

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 469/TT/2020

Coram:

Shri P. K. Pujari, Chairperson

Shri I. S. Jha, Member

Shri Arun Goyal, Member

Shri P. K. Singh, Member

Date of Order: 06.06.2022

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of the Combined Asset consisting of **Asset-I:** Combined Asset-A&B: (Asset A: 315 MVA ICT-I at Sikar 400/200 kV new Sub-station with 1 Number 220 kV Line bay and Asset-B: LILO of Circuit-I of Sikar (RVPN)-Ratangarh (RVPN) 220 kV D/C line at Sikar(PG), Asset-C: LILO of Circuit-II of Sikar (RVPN)-Ratangarh (RVPN) 220 kV D/C line at Sikar(PG), Asset-D: 315 MVA ICT-II at Sikar 400/200 kV New Sub-station with 1 number 220 kV line bay, Combined Asset E to I (Asset E: LILO of 1st circuit of 400 kV Jhakri - Abdullapur transmission line at Panchkula, Asset F: LILO of 2nd circuit of 400 kV Jhakri - Abdullapur transmission line at Panchkula, Asset-G: 400/220 kV 315 MVA ICT-I along with associated bays at Panchkula Sub-station, Asset-H: 315 MVA ICT-II along with associated bays at Panchkula Sub-station, Asset-I: 125 MVAR bus reactor along with associated bays at Panchkula Sub-station, Asset-J: 400 kV, 80 MVAR bus reactor along with associated bays at 400/220 kV Sikar Sub-station, **Asset-II:** Asset-A: 400 KV Agra-Sikar (D/C QUAD) Line with associated Bays at Agra; Asset-B: 2 numbers 400 kV line bays for 400 kV D/C Agra-Sikar line including 2 numbers 50 MVAR Line Reactors under Bus Reactor operation mode at 400/220 kV Sikar Sub-station, **Asset-III:** One Circuit of 400 kV D/C Sikar-Ratangarh line with associated bays, **Asset-IV:** Second Circuit of 400 kV D/C Sikar-Ratangarh line with associated bays, **Asset-V:** 125 MVAR bus reactor at Ratangarh Sub-station (RRVPNL) with associated bays and **Asset-VI:** 400 kV D/C Sikar-Jaipur line with associated bays under "System Strengthening in Northern Region for Sasan and Mundra UMP" in the Northern Region.



And in the matter of:

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

.....Petitioner

Versus

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg,
Jaipur-302005 (Rajasthan).
2. Ajmer Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub-station Building,
Caligiri Road, Malviya Nagar,
Jaipur-302017 (Rajasthan).
3. Jaipur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub-station Building,
Caligiri Road, Malviya Nagar,
Jaipur-302017 (Rajasthan).
4. Jodhpur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub-station Building,
Caligiri Road, Malviya Nagar,
Jaipur-302017 (Rajasthan).
5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan,
Kumar House Complex Building II,
Shimla-171004 (Himachal Pradesh).
6. Punjab State Electricity Board,
Thermal Shed Tia,
Near 22 Phatak,
Patiala-147001 (Punjab).
7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula -134109 (Haryana).
8. Power Development Department,
Government of Jammu & Kashmir,
Mini Secretariat,



- Jammu.
9. Uttar Pradesh Power Corporation Limited,
(Formerly Uttar Pradesh State Electricity Board),
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226001 (Uttar Pradesh).
 10. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110002.
 11. BSES Yamuna Power Limited,
B-Block, Shakti Kiran Building,
(Near Karkardooma Courts),
Karkardooma, 2nd Floor,
New Delhi-110092.
 12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi-110019.
 13. Tata Power Delhi Distribution Limited,
NDPL House, Hudson Lines, Kingsway Camp,
Delhi-110009.
 14. Chandigarh Administration,
Sector-9,
Chandigarh.
 15. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road,
Dehradun (Uttarakhand).
 16. North Central Railway,
Allahabad (Uttar Pradesh).
 17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi-110002.

...Respondent(s)

For Petitioner: Shri S. S. Raju, PGCIL
Shri D. K. Biswal, PGCIL
Shri V. P. Rastogi, PGCIL
Shri A. K. Verma, PGCIL

For Respondent: None



ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, a deemed transmission licensee, 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 (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”) of 2019-24 tariff period in respect of the following assets under Transmission System for Phase-I Generation Projects in Jharkhand and West Bengal-Part-B in the Northern Region (hereinafter referred to as “the transmission project’):

Asset-I: Combined asset consisting of Combined Asset-A & B: (Asset A: 315 MVA ICT-I at Sikar 400/200 kV new Sub-station with 1 number 220 kV Line bay and Asset-B: LILO of Circuit-I of Sikar (RVPN)-Ratangarh (RVPN) 220 kV D/C line at Sikar (PG)), Asset-C: LILO of Circuit-II of Sikar (RVPN)-Ratangarh (RVPN) 220 kV D/C line at Sikar (PG), Asset-D: 315 MVA ICT-II at Sikar 400/200 kV New Sub-station with 1 number 220 kV line bay, Combined Asset E to I (Asset E: LILO of 1st Circuit of 400 kV Jhakri – Abdullapur transmission line at Panchkula, Asset F: LILO of 2nd Circuit of 400 kV Jhakri – Abdullapur transmission line at Panchkula, Asset-G: 400/220 kV 315 MVA ICT-I along with associated bays at Panchkula Sub-station, Asset-H: 315 MVA ICT-II along with associated bays at Panchkula Sub-station, Asset-I: 125 MVAR bus reactor along with associated bays at Panchkula Sub-station, Asset-J: 400 kV, 80 MVAR bus reactor along with associated bays at 400/220 kV Sikar Sub-station;

Asset-II: Combined asset consisting of Asset-A: 400 kV Agra-Sikar (D/C Quad) Line with associated Bays at Agra and Asset-B: 2 numbers 400 kV line bays



for 400 kV D/C Agra-Sikar line including 2 numbers 50 MVAR Line Reactors under Bus Reactor operation mode at 400/220 kV Sikar Sub-station;

Asset-III: One number Circuit of 400 kV D/C Sikar-Ratangarh line with associated bays;

Asset-IV: Second Circuit of 400 kV D/C Sikar-Ratangarh line with associated bays;

Asset-V: 125 MVAR bus reactor at Ratangarh Sub-station (RRVPL) with associated bays;

Asset-VI: 400 kV D/C Sikar-Jaipur line with associated bays

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

“1) Allow the Actual Additional Capital Expenditure during 2014-19 and projected during 2019-24 tariff block as claimed as per Para 6.1 and 7.1 above.

2) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 6.9 and 7.3 above.

3) Allow the Petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation, 2014 and Tariff Regulations, 2019 as per para 5.4 and 7.5 above for respective block.

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

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

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

7) Allow the Petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 7.9 above.



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

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

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) and expenditure sanction for the transmission project was accorded by the Board of Directors (BoD) of the Petitioner Company vide Memorandum No. C/CP/SS in Northern Region for Sasan and Mundra dated 10.12.2009 at an estimated cost of ₹121683 lakh including IDC of ₹5770 lakh (based on 2nd Quarter, 2009 price level) in its 229th meeting dated 3.12.2009. Further, the Revised Cost Estimate (RCE) in respect of the transmission project was accorded by the BoD of the Petitioner vide Memorandum No. C/CP/RCE-SS in Northern Region for Sasan and Mundra UMPP dated 1.6.2016 at an estimated cost of ₹142887 lakh including IDC of ₹7969 lakh (based on December, 2015 price level) in its 329th meeting dated 26.5.2016. The Petitioner has subsequently submitted RCE-II, vide affidavit dated 30.3.2021, duly approved by its BoD in its 380th meeting held on 11.11.2020 vide Memorandum No. C/CP/PA2021-09-0Q-RCE010 dated 18.12.2020.

b. The scope of work covered under the transmission project broadly includes:



Transmission Lines:

- i. Agra-Sikar 400 kV D/C (Quad) line - 320 km
- ii. Sikar-Jaipur 400 kV D/C Line - 157 km
- iii. Sikar-Ratanagr (RVPN) 400 kV D/C line - 90 km
- iv. LILO of both circuits of Nathapa Jhakri-Abdullapur 400 kV D/C (Triple Snowbird) line at Panchkula - 2 x 25 km
- v. LILO of both circuits of Sikar (RVPN)- Ratangarh (RVPN) 220 kV D/C line at Sikar (POWERGRID) - 5.4 km

Sub-station:

- i. 2 x 315 MVA, 400/220 kV Sikar Sub-station (New)
- ii. 2 X 315 MVA, 400/220 kV Panchkula Sub-station (New)
- iii. 765/400 kV Agra Sub-station (Extension)
- iv. 400/220 kV Ratangarh (RVPN) Sub-station (Extension)
- v. 400/220 kV Jaipur Sub-station (Extension)

Reactive Compensation

Transmission Lines	Line reactors (MVAR)	
	From end	To end
i) Agra-Sikar 400 kV D/C (Quad) line	50	50 (Switchable)
ii) LILO of both circuits of Nathpa Jhakri-Abdullapur 400 kV D/C at Panchkula <ul style="list-style-type: none">• Naptha Jhakri-Panchkula 400 kV D/C line• Panchkula-Abdullapur 400 kV D/C line	- -	50 (Switchable) 50 (existing reactor to be retained)

Switchable Bus Reactors (MVAR)

- | | | |
|----------------|---|-----|
| i. Sikar | - | 80 |
| ii. Ratangarh | - | 125 |
| iii. Panchkula | - | 125 |

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



Nomenclature of the asset in the instant petition	Nomenclature of the asset in the previous petition	COD
Order dated 30.3.2016 in Petition No. 186/TT/2015		
Asset-I	Combined Asset- A&B	1.2.2012
	Asset-C	1.5.2012
	Asset-D	1.4.2012
	Combined Asset E to I	1.3.2012
	Asset-J	1.9.2012
Order dated 20.7.2018 in Petition No. 64/TT/2018		
Asset-II	Asset-A	1.1.2014
	Asset-B	1.8.2013
Order dated 28.4.2016 in Petition No. 199/TT/2015		
Asset-III	Asset-A	11.2.2015
Asset-IV	Asset-B	11.2.2015
Asset-V	Asset-C	3.2.2015
Order dated 6.12.2017 in Petition No. 69/TT/2017		
Asset-VI	Asset-A	16.2.2017

d. The tariff from respective COD to 31.3.2014 in respect of the Combined Asset-A&B, Asset-C, Asset-D and Combined Asset E to I was determined vide order dated 6.8.2013 in Petition No. 97/TT/2012 and tariff for Asset-J was determined vide order dated 9.6.2015 in Petition No. 61/TT/2013 in accordance with the 2009 Tariff Regulations. The transmission tariff in respect of the transmission assets under Asset-I for 2009-14 tariff period was subsequently trued-up and the transmission tariff for 2014-19 tariff period was determined vide order dated 30.3.2016 in Petition No. 186/TT/2015.

e. The transmission tariff from respective COD to 31.3.2014 for Asset-A and Asset-B combined (Asset-II in the instant petition) was determined vide order dated 13.8.2015 in Petition No. 300/TT/2013 in accordance with the 2009 Tariff



Regulations. The transmission tariff for Asset-A and Asset-B combined under Asset-II for 2009-14 tariff period was subsequently trued-up and the transmission tariff for 2014-19 tariff period was determined vide order dated 20.7.2018 in Petition No. 64/TT/2018. The transmission tariff for Asset-A and Asset-B combined under Asset-II for 2009-14 tariff period was further revised and the transmission tariff for 2014-19 tariff period was determined vide order dated 23.4.2019 in Petition No. 64/TT/2018 on account non-consideration of affidavit dated 6.7.2018.

f. The transmission tariff for Asset-III, Asset-IV and Asset-V for 2014-19 tariff period was determined vide order dated 28.4.2016 in Petition No. 199/TT/2015 and the transmission tariff for Asset-VI for 2014-19 tariff period was determined vide order dated 6.12.2017 in Petition No. 69/TT/2017.

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notice published in the newspaper by the Petitioner. None of the Respondents have filed reply in the matter.



6. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 29.1.2020 and affidavits dated 30.3.2021, 12.8.2021 and 2.9.2021.

7. The hearing in this matter was held on 17.8.2021 through video conference and the order was reserved.

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

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

9. The details of the trued up transmission charges claimed by the Petitioner for the transmission assets are as follows:

Asset-I

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1142.11	1144.79	1145.50	1146.49	1147.97
Interest on Loan	312.66	308.97	362.98	373.73	480.29
Return on Equity	1391.12	1400.63	1400.72	1401.83	1489.31
O&M Expenses	1435.28	1482.91	1532.19	1582.99	1635.54
Interest on Working Capital	144.80	147.62	151.61	154.71	162.11
Total	4425.97	4484.92	4593.00	4659.75	4915.22

Asset-II

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	3339.85	3400.68	3437.76	3428.16	3420.62
Interest on Loan	704.45	747.17	980.80	1053.67	1216.49
Return on Equity	3720.73	3806.86	3848.38	3837.62	3839.28
O&M Expenses	771.73	797.24	823.56	851.07	879.32
Interest on Working Capital	221.37	227.14	235.78	238.51	243.69
Total	8758.13	8979.09	9326.28	9409.03	9599.40



Asset-III

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	43.75	352.47	379.82	380.88	383.22
Interest on Loan	9.77	83.26	119.59	131.12	156.28
Return on Equity	48.85	396.52	428.08	429.26	433.04
O&M Expenses	16.20	124.60	128.74	133.02	137.42
Interest on Working Capital	3.25	26.04	28.46	29.01	29.98
Total	121.82	982.89	1084.69	1103.29	1139.94

Asset-IV

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	27.65	211.85	218.33	219.45	221.39
Interest on Loan	6.18	50.17	68.81	75.66	90.60
Return on Equity	30.90	239.00	247.25	248.52	251.36
O&M Expenses	23.46	180.54	186.52	192.71	199.10
Interest on Working Capital	2.79	21.51	22.60	23.16	23.97
Total	90.98	703.07	743.51	759.50	786.42

Asset-V

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	8.43	53.99	54.13	54.30	54.37
Interest on Loan	1.88	12.66	16.76	18.35	21.58
Return on Equity	9.40	60.48	60.60	60.80	61.03
O&M Expenses	9.42	62.30	64.37	66.51	68.71
Interest on Working Capital	0.97	6.37	6.58	6.75	6.95
Total	30.10	195.80	202.44	206.71	212.64

Asset-VI

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata for 44 days)	2017-18	2018-19
Depreciation	158.49	1321.83	1358.14
Interest on Loan	65.27	549.40	678.65
Return on Equity	178.46	1488.26	1533.02
O&M Expenses	46.42	397.86	411.05
Interest on Working Capital	11.20	94.05	99.32
Total	459.84	3851.40	4080.18

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



Asset-I

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	119.61	123.58	127.68	131.92	136.30
Maintenance Spares	215.29	222.44	229.83	237.45	245.33
Receivables	737.66	747.49	765.50	776.62	819.20
Total Working Capital	1072.56	1093.51	1123.01	1145.99	1200.83
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	144.80	147.62	151.61	154.71	162.11

Asset-II

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	64.31	66.44	68.63	70.92	73.28
Maintenance Spares	115.76	119.59	123.53	127.66	131.90
Receivables	1459.469	1496.32	1554.38	1568.17	1599.90
Total Working Capital	1639.76	1682.55	1746.54	1766.75	1805.08
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	221.37	227.14	235.78	238.51	243.69

Asset-III

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	10.05	10.38	10.73	11.09	11.45
Maintenance Spares	18.09	18.69	19.31	19.95	20.61
Receivables	151.17	163.80	180.79	183.89	189.99
Total Working Capital	179.31	192.88	210.83	214.92	222.05
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	3.25	26.04	28.46	29.01	29.98

Asset-IV

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	14.56	15.05	15.54	16.06	16.59
Maintenance Spares	26.21	27.08	27.98	28.91	29.87
Receivables	112.94	117.18	123.92	126.58	131.07
Total Working Capital	153.71	159.31	167.44	171.55	177.53
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	2.79	21.51	22.60	23.16	23.97



Asset-V

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	32.13	32.63	33.74	34.45	35.44
Total Working Capital	46.21	47.17	48.76	49.97	51.48
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	0.97	6.37	6.58	6.75	6.95

Asset-VI

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata for 44 days)	2017-18	2018-19
O&M Expenses	32.09	33.16	34.25
Maintenance Spares	57.76	59.68	61.66
Receivables	635.76	641.90	680.03
Total Working Capital	725.61	734.74	775.94
Rate of Interest (in %)	12.80	12.80	12.80
Interest on Working Capital	11.20	94.05	99.32

Capital Cost

11. The Commission vide order dated 30.3.2016 in Petition No. 186/TT/2015 for Asset-I, orders dated 20.7.2018 and 23.4.2019 in Petition No. 64/TT/2018 for Asset-II, order dated 28.4.2016 in Petition No. 199/TT/2015 for Asset-III, Asset-IV and Asset-V, order dated 6.12.2017 in Petition No. 69/TT/2017 for Asset-VI allowed the capital cost as on COD and Additional Capital Expenditure (ACE) for 214-19 tariff period as follows:

Assets	(₹ in lakh)				Admitted Cost as on 31.3.2019
	Allowed ACE				
	2014-15	2015-16	2016-17	2017-18	
Asset-I	3.63	223.94	0.00	0.00	2957.13
	0.00	85.92	0.00	0.00	815.11
	3.63	125.25	0.00	0.00	2230.58
	36.87	0.00	0.00	0.00	17203.18
	73.90	166.52	0.00	0.00	1095.01
Asset-II	1082.08	1097.74	184.19	567.99	64333.28



	11.78	112.29	10.41	70.68	1494.82
Asset-III	0.00	749.81	0.00	0.00	6913.39
Asset-IV	0.00	630.20	0.00	0.00	4540.26
Asset-V	0.00	0.00	0.00	0.00	918.88
Asset-VI	0.00	0.00	2.79	1436.39	26477.64
Total	1211.89	3191.67	197.39	2075.06	128979.28

12. The details of apportioned approved capital cost as per FR, RCE-I and RCE-II, capital cost as on COD and as on 31.3.2014 and ACE up to 31.3.2019 claimed by the Petitioner in respect of the transmission assets are as follows:

(₹ in lakh)

Assets	Apportioned Cost as per FR	Apportioned Approved Cost as per RCE-I	Apportioned Approved Cost as per RCE-II	Capital Cost as on COD/ 31.3.2014	Actual ACE					Cost as on 31.3.2019
					2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	3287.14	3204.56	2965.87	2729.56	3.63	9.63	13.74	12.70	27.72	2796.98
	933.79	1534.32	810.47	729.19	0.00	0.68	0.49	3.11	2.02	735.49
	2353.35	2536.31	2202.28	2101.7	3.63	1.02	1.00	4.67	3.03	2115.05
	20367.51	18007.10	20195.63	17166.31	12.99	0.00	0.00	0.00	2768.53	19947.83
	1242.52	1236.35	968.10	854.59	73.90	0.34	0.24	1.56	1.01	931.64
	28184.31	26518.64	27142.35	23581.35	94.15	11.67	15.47	22.04	2802.32	26527.00
Asset-II	62999.19	71644.87	67121.41	61405.65	1082.08	1097.74	184.19	-563.96*	268.58	63474.28
	2078.29	1624.39	1567.86	1289.66	11.78	112.29	10.41	5.63	4.04	1433.81
	65077.48	73269.26	68689.27	62695.32	1093.86	1210.03	194.60	-558.34	272.63	64908.10
Asset-III	6913.39	8024.61	7820.03	6180.81	0.00	1046.73	27.95	12.07	76.43	7343.99
Asset-IV	4540.26	5126.54	4624.06	3910.06	0.00	261.74	21.78	20.97	52.47	4267.02
Asset-V	918.88	3061.31	1085.91	1022.35	0.00	0.34	5.01	1.56	1.01	1030.27
Asset-VI	16048.68	26886.64	28255.10	25040.90	0.00	0.00	2.79	264.23	1110.89	26418.81
Total	121683.00	142887.00	137616.72	122430.79	1188.01	2530.51	267.60	-237.47	4315.75	130495.19

*Includes decapitalization of ₹ 579.40 lakh and ACE of ₹15.44 lakh

Cost over-run

13. The FR apportioned cost for the assets covered in the instant petition is ₹121683.00 lakh and the capital cost claimed by the Petitioner from their respective COD to 31.3.2019 is ₹130495.19 lakh. Accordingly, there is overall cost over-run of ₹8812.19 lakh with respect to FR cost. Further, the Petitioner has submitted the RCE-I of ₹142887.00 lakh and the capital cost claimed by the Petitioner from their respective COD to 2019 of the transmission assets covered in the instant petition is ₹130495.19 lakh. Accordingly, there is no overall cost over-run with respect to RCE-I. The capital



cost of Asset-II, Asset-III, Asset-IV, Asset-V and Asset-VI as on 31.3.2019 are within the RCE-I and therefore, there is no cost over-run. However, the capital cost of Asset-I claimed by the Petitioner from COD to 31.3.2019 is more than the RCE-I.

14. The Petitioner has submitted that the Commission in order dated 28.4.2016 in Petition No. 199/TT/2015 restricted the capital cost of Asset-V to FR cost. The Petitioner in the instant petition has submitted RCE and the completion cost is within RCE-I cost.

15. The Petitioner has submitted that an amount of ₹2768.53 lakh in 2018-19 w.r.t. Asset-I [combined Asset-(E to I)] is paid towards land compensation as per the court order and due to this, the Petitioner has revised the apportioned approved cost and also submitted RCE-II. The Petitioner has submitted the RCE-II of ₹137616.72 lakh and the capital cost claimed by the Petitioner from their respective COD to 31.3.2019 of all the assets covered in the instant petition is ₹130495.19 lakh. Accordingly, there is no cost over-run with respect to RCE-II.

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

IA, RCE-I and RCE-II Date	Project cost
Investment Approval (IA) 10.12.2009	₹121683.00 lakh, which included IDC of ₹5770 lakh.
Revised Cost Estimate-I (RCE-I) 26.5.2016	₹142887.00 lakh including IDC of ₹7969 lakh.
Revised Cost Estimate-II (RCE-II) 11.11.2020	₹137617.72 lakh including IDC of ₹7060 lakh.

17. From the above, it is observed that the project cost as per RCE-II is lower than the RCE-I by ₹5270.00 lakh.



18. The Commission in earlier tariff petitions has allowed the total capital cost of ₹128979.30 lakh as on 31.3.2019 and the estimated completion cost claimed by the Petitioner in the instant petition as on 31.3.2019 is ₹131078.80 lakh. The capital cost as on 31.3.2019 in the instant true up petition has increased by ₹8584 lakh.

19. As shown in table above in paragraph 12, the apportioned approved capital cost of Asset-I, Asset-III and Asset-IV is more than the RCE-I apportioned approved cost. The Petitioner had to pay an amount of ₹2768.53 lakh in 2018-19 in case of Asset-I due to court case and it has necessitated RCE-II. The Petitioner had not mentioned about any court case while claiming tariff in respect of Asset-I in Petition No. 186/TT/2015. The Petitioner has mentioned about the court case only in the instant petition. The Petitioner is directed to take proper care while filing the petitions and mention in the pleadings all the relevant details in respect of asset/project/scheme. It is observed that the estimated completion cost of ₹130495.19 lakh is within the RCE-II approved capital cost (as per RCE-II) of ₹137616.72 lakh. The individual capital cost of each asset is also within the respective RCE-II apportioned capital cost.

20. The Petitioner in all future petitions, wherever the cost of the assets is anticipated to be higher than the FR cost, is directed to submit the RCE prior to COD of the assets and not after their COD. Further, after COD of the asset, the Petitioner is directed to furnish actual cost incurred, duly approved by the competent authority along with the justification and documentary evidence with reference to cost variations.



Time over-run

21. As per the IA meeting dated 3.12.2009, the transmission project was scheduled to be executed within 32 months from the date of IA i.e. by 3.8.2012. However, there is time over-run in case of all assets except in case of Asset-I. The details are as follows:

Assets	Scheduled COD	Actual COD	Time over-run	Time over-run condoned/ not condoned
Asset-I	3.8.2012	1.3.2012	NA	NA
Asset-II		28.12.2013	12 months for Asset-A 11 months for Asset-B	Not Condoned
Asset-III		11.2.2015	922 days	Condoned
Asset-IV		11.2.2015	922 days	Condoned
Asset-V		3.2.2015	914 days	Condoned till June 2013 (331 days); 583 days not condoned
Asset-VI		16.2.2017	1658 days	To be considered in the instant petition.

22. The time over-run in case of Asset-II, Asset-III, Asset-IV and Asset-V has already been considered by the Commission as shown in the above table.

23. The Commission vide order dated 6.12.2017 in Petition No. 69/TT/2017 condoned the entire time over-run of 1658 days in case of Asset-VI provisionally and directed the Petitioner to submit the detailed reasons for time over-run in case of Asset-VI at the time of truing up. The relevant portion of the order dated 6.12.2017 in Petition No. 69/TT/2017 is extracted hereunder:

“26. The petitioner has submitted that the time over-run of 54 months and 7 days is mainly attributable to RoW issues faced by the petitioner during construction of the transmission line at various locations including at Bhadadar Jigar Choti, Achrol, Bhanpur kala, Kanouta, Bhajpura and Bassi. We have gone through the chronology of events supported by documentary evidence and correspondences exchanged with the various Authorities. On 18.10.2011 Tehsildar J.Ramgad informed the SDM, J. Ramgarh and others about the obstruction caused by anti-social elements at location nos. 259 to 264, at village Bhanpur. The Secretary, Government of Rajasthan wrote a letter to the District Collector and District Magistrate on 19.9.2013 to resolve the ROW



problems caused by villagers of Bhadadar and Mailashi. On 19.6.2014, SDM, J. Ramgarh wrote to SHO J. Ramgarh to assist the completion of pending work at Bhanpur Kalan village at location no. 359. On 2.12.2014 the District Magistrate, Jaipur directed SDM, Jaipur to prepare a report of ROW issues of Sikar-Jaipur line in response to the petitioner's letter dated 30.11.2016 regarding ROW issues at location nos. 359 and 360 at Bhanpur Kalan which were pending since 18.10.2011. Besides this, there were ROW problems at location nos. 85, 182, 423 and 424 at Mahrauli which could be completed on 15.1.2017 with the assistance of police on the direction of SDM, Shrimadhapur. Similar RoW issues were faced by the petitioner at other locations as well and the same are supported by documentary evidence.

27. We have considered the submissions of the petitioner regarding time over-run of 54 months and 7 days in achieving COD of the instant asset. The petitioner has submitted extensive details of correspondences exchanged with various Authorities alongwith supporting documents. However, from the submission, it is not clear when a specific RoW issue was resolved at a particular location. Further, the period of RoW issue at certain location is also not understood. However, based on the documentary evidence placed on record by the petitioner, the time over-run of 54 months and 7 days is provisionally allowed.

28. The petitioner is directed to furnish the details of time over-run for each activity/event supported by PERT/CPM charts at the time of filing truing up petition. The petitioner is also directed to furnish a detailed note on execution of the project giving details of erection of each tower planned and its actual execution, number of gangs deployed for construction of towers, construction of towers taken in parallel, start and completion date of construction of each tower, start date of ROW problem associated with each tower, date of resolving the ROW problem and efforts made, gangs deployed in stringing of towers, date of restoring the work after every ROW problem faced and efforts made, date of charging of the line etc at the time of truing up.”

24. The Petitioner had failed to submit the above-mentioned details at the time of truing up in the instant petition. The Commission in Record of Proceedings dated 6.4.2021 observed as follows:

“4. The Commission observed that the time over-run in case of the instant assets was allowed provisionally vide order dated 6.12.2017 in Petition No. 69/TT/2017 and the Petitioner was to submit certain information along with supporting documents at the time of true up. The Petitioner has not submitted the information as directed in order dated 6.12.2017 in the instant petition. The Commission further observed that more than 3 years have lapsed since the direction was given and the Petitioner has conveniently ignored the direction of the Commission and has neither mentioned about condonation of time over-run in the pleadings nor prayed for the same in the instant petition. Therefore, allowing further time to file the information as prayed for cannot be acceded to at this juncture and the petition will be decided on the basis of information already filed by the Petitioner.”



25. The Petitioner *vide* affidavit dated 12.8.2021 submitted the documents pertaining to RoW issue and PERT/CPM chart indicating the activity timelines. The Petitioner has further submitted the justification regarding time over-run in case of Asset-VI and also submitted that the same has been inadvertently missed while filing the truing-up petition. The Petitioner has submitted that in the instant transmission line, a total of 485 towers were commissioned and 4 gangs were deployed together to work at 4 different towers. The Petitioner had started the work after placing the LOA. However, while constructing 400 kV D/C Sikar-Jaipur line, the Petitioner has faced severe RoW problems at various locations since July, 2011. The Petitioner has further submitted that some major RoW issues pertaining to location 1 to location 12, location 182, location 186 and location 186 A and location 344 to location 364 and continued for a long time i.e. since 11.7.2011 to 15.1.2017 (Total 2015 days). The Petitioner has further submitted that RoW problems were created by local villagers/ landowners. The matter was serious and the issue was taken up to the level of Chief Secretary- Government of Rajasthan, Additional Chief Secretary (Home) Government of Rajasthan, Secretary (Energy) Government of Rajasthan, Collector for their intervention to resolve the RoW problems. The Petitioner has further submitted that the work pertaining to the RoW area could be carried out only after the police protection was provided. The Petitioner had continuously worked at other (non-ROW) areas and completed the work immediately after resolving the RoW issues. The Petitioner has submitted that however, due to persistent RoW issues at a few stretches/ areas mentioned above, the commissioning of the transmission line got delayed by 1651 days. The Petitioner has put all the efforts to resolve the RoW issue and construction activities were taken up at war footing whenever and wherever the



RoW issues were resolved. The Petitioner has also submitted the detailed chronology of events pertaining to each of the locations and we have gone through them.

26. The Petitioner has submitted that the total concurrent delay is from 11.7.2011 to 15.1.2017 (2015 days). However, since transmission line construction is a linear activity, this delay of 2015 days has been reduced to 1651 days by completing the balance activities immediately where RoW issues had been resolved. The Petitioner has submitted the relevant documents pertaining to the miscellaneous RoW issues along with the affidavit dated 12.8.2021.

27. We have perused the submissions made by the Petitioner *in* affidavit dated 12.8.2021. The gist of the submissions made is as follows:

- a) The Petitioner has flagged the RoW issues at location 1 to location 12 (Bhadadar, Bhookarokabas, Mailashi etc.) to the concerned authorities for the first time on 11.7.2011 and the last letter seeking help for resolving the issue was sent by the Petitioner on 20.10.2015.
- b) The Petitioner has flagged the RoW issues at location 182, location 186 and location 186A (Sikar, Srimadhapur, etc.) to the concerned authorities for the first time on 13.2.2012 and the last letter seeking help for resolving the RoW issue was sent by the Petitioner on 15.1.2017 but the same is not legible. The General Manager (POWERGRID) on 11.7.2013 and 21.8.2013 requested the Collector, Sikar for help in resolving RoW issue created by the villagers of Bhadadar. The Secretary Energy, Government of Rajasthan wrote a letter to the District Collector and District Magistrate on 19.9.2013 to extend support to POWRGRID and resolve the RoW problems caused by villagers of Bhadadar and Malasi.
- c) In case of location 344 and location 359 to location 364 (J. Ramgarh, Jaipur, Amer, etc), the Petitioner has flagged the RoW issues to the concerned



authorities for the first time on 14.10.2011 and the last letter seeking help for resolving the RoW issue was sent by the Petitioner on 8.12.2016.

d) In case of location 464 to location 468 (Bassi, Sikar, etc), the Petitioner has flagged the RoW issues to the concerned authorities for the first time on 16.1.2012 and the last letter seeking help for resolving the RoW issue was sent by the Petitioner on 8.6.2015.

e) Apart from the above-mentioned locations, the Petitioner has flagged RoW issues at location 464 to location 468, location 427 to location 429, location 83, location 84 and tower 83 to tower 86.

28. It is observed that the Petitioner had faced RoW issues at various locations from 11.7.2011 to 15.1.2017 and after resolving them, Asset-VI was put into commercial operation on 16.2.2017. Therefore, the time from the scheduled COD of 3.8.2012 to 16.2.2017 i.e. 1658 days is due to RoW problems and it is beyond the control of the Petitioner and the same has been accordingly condoned.

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

29. The Petitioner has claimed IDC in case of Asset-III, Asset-IV, Asset-V and Asset-VI covered in the instant petition and has submitted the statement showing IDC claim, discharge of IDC liability as on COD and thereafter as follows:

(₹ in lakh)					
Assets	IDC as per Auditor Certificate	IDC Discharged up to COD	IDC discharged during 2015-16	IDC discharged during 2016-17	IDC discharged during 2017-18
Asset-III	216.62	212.82	3.80	0.00	0.00
Asset-IV	137.07	133.65	3.42	0.00	0.00
Asset-V	43.89	43.25	0.64	0.00	0.00
Asset-VI	1676.56	1623.95	0.00	0.00	52.61



30. The Petitioner vide affidavit dated 12.8.2021 has submitted that the details of foreign IDC calculations. We have considered the submissions of the Petitioner. The Petitioner has submitted IDC computation statement for domestic as well as foreign currency loans which contains the name of loan, drawl date, loan amount, interest rate, exchange rate and interest claimed. IDC is worked out based on the details given in the IDC statement. Further, the loan amount as on COD has been mentioned in Forms-6 and Form-9C. On scrutiny of these documents, certain discrepancies have been noted such as mismatch in loan amount between IDC statement and Form-6 and Form-9C. The allowable IDC has been worked out based on the information available on record and relying on loan amount as per Form-9C. IDC claimed and considered as on COD and summary of discharge of IDC liability up to COD and thereafter for the purpose of tariff determination is as follows:

(₹ in lakh)

Assets	IDC as per Auditor certificate	IDC disallowed due to time over-run not condoned	IDC disallowed due to computational error	IDC allowed	IDC discharged up to COD	IDC discharged during 2015-16	IDC discharged during 2017-18
1	2	3	4	5=2-3-4	6	7	8
Asset-III	216.62	0.00	0.00	216.62	212.82	3.80	0.00
Asset-IV	137.07	0.00	0.00	137.07	133.65	3.42	0.00
Asset-V	43.89	16.06	0.00	27.83	27.83	0.00	0.00
Asset-VI	1676.56	0.00	0.00	1676.56	1623.95	0.00	52.61

31. The Petitioner has claimed IEDC in respect of the transmission assets as per the Auditor Certificate. The Petitioner has submitted that the entire IEDC mentioned in the Auditor's Certificate is on cash basis and was paid up to COD. As the time over-run for Asset-V and Asset-VI has not been condoned, there is dis-allowance of IEDC.



IEDC claimed as per Auditor's Certificate, IEDC considered and discharged up to COD is as follows:

(₹ in lakh)			
Assets	IEDC as per Auditor's Certificate	IEDC disallowed due to time over-run not condoned	IEDC allowed
Asset-III	127.50	0.00	127.50
Asset-IV	80.68	0.00	80.68
Asset-V	25.84	7.98	17.86
Asset-VI	732.82	0.00	732.82

Initial Spares

32. 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%”*

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

(₹ in lakh)				
Assets	Plant and Machinery Cost		Initial spares claimed by the Petitioner	
	Sub-station	Transmission Line	Sub-station	Transmission Line
Asset-I	2650.46	139.14	35.76	0.00
	550.55	203.00	8.30	0.00
	2089.64	0.00	27.46	0.00
	9811.84	6107.95	210.52	38.68
	923.17	0.00	15.47	0.00
Asset-II	2547.02	62478.70	0.58	474.22
	1445.15	0.00	20.25	0.00



Asset-III	2306.61	5196.09	0.00	15.11
Asset-IV	2300.97	2142.03	0.00	15.11
Asset-V	1051.71	0.00	18.87	0.00
Asset-VI	3588.04	23828.82	66.81	161.21
Total			404.02	704.33

34. We have considered the submissions of the Petitioner. For Combined Asset-A&B, Asset-C, Asset-D, Combined Asset-(E to I) and Asset-J under Asset-I (in the instant petition) and for Asset-A and Asset-B under Asset-II (in the instant petition), Initial Spares have been computed again in this order since the cut-off date for these assets falls in 2014-19 tariff period. Initial Spares for assets put into commercial operation in 2009-14 tariff period have been computed as per the 2009 Tariff Regulations and for assets put into commercial operation in 2014-19 Tariff Regulations under the 2014 Tariff Regulations. The details are as follows:

Assets put under commercial operation during the 2009-14 tariff period

(₹ in lakh)

Asset-I						
Assets	Project cost as on cut-off date	Apportioned Initial Spares claimed	Ceiling limits as per Regulation 8 of the 2009 Tariff Regulations	Ceiling limit of Initial Spares	Excess Initial Spares claimed	Initial Spares allowed
Sub-station						
Combined Asset-A&B	2636.97	35.76	2.50%	66.70	0.00	35.76
Asset-C	561.19	8.30	2.50%	14.18	0.00	8.30
Asset-D	2105.33	27.46	2.50%	53.28	0.00	27.46
Combined Asset-(E to I)	11071.35	210.52	2.50%	278.48	0.00	210.52
Asset-J	928.49	15.47	2.50%	23.41	0.00	15.47
Total	17303.33	297.51		436.05	0.00	297.51
Transmission line						
Combined Asset-(E to I)	6107.95	38.68	0.75%	45.86	0.00	38.68



(₹ in lakh)

Asset-II						
Assets	Project cost as on cut-off date	Apportioned Initial Spares claimed	Ceiling limits as per Regulation 8 of the 2009 Tariff Regulations	Ceiling limit of Initial Spares	Excess Initial Spares claimed	Initial Spares allowed
Transmission line						
Asset-A	62643.24	474.22	0.75%	469.79	4.43	469.79
Sub-station						
Asset-A	1975.57	0.58	2.50%	50.64	0.00	0.58
Asset-B	1463.89	20.25	2.50%	37.02	0.00	20.25
Total	3439.46	20.83		87.66		20.83

Assets put under commercial operation during the 2014-19 tariff period

(₹ in lakh)

Assets	Elements	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	Ceiling limit of Initial Spares	Excess Initial Spares claimed	Initial Spares allowed
Asset-III	Transmission Line	4985.92	15.11	1.00%	50.21	NIL	15.11
Asset-IV	Transmission Line	2046.59	15.11	1.00%	20.52	NIL	15.11
Asset-V	Sub-station	981.98	18.87	6.00%	61.48	NIL	18.87
Asset-VI	Transmission Line	21762.87	161.21	1.00%	218.20	N/A	161.21
	Sub-station	2884.22	66.81	6.00%	179.83	N/A	66.81

35. Accordingly, Initial Spares amounting ₹699.90 lakh and ₹404.02 lakh is approved for transmission line and sub-station respectively.

36. The Petitioner vide affidavit dated 30.3.2021 has submitted the details of actual Initial Spares discharged w.r.t. Asset-II as follows:



(₹ in lakh)

Assets	Transmission Line/ Sub-station	Initial Spares claimed	Discharged up to COD	Initial Spares discharged during the year			Total Initial Spares discharged
				2013-14	2014-15	2015-16	
Asset-A of Asset-II	Transmission Line	474.22	432.20	17.73	14.72	9.57	474.22
	Sub-station	0.58	0.58	0.00	0.00	0.00	0.58
Asset-B of Asset-II	Sub-station	20.25	20.25	0.00	0.00	0.00	20.25

37. Accordingly, excess Initial Spares of ₹4.43 lakh disallowed for transmission line are deducted from ACE in 2015-16 for Asset-II.

38. The details of the capital cost now approved as on COD after adjustment of IDC, IEDC and Initial Spares, if any, are as follows:

(₹ in lakh)

Assets	Capital Cost claimed as on COD (A)	IDC disallowed (B)	IEDC Disallowed (C)	Undischarged IDC (D)	Excess Initial Spares Disallowed as on COD (E)	Capital Cost allowed as on COD (F)= (A-B-C-D-E)
Asset-I	23581.35	0.00	0.00	0.00	0.00	23581.35
Asset-II	62695.31	0.00	0.00	0.00	0.00	62695.31
Asset-III	6184.61	0.00	0.00	3.80	0.00	6180.81
Asset-IV	3913.48	0.00	0.00	3.42	0.00	3910.06
Asset-V	1043.79	16.06	7.98	0.00	0.00	1019.75
Asset-VI	25093.51	0.00	0.00	52.61	0.00	25040.90

Additional Capital Expenditure (“ACE”)

39. The Commission vide order dated 30.3.2016 in Petition No. 186/TT/2015, order dated 20.7.2018 in Petition No. 64/TT/2018, order dated 28.4.2016 in Petition No. 199/TT/2015 and order dated 6.12.2017 in Petition No. 69/TT/2017 had allowed the following ACE for 2014-19 tariff period:



(₹ in lakh)

Assets	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	118.03	601.63	0.00	0.00	0.00
Asset-II	1093.86	1210.03	194.60	638.67	0.00
Asset-III	0.00	749.81	0.00	0.00	0.00
Asset-IV	0.00	630.20	0.00	0.00	0.00
Asset-V	0.00	0.00	0.00	0.00	0.00
Asset-VI	0.00	0.00	2.79	1436.39	0.00

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

(₹ in lakh)

Assets	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	94.15	11.67	15.47	22.04	2802.32
Asset-II	1093.86	1210.03	194.60	-558.34	272.63
Asset-III	0.00	1046.73	27.95	12.07	76.43
Asset-IV	0.00	261.74	21.78	20.97	52.47
Asset-V	0.00	0.34	5.01	1.56	1.01
Asset-VI	0.00	0.00	2.79	264.23	1110.89

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

Assets	Description	COD	Cut-off date
Asset-I	Combined Asset A&B	1.2.2012	31.3.2015
	Asset C	1.5.2012	31.3.2015
	Asset D	1.4.2012	31.3.2015
	Combined Asset E to I	1.3.2012	31.3.2015
	Asset J	1.9.2012	31.3.2015
Asset-II	Asset-A1	1.1.2014	31.3.2017
	Asset-A2	1.8.2013	31.3.2016
Asset-III		11.2.2015	31.3.2018
Asset-IV		11.2.2015	31.3.2018
Asset-V		3.2.2015	31.3.2018
Asset-VI		16.2.2017	31.3.2020

42. Details of ACE incurred after cut-off date is as follows:

Asset-I: Combined Asset E to I (Asset E: LILO of 1st circuits of 400 kV Jhakri - Abdullapur transmission line at Panchkula, Asset F: LILO of 2nd circuits of 400 kV



Jhakri - Abdullapur transmission line at Panchkula, Asset-G: 400/220 kV 315 MVA
 ICT-I along with associated bays at Panchkula Sub-station, Asset-H: 315 MVA
 ICT-II along with associated bays at Panchkula Sub-station, Asset-I: 125 MVAR
 bus reactor along with associated bays at Panchkula Sub-station

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Differed work
2014-15	12.99	Omicron Energy Solution Pvt. Limited	Civil & Building	Balance and Retention payment as per Regulation 14(1)(i) of 2014 Tariff Regulations
2018-19	2768.53*	Land Authorities/Land Owners	Land	Land Payment compensation due to Court Case against enhanced Land payment. Claimed as per Regulation 14(3)(i) of 2014 Tariff Regulations

* Payment of ₹2768.53 lakh in 2018-19 in Asset-I (Combined Asset E to I) was necessitated due to judgment dated 9.4.2018 of Additional District Judge, Panckula. The I Land compensation decided by the Land Acquisition Collector, Public Works Department(Power), Haryana was contested by land owners and the court ruled in favour of the land owners. After necessary approvals, the amount was released in 2018-19. Court order and Management Approval has been submitted along with the petition. Copy of documents/ receipt w.r.t. said payment for land compensation are also submitted by the Petitioner vide affidavit dated 12.8.2021.

Asset-II: Asset-J: 400 kV, 80 MVAR bus reactor along with associated bays at
 400/220 kV Sikar Sub-station;

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Differed work
2014-15	73.90	Crompton Greaves Ltd.	Sub- station	Deferred work liability as per Regulation 14(1)(ii) of 2014 Tariff Regulations
2015-16	0.34	Crompton Greaves Ltd.	Sub- station	Balance and Retention payment as per Regulation 14(3)(v) of 2014 Tariff Regulations
2016-17	0.24	Crompton Greaves Ltd.	Sub- station	Balance and Retention payment as per Regulation 14(3)(v) of 2014 Tariff Regulations
2017-18	1.56	Crompton Greaves Ltd.	Sub- station	Balance and Retention payment as per Regulation 14(3)(v) of 2014 Tariff Regulations
2018-19	1.01	Crompton Greaves Ltd.	Sub- station	Balance and Retention payment as per Regulation 14(3)(v) of 2014 Tariff Regulations



Asset-III: One circuit of 400 kV D/C Sikar-Ratangarh line with associated bays

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Differed work
2015-16	104.50	Crompton Greaves Ltd.	Civil & Building	Deferred work liability as per Regulation 14(1)(ii) of 2014 Tariff Regulations
	0.34	Crompton Greaves Ltd.	Sub-station	Deferred work liability as per Regulation 14(1)(ii) of 2014 Tariff Regulations
	938.09	Sujana Towers/ Spic Smo	Transmission Line	Deferred work liability as per Regulation 14(1)(ii) of 2014 Tariff Regulations
2016-17	0.24	Crompton Greaves Ltd.	Sub-station	Balance and Retention payment as per Regulation 14(1)(i) of 2014 Tariff Regulations
	27.71	Sujana Towers/ Spic Smo	Transmission Line	Balance and Retention payment as per Regulation 14(1)(i) of 2014 Tariff Regulations
2017-18	1.56	Crompton Greaves Ltd.	Sub-station	Deferred work liability as per Regulation 14(1)(ii) of 2014 Tariff Regulations
	10.51	Sujana Towers/ Spic Smo	Transmission Line	Deferred work liability as per Regulation 14(1)(ii) of 2014 Tariff Regulations
2018-19	1.01	Crompton Greaves Ltd.	Sub-station	Balance and Retention payment as per Regulation 14(3)(v) of 2014 Tariff Regulations
	75.42	Sujana Towers/ Spic Smo	Transmission Line	Balance and Retention payment as per Regulation 14(3)(v) of 2014 Tariff Regulations

Asset-IV: Second circuit of 400 kV D/C Sikar-Ratangarh line with associated bays

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Differed work
2015-16	104.50	Crompton Greaves Ltd.	Civil & Building	Deferred work liability as per Regulation 14(1)(ii) of 2014 Tariff Regulations
	0.34	Crompton Greaves Ltd.	Sub-station	Deferred work liability as per Regulation 14(1)(ii) of 2014 Tariff Regulations
	153.47	Sujana Towers/ Spic Smo	Transmission Line	Deferred work liability as per Regulation 14(1)(ii) of 2014 Tariff Regulations
2016-17	0.24	Crompton Greaves Ltd.	Sub-station	Balance and Retention payment as per Regulation 14(1)(i) of 2014 Tariff Regulations
	21.54	Sujana	Transmission	Balance and Retention payment as per



		Towers/ Spic Smo	Line	Regulation 14(1)(i) of 2014 Tariff Regulations
2017-18	1.56	Crompton Greaves Ltd.	Sub-station	Deferred work liability as per Regulation 14(1)(ii) of 2014 Tariff Regulations
	19.41	Sujana Towers/ Spic Smo	Transmission Line	Deferred work liability as per Regulation 14(1)(ii) of 2014 Tariff Regulations
2018-19	1.01	Crompton Greaves Ltd.	Sub-station	Balance and Retention payment as per Regulation 14(3)(v) of 2014 Tariff Regulations
	51.46	Sujana Towers/ Spic Smo	Transmission Line	Balance and Retention payment as per Regulation 14(3)(v) of 2014 Tariff Regulations

Asset-VI:400 kV D/C Sikar-Jaipur line with associated bays

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Differed work
2016-17	2.79	Crompton Greaves Ltd.	Sub-station	Deferred work liability as per Regulation 14(1)(ii) of 2014 Tariff Regulations
2017-18	6.83	Crompton Greaves Ltd.	Sub-station	Deferred work liability as per Regulation 14(1)(ii) of 2014 Tariff Regulations
	204.79	Sujana Towers/ Spic Smo	Transmission Line	Deferred work liability as per Regulation 14(1)(ii) of 2014 Tariff Regulations
2018-19	4.04	Crompton Greaves Ltd.	Sub-station	Deferred work liability as per clause 14(1)(ii) of 2014 Tariff Regulation
	1106.85	Sujana Towers/ Spic Smo	Transmission Line	Deferred work liability as per Regulation 14(1)(ii) of 2014 Tariff Regulations

43. The Petitioner has submitted that ACE incurred in the contextual assets is on account of any undischarged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date.



44. The Petitioner vide affidavit dated 12.8.2021 has submitted the details of de-capitalization of 2x50 MVAR line reactors at Agra commissioned along with "400 KV Agra-Sikar (D/C QUAD) Line with associated Bays at Agra" covered in the instant Petition as Asset-II. The Petitioner has further submitted that the 2x50 MVAR line reactors at Agra is replaced with the 80 MVAR Line reactor (Petition No. 242/TT/2018) under "North East Northern/Western Interconnector-I Project" on 1.8.2017 and has utilized the replaced 50 MVAR Line reactor at Daltonganj Sub-station (True up Petition No. 372/TT/2020) under ERSS-III. The actual date of de-capitalization of 2x50 MVAR line reactor form Agra is 15.7.2017.

45. We have considered the submission of the Petitioner. ACE and de-capitalisation claimed by the Petitioner has been verified from the Auditor's Certificate. Accordingly, ACE within the cut-off date 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, as applicable. The date of de-capitalization is considered as 15.7.2017. The undischarged IDC liability as on COD has been allowed as ACE during the year of its discharge. The excess Initial Spares are disallowed as per actual discharge for Asset-II.

46. The allowed ACE is as follows:

(₹ in lakh)

Assets	ACE (as per Auditor's Certificate)					IDC Discharged		Less: Excess Initial Spares 2015-16	ACE (Including discharged IDC and excluding excess Initial Spares)				
	2014-15	2015-16	2016-17	2017-18	2018-19	2015-16	2018-19		2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	94.15	11.67	15.47	22.04	2802.31	0.00	0.00	0.00	94.15	11.67	15.47	22.04	2802.31
Asset-II	1093.86	1210.03	194.60	-558.33	272.62	0.00	0.00	4.43	1093.86	1205.60	194.60	-558.33	272.62
Asset-III	0.00	1042.93	27.95	12.07	76.43	3.80	0.00	0.00	0.00	1046.73	27.95	12.07	76.43
Asset-IV	0.00	258.31	21.78	20.96	52.47	3.42	0.00	0.00	0.00	261.73	21.78	20.96	52.47
Asset-V	0.00	0.34	5.01	1.56	1.01	0.00	0.00	0.00	0.00	0.34	5.01	1.56	1.01
Asset-VI	0.00	0.00	2.79	211.61	1110.90	0.00	52.61	0.00	0.00	0.00	2.79	264.23	1110.90
Total	1188.01	2523.28	267.61	-290.09	4315.74	7.22	52.61	4.43	1188.01	2530.50	267.61	-237.47	4315.74



47. The details of the capital cost and ACE approved up to 31.3.2019 in respect of the transmission assets covered in the instant petition are as follows:

Assets	Capital Cost admitted as on COD	ACE (including accrued IDC discharged)					Capital Cost as on 31.3.2019
		2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	23581.35	94.15	11.67	15.47	22.04	2802.31	26526.99
Asset-II	62695.31	1093.86	1205.60	194.60	-558.33	272.62	64903.66
Asset-III	6180.81	0.00	1046.73	27.95	12.07	76.43	7343.99
Asset-IV	3910.06	0.00	261.73	21.78	20.96	52.47	4267.00
Asset-V	1019.75	0.00	0.34	5.01	1.56	1.01	1027.67
Asset-VI	25040.90	0.00	0.00	2.79	264.23	1110.90	26418.81

Debt-Equity ratio

48. The Petitioner has claimed debt-equity ratio of 70:30 as on COD. Debt-equity ratio of 70:30 is considered as provided under Regulation 19 of the 2014 Tariff Regulations. The Asset- details of debt-equity as on COD and as on 31.3.2019 in respect of Asset-I, Asset-II, Asset-III, Asset-IV, Asset-V and Asset-VI considered for the purpose of tariff of 2014-19 period is as follows:

Asset-I

Particulars	Capital Cost as on COD (₹ in lakh)	(in %)	ACE during 2014-19 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	16506.95	70.00	2061.95	70.00	18568.89	70.00
Equity	7074.41	30.00	883.69	30.00	7958.10	30.00
Total	23581.35	100.00	2945.64	100.00	26526.99	100.00

Asset-II

Particulars	Capital Cost as on COD (₹ in lakh)	(in %)	ACE during 2014-19 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	43886.72	70.00	1545.85	70.00	45432.56	70.00
Equity	18808.59	30.00	662.51	30.00	19471.10	30.00



Total	62695.31	100.00	2208.35	100.00	64903.66	100.00
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Asset-III

Particulars	Capital Cost as on COD (₹ in lakh)	(in %)	ACE during 2014-19 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	4326.57	70.00	814.23	70.00	5140.79	70.00
Equity	1854.24	30.00	348.95	30.00	2203.20	30.00
Total	6180.81	100.00	1163.18	100.00	7343.99	100.00

Asset-IV

Particulars	Capital Cost as on COD (₹ in lakh)	(in %)	ACE during 2014-19 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	2737.04	70.00	249.86	70.00	2986.90	70.00
Equity	1173.02	30.00	107.08	30.00	1280.10	30.00
Total	3910.06	100.00	356.94	100.00	4267.00	100.00

Asset-V

Particulars	Capital Cost as on COD (₹ in lakh)	(in %)	ACE during 2014-19 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	713.83	70.00	5.54	70.00	719.37	70.00
Equity	305.93	30.00	2.38	30.00	308.30	30.00
Total	1019.75	100.00	7.92	100.00	1027.67	100.00

Asset-VI

Particulars	Capital Cost as on COD (₹ in lakh)	(in %)	ACE during 2014-19 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	17528.63	70.00	964.54	70.00	18493.1	70.00
Equity	7512.27	30.00	413.38	30.00	7925.65	30.00
Total	25040.90	100.00	1377.92	100.00	26418.81	100.00

Depreciation

49. The Petitioner's claim towards depreciation in this petition was found higher than the depreciation allowed for the transmission assets vide order dated 30.3.2016



in Petition No. 186/TT/2015, order dated 20.7.2018 in Petition No. 64/TT/2018, order dated 28.4.2016 in Petition No. 199/TT/2015 and order dated 6.12.2017 in Petition No. 69/TT/2017. The Petitioner has neither given any justification for claiming higher depreciation than what was allowed in earlier orders nor made any specific prayer for allowing higher depreciation in this Petition. In a similar case, the Commission vide order dated 9.5.2020 in Petition No. 19/TT/2020 held as follows:

“31. We have considered the submissions of the Petitioner. The instant assets were put into commercial operation during the 2009-14 period and the tariff from the respective CODs to 31.3.2014 was allowed vide orders dated 30.8.2012 and 9.5.2013 in Petition No.343/2010 and Petition No. 147/TT/2011 respectively. Further, the tariff of the 2009- 14 period was trued up and tariff for the 2014-19 period was allowed vide order dated 25.2.2016 in Petition No.10/TT/2015. The Petitioner did not claim any capital expenditure towards “IT Equipment” in the above said three petitions where tariff for the instant assets for the 2009-14 period was allowed, tariff of the 2009-14 period was trued up and tariff for 2014-19 period was allowed even though there was a clear provision in the 2009 Tariff Regulations and 2014 Tariff Regulations providing depreciation @15% for IT Equipment. Having failed to make a claim as per the 2009 Tariff Regulations(the period during which COD of assets was achieved), the Petitioner has now, at the time of truing up of the tariff allowed for the 2014-19 period has apportioned a part of the capital expenditure to “IT Equipment”. The Petitioner has adopted similar methodology not only in this but in some of the other petitions listed along with the instant petition on 26.2.2020. It is observed that the Petitioner has for the first time apportioned a part of the capital expenditure towards IT Equipment and has claimed depreciation under the head “IT Equipment” @15% at the time of truing up of the tariff of 2014-19 period. Regulation 8(1) of the 2014 Tariff Regulations provides for truing up of the capital expenditure including the additional capital expenditure, incurred up to 31.3.2019, admitted by the Commission after prudence check. We are of the view that scope of truing up exercise is restricted to truing up of the capital expenditure already admitted and apportionment or reapportionment of the capital expenditure cannot be allowed at the time of truing up. Therefore, we are not inclined to consider the Petitioner’s prayer for apportionment of capital expenditure towards IT Equipment and allowing depreciation @ 15% from 1.4.2014 onwards. Accordingly, the 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 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 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations.”

50. In line with the above decision, 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 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 2014-19 tariff period is as follows:

(₹ in lakh)

Asset-I						
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	23581.35	23675.50	23687.17	23702.64	23724.68
B	Additional Capitalisation	94.15	11.67	15.47	22.04	2802.31
C	Closing Gross Block (A+B)	23675.50	23687.17	23702.64	23724.68	26526.99
D	Average Gross Block [(A+C)/2]	23628.43	23681.34	23694.91	23713.66	25125.84
E	Freehold land	1352.72	1352.72	1352.72	1352.72	2736.99
F	Weighted Average Rate of Depreciation (in %)	4.83	4.83	4.83	4.83	4.57
G	Balance useful life of the asset	26	25	24	23	22
H	Lapsed life at the beginning of the year (Year)	3	4	5	6	7
I	Aggregate Depreciable Value	20048.13	20095.75	20107.97	20124.85	20149.97
J	Combined Depreciation during the year	1142.11	1144.78	1145.50	1146.49	1147.96
K	Aggregate Cumulative Depreciation	3331.15	4475.94	5621.43	6767.92	7915.88
L	Remaining Depreciable Value (I-K)	16716.98	15619.82	14486.53	13356.92	12234.08



(₹ in lakh)

Asset-II							
	Particulars	2014-15	2015-16	2016-17	01.04.2017 to 15.7.2017	16.07.2017 to 31.03.2018	2018-19
	Depreciation						
A	Opening Gross Block	62695.31	63789.17	64994.77	65189.37	64609.97	64631.04
B	Additional Capitalisation	1093.86	1205.60	194.60	21.07	21.07	272.62
C	Closing Gross Block (A+B)	63789.17	64994.77	65189.37	65210.44	64631.04	64903.66
D	Average Gross Block [(A+C)/2]	63242.24	64391.97	65092.07	65199.91	64620.51	64767.35
E	Freehold land	16.31	16.31	16.31	16.31	16.31	16.31
F	Weighted Average Rate of Depreciation (in %)	5.28%	5.28%	5.28%	5.28%	5.26%	5.28%
G	Balance useful life of the asset	34	33	32	31	31	30
H	Lapsed life at the beginning of the year (Year)	0.00	1.00	2.00	3.00	3.00	4.00
I	Aggregate Depreciable Value	56903.34	57938.09	58568.18	58665.24	58143.78	58275.94
J	Combined Depreciation during the year	3339.30	3400.01	3436.97	999.79	2410.71	3419.83
K	Aggregate Cumulative Depreciation	4173.99	7574.00	11010.97	12010.76	14319.89*	17739.72
L	Remaining Depreciable Value (I-K)	52729.34	50364.09	47557.21	46654.47	43823.88	40536.21

*After adjustment of cumulative depreciation for de-capitalised asset of ₹ 101.58 lakh

(₹ in lakh)

Asset-III						
	Particulars	2014-15 (pro-rata 48 days)	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	6180.81	6180.81	7227.54	7255.49	7267.56
B	Additional Capitalisation	0.00	1046.73	27.95	12.07	76.43
C	Closing Gross Block (A+B)	6180.81	7227.54	7255.49	7267.56	7343.99
D	Average Gross Block [(A+C)/2]	6180.81	6704.18	7241.52	7261.53	7305.78
E	Freehold land	9.07	9.07	9.07	9.07	9.07
F	Weighted Average Rate of Depreciation (in %)	5.27	5.26	5.25	5.25	5.25
G	Balance useful life of the asset	31	31	30	29	28
H	Lapsed life at the beginning of the year (Year)	0	0	1	2	3
I	Aggregate Depreciable Value	5554.57	6025.59	6509.20	6527.21	6567.03

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J	Combined Depreciation during the year	43.74	352.47	379.83	380.88	383.22
K	Aggregate Cumulative Depreciation	43.74	396.21	776.04	1156.93	1540.15
L	Remaining Depreciable Value (I-K)	5510.82	5629.38	5733.16	5370.28	5026.89

(₹ in lakh)

	Particulars	Asset-IV				
		2014-15 (pro-rata 48 days)	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	3910.06	3910.06	4171.79	4193.57	4214.54
B	Additional Capitalisation	0.00	261.73	21.78	20.97	52.47
C	Closing Gross Block (A+B)	3910.06	4171.79	4193.57	4214.54	4267.01
D	Average Gross Block [(A+C)/2]	3910.06	4040.93	4182.68	4204.06	4240.78
E	Freehold land	9.07	9.07	9.07	9.07	9.07
F	Weighted Average Rate of Depreciation (in %)	5.27	5.24	5.22	5.22	5.22
G	Balance useful life of the asset	29	29	28	27	26
H	Lapsed life at the beginning of the year (Year)	0	0	1	2	3
I	Aggregate Depreciable Value	3510.89	3628.67	3756.25	3775.49	3808.53
J	Combined Depreciation during the year	27.65	211.85	218.32	219.45	221.39
K	Aggregate Cumulative Depreciation	27.65	239.50	457.82	677.27	898.66
L	Remaining Depreciable Value (I-K)	3483.24	3389.17	3298.43	3098.21	2909.87

(₹ in lakh)

	Particulars	Asset-V				
		2014-15 (pro-rata 56 days)	2015-16	2016-17	2017-18	2018-19
	Depreciation					
A	Opening Gross Block	1019.75	1019.75	1020.09	1025.10	1026.66
B	Additional Capitalisation	0.00	0.34	5.01	1.56	1.01
C	Closing Gross Block (A+B)	1019.75	1020.09	1025.10	1026.66	1027.67
D	Average Gross Block [(A+C)/2]	1019.75	1019.92	1022.60	1025.88	1027.17



E	Freehold land	0.00	0.00	0.00	0.00	0.00
F	Weighted Average Rate of Depreciation (in %)	5.28	5.28	5.28	5.28	5.28
G	Balance useful life of the asset	25	25	24	23	22
H	Lapsed life at the beginning of the year (Year)	0	0	1	2	3
I	Aggregate Depreciable Value	917.78	917.93	920.34	923.29	924.45
J	Combined Depreciation during the year	8.41	53.85	53.99	54.17	54.23
K	Aggregate Cumulative Depreciation	8.41	62.26	116.25	170.42	224.65
L	Remaining Depreciable Value (I-K)	909.37	855.67	804.08	752.87	699.80

(₹ in lakh)

	Particulars	Asset-VI		
		2016-17 (pro-rata 44 days)	2017-18	2018-19
	Depreciation			
A	Opening Gross Block	25040.90	25043.69	25307.92
B	Additional Capitalisation	2.79	264.23	1110.89
C	Closing Gross Block (A+B)	25043.69	25307.92	26418.81
D	Average Gross Block [(A+C)/2]	25042.30	25175.80	25863.36
E	Freehold land	16.95	16.95	16.95
F	Weighted Average Rate of Depreciation (in %)	5.25	5.25	5.25
G	Aggregate Depreciable Value	34	34	33
H	Balance useful life of the asset (Year)	0	0	1
I	Lapsed life at the beginning of the year (Year)	22522.81	22642.97	23261.77
J	Depreciation during the year	158.50	1321.84	1358.14
K	Cumulative depreciation	158.50	1480.34	2838.47
L	Remaining Depreciable Value (G-K)	22364.31	21162.63	20423.30

51. The details of depreciation allowed vide order dated 30.3.2016 in Petition No. 186/TT/2015, order dated 20.7.2018 in Petition No. 64/TT/2018, order dated 28.4.2016 in Petition No. 199/TT/2015 and order dated 6.12.2017 in Petition No. 69/TT/2017, claimed by the Petitioner in the instant petition and trued-up depreciation in the instant order are as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I					
Allowed <i>vide</i> order dated 30.3.2016 in Petition No. 186/TT/2015	1142.51	1161.15	1177.04	1177.04	1177.04
Claimed by the Petitioner in the instant petition	1142.11	1144.79	1145.50	1146.49	1147.97
Approved after true-up in this order	1142.11	1144.78	1145.50	1146.49	1147.96
Asset-II					
Allowed <i>vide</i> order dated 20.7.2018 in Petition No. 64/TT/2018	3182.69	3243.51	3280.60	3302.06	3318.39
Claimed by the Petitioner in the instant petition	3339.85	3400.68	3437.76	3428.16	3420.62
Approved after true-up in this order	3339.30	3400.01	3436.97	3410.50	3419.83
Asset-III					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	43.62	344.62	364.31	364.31	364.31
Claimed by the Petitioner in the instant petition	43.75	352.47	379.82	380.88	383.22
Approved after true-up in this order	43.74	352.47	379.83	380.88	383.22
Asset-IV					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	27.65	222.41	238.86	238.86	238.86
Claimed by the Petitioner in the instant petition	27.65	211.85	218.33	219.45	221.39
Approved after true-up in this order	27.65	211.85	218.32	219.45	221.39
Asset-V					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	7.58	48.52	48.52	48.52	48.52
Claimed by the Petitioner in the	8.41	53.85	53.99	54.17	54.23

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Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
instant petition					
Approved after true-up in this order	8.41	53.85	53.99	54.17	54.23
	Asset-VI				
Allowed <i>vide</i> order dated 6.12.2017 in Petition No. 69/TT/2017			158.48	1352.74	1390.73
Claimed by the Petitioner in the instant petition			158.49	1321.83	1358.14
Approved after true-up in this order			158.50	1321.84	1358.14

Interest on Loan (“IoL”)

52. 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-I				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	16506.95	16572.85	16581.02	16591.85	16607.28
B	Cumulative Repayments up to Previous Year	2189.03	3331.14	4475.93	5621.42	6767.91
C	Net Loan-Opening (A-B)	14317.92	13241.71	12105.09	10970.43	9839.36
D	Additions	65.91	8.17	10.83	15.43	1961.62
E	Repayment during the year	1142.11	1144.78	1145.50	1146.49	1147.96
F	Net Loan-Closing (C+D-E)	13241.71	12105.09	10970.43	9839.36	10653.02
G	Average Loan [(C+F)/2]	13779.81	12673.40	11537.76	10404.90	10246.19
H	Weighted Average Rate of Interest on Loan (in %)	2.2690	2.4378	3.1460	3.5920	4.6876
I	Interest on Loan (G*H)	312.67	308.96	362.97	373.74	480.30



(₹ in lakh)

	Particulars	Asset-II					
		2014-15	2015-16	2016-17	1.4.2017 to 15.7.2017	16.7.2017 to 31.3.2018	2018-19
	Interest on Loan						
A	Gross Normative Loan	43886.72	44652.42	45496.34	45632.56	45226.98	45241.73
B	Cumulative Repayments upto Previous Year	834.69	4173.99	7574.00	11010.97	11797.40*	14208.11
C	Net Loan-Opening (A-B)	43052.03	40478.43	37922.34	34621.59	33429.58	31033.62
D	Additions	765.70	843.92	136.22	14.75	14.75	190.83
E	Repayment during the year	3339.30	3400.01	3436.97	999.79	2410.71	3419.83
F	Net Loan-Closing (C+D-E)	40478.43	37922.34	34621.59	33636.55	31033.62	27804.62
G	Average Loan [(C+F)/2]	41765.23	39200.38	36271.96	34129.07	32231.60	29419.12
H	Weighted Average Rate of Interest on Loan (in %)	1.6867	1.9063	2.7042	3.2142	3.2142	4.1525
I	Interest on Loan (G*H)	704.44	747.28	980.85	318.58	735.14	1221.62

*After adjustment of cumulative repayment of loan for de-capitalised asset of ₹213.36 lakh

(₹ in lakh)

	Particulars	Asset-III				
		2014-15 (pro-rata 48 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	4326.57	4326.57	5059.28	5078.84	5087.29
B	Cumulative Repayments upto Previous Year	0.00	43.74	396.21	776.04	1156.93
C	Net Loan-Opening (A-B)	4326.57	4282.82	4663.06	4302.80	3930.36
D	Additions	0.00	732.71	19.57	8.45	53.50
E	Repayment during the year	43.74	352.47	379.83	380.88	383.22
F	Net Loan-Closing (C+D-E)	4282.82	4663.06	4302.80	3930.36	3600.64
G	Average Loan [(C+F)/2]	4304.69	4472.94	4482.93	4116.58	3765.50
H	Weighted Average Rate of Interest on Loan (in %)	1.6900	1.8643	2.6680	3.1853	4.1502
I	Interest on Loan (G*H)	9.77	83.39	119.61	131.13	156.28



(₹ in lakh)

	Particulars	Asset-IV				
		2014-15 (pro-rata 48 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	2737.04	2737.04	2920.25	2935.50	2950.17
B	Cumulative Repayments upto Previous Year	0.00	27.65	239.50	457.82	677.27
C	Net Loan-Opening (A-B)	2737.04	2709.39	2680.75	2477.68	2272.90
D	Additions	0.00	183.21	15.25	14.67	36.73
E	Repayment during the year	27.65	211.85	218.32	219.45	221.39
F	Net Loan-Closing (C+D-E)	2709.39	2680.75	2477.68	2272.90	2088.24
G	Average Loan[(C+F)/2]	2723.22	2695.07	2579.21	2375.29	2180.57
H	Weighted Average Rate of Interest on Loan (in %)	1.6900	1.8627	2.6681	3.1859	4.1547
I	Interest on Loan (G*H)	6.18	50.20	68.82	75.67	90.60

(₹ in lakh)

	Particulars	Asset-V				
		2014-15 (pro-rata 56 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Loan					
A	Gross Normative Loan	713.83	713.83	714.06	717.57	718.66
B	Cumulative Repayments upto Previous Year	0.00	8.41	62.26	116.25	170.42
C	Net Loan-Opening (A-B)	713.83	705.42	651.80	601.32	548.24
D	Additions	0.00	0.24	3.51	1.09	0.71
E	Repayment during the year	8.41	53.85	53.99	54.17	54.23
F	Net Loan-Closing (C+D-E)	705.42	651.80	601.32	548.24	494.72
G	Average Loan [(C+F)/2]	709.62	678.61	626.56	574.78	521.48
H	Weighted Average Rate of Interest on Loan (in %)	1.6900	1.8615	2.6681	3.1853	4.1275
I	Interest on Loan (G*H)	1.87	12.63	16.72	18.31	21.52

(₹ in lakh)

	Particulars	Asset-VI		
		2016-17 (pro-rata 44 days)	2017-18	2018-19
	Interest on Loan			
A	Gross Normative Loan	17528.63	17530.58	17715.54
B	Cumulative Repayments up to Previous Year	0.00	158.50	1480.34
C	Net Loan-Opening (A-B)	17528.63	17372.09	16235.21
D	Additions	1.95	184.96	777.63



	Particulars	Asset-VI		
		2016-17 (pro-rata 44 days)	2017-18	2018-19
E	Repayment during the year	158.50	1321.84	1358.14
F	Net Loan-Closing (C+D-E)	17372.09	16235.21	15654.70
G	Average Loan [(C+F)/2]	17450.36	16803.65	15944.95
H	Weighted Average Rate of Interest on Loan (in %)	3.1026	3.2709	4.2621
I	Interest on Loan (G*H)	65.27	549.64	679.59

53. The details of IoL allowed vide order dated 30.3.2016 in Petition No. 186/TT/2015, order dated 20.7.2018 in Petition No. 64/TT/2018, order dated 28.4.2016 in Petition No. 199/TT/2015 and order dated 6.12.2017 in Petition No. 69/TT/2017, claimed by the Petitioner in the instant petition and true-up IoL in the instant order are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I					
Allowed vide order dated 30.3.2016 in Petition No. 186/TT/2015	309.39	284.24	258.80	229.02	199.86
Claimed by the Petitioner in the instant petition	312.66	308.97	362.98	373.73	480.29
Approved after true-up in this order	312.67	308.96	362.97	373.74	480.30
Asset-II					
Allowed vide order dated 20.7.2018 in Petition No. 64/TT/2018	660.44	618.95	575.45	528.07	475.78
Claimed by the Petitioner in the instant petition	704.45	747.17	980.80	1053.67	1216.49
Approved after true-up in this order	704.44	747.28	980.85	1053.71	1221.62
Asset-III					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	9.74	73.70	72.15	65.99	59.83
Claimed by the Petitioner in the instant petition	9.77	83.26	119.59	131.12	156.28
Approved after true-up in this order	9.77	83.39	119.61	131.13	156.28
Asset-IV					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	6.18	47.64	47.47	43.43	39.39
Claimed by the Petitioner in the instant petition	6.18	50.17	68.81	75.66	90.60
Approved after true-up in this order	6.18	50.20	68.82	75.67	90.60
Asset-V					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	1.66	9.99	9.17	8.35	7.53
Claimed by the Petitioner in the instant petition	1.88	12.66	16.76	18.35	21.58
Approved after true-up in this order	1.87	12.63	16.72	18.31	21.52
Asset-VI					
Allowed <i>vide</i> order dated 6.12.2017 in Petition No. 69/TT/2017			60.14	493.12	469.94
Claimed by the Petitioner in the instant petition			65.27	549.40	678.65
Approved after true-up in this order			65.27	549.64	679.59

Return on Equity (“RoE”)

54. The Petitioner has claimed RoE for the transmission assets in terms of Regulations 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 the following effective tax rates for the 2014-19 tariff period:

Year	Claimed effective tax rate (in %)	Grossed-up RoE (in %) [(Base Rate)/(1-t)]
2014-15	21.018	19.624
2015-16	21.382	19.715
2016-17	21.338	19.704
2017-18	21.337	19.704
2018-19	21.549	19.757

55. 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 as follows:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Effective tax (in %)
2014-15	20.961	20.961
2015-16	21.342	21.342
2016-17	21.342	21.342
2017-18	21.342	21.342
2018-19	21.549	21.549

56. MAT rates considered *vide* 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 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations, as follows:

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



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

(₹ in lakh)

	Particulars	Asset-I				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	7074.41	7102.65	7106.15	7110.79	7117.40
B	Additions	28.25	3.50	4.64	6.61	840.69
C	Closing Equity (A+B)	7102.65	7106.15	7110.79	7117.40	7958.10
D	Average Equity [(A+C)/2]	7088.53	7104.40	7108.47	7114.10	7537.75
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	1390.06	1399.92	1400.72	1401.83	1489.31

(₹ in lakh)

	Particulars	Asset-II					
		2014-15	2015-16	2016-17	2017-18		2018-19
	Return on Equity				1.4.2017 to 15.7.2017	16.7.2017 to 31.3.2018	
A	Opening Equity	18808.59	19136.75	19498.43	19556.81	19382.99	19389.31
B	Additions	328.16	361.68	58.38	6.32	6.32	81.79
C	Closing Equity (A+B)	19136.75	19498.43	19556.81	19563.13	19389.31	19471.10
D	Average Equity [(A+C)/2]	18972.67	19317.59	19527.62	19559.97	19386.15	19430.21
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	3720.54	3806.53	3847.92	1119.33	2710.66	3839.02



(₹ in lakh)

	Particulars	Asset-III				
		2014-15 (pro-rata 48 days)	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	1854.24	1854.24	2168.26	2176.65	2180.27
B	Additions	0.00	314.02	8.39	3.62	22.93
C	Closing Equity (A+B)	1854.24	2168.26	2176.65	2180.27	2203.20
D	Average Equity [(A+C)/2]	1854.24	2011.25	2172.45	2178.46	2191.73
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	48.81	396.32	428.08	429.27	433.04

(₹ in lakh)

	Particulars	Asset-IV				
		2014-15 (pro-rata 48 days)	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	1173.02	1173.02	1251.54	1258.07	1264.36
B	Additions	0.00	78.52	6.53	6.29	15.74
C	Closing Equity (A+B)	1173.02	1251.54	1258.07	1264.36	1280.10
D	Average Equity [(A+C)/2]	1173.02	1212.28	1254.80	1261.22	1272.23
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	30.88	238.88	247.26	248.52	251.37

(₹ in lakh)

	Particulars	Asset-V				
		2014-15 (pro-rata 56 days)	2015-16	2016-17	2017-18	2018-19
	Return on Equity					
A	Opening Equity	305.93	305.93	306.03	307.53	308.00
B	Additions	0.00	0.10	1.50	0.47	0.30
C	Closing Equity (A+B)	305.93	306.03	307.53	308.00	308.30
D	Average Equity [(A+C)/2]	305.93	305.98	306.78	307.76	308.15
E	Return on Equity	15.500	15.500	15.500	15.500	15.500

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	Particulars	Asset-V				
		2014-15 (pro-rata 56 days)	2015-16	2016-17	2017-18	2018-19
	(Base Rate) (in %)					
F	MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (D*G)	9.37	60.29	60.45	60.64	60.88

(₹ in lakh)

	Particulars	Asset-VI		
		2016-17 (pro-rata 44 days)	2017-18	2018-19
	Return on Equity			
A	Opening Equity	7512.27	7513.11	7592.38
B	Additions	0.84	79.27	333.27
C	Closing Equity (A+B)	7513.11	7592.38	7925.65
D	Average Equity (A+C)/2	7512.69	7552.74	7759.01
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	21.342	21.342	21.549
G	Rate of Return on Equity (in %)	19.705	19.705	19.758
H	Return on Equity (D*G)	178.46	1488.27	1533.03

58. The details of RoE allowed vide order dated 30.3.2016 in Petition No. 186/TT/2015, order dated 20.7.2018 in Petition No. 64/TT/2018, order dated 28.4.2016 in Petition No. 199/TT/2015 and order dated 6.12.2017 in Petition No. 69/TT/2017, 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-I				
Allowed vide order dated 30.3.2016 in Petition No. 186/TT/2015	1390.76	1411.93	1429.63	1429.63	1429.63
Claimed by the Petitioner in the instant petition	1391.12	1400.63	1400.72	1401.83	1489.31



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved after true-up in this order	1390.06	1399.92	1400.72	1401.83	1489.31
Asset-II					
Allowed <i>vide</i> order dated 20.7.2018 in Petition No. 64/TT/2018	3545.47	3613.24	3654.56	3679.07	3697.86
Claimed by the Petitioner in the instant petition	3720.73	3806.86	3848.38	3837.62	3839.28
Approved after true-up in this order	3720.54	3806.53	3847.92	3829.99	3839.02
Asset-III					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	48.68	384.66	406.71	406.71	406.71
Claimed by the Petitioner in the instant petition	48.85	396.52	428.08	429.26	433.04
Approved after true-up in this order	48.81	396.32	428.08	429.27	433.04
Asset-IV					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	30.88	248.56	267.10	267.10	267.10
Claimed by the Petitioner in the instant petition	30.90	239.00	247.25	248.52	251.36
Approved after true-up in this order	30.88	238.88	247.26	248.52	251.37
Asset-V					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	8.44	54.06	54.06	54.06	54.06
Claimed by the Petitioner in the instant petition	9.40	60.48	60.60	60.80	61.03
Approved after true-up in this order	9.37	60.29	60.45	60.64	60.88
Asset-VI					
Allowed <i>vide</i> order dated 6.12.2017 in Petition No. 69/TT/2017			177.58	1515.43	1557.68



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition			178.46	1488.26	1533.02
Approved after true-up in this order			178.46	1488.27	1533.03

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

59. O&M Expenses claimed by the Petitioner in respect of the transmission asset for 2014-19 period are as follows:

Particulars	Asset-I				
	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission line					
(i) LILO of one circuit of 220 kV D/C Sikar-Ratangarh Transmission Line at Sikar (1 Sub-conductors) (2.915 km)					
(ii) LILO of 400 kV D/C Naptha Jhakri-Abdullapur line at Panchkula (3 Sub-conductors) (48.885 km)					
(iii) LILO OF 220 kV D/C Sikar-Ratnagarh II at Sikar (1 Sub-conductors) (2.915 km)					
D/C Twin/Triple Conductor (km)	48.885	48.885	48.885	48.885	48.885
Norms (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
D/C Single Conductor (km)	2.915	2.915	2.915	2.915	2.915
Norms (₹ lakh/km)	0.303	0.313	0.324	0.334	0.346
400 kV bays of:					
(i) Sikar:400/220 kV 315 MVA ICT-I AT SIKAR [1 Number of bay(s)]					
(ii) Panchkula:Abdullapur I Bay [1 Number of bay(s)]					
(iii) Panchkula:Abdullapur II Bay [1 Number of bay(s)]					
(iv) Panchkula:Napthajhakri I Bay [1 Number of bay(s)]					
(v) Panchkula:Napthajhakri II Bay [1 Number of bay(s)]					
(vi) Panchkula:Switchable Line Reactor I Bay For Napthajhakri I [1 Number of bay(s)]					
(vii) Panchkula:Switchable Line Reactor II Bay For Napthajhakri II [1 Number of bay(s)]					
(viii) Panchkula:125 MVAR Bus Reactor Bay [1 Number of bay(s)]					
(ix) Panchkula:315 MVA ICT-I Bay [1 Number of bay(s)]					
(x) Panchkula:315 MVA ICT-II Bay [1 Number of bay(s)]					
(xi) Sikar:315 MVA ICT-II Bay					
(xii) Sikar:Bus Reactor Bay					
220 kV bays of:					
(i) Sikar:400/220 kV 315 MVA ICT-I at Sikar [1 Number of bay(s)]					
(ii) Sikar:220 kV Line Bays at SIKAR Sub-station (New) [3 Numbers of bay(s)]					
(iii) Panchkula:315 MVA ICT-I Bay [1 Number of bay(s)]					
(iv) Panchkula:315 MVA ICT-II Bay [1 Number of bay(s)]					
(v) Panchkula Line I Bay [1 Number of bay(s)]					
(vi) Panchkula Line II Bay [1 Number of bay(s)]					
(vii) Panchkula Line III Bay [1 Number of bay(s)]					
(viii) Panchkula Line IV Bay [1 Number of bay(s)]					
(ix) Panchkula Line V Bay [1 Number of bay(s)]					



Particulars	Asset-I				
	2014-15	2015-16	2016-17	2017-18	2018-19
(x) Panchkula Line VI Bay [1 Number of bay(s)]					
(xi) Sikar:Sikar II Bay					
(xii) Sikar:Ratnagarh II Bay					
(xiii) Sikar:315 MVA ICT-II Bay					
(xiv) Sikar:Line VI Bay					
400 kV Bays	12	12	12	12	12
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
220 kV Bays	16	16	16	16	16
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.10
Total O&M Expenses (₹ in lakh)	1435.28	1482.91	1532.19	1582.99	1635.54

Particulars	Asset-II				
	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission line					
(i) 400 kV Agra-Sikar D/C Quad Line (4 Sub-conductors) (386.000 km)					
D/C Bundled (4 or more sub conductor (km))	386.00	386.00	386.00	386.00	386.00
Norms (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
400 kV bays of:					
(i) Sikar: Agra II Bay [1 Number of bay(s)]					
(ii) Sikar: Agra I Bay [1 Number of bay(s)]					
(iii) Agra Switchable Line reactor at Agra [2 Numbers of bay(s)]					
(iv) Agra:Sikar-I Line Bay [1 Number of bay(s)]					
(v) Agra:Sikar-II Line Bay [1 Number of bay(s)]					
400 kV Bays	6	6	6	6	6
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	771.73	797.24	823.56	851.07	879.32

Particulars	Asset-III				
	2014-15 (pro-rata 48 days)	2015-16	2016-17	2017-18	2018-19
400 kV bay of:					
(i) Ratangarh:Sikar Bay [1 Number of bay(s)]					
(ii) Sikar:Ratangarh Bay [1 Number of bay(s)]					
400 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	16.20	124.60	128.74	133.02	137.42



Particulars	Asset-IV				
	2014-15 (pro-rata 48 days)	2015-16	2016-17	2017-18	2018-19
Transmission line					
(i) 400 kV D/C Sikar-Ratangarh Transmission Line (2 Sub-conductors) (76.53 km)					
D/C Twin/Triple Conductor (km)	76.53	76.53	76.53	76.53	76.53
Norms (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
400 kV bay of:					
(i) Ratangarh:Sikar Bay [1 Number of bay(s)]					
(ii) Sikar:Ratangarh Bay [1 Number of bay(s)]					
400 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	23.46	180.54	186.52	192.71	199.10

Particulars	Asset-V				
	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV bay of:					
(i) Ratangarh:125 MVAR Bus Reactor at Ratangarh [1 Number of bay(s)]					
400 kV Bays	1	1	1	1	1
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	9.42	62.30	64.37	66.51	68.71

Particulars	Asset-VI		
	2016-17 (pro-rata 44 days)	2017-18	2018-19
Transmission line			
(i) 400kV Sikar-Jaipur Line Along with Associated Bays at Sikar Sub-station (2 Sub-conductors) (169.00 km)			
D/C Twin/triple Conductor (km)	169.00	169.00	169.00
Norms (₹ lakh/km)	0.755	0.780	0.806
400 kV Bays of:			
(i) Bassi:Sikar Bay I [1 Number of bay(s)]			
(ii) Bassi:Sikar Bay II [1 Number of bay(s)]			
(iii) Sikar:Jaipur Bay I [1 Number of bay(s)]			
(iv) Sikar:Jaipur Bay II [1 Number of bay(s)]			
400 kV Bays	4	4	4
Norms (₹ lakh/Bay)	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	46.42	397.86	411.05



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

Particulars	Asset-I				
	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission line					
(iv) LILO of one circuit of 220 kV D/C Sikar-Ratargarh Transmission Line at Sikar (1 Sub-conductors) (2.915 km)					
(v) LILO of 400 kV D/C Naptha Jhakri-Abdullapur line at Panchkula (3 Sub-conductors) (48.885 km)					
(vi) LILO OF 220 kV D/C Sikar-Ratnagarh II at Sikar (1 Sub-conductors) (2.915 km)					
D/C Twin/Triple Conductor (km)	48.885	48.885	48.885	48.885	48.885
Norms (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
D/C Single Conductor (km)	2.915	2.915	2.915	2.915	2.915
Norms (₹ lakh/km)	0.303	0.313	0.324	0.334	0.346
400 kV bays of:					
(i) Sikar:400/220 kV 315 MVA ICT-I AT SIKAR [1 Number of bay(s)]					
(ii) Panchkula:Abdullapur I Bay [1 Number of bay(s)]					
(iii) Panchkula:Abdullapur II Bay [1 Number of bay(s)]					
(iv) Panchkula:Napthajhakri I Bay [1 Number of bay(s)]					
(v) Panchkula:Napthajhakri II Bay [1 Number of bay(s)]					
(vi) Panchkula:Switchable Line Reactor I Bay For Napthajhakri I [1 Number of bay(s)]					
(vii) Panchkula:Switchable Line Reactor II Bay For Napthajhakri II [1 Number of bay(s)]					
(viii) Panchkula:125 MVAR Bus Reactor Bay [1 Number of bay(s)]					
(ix) Panchkula:315 MVA ICT-I Bay [1 Number of bay(s)]					
(x) Panchkula:315 MVA ICT-II Bay [1 Number of bay(s)]					
(xi) Sikar:315 MVA ICT-II Bay					
(xii) Sikar:Bus Reactor Bay					
220 kV bays of:					
(i) Sikar:400/220 kV 315 MVA ICT-I AT Sikar [1 Number of bay(s)]					
(ii) Sikar:220KV Line Bays at SIKAR Sub-station (New) [3 Numbers of bay(s)]					
(iii) Panchkula:315 MVA ICT-I BAY [1 Number of bay(s)]					
(iv) Panchkula:315 MVA ICT-II BAY [1 Number of bay(s)]					
(v) Panchkula Line I Bay [1 Number of bay(s)]					
(vi) Panchkula Line II Bay [1 Number of bay(s)]					
(vii) Panchkula Line III Bay [1 Number of bay(s)]					
(viii) Panchkula Line IV Bay [1 Number of bay(s)]					
(ix) Panchkula Line V Bay [1 Number of bay(s)]					
(x) Panchkula Line VI Bay [1 Number of bay(s)]					
(xi) Sikar:Sikar II Bay					
(xii) Sikar:Ratnagarh II Bay					
(xiii) Sikar:315 MVA ICT-II Bay					
(xiv) Sikar:Line VI Bay					
400 kV Bays	12	12	12	12	12
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71



Particulars	Asset-I				
	2014-15	2015-16	2016-17	2017-18	2018-19
220 kV Bays	16	16	16	16	16
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.10
Total O&M Expenses (₹ in lakh)	1435.29	1482.92	1532.20	1583.00	1635.54

Particulars	Asset-II				
	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission line					
(i) 400 kV Agra-Sikar D/C Quad Line (4 Sub-conductors) (386.00 km)					
D/C Bundled (4 or more sub conductor (km))	386.00	386.00	386.00	386.00	386.00
Norms (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
400 kV bays of:					
(i) Sikar: Agra II Bay [1 Number of bay(s)]					
(ii) Sikar: Agra I Bay [1 Number of bay(s)]					
(iii) Agra Switchable Line reactor at Agra [2 Numbers of bay(s)]					
(iv) Agra:Sikar-I Line Bay [1 Number of bay(s)]					
(v) Agra:Sikar-II Line Bay [1 Number of bay(s)]					
400 kV Bays	6	6	6	6	6
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	771.73	797.24	823.56	851.07	879.32

Particulars	Asset-III				
	2014-15 (pro-rata 48 days)	2015-16	2016-17	2017-18	2018-19
400 kV bay of:					
(i) Ratangarh:Sikar Bay [1 Number of bay(s)]					
(ii) Sikar:Ratangarh Bay [1 Number of bay(s)]					
400 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	16.19	124.60	128.74	133.02	137.42

Particulars	Asset-IV				
	2014-15 (pro-rata 48 days)	2015-16	2016-17	2017-18	2018-19
Transmission line					
(ii) 400 kV D/C Sikar-Ratangarh Transmission Line (2 Sub-conductors) (76.53 km)					
D/C Twin/Triple Conductor (km)	76.53	76.53	76.53	76.53	76.53
Norms (₹ lakh/km)	0.707	0.731	0.755	0.780	0.806
400 kV bay of:					
(iii) Ratangarh:Sikar Bay [1 Number of bay(s)]					
(iv) Sikar:Ratangarh Bay [1 Number of bay(s)]					
400 kV Bays	2	2	2	2	2



Particulars	Asset-IV				
	2014-15 (pro-rata 48 days)	2015-16	2016-17	2017-18	2018-19
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	23.45	180.54	186.52	192.71	199.10

Particulars	Asset-V				
	2014-15 (pro-rata 56 days)	2015-16	2016-17	2017-18	2018-19
400 kV bay of:					
(ii) Ratangarh:125 MVAR Bus Reactor at Ratangarh [1 Number of bay(s)]					
400 kV Bays	1	1	1	1	1
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	9.42	62.30	64.37	66.51	68.71

Particulars	Asset-VI		
	2016-17 (pro-rata 44 days)	2017-18	2018-19
Transmission line			
(ii) 400 kV Sikar-Jaipur Line Along with Associated Bays at Sikar Sub-station (2 Sub-conductors) (169.00 km)			
D/C Twin/triple Conductor (km)	169.00	169.00	169.00
Norms (₹ lakh/km)	0.755	0.780	0.806
400 kV Bays of:			
(v) Bassi:Sikar Bay I [1 Number of bay(s)]			
(vi) Bassi:Sikar Bay II [1 Number of bay(s)]			
(vii) Sikar:Jaipur Bay I [1 Number of bay(s)]			
(viii) Sikar:Jaipur Bay II [1 Number of bay(s)]			
400 kV Bays	4	4	4
Norms (₹ lakh/Bay)	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	46.42	397.86	411.05

61. The details of O&M Expenses allowed vide order dated 30.3.2016 in Petition No. 186/TT/2015, order dated 20.7.2018 in Petition No. 64/TT/2018, order dated 28.4.2016 in Petition No. 199/TT/2015 and order dated 6.12.2017 in Petition No. 69/TT/2017, claimed by the Petitioner in the instant petition and trued-up O&M Expenses in the instant order are as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I					
Allowed <i>vide</i> order dated 30.3.2016 in Petition No. 186/TT/2015	1435.29	1482.91	1532.19	1582.99	1635.54
Claimed by the Petitioner in the instant petition	1435.28	1482.91	1532.19	1582.99	1635.54
Approved after true-up in this order	1435.29	1482.92	1532.20	1583.00	1635.54
Asset-II					
Allowed <i>vide</i> order dated 20.7.2018 in Petition No. 64/TT/2018	771.73	797.24	823.56	851.07	879.32
Claimed by the Petitioner in the instant petition	771.73	797.24	823.56	851.07	879.32
Approved after true-up in this order	771.73	797.24	823.56	851.07	879.32
Asset-III					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	23.45	180.54	186.52	192.71	199.10
Claimed by the Petitioner in the instant petition	16.20	124.60	128.74	133.02	137.42
Approved after true-up in this order	16.19	124.60	128.74	133.02	137.42
Asset-IV					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	23.45	180.54	186.52	192.71	199.10
Claimed by the Petitioner in the instant petition	23.46	180.54	186.52	192.71	199.10
Approved after true-up in this order	23.45	180.54	186.52	192.71	199.10
Asset-V					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	9.42	62.30	64.37	66.51	68.71
Claimed by the Petitioner in the instant petition	9.42	62.30	64.37	66.51	68.71
Approved after true-up in this order	9.42	62.30	64.37	66.51	68.71
Asset-VI					
Allowed <i>vide</i> order dated 6.12.2017 in Petition No. 69/TT/2017			46.42	397.86	411.05



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition			46.42	397.86	411.05
Approved after true-up in this order			46.42	397.86	411.05

Interest on Working Capital (“IWC”)

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

(₹ in lakh)

	Particulars	Asset-I				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	O&M Expenses	119.61	123.58	127.68	131.92	136.29
B	Maintenance Spares	215.29	222.44	229.83	237.45	245.33
C	Receivables	737.48	747.36	765.50	776.63	819.20
D	Total Working Capital (A+B+C)	1072.38	1093.38	1123.01	1145.99	1200.83
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	144.77	147.61	151.61	154.71	162.11

(₹ in lakh)

	Particulars	Asset-II					
		2014-15	2015-16	2016-17	2017-18		2018-19
	Interest on Working Capital				1.4.2017 to 15.7.2017	16.7.2017 to 31.3.2018	
A	O&M Expenses	64.31	66.44	68.63	70.92	70.92	73.28
B	Maintenance Spares	115.76	119.59	123.53	127.66	127.66	131.90
C	Receivables	1459.56	1496.36	1554.18	1580.87	1556.91	1600.59
D	Total Working Capital (A+B+C)	1639.63	1682.39	1746.34	1779.46	1755.49	1805.77
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	221.35	227.12	235.76	69.76	168.17	243.78



(₹ in lakh)

	Particulars	Asset-III				
		2014-15 (pro-rata 336 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	O&M Expenses	10.05	10.38	10.73	11.09	11.45
B	Maintenance Spares	18.09	18.69	19.31	19.95	20.61
C	Receivables	151.17	163.80	180.79	183.89	189.99
D	Total Working Capital (A+B+C)	179.31	192.88	210.83	214.92	222.05
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	3.25	26.04	28.46	29.01	29.98

(₹ in lakh)

	Particulars	Asset-IV				
		2014-15 (pro-rata 337 days)	2015-16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	O&M Expenses	14.56	15.05	15.54	16.06	16.59
B	Maintenance Spares	26.21	27.08	27.98	28.91	29.87
C	Receivables	112.91	117.16	123.92	126.59	131.07
D	Total Working Capital (A+B+C)	153.67	159.29	167.44	171.55	177.53
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	2.79	21.50	22.60	23.16	23.97

(₹ in lakh)

	Particulars	Asset-V				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Interest on Working Capital					
A	O&M Expenses	5.03	5.19	5.36	5.54	5.73
B	Maintenance Spares	9.05	9.35	9.66	9.98	10.31
C	Receivables	32.06	32.57	33.68	34.39	35.38
D	Total Working Capital (A+B+C)	46.13	47.11	48.70	49.91	51.41
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	0.97	6.36	6.58	6.74	6.94



(₹ in lakh)

	Particulars	Asset-VI		
		2016-17 (pro-rata 44 days)	2017-18	2018-19
	Interest on Working Capital			
A	O&M Expenses	32.09	33.16	34.25
B	Maintenance Spares	57.76	59.68	61.66
C	Receivables	635.76	641.94	680.19
D	Total Working Capital (A+B+C)	725.61	734.78	776.10
E	Rate of Interest (in %)	12.80	12.80	12.80
F	Interest of working capital (D*E)	11.20	94.05	99.34

63. The details of IWC allowed vide order dated 30.3.2016 in Petition No. 186/TT/2015, order dated 20.7.2018 in Petition No. 64/TT/2018, order dated 28.4.2016 in Petition No. 199/TT/2015 and order dated 6.12.2017 in Petition No. 69/TT/2017, claimed by the Petitioner in the instant petition and true-up IWC in the instant order are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	Asset-I				
Allowed vide order dated 30.3.2016 in Petition No. 186/TT/2015	144.72	147.69	150.60	152.72	154.95
Claimed by the Petitioner in the instant petition	144.80	147.62	151.61	154.71	162.11
Approved after true-up in this order	144.77	147.61	151.61	154.71	162.11
	Asset-II				
Allowed vide order dated 20.7.2018 in Petition No. 64/TT/2018	212.70	216.12	218.37	219.86	221.03
Claimed by the Petitioner in the instant petition	221.37	227.14	235.78	238.51	243.69
Approved after true-up in this order	221.35	227.12	235.76	237.93	243.78
	Asset-III				
Allowed vide order dated 28.4.2016 in Petition No. 199/TT/2015	3.64	28.46	29.71	29.91	30.12



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition	3.25	26.04	28.46	29.01	29.98
Approved after true-up in this order	3.25	26.04	28.46	29.01	29.98
Asset-IV					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	2.79	21.91	23.04	23.29	23.55
Claimed by the Petitioner in the instant petition	2.79	21.51	22.60	23.16	23.97
Approved after true-up in this order	2.79	21.50	22.60	23.16	23.97
Asset-V					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	0.93	6.03	6.13	6.23	6.33
Claimed by the Petitioner in the instant petition	0.97	6.37	6.58	6.75	6.95
Approved after true-up in this order	0.97	6.36	6.58	6.74	6.94
Asset-VI					
Allowed <i>vide</i> order dated 6.12.2017 in Petition No. 69/TT/2017			11.20	94.05	99.32
Claimed by the Petitioner in the instant petition			11.20	94.05	99.32
Approved after true-up in this order			11.20	94.05	99.34

Approved Annual Fixed Charges for 2014-19 Period

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

(₹ in lakh)

	Particulars	Asset-I				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Annual Transmission Charges					
A	Depreciation	1142.11	1144.78	1145.50	1146.49	1147.96
B	Interest on Loan	312.67	308.96	362.97	373.74	480.30
C	Return on Equity	1390.06	1399.92	1400.72	1401.83	1489.31
D	O&M Expenses	1435.29	1482.92	1532.20	1583.00	1635.54



	Particulars	Asset-I				
		2014-15	2015-16	2016-17	2017-18	2018-19
E	Interest on Working Capital	144.77	147.61	151.61	154.71	162.11
F	Total (A+B+C+D+E)	4424.90	4484.19	4593.00	4659.77	4915.22

(₹ in lakh)

	Particulars	Asset-II				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Annual Transmission Charges					
A	Depreciation	3339.30	3400.01	3436.97	3410.50	3419.83
B	Interest on Loan	704.44	747.28	980.85	1053.71	1221.62
C	Return on Equity	3720.54	3806.53	3847.92	3829.99	3839.02
D	O&M Expenses	771.73	797.24	823.56	851.07	879.32
E	Interest on Working Capital	221.35	227.12	235.76	237.93	243.78
F	Total (A+B+C+D+E)	8757.36	8978.18	9325.06	9383.20	9603.56

(₹ in lakh)

	Particulars	Asset-III				
		2014-15 (pro-rata 336 days)	2015-16	2016-17	2017-18	2018-19
	Annual Transmission Charges					
A	Depreciation	43.74	352.47	379.83	380.88	383.22
B	Interest on Loan	9.77	83.39	119.61	131.13	156.28
C	Return on Equity	48.81	396.32	428.08	429.27	433.04
D	O&M Expenses	16.19	124.60	128.74	133.02	137.42
E	Interest on Working Capital	3.25	26.04	28.46	29.01	29.98
F	Total (A+B+C+D+E)	121.76	982.81	1084.72	1103.31	1139.94

(₹ in lakh)

	Particulars	Asset-IV				
		2014-15 (pro-rata 337 days)	2015-16	2016-17	2017-18	2018-19
	Annual Transmission Charges					
A	Depreciation	27.65	211.85	218.32	219.45	221.39
B	Interest on Loan	6.18	50.20	68.82	75.67	90.60
C	Return on Equity	30.88	238.88	247.26	248.52	251.37
D	O&M Expenses	23.45	180.54	186.52	192.71	199.10
E	Interest on Working Capital	2.79	21.50	22.60	23.16	23.97
F	Total (A+B+C+D+E)	90.95	702.98	743.52	759.52	786.42



(₹ in lakh)

	Particulars	Asset-V				
		2014-15	2015-16	2016-17	2017-18	2018-19
	Annual Transmission Charges					
A	Depreciation	8.41	53.85	53.99	54.17	54.23
B	Interest on Loan	1.87	12.63	16.72	18.31	21.52
C	Return on Equity	9.37	60.29	60.45	60.64	60.88
D	O&M Expenses	9.42	62.30	64.37	66.51	68.71
E	Interest on Working Capital	0.97	6.36	6.58	6.74	6.94
F	Total (A+B+C+D+E)	30.04	195.44	202.11	206.37	212.29

(₹ in lakh)

	Particulars	Asset-VI		
		2016-17 (pro-rata 44 days)	2017-18	2018-19
	Annual Transmission Charges			
A	Depreciation	158.50	1321.84	1358.14
B	Interest on Loan	65.27	549.64	679.59
C	Return on Equity	178.46	1488.27	1533.03
D	O&M Expenses	46.42	397.86	411.05
E	Interest on Working Capital	11.20	94.05	99.34
F	Total (A+B+C+D+E)	459.84	3851.66	4081.15

65. Accordingly, the comparison between Annual Transmission Charges as allowed vide order dated 30.3.2016 in Petition No. 186/TT/2015, order dated 20.7.2018 in Petition No. 64/TT/2018, order dated 28.4.2016 in Petition No. 199/TT/2015 and order dated 6.12.2017 in Petition No. 69/TT/2017, 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-I				
Allowed vide order dated 30.3.2016 in Petition No. 186/TT/2015	4422.67	4487.93	4548.26	4571.41	4597.01
Claimed by the Petitioner in the instant petition	4425.97	4484.92	4593.00	4659.75	4915.22
Approved after true-up in this order	4424.90	4484.19	4593.00	4659.77	4915.22



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-II					
Allowed <i>vide</i> order dated 20.7.2018 in Petition No. 64/TT/2018	8373.04	8489.07	8552.54	8580.13	8592.37
Claimed by the Petitioner in the instant petition	8758.13	8979.09	9326.28	9409.03	9599.40
Approved after true-up in this order	8757.36	8978.18	9325.06	9383.20	9603.56
Asset-III					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	129.14	1011.98	1059.39	1059.63	1060.07
Claimed by the Petitioner in the instant petition	121.82	982.89	1084.69	1103.29	1139.94
Approved after true-up in this order	121.76	982.81	1084.72	1103.31	1139.94
Asset-IV					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	90.94	721.05	762.98	765.38	768.00
Claimed by the Petitioner in the instant petition	90.98	703.07	743.51	759.50	786.42
Approved after true-up in this order	90.95	702.98	743.52	759.52	786.42
Asset-V					
Allowed <i>vide</i> order dated 28.4.2016 in Petition No. 199/TT/2015	28.02	180.90	182.25	183.67	185.15
Claimed by the Petitioner in the instant petition	30.10	195.80	202.44	206.71	212.64
Approved after true-up in this order	30.04	195.44	202.11	206.37	212.29
Asset-VI					
Allowed <i>vide</i> order dated 6.12.2017 in Petition No. 69/TT/2017			453.68	3853.23	3925.42
Claimed by the Petitioner in the instant petition			459.84	3851.40	4080.18



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved after true-up in this order			459.84	3851.66	4081.15

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

66. All assets have been combined by the Petitioner w.e.f. 1.4.2019 into single asset, namely, 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	6657.16	6695.58	6703.36	6703.36	6703.36
Interest on Loan	2614.69	2331.86	2030.75	1724.80	1417.58
Return on Equity	7385.56	7426.55	7434.86	7434.86	7434.86
O&M Expenses	2451.16	2537.68	2626.78	2719.62	2813.62
Interest on Working Capital	357.32	358.82	358.41	357.85	356.55
Total	19465.89	19350.49	19154.16	18940.49	18725.97

67. The Petitioner has claimed the following IWC 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
O&M Expenses	204.26	211.27	218.90	226.64	234.47
Maintenance Spares	367.67	380.65	394.02	407.94	422.04
Receivables	2393.35	2385.68	2361.47	2335.13	2302.37
Total Working Capital	2965.28	2977.60	2974.39	2969.71	2958.88
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	357.32	358.80	358.41	357.85	356.55

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

68. The Petitioner has stated that E-COD of the Combined Asset works out to be 14.5.2014. However, based on the trued-up capital cost and actual dates of commercial operation of the 6 assets, E-COD has been worked out as 13.5.2014 and it is as follows:



Assets	Capital Cost as on COD (₹ in lakh)	Actual COD	Number of days from last COD of Asset	Weight of cost (in %)	Weighted days	E-COD (latest COD – total weighted Days)
Asset-I	26526.99	1.3.2012	1813	20.33	368.57	13.5.2014
Asset-II	64903.66	28.12.2013	1146	49.74	570.01	
Asset-III	7343.99	11.2.2015	736	5.63	41.42	
Asset-IV	4267.01	11.2.2015	736	3.27	24.07	
Asset-V	1027.67	3.2.2015	744	0.79	5.86	
Asset-VI	26418.81	16.2.2017	0	20.25	0.00	
Total	130488.13			100.00	1009.93	

69. 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

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

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

72. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as specified in the 2019 Tariff Regulations. The element-wise life as defined in the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, the WAL of all the transmission assets commissioned during 2014-19 period has been worked out as 33 years as follows:



Particulars	Life (in years) (1)	Capital Cost as on 31.3.2019 (₹ in lakh) (2)	Weighted Cost (₹ in lakh) (3) = [(1)*(2)]	Weighted Average Life of Asset (in years) (4) = [(3)/(2)]
Building Civil Works & Colony	25.00	2601.24	65031.02	32.685 years (rounded off to 33 years)
Transmission Line	35.00	97708.58	3419800.19	
Sub Station	25.00	25379.16	634478.88	
PLCC	15.00	630.94	9464.06	
I.T. Equipment	6.67	0.00	0.00	
Total		126319.91	4128774.15	

73. 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, E-COD of the transmission assets is 13.5.2014 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 29 years.

Capital Cost

74. 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.”

75. The Petitioner has claimed the capital cost of individual assets which has been added to arrive at the capital cost claimed during 2019-24 period in respect of the Combined Asset as per following details:

(₹ in lakh)

Assets	RCE-II Apportioned Approved Capital Cost	Capital Cost claimed as on 31.3.2019	ACE Claimed in 2019-20	ACE Claimed in 2020-21	Estimated Completion Cost
Asset-I	27142.35	26527.00	50.00	20.00	26597.00
Asset-II	68689.27	64908.10	0.00	0.00	64908.10
Asset-III	7820.03	7344.00	150.00	35.00	7529.00
Asset-IV	4624.06	4267.00	150.00	35.00	4452.00
Asset-V	1085.91	1030.27	0.00	0.00	1030.27
Asset-VI	28255.10	26418.81	810.00	205.00	27433.81
Combined Asset	137616.72	130495.19	1160.00	295.00	131950.19



76. Against the overall apportioned approved capital cost (as per RCE-II) of ₹137616.72 lakh, the estimated completion cost is ₹131950.19 lakh. The individual capital cost of each transmission asset is also within the respective RCE apportioned capital cost. Therefore, there is no cost over-run in respect of the Combined Asset.

77. The capital cost has been dealt in line with Regulation 19(3) of the 2019 Tariff Regulations. The element-wise capital cost (i.e. land, building, transmission line, substation and PLCC) as admitted by the Commission as on 31.3.2019 in respect of the transmission assets are clubbed together and the capital cost has been considered as capital cost for Combined Asset as on 1.4.2019 as per following details:

							(₹ in lakh)
Elements	Asset-I	Asset-II	Asset-III	Asset-IV	Asset-V	Asset-VI	Capital Cost for Combined Asset as on 31.3.2019
Freehold Land	4121.25	16.31	9.07	9.07	0.00	16.95	4172.65
Building Civil Works & Colony	1914.41	20.39	133.91	133.83	0.00	398.70	2601.24
Transmission Line	6372.17	61538.97	5022.16	1957.03	0.00	22813.82	97704.15
Sub Station	13836.30	3197.63	2126.20	2114.52	1027.67	3076.83	25379.16
PLCC	282.86	130.36	52.65	52.56	0.00	112.51	630.94
Total	26526.99	64903.66	7343.99	4267.01	1027.67	26418.81	130488.13

78. The trued-up capital cost of ₹130488.13 lakh in respect of the Combined Asset is considered as admitted capital cost as on 31.3.2019 for working out tariff for 2019-24 tariff period.



Initial Spares

79. As stated earlier in this order, Initial Spares are allowed for 2014-19 period on the basis of the cost of individual assets. The assets covered in the transmission project are combined during 2019-24 tariff period and hence, Initial Spares are allowed on the basis of the overall project cost as per APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017. Accordingly, Initial Spares allowed in 2019-24 tariff period are as follows:

(₹ in lakh)						
Assets	Capital Cost/P&M cost considered as on cut-off date	Initial Spares claimed	Norms as per 2009/2014 Tariff Regulations	Ceiling limit of Initial Spares	Excess Initial Spares claimed	Initial Spares allowed on Combined Asset
Transmission line						
Asset-I	6107.95	38.68	0.75%	45.86	38.68	0.00
Asset-II	62643.24	474.22	0.75%	469.79	469.79	4.43
Asset-III	4985.92	15.11	1.00%	50.21	15.11	0.00
Asset-IV	2046.59	15.11	1.00%	20.52	15.11	0.00
Asset-VI	21762.87	66.81	1.00%	219.15	66.81	0.00
Combined Asset	97546.57	609.93		805.54	605.50	4.43

80. Thus, capital cost considered for working out tariff for 2019-24 tariff period is as follows:

(₹ in lakh)			
Assets	Total Capital Cost as on 31.3.2019 (A)	Additional Initial Spares allowed (B)	Total Capital Cost as on 1.4.2019 (C)=[(A)+(B)]
Combined Asset	130488.13	4.43	130492.56

Additional Capital Expenditure ("ACE")

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



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

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

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

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

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

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

(1) *The 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;*
- (g) *Raising of ash dyke as a part of ash disposal system.*

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

- (a) *The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;*
- (b) *The replacement of the asset or equipment is necessary on account of*



change in law or Force Majeure conditions;
(c) *The replacement of such asset or equipment is necessary on account of obsolescence of technology; and*
(d) *The replacement of such asset or equipment has otherwise been allowed by the Commission.”*

82. The Petitioner has claimed the following ACE in respect of the Combined Asset for 2019-24 tariff period:

Assets	ACE Claimed in 2019-20	ACE Claimed in 2020-21
Asset-I	50.00	20.00
Asset-II	0.00	0.00
Asset-III	150.00	35.00
Asset-IV	150.00	35.00
Asset-V	0.00	0.00
Asset-VI	810.00	205.00
Combined Asset	1160.00	295.00

83. Details of ACE incurred after cut-off date is furnished below:

Asset-III: One circuit of 400 kV D/C Sikar-Ratangarh line with associated bays

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Differed work
2019-20	150.00	Sujana Towers/ Spic Smo	Transmission Line	Balance and Retention payment as per clause 24(1)(d) of 2014 Tariff Regulation
2020-21	35.00	Sujana Towers/ Spic Smo	Transmission Line	Balance and Retention payment as per clause 24(1)(d) of 2014 Tariff Regulation

Asset-IV: Second circuit of 400 kV D/C Sikar-Ratangarh line with associated bays

Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Differed work
2019-20	150.00	Sujana Towers/ Spic Smo	Transmission Line	Balance and Retention payment as per Regulation 24(1)(d) of 2014 Tariff Regulations
2020-21	35.00	Sujana Towers/ Spic Smo	Transmission Line	Balance and Retention payment as per Regulation Regulation 24(1)(d) of 2014 Tariff Regulations

Asset-VI: 400 kV D/C Sikar-Jaipur line with associated bays



Year	ACE (₹ in lakh)	Party Name	Package	Balance and Retention/ Differed work
2019-20	810.00	Sujana Towers/ SpicSmo	Transmission Line	Balance and Retention payment as per Regulation 24(1)(d) of 2014 Tariff Regulations
2020-21	205.00	Sujana Towers/ Spic Smo	Transmission Line	Balance and Retention payment as per Regulation 24(1)(d) of 2014 Tariff Regulations

84. The Petitioner has further submitted that ACE projected to be incurred during 2019-24 is beyond cut-off date and is accordingly claimed as per Regulation 25(1)(d) of the 2019 Tariff Regulations.

85. We have considered the submissions made by the Petitioner. ACE claimed by the Petitioner has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations on account of any undischarged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date. Accordingly, the capital cost considered in respect of the Combined Asset for 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	
130492.56	1160.00	295.00	0.00	0.00	0.00	131947.56

86. The Capital Cost as on 31.3.2024 now approved is within the RCE-II cost of ₹137616.72 lakh.

Debt-Equity ratio

87. 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.”



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

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	ACE 2019-24 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	91344.79	70.00	1018.50	70.00	92363.29	70.00
Equity	39147.77	30.00	436.50	30.00	39584.27	30.00
Total	130492.56	100.00	1455.00	100.00	131947.56	100.00

Depreciation

89. 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.”

90. 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. Depreciation allowed in respect of the Combined Asset is as follows:

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation					
A	Opening Gross Block	130492.56	131652.56	131947.56	131947.56	131947.56
B	Additional Capitalisation	1160.00	295.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	131652.56	131947.56	131947.56	131947.56	131947.56
E	Average Gross Block [(A+C)/2]	131072.56	131800.06	131947.56	131947.56	131947.56
D	Freehold Land	4172.65	4172.65	4172.65	4172.65	4172.65
F	Weighted average rate of Depreciation (WAROD) (in %)	5.08	5.08	5.08	5.08	5.08
G	Balance useful life of the asset	29	28	27	26	25
H	Aggregate Depreciable Value	114209.92	114864.67	114997.42	114997.42	114997.42
I	Depreciation during the year	6656.48	6694.89	6702.68	6702.68	6702.68
J	Cumulative Depreciation	37814.02	44508.91	51211.58	57914.26	64616.94



	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	at the end of the year					
K	Remaining Depreciable Value (H-J)	76395.90	70355.76	63785.84	57083.16	50380.48

Interest on Loan (“IoL”)

91. 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.”

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

93. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for 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	91344.79	92156.79	92363.29	92363.29	92363.29
B	Cumulative Repayments up to Previous Year	31045.75	37702.23	44397.12	51099.79	57802.47
C	Net Loan-Opening (A-B)	60299.04	54454.56	47966.18	41263.50	34560.82
D	Additions	812.00	206.50	0.00	0.00	0.00
E	Repayment during the year	6656.48	6694.89	6702.68	6702.68	6702.68
F	Net Loan-Closing (C+D-E)	54454.56	47966.18	41263.50	34560.82	27858.15
G	Average Loan [(C+F)/2]	57376.80	51210.37	44614.84	37912.16	31209.48
H	Weighted Average Rate of Interest on Loan (in %)	4.5671	4.5648	4.5648	4.5648	4.5610
I	Interest on Loan (G*H)	2620.47	2337.66	2036.57	1730.63	1423.46

Return on Equity (“RoE”)

94. 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.”

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



(₹ in lakh)

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Return on Equity					
A	Opening Equity	39147.77	39495.77	39584.27	39584.27	39584.27
B	Additions	348.00	88.50	0.00	0.00	0.00
C	Closing Equity (A+B)	39495.77	39584.27	39584.27	39584.27	39584.27
D	Average Equity [(A+C)/2]	39321.77	39540.02	39584.27	39584.27	39584.27
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (D*G)	7385.41	7426.41	7434.72	7434.72	7434.72

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

96. O&M Expenses claimed by the Petitioner in respect of the Combined asset for 2019-24 tariff period are as follows:

Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
Transmission line					
(i) LILO of one circuit of 220 kV D/C Sikar-Ratangarh Transmission Line at Sikar (1 Sub-conductors) (2.915 km)					
(ii) LILO of 400 kV D/C Naptha Jhakri-Abdullapur line at Panchkula (3 Sub-conductors) (48.885 km)					
(iii) LILO OF 220 kV D/C Sikar-Ratnagarh II at Sikar (1 Sub-conductors) (2.915 km)					
(iv) 400 kV Agra-Sikar D/C Quad Line (4 Sub-conductors) (386.000 km)					
(v) 400 kV D/C Sikar-Ratangarh Transmission Line (2 Sub-conductors) (76.53 km)					
(vi) 400kV Sikar-Jaipur Line Along with Associated Bays at Sikar Sub-station (2 Sub-conductors) (169.00 km)					
D/C Bundled Conductor with four or more subconductors (km)	386.00	386.00	386.00	386.00	386.00
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
D/C Twin/Triple Conductor (km)	294.42	294.42	294.42	294.42	294.42
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
D/C Single Conductor (km)	5.83	5.83	5.83	5.83	5.83
Norms (₹ lakh/km)	0.377	0.391	0.404	0.419	0.433
400 kV bays of:					
(i) Sikar:400/220 kV 315 MVA ICT-I AT SIKAR [1 Number of bay(s)]					
(ii) Panchkula:Abdullapur I Bay [1 Number of bay(s)]					
(iii) Panchkula:Abdullapur II Bay [1 Number of bay(s)]					
(iv) Panchkula:Napthajhakri I Bay [1 Number of bay(s)]					
(v) Panchkula:Napthajhakri II Bay [1 Number of bay(s)]					
(vi) Panchkula:Switchable Line Reactor I Bay For Napthajhakri I [1 Number of bay(s)]					



Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
(vii) Panchkula:Switchable Line Reactor II Bay For Napthajhakri II [1 Number of bay(s)]					
(viii) Panchkula:125 MVAR Bus Reactor Bay [1 Number of bay(s)]					
(ix) Panchkula:315 MVA ICT-I Bay [1 Number of bay(s)]					
(x) Panchkula:315 MVA ICT-II Bay [1 Number of bay(s)]					
(xi) Sikar:315 MVA ICT-II Bay					
(xii) Sikar:Bus Reactor Bay					
(xiii) Sikar: Agra II Bay [1 Number of bay(s)]					
(xiv) Sikar: Agra I Bay [1 Number of bay(s)]					
(xv) Agra Switchable Line reactor at Agra [2 Numbers of bay(s)]					
(xvi) Agra:Sikar-I Line Bay [1 Number of bay(s)]					
(xvii) Agra:Sikar-II Line Bay [1 Number of bay(s)]					
(xviii) Ratangarh:Sikar Bay [1 Number of bay(s)]					
(xix) Sikar:Ratangarh Bay [1 Number of bay(s)]					
(xx) Ratangarh:Sikar Bay [1 Number of bay(s)]					
(xxi) Sikar:Ratangarh Bay [1 Number of bay(s)]					
(xxii) Ratangarh:125 MVAR Bus Reactor at Ratangarh [1 Number of bay(s)]					
(xxiii) Bassi:Sikar Bay I [1 Number of bay(s)]					
(xxiv) Bassi:Sikar Bay II [1 Number of bay(s)]					
(xxv) Sikar:Jaipur Bay I [1 Number of bay(s)]					
(xxvi) Sikar:Jaipur Bay II [1 Number of bay(s)]					
220 kV bays of:					
(i) Sikar:400/220 kV 315 MVA ICT-I at Sikar [1 Number of bay(s)]					
(ii) Sikar:220KV Line Bays at SIKAR Sub-station (New) [3 Number of bay(s)]					
(iii) Panchkula:315 MVA ICT-I Bay [1 Number of bay(s)]					
(iv) Panchkula:315 MVA ICT-II Bay [1 Number of bay(s)]					
(v) Panchkula Line I Bay [1 Number of bay(s)]					
(vi) Panchkula Line II Bay [1 Number of bay(s)]					
(vii) Panchkula Line III Bay [1 Number of bay(s)]					
(viii) Panchkula Line IV Bay [1 Number of bay(s)]					
(ix) Panchkula Line V Bay [1 Number of bay(s)]					
(x) Panchkula Line VI Bay [1 Number of bay(s)]					
(xi) Sikar:Sikar II Bay					
(xii) Sikar:Ratnagarh II Bay					
(xiii) Sikar:315 MVA ICT-II Bay					
(xiv) Sikar:Line VI Bay					
400 kV Bays	27	27	27	27	27
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
220 kV Bays	16	16	16	16	16
Norms (₹ lakh/Bay)	22.51	23.30	24.12	24.96	25.84
Transformers:					
400 kV					
(i) Sikar: ICT-I at Sikar (400 kV) (315 MVA) x 1					
(ii) Sikar: ICT-II at Sikar (400 kV) (315 MVA) x 1					
(iii) Panchkula:ICT-I at Panchkula (400 kV) (315 MVA) x 1					
(iv) Panchkula:ICT-II at Panchkula (400 kV) (315 MVA) x 1					
400 kV (MVA)	1260	1260	1260	1260	1260
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411



Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
PLCC (@ 2% of capital cost)					
Capital cost for PLCC	631.00	631.00	631.00	631.00	631.00
Total O&M Expenses (₹ in lakh)	2463.78	2550.30	2639.40	2732.24	2826.24

97. The O&M Expenses norms specified under Regulation 35(3)(a) and (4) of the 2019 Tariff Regulations provide as follows:

“35. Operation and Maintenance Expenses:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (Rs 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 (Rs Lakh per MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (Rs 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



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
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 (Rs. 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 (2500 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.”

98. We have considered the submissions of the Petitioner. O&M Expenses have been worked out as per the norms specified in the 2019 Tariff Regulations and are as follows:

	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses					
27 Numbers of 400 kV bays					
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
Total	868.05	898.56	930.15	962.82	996.57
16 Numbers of 220 kV bays					
Norms (₹ lakh/Bay)	22.51	23.30	24.12	24.96	25.84
Total	360.16	372.80	385.92	399.36	413.44
386.00 km Double Circuit (Bundled conductor with 4 sub-conductors)					
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
Total	510.29	528.05	546.58	565.88	585.56
294.42 km Double Circuit Twin/Triple Conductor					
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
Total	259.38	268.51	277.93	287.64	297.65
5.83 km Double Circuit Single Conductor					
Norms (₹ lakh/km)	0.377	0.391	0.404	0.419	0.433
Total	2.20	2.28	2.36	2.44	2.52



	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses					
4 Numbers 400 kV Sub-station ICT					
Norms (₹ lakh/MVA)	0.491	0.508	0.526	0.545	0.564
Total	451.08	467.46	483.84	501.48	517.86
Total O&M Expenses allowed (₹ in lakh)	2451.16	2537.65	2626.77	2719.62	2813.61

* The Petitioner has not claimed any O&M towards PLCC.

Interest on Working Capital (“IWC”)

99. Regulation 34(1)(c), Regulation 34(3), Regulation 34(4) 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
- (iii) Operation and maintenance expenses, including security expenses for one month.”

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

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

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

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

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

100. The Petitioner has submitted that it has computed IWC for 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%. 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	O&M Expenses	204.26	211.47	218.90	226.64	234.47
B	Maintenance Spares	367.67	380.65	394.02	407.94	422.04
C	Receivables	2393.96	2383.32	2356.34	2330.01	2297.29
D	Total Working Capital (A+B+C)	2965.90	2975.44	2969.25	2964.58	2953.80
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest on working capital (D*E)	357.39	334.74	311.77	311.28	310.15

Annual Fixed Charges for 2019-24 Tariff Period

101. The transmission charges allowed for 2019-24 tariff period are as follows:

						(₹ in lakh)
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation	6656.48	6694.89	6702.68	6702.68	6702.68
	Interest on Loan	2620.47	2337.66	2036.57	1730.63	1423.46
	Return on Equity	7385.41	7426.41	7434.72	7434.72	7434.72
	Interest on Working Capital	357.39	334.74	311.77	311.28	310.15
	O&M Expenses	2451.16	2537.65	2626.77	2719.62	2813.61
	Total	19470.91	19331.34	19112.50	18898.93	18684.61

Filing Fee and Publication Expenses

102. The Petitioner has sought reimbursement of fee paid by it for filing the Petition and publication expenses. The Petitioner shall be entitled for reimbursement of the



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

Licence Fee & RLDC Fees and Charges

103. 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

104. 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.

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

Security Expenses

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



107. 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 wherein the Commission has approved security expenses from 1.4.2019 to 31.3.2024. Accordingly, security expenses will be shared in terms of order dated 3.8.2021 in Petition No. 260/MP/2020. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

Capital Spares

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

Sharing of Transmission Charges

109. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the 2010 Sharing Regulations and with effect from 1.11.2020 (after repeal of the 2010 Sharing Regulations), sharing of transmission charges is governed by the 2020 Sharing Regulations. Accordingly, the liabilities of DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and Sharing Regulations and shall be recovered from the concerned DICs through Bills under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of the transmission charges for subsequent period shall be recovered in



terms of provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

110. To summarize:

a. The trued-up AFC approved for 2014-19 tariff period are as follows:

(₹ in lakh)

AFC					
Assets	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	4424.90	4484.19	4593.00	4659.77	4915.22
Asset-II	8757.36	8978.18	9325.06	9383.20	9603.56
Asset-III	121.76	982.81	1084.72	1103.31	1139.94
Asset-IV	90.95	702.98	743.52	759.52	786.42
Asset-V	30.04	195.44	202.11	206.37	212.29
Asset-VI			459.84	3851.66	4081.15

b. AFC allowed in respect of the Combined Asset for 2019-24 tariff period in this order is as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	19470.91	19331.34	19112.50	18898.93	18684.61

111. Annexures-I and Annexure-II given hereinafter form part of this order.

112. This order disposes of Petition No. 469/TT/2020 in terms of the above discussion and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I.S. Jha)
Member

sd/-
(P.K. Pujari)
Chairperson



Asset-I

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014 (₹ 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	1352.72	-	-	-	-	2768.53	2768.53	4121.25	-	-	-	-	-	-	
Building Civil Works & Colony	1901.42	12.99	-	-	-	-	12.99	1914.41	3.34%	63.72	63.94	63.94	63.94	63.94	
Transmission Line	6372.17	-	-	-	-	-	-	6372.17	5.28%	336.45	336.45	336.45	336.45	336.45	
Sub Station	13672.18	81.16	11.67	15.47	22.04	33.78	164.12	13836.30	5.28%	724.03	726.48	727.20	728.19	729.66	
PLCC	282.86	-	-	-	-	-	-	282.86	6.33%	17.91	17.91	17.91	17.91	17.91	
Total	23581.35	94.15	11.67	15.47	22.04	2802.31	2945.64	26526.99		1142.11	1144.78	1145.50	1146.49	1147.96	
										Average Gross Block (₹ in lakh)	23628.43	23681.34	23694.91	23713.66	25125.84
										Weighted Average Rate of Depreciation (in %)	4.83%	4.83%	4.83%	4.83%	4.57%



Asset-II

2014-19 Capital Expenditure	Admitted Capital Cost as on 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			2014-15	2015-16	2016-17	1.4.2017-15.7.2017	16.7.2017-31.3.2018	2018-19	
Land - Freehold	16.31	0.00	0.00	0.00	0.00	0.00	16.31	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	20.39	0.00	0.00	0.00	0.00	0.00	20.39	3.34%	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Transmission Line	58928.34	1082.08	1081.02	173.78	9.21	264.54	61538.97	5.28%	3139.98	3197.09	3230.22	3235.05	3235.29	3242.27	
Sub Station	3599.91	11.78	124.58	20.82	11.86	8.08	3258.63	5.28%	190.39	193.99	197.82	198.69	153.11	168.62	
PLCC	130.36	0.00	0.00	0.00	0.00	0.00	130.36	6.33%	8.25	8.25	8.25	8.25	8.25	8.25	
Total	62695.31	1093.86	1205.60	194.60	21.07	272.62	64964.66	Total	3339.30	3400.01	3436.97	3442.67	3397.33	3419.83	
								Average Gross Block (₹ in lakh)	63237.81	64389.76	65092.07	65199.91	64620.51	64767.35	
								Weighted Average Rate of Depreciation (in %)	5.28%	5.28%	5.28%	5.28%	5.23%	5.26%	



Asset-III

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014 (₹ 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	
Land - Freehold	9.07	-	-	-	-	-	9.07	-	-	-	-	-	-	
Building Civil Works & Colony	29.39	104.52	-	-	-	104.52	133.91	3.34%	0.98	2.73	4.47	4.47	4.47	
Transmission Line	3967.99	940.53	27.71	10.51	75.42	1054.17	5022.16	5.28%	209.51	234.34	259.90	260.91	263.18	
Sub Station	2121.74	1.65	0.24	1.56	1.01	4.46	2126.20	5.28%	112.03	112.07	112.12	112.17	112.24	
PLCC	52.62	0.03	-	-	-	0.03	52.65	6.33%	3.33	3.33	3.33	3.33	3.33	
Total	6180.81	1046.73	27.95	12.07	76.43	1163.18	7343.99		325.85	352.47	379.83	380.88	383.22	
									Average Gross Block (₹ in lakh)	6180.81	6704.18	7241.52	7261.53	7305.78
									Weighted Average Rate of Depreciation (in %)	5.27%	5.26%	5.25%	5.25%	5.25%



Asset-IV

2014-19	Admitted Capital Cost as on 1.4.2014 (₹ 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)					
Capital Expenditure		2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19	
Land - Freehold	9.07	-	-	-	-	-	9.07	-	-	-	-	-	-	
Building Civil Works & Colony	29.30	104.53	-	-	-	104.53	133.83	3.34%	0.98	2.72	4.47	4.47	4.47	
Transmission Line	1709.65	154.97	21.54	19.41	51.46	247.38	1957.03	5.28%	90.27	94.36	99.02	100.10	101.97	
Sub Station	2109.52	2.19	0.24	1.56	1.01	5.00	2114.52	5.28%	111.38	111.44	111.50	111.55	111.62	
PLCC	52.51	0.05	-	-	-	0.05	52.56	6.33%	3.32	3.33	3.33	3.33	3.33	
Total	3910.06	261.73	21.78	20.97	52.47	356.95	4267.01		205.96	211.85	218.32	219.45	221.39	
									Average Gross Block (₹ in lakh)	3910.06	4040.93	4182.68	4204.06	4240.78
									Weighted Average Rate of Depreciation (in %)	5.27%	5.24%	5.22%	5.22%	5.22%



Asset-V

2014-19	Admitted Capital Cost as on 1.4.2014 (₹ 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	
Capital Expenditure														
Sub Station	1019.75	0.34	5.01	1.56	1.01	7.92	1027.67	5.28%	53.84	53.85	53.99	54.17	54.23	
Total	1019.75	0.34	5.01	1.56	1.01	7.92	1027.67		53.84	53.85	53.99	54.17	54.23	
									Average Gross Block (₹ in lakh)	1019.75	1019.92	1022.60	1025.88	1027.17
									Weighted Average Rate of Depreciation (in %)	5.28%	5.28%	5.28%	5.28%	5.28%



Asset-VI

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)		
		2016-17	2017-18	2018-19	Total			2016-17	2017-18	2018-19
Land - Freehold	16.95	-	-	-	-	16.95	-	-	-	-
Building Civil Works & Colony	397.86	-	0.84	-	0.84	398.70	3.34%	13.29	13.30	13.32
Transmission Line	21457.07	0.00	249.90	1106.85	1356.75	22813.82	5.28%	136.57	1139.53	1175.35
Sub Station	3056.74	2.79	13.26	4.04	20.09	3076.83	5.28%	19.46	161.89	162.35
PLCC	112.27	0.00	0.24	0.00	0.24	112.51	6.33%	0.86	7.11	7.12
IT Equipment (Incl. Software)	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00
Total	25040.90	2.79	264.23	1110.89	1377.91	26418.81	Total	170.18	1321.84	1358.14
Average Gross Block (₹ in lakh)								25042.30	25175.80	25863.36
Weighted Average Rate of Depreciation (in %)								5.25%	5.25%	5.25%



ANNEXURE-2

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	2020-21	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Land - Freehold	4172.65	-	-	-	4172.65	-	-	-	-	-	-
Building Civil Works & Colony	2601.24	-	-	-	2601.24	3.34%	86.88	86.88	86.88	86.88	132.14
Transmission Line	97708.58	1160.00	295.00	1455.00	99163.58	5.28%	5189.64	5228.05	5235.84	5235.84	5037.31
Sub Station	25379.16	-	-	-	25379.16	5.28%	1340.02	1340.02	1340.02	1340.02	1289.21
PLCC	630.94	-	-	-	630.94	6.33%	39.94	39.94	39.94	39.94	32.05
Total	130492.56	1160.00	295.00	1455.00	131947.56		6656.48	6694.89	6702.68	6702.68	6702.68
Average Gross Block (₹ in lakh)							131072.56	131800.06	131947.56	131947.56	131947.56
Weighted Average Rate of Depreciation (in %)							5.08%	5.08%	5.08%	5.08%	5.08%

