Station	5830.42	501.28	27.81	0.00	529.10	6359.52	5.28%	321.08	335.05	335.78	
IT Equipment (Incl. Software)	19.52	0.75	0.04	0.00	0.79	20.31	5.28%	1.05	1.07	1.07	
Total	6303.10	544.01	28.77	49.63	622.41	6925.51	Total	337.97	352.67	354.25	
								Average Gross Block (₹ in lakh)	6575.11	6861.49	6900.69
								Weighted Average Rate of Depreciation	5.14%	5.14%	5.13%



Asset-3i

2014-19		ACE (₹ in lakh)					Depreciation as per Regulations				
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depn.	2016-17	2017-18	2018-19	
Building Civil Works & Colony	762.33	37.18	102.56	469.79	609.52	1371.85	3.34%	26.08	28.42	37.97	
Sub Station	6708.06	610.94	144.71	129.41	885.06	7593.13	5.28%	370.31	390.26	397.50	
IT Equipment (Incl. Software)	29.79	0.25	0.01	0.00	0.26	30.05	5.28%	1.58	1.59	1.59	
Total	7500.18	648.37	247.28	599.20	1494.85	8995.03	Total	397.98	420.27	437.06	
								Average Gross Block (₹ in lakh)	7824.37	8272.19	8695.43
								Weighted Average Rate of Depreciation	5.09%	5.08%	5.03%



Asset-3j

2014-19		ACE (₹ in lakh)					Depreciation as per Regulations				
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depn.	2016-17	2017-18	2018-19	
Building Civil Works & Colony	122.37	4.82	1.47	0.00	6.29	128.66	3.34%	4.17	4.27	4.30	
Sub Station	1260.06	42.95	88.47	0.00	131.42	1391.48	5.28%	67.66	71.13	73.47	
PLCC	25.14	0.39	0.30	0.00	0.69	25.83	6.33%	1.60	1.63	1.64	
IT Equipment (Incl. Software)	4.97	0.05	0.06	0.00	0.11	5.08	5.28%	0.26	0.27	0.27	
Total	1412.54	48.20	90.31	0.00	138.51	1551.05	Total	73.70	77.30	79.67	
								Average Gross Block (₹ in lakh)	1436.64	1505.90	1551.05
								Weighted Average Rate of Depreciation	5.13%	5.13%	5.14%



Asset-3k

2014-19		ACE (₹ in lakh)					Depreciation as per Regulations				
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depn.	2016-17	2017-18	2018-19	
Building Civil Works & Colony	376.32	23.03	0.88	0.00	23.91	400.23	3.34%	12.95	13.35	13.37	
Sub Station	1617.51	90.84	24.05	0.00	114.89	1732.40	5.28%	87.80	90.84	91.47	
PLCC	20.05	4.89	0.05	0.00	4.94	24.99	6.33%	1.42	1.58	1.58	
IT Equipment (Incl. Software)	4.85	0.22	0.01	0.00	0.23	5.08	5.28%	0.26	0.27	0.27	
Total	2018.73	118.98	24.99	0.00	143.97	2162.70	Total	102.44	106.04	106.69	
								Average Gross Block (₹ in lakh)	2078.22	2150.21	2162.70
								Weighted Average Rate of Depreciation	4.93%	4.93%	4.93%



**ANNEXURE-II
2019-24**

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Land - Freehold	4376.51	0.00	0.00	4376.51	0.00	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	15025.53	405.00	405.00	15430.53	3.34%	508.62	515.38	515.38	515.38	780.54
Transmission Line	114555.45	0.00	0.00	114555.45	5.28%	6048.53	6048.53	6048.53	6048.53	5794.66
Sub Station	82748.70	356.99	356.99	83105.69	5.28%	4378.56	4387.98	4387.98	4387.98	4203.81
PLCC	557.85	0.00	0.00	557.85	6.33%	35.31	35.31	35.31	35.31	28.22
IT Equipment (Incl. Software)	416.39	0.00	0.00	416.39	15.00%	62.46	62.46	62.46	62.46	62.46
Total	217680.44	761.99	761.99	218442.43		11033.47	11049.66	11049.66	11049.66	11049.66
Average Gross Block (₹ in lakh)						218061.43	218442.43	218442.43	218442.43	218442.43
Weighted Average Rate of Depreciation						5.06%	5.06%	5.06%	5.06%	5.06%

