

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 325/TT/2022

Coram:

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

Date of Order: 01.01.2024

In the matter of:

Approval under Section 79(1)(c) and (d) of the Electricity Act, 2003 for determination of tariff of the inter-State transmission lines connecting two States for the TSTRANSCO-owned transmission lines/system as per this Commission's orders dated 5.9.2018 in Petition No. 7/Suo-Motu/2017 and dated 13.1.2020 in Petition No. 2/TT/2019 for inclusion in the PoC transmission charges for the period 2014-15 to 2018-19 in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

And in the matter of:

Transmission Corporation of Telangana Limited,
Vidyut Soudha, Khairatabad,
Hyderabad, Telangana-500082.

.....Petitioner

Vs

1. Transmission Corporation of Andhra Pradesh Limited,
Vidyut Soudha, Gunadala, Eluru Road,
Vijayawada, Andhra Pradesh-520004.
2. Karnataka Power Transmission Corporation Limited (KPTCL),
Kaveri Bhavan, Kempegowda Road,
Bangalore-560 009.

.....Respondents

For Petitioner : Ms. Swapna Seshadri, Advocate, TANTRANSCO
Ms. Ashbari Thakur, Advocate, TANTRANSCO

For Respondent : Shri Fahad Khan, Advocate, KPTCL

ORDER

The Petitioner, Transmission Corporation of Telangana Limited (TCTL), has filed the present petition for determination of tariff for the 2014-19 tariff period in respect of 41 number of transmission lines owned by it connecting the other States and intervening transmission lines incidental to inter-State transmission of electricity in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”).

2. The Petitioner has made the following prayer(s):

- “a) *Determine the tariff of Inter-State transmission lines connecting two states for:*
- (i) *FY 2014-15 (Pro-rata) (for 37 Nos. of Assets, i.e., Asset-I to Asset-XXXVII);*
 - (ii) *FY 2015-16 (for 37 Nos. of Assets i.e., Asset-I to Asset-XXXVII);*
 - (iii) *FY 2016-17 (pro-rata for 4 Nos. of 400 KV Assets, (i.e., Asset-XXXVII to Asset- XXXXI) & 1 No. of 132 KV Asset, (i.e., Asset-XVII));*
 - (iv) *FY 2017-18 (for 41 Nos. of Assets, i.e., Asset-I to Asset-XXXXI; and*
 - (v) *FY 2018-19 (for 41 Nos. of Assets i.e., Asset-I to Asset-XXXXI);*
- b) *Approve the annual fixed charges for the assets covered under this Petition;*
- c) *Include the assets (Asset-XVII and Assets-XXXVIII to XXXXI) in the PoC charges with FY 2016-17 tariff in the interim, till order on the determination of tariff for FY 2014-15 to FY 2018-19; and/or*
- d) *Pass any other and further order(s) as this Hon'ble Commission may deem fit and proper under the facts and circumstances of the present case and in the interest of justice.”*

Background

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

- a) Transmission Corporation of Telangana Limited (TCTL/TSTRANSCO), the transmission licensee in the State of Telangana, owns certain inter-State transmission lines/system which is being used by Andhra Pradesh and Karnataka.

- b) On 2.6.2014, the erstwhile State of Andhra Pradesh was bifurcated and re-organized into the States of Andhra Pradesh and Telangana which resulted in a number of inter-State transmission lines between the States of Andhra Pradesh and Telangana. Initially, there were 36 inter-State transmission lines which were partly/wholly owned by the Petitioner. Subsequently, 4 number of new transmission lines were executed in 2016-17.
- c) The Commission vide its order dated 14.3.2012 in Petition No.15/SM/2012 directed the owners/developers of the inter-State transmission lines to file appropriate application before the Commission for determination of tariff of the transmission lines or by State Transmission Utilities (STUs) where the transmission lines are owned by them in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009.
- d) The Commission vide its order dated 12.5.2017 in Petition No.7/SM/2017 directed the State utilities to file the tariff petitions for ISTS lines connecting two States along with certificate from the concerned RPC for the 2014-19 tariff period as per the 2014 Tariff Regulations.
- e) Accordingly, the Petitioner filed Petition No. 2/TT/2019 for determination of tariff for only 2016-17 in respect of 38 number of inter-State transmission lines connecting the States of Telangana and Andhra Pradesh and the tariff was approved by the Commission vide order dated 13.1.2020.
- f) The Commission vide its order dated 13.1.2020 in Petition No. 2/TT/2019 granted tariff for 2016-17 in respect of 36 number of natural inter-State transmission lines except for the two lines (Asset-8 and Asset-9 i.e. Uravakonda-

Veltur-I and II Feeders) which were put under commercial operation with effect from 17.11.2016 and 18.11.2016 respectively. The Petitioner was directed to file a fresh petition in respect of these two assets alongwith the required information specified in the tariff Forms as per the 2014 Tariff Regulations.

g) The Petitioner has filed the instant petition for determination of tariff for the following transmission lines for 2014-15, 2015-16, 2017-18 and 2018-19:

Sl. No.	Assets	COD	Asset Number*	Remarks	Connecting States
1.	400 kV Srisailem-Kurnool (SC)	6.3.2001	Asset-1	-	Telangana – Andhra Pradesh
2.	400 kV Kalpaka-Asupaka	9.8.2017	Asset-2	Total TS Portion including LILO = 25.50 ckm	
	(a) 400 kV Kalpaka-Asupaka (Part of Old Line 400 kV Kalpaka-Khammam-I)	10.5.2002		portion of Old Line = 8.50 ckm	
	(b) LILO of Kalpaka to Khammam-I at Asupaka Sub-station	9.8.2017		New LILO Portion = 17.00 ckm	
3.	400 kV Kalpaka-Khammam-II	10.5.2002	Asset-3	-	
4	400 kV VTPS-Suryapet-I	30.3.2016	Asset-4V	Total (TS Portion including LILO) = 56.66 ckm	
	(a) 400 kV VTPS-Suryapet-I (part of Old Main Line 400 kV VTPS-Malkaram-I)	2.4.2013		Portion of Old line = 54.66 ckm	
	(b) LILO of VTPS to Malkaram-I at Suryapet Sub-station	30.3.2016		New LILO Portion = 2.00 ckm	
5.	400 kV VTPS-Suryapet-II	14.4.2018	Asset-5	Total TS Portion including LILO = 56.66 ckm	Telangana – Andhra Pradesh
	(a) 400 kV VTPS-Suryapet-II (Part of Old Line 400 kV VTPS-Malkaram - II)	2.4.2013		Portion of Old line = 54.66 ckm	
	(b) LILO of VTPS-Suryapet-II	14.4.2018		New LILO Portion = 2.00 ckm	
6.	400 kV Srisailem-Sattenapalli Ckt-I	23.10.2000	Asset-6		
7.	400 kV Srisailem-Sattenapalli Ckt-II	23.10.2000	Asset-7		
8.	220 kV Lower Sileru-KTPS-I	31.3.1967	Asset-8	-	
9.	220 kV Lower Sileru-KTPS-II	31.3.1979	Asset-9	-	
10.	220 kV Srisailem-Dindi-I	12.9.1982	Asset-10	-	
11.	220 kV Srisailem-Dindi-II	12.9.1982	Asset-11	-	
12.	220 kV Tallapalli-Nagarjunasagar-III	27.1.1985	Asset-12	-	
13.	220 kV Tallapalli-Nagarjunasagar-I	5.8.1985	Asset-13	-	
14.	220 kV Tallapalli-Nagarjunasagar-II	5.8.1985	Asset-14	-	
15.	220 kV N'Sagar Receiving Station-Srisailem (SC) Line	7.2.1989	Asset-15	-	
16.	220 kV Nunna-KTPS	21.1.1992	Asset-16	-	
17.	220 kV Tandur-Sedam S/C Line	28.2.2001	Asset-17	ISTS Line between Telangana – Karnataka	Telangana - Karnataka

18.	220 kV Tallapalli-Chalukurthy	21.7.2007	Asset-18	-	Telangana – Andhra Pradesh
19.	220 kV Brahmankotkur (LIS)-Wanaparthy	29.10.2009	Asset-19	-	
20.	220 kV Chillakallu-Suryapeta	21.12.2016	Asset-20	Total TS Portion including LILO = 50.30 ckm	Telangana – Andhra Pradesh
	(a) 220 kV Chillakallu-Suryapeta (part of old line 220 kV Chillakallu-Narketpally-I)	29.3.1999		Portion of Old Line = 38.62 ckm	
	(b) LILO of Chillakallu to Narketpally-I at Suryapeta Sub-station	21.12.2016		New LILO Portion = 11.68 ckm	
21.	220 kV Chillakallu-Pulichintala	5.12.2018	Asset-21	Total TS Portion including LILO = 66.78 ckm	
	(a) 220 kV Chillakallu-Pulichintala (Part of Old Line 220 kV Chillakallu-Narketpally - II)	29.3.1999		Old line portion = 18.08 ckm	
	(b) LILO of Chillakallu to Narketpally-II at Pulichintala Sub-station	5.12.2018		New LILO Portion = 48.70 ckm	
22.	132 kV Chillakallu-Ramapuram	21.10.1982	Asset-22	-	
23.	132 kV Kamavarapu Kota-Aswaraopet-I	9.6.1982	Asset-23	-	
24.	132 kV Kamavarapu Kota-Aswaraopet-II	9.6.1982	Asset-24	-	
25.	132 kV Nagarjunasagar-RCPH	25.2.1983	Asset-25	-	
26.	132 kV Chillakallu-Kusumanchi	24.12.1985	Asset-26	-	
27.	132 kV Chillakallu-Bonakallu-I	20.1.1987	Asset-27	-	
28.	132 kV Chillakallu-Bonakallu-II	20.1.1987	Asset-28	-	
29.	132 kV A. P. Carbides-Alampur-I	17.5.2004	Asset-29	Total TS Portion including LILO = 5.86 ckm	Telangana – Andhra Pradesh
	(a) 132 kV A.P. Carbides-Alampur-I (part of old line 132 kV A.P. Carbides-Wanaparthy)	20.1.1987		portion of Old Line = 4.66 ckm	
	(b) LILO of A. P. Carbides to Wanaparthy at Alampur Sub-station	17.5.2004		New LILO Portion = 1.2 ckm	
30.	132 kV Chillakallu-Madhira	27.10.2001	Asset-30	-	
31.	132 kV Chillakallu-Khammam	2.12.2001	Asset-31	-	
32.	132 kV Chillakallu-Sitapuram	6.4.2004	Asset-32	-	
33.	132 kV Chillakallu-Kodada	10.6.2004	Asset-33	-	
34.	132 kV Sitapuram-KCP	10.5.2010	Asset-34	-	
35.	132 kV Tangeda-Wadapalli	26.8.2010	Asset-35	-	
36.	132 kV Piduguralla-Wadapalli	22.2.2014	Asset-36	-	
37.	132 kV A. P. Carbides-Alampur-II	6.9.2014	Asset-37	Total TS Portion including LILO = 5.86 ckm	Telangana – Andhra Pradesh
	(a) 132 kV A. P. Carbides-Alampur-II (part of old line 132 kV A. P. Carbides-Gadwal)	13.1.2000		portion of Old Line = 4.66 ckm	
	(b) LILO of A. P. Carbides to Gadwal at Alampur Sub-station	6.9.2014		New LILO Portion = 1.2 ckm	
38.	400 kV Uravakonda-Veltoor-I	17.11.2016	Asset-38	-	
39.	400 kV Uravakonda-Veltoor-II	18.11.2016	Asset-39	-	
40.	400 kV Suryapeta-Kamavarapu Kota-I	20.10.2016	Asset-40	-	
41.	400 kV Suryapeta-Kamavarapu Kota-II	20.10.2016	Asset-41	-	

**Arabic numerals are used for numbering the assets in the order for the sake of convenience.*

h) In the present petition, the Petitioner has claimed determination of tariff for the inter-State transmission lines for 2014-15 (pro-rata for 10 months) and 2015-16 in respect of 37 number of assets which are Asset-1 to Asset-37. The Petitioner has claimed tariff for 2016-17 to 2018-19 for 41 number of transmission assets which are mentioned in the table in the preceding paragraph. The Petitioner has also claimed transmission tariff in respect of Asset-17 i.e. 220 kV Tandur-Sedam Line for the 2014-19 tariff period including 2016-17. Besides this, the Petitioner has also claimed transmission tariff in respect of 4 of assets, Assets-38 and 39 and Assets-40 and 41 from 2016-17 to 2018-19.

4. The Respondents are the distribution licensee power department and transmission licensee, who are procuring transmission services from the Petitioner, mainly beneficiaries of the Southern Region.

5. The Petitioner has served a copy of the petition upon the Respondents and notice of this application has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the notice published in the newspapers. None of the Respondents have filed any reply in the matter.

6. The hearing in this matter was held on 24.11.2022 and order was reserved in the matter. This order is issued considering the submissions made by the Petitioner in its petition accompanied by affidavits dated 15.9.2020 and 11.1.2023.

7. Having heard the learned counsel for the Petitioner and perused the material on record, we proceed to dispose of the petition.

8. The Commission vide order dated 13.1.2020 in Petition No. 2/TT/2019 approved tariff for the 2016-17 in respect of the following transmission lines:

Assets	Transmission line	Date of commercial operation
Assets-1 and 2	400 kV VTPS-Malkaram line	2.4.2013
	400 kV VTPS-Suryapet line	
Assets-3 and 4	400 kV Srisailam-Sattenapalli Ckt I	23.10.2010
	400 kV Srisailam-Sattenapalli Ckt I	
Asset-5	400 kV Srisailam-Kurnool (SC) feeder	6.3.2001
Assets-6 and 7	400 kV Kalpaka-Khammam-I feeder	10.5.2002
	400 kV Kalpaka-Khammam-II feeder	
Asset-10	220 kV Nunna-KTPS Line	21.1.1992
Assets-11 and 12	220 kV Tallapalli-Nagarjunasagar-I feeder	5.8.1985
	220 kV Tallapalli-Nagarjunasagar-II feeder	
Asset-13	220 kV Tallapalli-Nagarjunasagar-III feeder	27.1.1985
Asset-14	220 kV Tallapalli-Chalakurthy feeder	21.7.2007
Assets-15 and 16	220 kV Chillakallu-Narketpalli-I feeder	10.3.2010
	220 kV Chillakallu-Narketpalli-II feeder	
Asset-17	220 kV Brahmnaotkur-Wanaparthy line (LIS)	29.10.2009
Asset-18 and 19	220 kV Srisailam-Dindi-I feeder	12.9.1982
	220 kV Srisailam-Dindi-II feeder	
Asset-20	220 kV N'Sagar Receiving Station-Srisailam SC Line	7.2.1989
Asset-21	220 kV LSR-KTPS-I feeder	31.3.1967
Asset-22	220 kV LSR-KTPS-II feeder	31.3.1979
Asset-23	132 kV Nagarjunasagar-RCPH feeder	25.2.1983
Asset-24	132 kV Piduguralla-Wadapalli	22.2.2014
Asset-25	132 kV Tangeda-Wadapalli line	26.8.2010
Asset-26	132 kV Chillakallu-Kodada line	10.6.2004
Asset-27	132 kV Chillakallu-Ramapuram line	21.10.1982
Asset-28	132 kV Chillakallu-Sitapuram line	6.4.2004
Asset-29	132 kV Chillakallu-Khammam line	2.12.2001
Asset-30	132 kV Chillakallu-Kusumanchi line	24.12.1985
Asset-31	132 kV Chillakallu-Madhira line	27.10.2001
Asset-32	132 kV Sitapuram-KCP line	10.5.2010
Assets-33 and 34	132 kV Chillakallu-Bonakallu-I feeder	20.1.1987
	32 kV Chillakallu-Bonakallu-II feeder	
Asset-35	132 kV A.P. Carbides-Alampur	20.1.1987
Asset-36	132 kV A.P. Carbides-Gadwal	13.1.2000
Assets-37 and 38	132 kV K. Kota- Aswaraopet-I feeder	9.6.1982
	132 kV K. Kota-Aswaraopet-II feeder	

9. SRPC vide its letter dated 11.9.2019 has certified the natural Inter-State lines owned by the Petitioner connecting Telangana with Andhra Pradesh and Karnataka and they are as follows:

Year	Number of 400 kV lines	Number of 220 kV lines	Number of 132 kV lines	Total number of Natural Inter-State lines
2014-15	07	14	16	37
2015-16	07	14	16	37
2016-17	11	14	16	41
2017-18	11	14	16	41
2018-19	11	14	16	41

10. The details of the inter-State transmission lines owned by Telangana STU certified by SRPC vide letter its dated 11.9.2019 are as follows:

Sl. No.	Name of the line	Telangana Sub-station	Date of Commercial Operation	Total length in ckt-km	Length of the line Telangana Portion (in ckt-km)	Length approved for the purpose of tariff calculation
1	400 kV Srisailam-Kurnool (SC)	Srisailam LB	6.3.2001	102.00	1.50	1.50
2 and 3	400 kV Kalpaka-Khammam-I	Khammam	10.5.2002	360.00	121.00	121.00
	400 kV Kalpaka-Khammam-II	Khammam	10.5.2002	360.00	121.00	
4 and 5	400 kV VTPS-Malkaram-I	Malkaram	1.4.2013	260.95	189.32	189.32
	400 kV VTPS-Malkaram-II	Malkaram	13.2.2013	260.95	189.32	
6 and 7	400 kV Srisailam-Sattenapalli Ckt-I	Srisailam LB	12.2.2014	166.00	0.40	0.4
	400 kV Srisailam-Sattenapalli Ckt-II	Srisailam LB	12.2.2014	166.00	0.40	
8	220 kV Lower Sileru-KTPS-I	KTPS	31.3.1967	141.17	81.00	81.00
9	220 kV Lower Sileru-KTPS-II	KTPS	31.3.1979	113.20	25.00	25.00
10 and 11	220 kV Srisailam-Dindi-I	Dindi	12.9.1982	81.20	80.00	80.00
	220 kV Srisailam-Dindi-II	Dindi	12.9.1982	81.20	80.00	

12	220 kV Tallapali- Nagarjuna sagar-III	Nagarjuna-sagar	27.1.1985	15.00	4.00	4.00
13 and 14	220 kV Tallapali- Nagarjuna sagar-I	Nagarjuna-sagar	5.8.1985	12.10	2.10	2.10
	220 kV Tallapali- Nagarjuna sagar-II	Nagarjuna-sagar	5.8.1985	12.10	2.10	
15	220 kV Nagarjuna sagar Receiving station- Srisaillam SC line	Nagarjuna-sagar Receiving Station	7.2.1989	90.00	4.00	4.00
16	220 kV Nunna- KTPS	KTPS	21.1.1992	125.60	64.45	64.45
17	220 kV Tallapalli- Chalukurthy	Chalukurthy	21.7.2007	38.40	27.40	27.4
18	220 kV Brahmakotkur- Wanaparthy (LIS)	Wanaparthy (LS)	29.10.2009	97.64	78.79	78.79
19 and 20	220 kV Chillakallu- Narketpalli-I	Narketpalli	10.3.2010	120.00	108.00	108.00
	220 kV Chillakallu- Narketpalli-II	Narketpalli	10.3.2010	120.00	108.00	
21	132 kV Chillakallu- Ramapuram	Ramapuram	21.10.1982	21.67	6.67	3.335
22	132 kV Kota- Aswaraopet-I	Aswaraopet	9.6.1982	36.50	5.50	5.50
23	132 kV Kota- Aswaraopet-II	Aswaraopet	9.6.1982	36.50	5.50	
24	132 kV Nagarjunasag ar-RCPH	Nagarjuna-sagar	25.2.1983	13.70	7.70	7.70
25	132 kV Chillakallu- Kusumanchi	Kusumanchi	24.12.1985	58.00	47.00	23.50
26	132 kV Chillakallu- Bonakallu-I	Bonakallu	20.1.1987	20.00	2.80	2.80
27	132 kV Chillakallu- Bonakallu-II	Bonakallu	20.1.1987	20.00	2.80	2.80
28	132 kV A.P. Carbides- Alampur-I	Alampur	20.1.1987	19.70	4.66	4.66
29	132 kV A.P. Carbides- Alampur-II	Alampur	13.01.2000	19.70	4.66	4.66

30	132 kV Chillakallu- Madhira	Madhira	27.10.2001	28.00	7.00	7.00
31	132 kV Chillakallu- Khammam	Khammam	2.12.2001	46.00	35.00	17.50
32	132 kV Chillakallu- Sitapuram	Sitapuram	6.4.2004	17.00	2.50	2.50
33	132 kV Chillakallu- Kodada	Kodada	10.6.2004	21.56	9.84	9.84
34	132 kV Sitapuram- KCP	Sitapuram	10.5.2010	2.40	0.37	0.37
35	132 kV Tangeda- Wadapalli	Wadapalli	26.8.2010	29.74	2.36	2.36
36	132 kV Piduguralla- Wadapalli	Wadapalli	22.2.2014	44.58	2.36	2.36
37	220 kV Tandur-Sedam	Tandur	28.2.2001	44.70	9.46	

11. Out of 41 transmission lines which the Petitioner has claimed tariff, 29 transmission lines are certified by SRPC, 8 assets are related to LILOs of the existing transmission lines, 4 transmission lines are the new one (Assets-38, 39, 40 and 41) having CODs as claimed as 17.11.2016, 18.11.2016, 20.10.2016 and 20.10.2016 respectively.

12. It is relevant to mention here that the bifurcation of Andhra Pradesh is effective from 2.6.2014. Therefore, the tariff of the ISTS lines covered in the present petition for the period 2014-15 shall be calculated from 2.6.2014 to 31.3.2015 on pro-rata basis.

The details of these transmission assets is as follows:

(i) Existing ISTS lines

Srl. No.	Assets	COD	Asset Number
1	400 kV Srisailem-Kurnool (SC)	6.3.2001	Asset-1
2	400 kV Srisailem-Sattenapalli Ckt-I	23.10.2000	Asset-6-
3	400 kV Srisailem-Sattenapalli Ckt-II	23.10.2000	Asset-7
4	220 kV Lower Sileru-KTPS-I	31.3.1967	Asset-8
5	220 kV Lower Sileru-KTPS-II	31.3.1979	Asset-9
6	220 kV Srisailem-Dindi-I	12.9.1982	Asset-10
7	220 kV Srisailem-Dindi-II	12.9.1982	Asset-11
8	220 kV Tallapalli-Nagarjunasagar-III	27.1.1985	Asset-12
9	220 kV Tallapalli-Nagarjunasagar-I	5.8.1985	Asset-13
10	220 kV Tallapalli-Nagarjunasagar-II	5.8.1985	Asset – 14

11	220 kV N'Sagar Receiving Station-Srisailam (SC) Line	7.2.1989	Asset – 15
12	220 kV Nunna-KTPS	21.1.1992	Asset – 16
13	220 kV Tandur-Sedam S/C Line	28.2.2001	Asset – 17
14	220 kV Tallapalli-Chalukurthy	21.7.2007	Asset – 18
15	220 kV Brahmakotkur (LIS)-Wanaparthy	29.10.2009	Asset – 19
16	132 kV Chillakallu-Ramapuram	21.10.1982	Asset – 22
17	132 kV Kamavarapu Kota-Aswaraopet-I	9.6.1982	Asset – 23
18	132 kV Kamavarapu Kota-Aswaraopet-II	9.6.1982	Asset – 24
19	132 kV Nagarjunasagar-RCPH	25.2.1983	Asset – 25
20	132 kV Chillakallu-Kusumanchi	24.12.1985	Asset – 26
21	132 kV Chillakallu-Bonakallu-I	20.1.1987	Asset – 27
22	132 kV Chillakallu-Bonakallu-II	20.1.1987	Asset – 28
23	132 kV Chillakallu-Madhira	27.10.2001	Asset – 30
24	132 kV Chillakallu-Khammam	2.12.2001	Asset – 31
25	132 kV Chillakallu-Sitapuram	6.4.2004	Asset – 32
26	132 kV Chillakallu-Kodada	10.6.2004	Asset – 33
27	132 kV Sitapuram-KCP	10.5.2010	Asset – 34
28	132 kV Tangeda-Wadapalli	26.8.2010	Asset – 35
29	132 kV Piduguralla-Wadapalli	22.2.2014	Asset – 36

**Arabic numerals are used for numbering the assets in the order for the sake of convenience.*

(ii) **LILO of the existing assets and claimed tariff as ISTS lines**

Sl. No.	Assets	COD	Asset number
1.	400 kV Kalpaka-Asupaka	9.8.2017	Asset-2
	(a) 400 kV Kalpaka-Asupaka (Part of Old Line 400 kV Kalpaka-Khammam-I)	10.5.2002	
	(b) LILO of Kalpaka to Khammam-I at Asupaka Sub-station	9.8.2017	
2.	400 kV Kalpaka-Khammam-II	10.5.2002	Asset-3
3.	400 kV VTPS-Suryapet-I	30.3.2016	Asset-4
	(a) 400 kV VTPS-Suryapet-I (part of Old Main Line 400 kV VTPS-Malkaram-I)	2.4.2013	
	(b) LILO of VTPS to Malkaram-I at Suryapet Sub-station	30.3.2016	
4.	400 kV VTPS-Suryapet-II	14.4.2018	Asset-5
	(a) 400 kV VTPS-Suryapet-II (Part of Old Line 400 kV VTPS-Malkaram - II)	2.4.2013	
	(b) LILO of VTPS-Suryapet-II	14.4.2018	
5.	220 kV Chillakallu-Suryapeta	21.12.2016	Asset-20
	(a) 220 kV Chillakallu-Suryapeta (part of old line 220 kV Chillakallu-Narketpally-I)	29.3.1999	
	(b) LILO of Chillakallu to Narketpally-I at Suryapeta Sub-station	21.12.2016	
6.	220 kV Chillakallu-Pulichintala	5.12.2018	Asset-21
	(a) 220 kV Chillakallu-Pulichintala (Part of Old Line 220 kV Chillakallu-Narketpally - II)	29.3.1999	

	(b) LILO of Chillakallu to Narketpally-II at Pulichintala Sub-station	5.12.2018	
7.	132 kV A. P. Carbides-Alampur-I	17.5.2004	Asset29
	(a) 132 kV A.P. Carbides-Alampur-I (part of old line 132 kV A.P. Carbides-Wanaparthy)	20.1.1987	
	(b) LILO of A. P. Carbides to Wanaparthy at Alampur Sub-station	17.5.2004	
8.	132 kV A. P. Carbides-Alampur-II	6.9.2014	Asset- 37
	(a) 132 kV A. P. Carbides-Alampur-II (part of old line 132 kV A. P. Carbides-Gadwal)	13.1.2000	
	(b) LILO of A. P. Carbides to Gadwal at Alampur Sub-station	6.9.2014	

**Arabic numerals are used for numbering the assets in the order for the sake of convenience.*

(iii) Newly Commissioned ISTS lines:

Sl. No.	Asset	COD	Asset Number
1.	400 kV Uravakonda-Veltoor-I	17.11.2016	Asset-38
2.	400 kV Uravakonda-Veltoor-II	18.11.2016	Asset-39
3.	400 kV Suryapeta-Kamavarapu Kota-I	20.10.2016	Asset-40
4.	400 kV Suryapeta-Kamavarapu Kota-II	20.10.2016	Asset-41

**Arabic numerals are used for numbering the assets in the order for the sake of convenience.*

A. Determination of tariff of the 29 no. of existing ISTS Lines

13. As stated above, SRPC has already certified following 29 transmission lines of the petitioner as ISTS.as Accordingly, in the first part of the order, these 29 assets have been considered for approval of transmission charges :

Sl. No.	Name of the line	Telangana Sub-station	Date of Commercial Operation	Length approved for the purpose of tariff calculation	Asset renamed in the instant Petition
1	400 kV Srisailam-Kurnool (SC)	Srisailam LB	6.3.2001	1.50	Asset-1
2 and 3	400 kV Srisailam-Sattenapalli Ckt-I	Srisailam LB	12.2.2014	0.4	Assets-6 and -7
	400 kV Srisailam-Sattenapalli Ckt-II	Srisailam LB	12.2.2014		

4	220 kV Lower Sileru-KTPS-I	KTPS	31.3.1967	81.00	Asset-8
5	220 kV Lower Sileru-KTPS-II	KTPS	31.3.1979	25.00	Asset-9
6 and 7	220 kV Srisailam-Dindi-I	Dindi	12.9.1982	80.00	Assets-10 and 11
	220 kV Srisailam-Dindi-II	Dindi	12. 9.1982		
8	220 kV Tallapali-Nagarjuna Sagar-III	NagarjunaSagar	27.1.1985	4.00	Asset-12
9 and 10	220 kV Tallapali-Nagarjuna Sagar-I	NagarjunaSagar	5.8.1985	2.10	Assets-13 and 14
	220 kV Tallapali-Nagarjuna Sagar-II	NagarjunaSagar	5.8.1985		
11	220 kV Nagarjuna Sagar Receiving station-Srisailam SC line	N'sagar Receiving Station	7.2.1989	4.00	Asset-15
12	220 kV Nunna-KTPS	KTPS	21.1.1992	64.45	Asset-16
13	220 kV Tandur-Sedam	Tandur	28.2.2001	9.46	Asset-17
14	220 kV Tallapalli-Chalukurthy	Chalukurthy	21.7.2007	27.4	Asset-18
15	220 kV Brahmakotkur-Wanaparthy (LIS)	Wanaparthy (LS)	29.10.2009	78.79	Assets-19
16	132 kV Chillakallu-Ramapuram	Ramapuram	21.10.1982	3.335	Assets- 22
17	132 kV Kota-Aswaraopet-I	Aswaraopet	9.6.1982	5.50	Asset-23 and Asset-24
18	132 kV Kota-Aswaraopet-II	Aswaraopet	9.6.1982		
19	132 kV NagarjunaSagar-RCPH	NagarjunaSagar	25.2.1983	7.70	Asset-25
20	132 kV Chillakallu-Kusumanchi	Kusumanchi	24.12.1985	23.50	Asset-26
21	132 kV Chillakallu-Bonakallu-I	Bonakallu	20.1.1987	2.80	Asset-27 and Asset-28
22	132 kV Chillakallu-Bonakallu-II	Bonakallu	20.1.1987	2.8	
23	132 kV Chillakallu-Madhira	Madhira	27.10.2001	7.00	Asset-30
24	132 kV Chillakallu-Khammam		2.12.2001	17.50	Asset-31
25	132 kV Chillakallu-Sitapuram		6.4.2004	2.50	Asset-32
26	132 kV Chillakallu-Kodada		10.6.2004	9.84	Asset-33
27	132 kV Sitapuram-KCP		10.5.2010	0.37	Asset-34
28	132 kV Tangeda-Wadapalli		26.8.2010	2.36	Asset-35
29	132 kV Piduguralla-Wadapalli		22.2.2014	2.36	Asset-36

14. The Commission in order dated 13.1.2020 in Petition No. 2/TT/2019 adopted the methodology adopted by the Commission in order dated 22.6.2018 in Petition No. 155/TT/2017 for determining the tariff for 36 assets owned by the Petitioner. The relevant portion of the said order dated 13.1.2020 is as follows:

“15. Similar issue was considered by the Commission in its order dated 22.6.2018 in Petition No. 155/TT/2017 wherein the transmission charges in respect of natural ISTS lines were determined on the basis of methodology already adopted by the Commission. The relevant portion of the said order is extracted as under:

“9. Some of the State Utilities have filed similar petitions claiming tariff of inter-State transmission lines connecting two States for the 2014-19 tariff periods as per the directions of the Commission. The information submitted by the State Utilities is incomplete and inconsistent. Further, some of the lines were more than 25 years old and the States were not having the details of the capital cost etc. To overcome these difficulties, the Commission evolved a methodology for allowing transmission charges for such transmission lines connecting two States in orders dated 19.12.2017 in Petition Nos. 88/TT/2017, 173/TT/2016 and 168/TT/2016 filed by Madhya Pradesh Power Transmission Corporation Limited, Maharashtra State Electricity Regulatory Commission and Uttar Pradesh Power Transmission Corporation Limited respectively. The Commission adopted the same methodology in order dated 4.5.2018 in Petition No.112/TT/2017, while granting tariff for ISTS connecting Rajasthan with other States and owned by Rajasthan Rajya Vidyut Prasaran Limited. The Commission derived the benchmark cost on the basis of the transmission lines owned by PGCIL. The useful life of the transmission line was considered as 25 years and for lines more than or equal to 25 years, only O & M Expenses and Interest on Working Capital (IWC) is decided to be allowed as per the existing Tariff Regulations. For assets put into commercial operation on or after 1.4.2014, tariff is decided to be allowed on the basis of the audited financial capital cost. The relevant portion of the order dated 4.5.2018 is extracted hereunder:-

“13. It is observed that the information submitted by the Petitioner States for computation of transmission charges for the deemed ISTS lines are not uniform, thereby causing divergence in working out the tariff. In some cases, the data related to funding and depreciation was not available and in some cases the assets have already completed, or nearing, their useful life. In most of the petitions, the states have expressed their inability to furnish the audited capital cost of transmission lines as the lines are old. As a result, tariff workings for old assets are ending in skewed results. It is further observed that the YTC figures emerging out by the existing ARR methodology are on the higher side. Considering these facts, we have conceptualized a modified methodology for determining the tariff of the inter-State transmission lines. The methodology is broadly based on the following:-

(a)PGCIL’s Annual Report data has been used as the reference data; based on which, year wise benchmark cost has been derived.

(b)Useful life of Transmission Line has been considered as 25 years. Thus, if life is more than or equal to 25 years as on 1.4.2014, only O & M Expenses and Interest on Working Capital (IWC) shall be allowed as per the existing Tariff Regulations, in lieu of complete tariff.

(c)It is expected that the States do have the audited financial data of recently commissioned (i.e. on or after 1.4.2014) lines.

Tariff Methodology

14. As per the petitions filed by the states, their ISTS lines generally have the configuration of 132 kV, 220 kV or 400 kV. In the absence of an established tariff data base, in order to develop this methodology Annual Reports of PGCIL from 1989-90 to 2013-14 have been referred to. The Annual Reports depict, inter alia, the information pertaining to year wise total length of transmission lines in ckt-km and corresponding Gross Block. This pan-India data represents all the five transmission regions and is a composite mix of parameters like terrains, wind-zones, tower and conductor type etc. +/- 500 kV HVDC and 765 kV and above voltage level AC lines too have come up in between and the data also includes those lines. Voltage level- wise data as on 30th April 2017, obtained from PGCIL indicates that the percentage of 220 kV, 132 kV and 66 kV Transmission Line taken together makes it around 8.3% of the total line length owned by PGCIL. Further, 132 kV Transmission Lines were established in NER prior to 1990, and Transmission Lines of 220 kV voltage levels were last commissioned in around the year 2004 in NR. Majority of the transmission lines consist of 400 kV which corresponds to 66% of the total transmission line lengths. Thus, the 400 kV and lesser voltage levels account for approximately 75% of the transmission lines. Assuming the above referred spread of voltage wise percentages for earlier years too, it can be said that the year wise average Transmission Line cost figures derived from PGCIL data, when further reduced by 25%, fairly represent the average transmission line capital cost corresponding to a 400 kV S/C line. Considering 400 kV S/C transmission line cost as reference cost, analysis of PGCIL's indicative cost data (P/L Feb 2017) suggests the following:-

	Reference cost of 400 kV S/C TL	₹ X lakh/km
1.	400 kV D/C TL	1.39 X
2.	220 kV D/C TL	0.57 X
3.	220 kV S/C TL	0.36 X
4.	132 kV D/C TL	0.43 X
5.	132 kV S/C TL	0.31 X

15. Therefore, for arriving at the costs of transmission lines of other voltage levels and circuit configurations, the average transmission line cost data shall be multiplied by the factors illustrated in the above table. Lower voltage levels can be treated as part of 132 kV. The above table contemplates Twin Moose conductor which is widely used in State transmission lines.

16. Based on respective year end data, average transmission line length during the year has been worked out. Difference between a particular year's average transmission line length figures and that for the immediate preceding year provides us the transmission line length added during that year. Average gross block corresponding to transmission lines has been divided by the average transmission line length to arrive at the Average Cost of transmission line (in ` lakh per ckt-km) during the year. Thus, considering the year of COD of a State's ISTS line and its ckt-km, its cost would be worked out by relating it to PGCIL's transmission line cost during that year. Although the Commission has relied on PGCIL's Annual Reports, there are certain deviations in the cost data worked

out. The year 1989-90 was the year of incorporation for PGCIL, and the transmission assets of NTPC, NHPC, NEEPCO etc. were taken over by PGCIL by mid-1991-92. Thus, as the base data for these years was not available, the corresponding average cost of transmission line could not be worked out. The average cost from 1992-93 onwards up to 2013- 14 shows an increasing trend at a CAGR of 5.17%. Therefore, for the years 1989-90, 1990-91 and 1991-92, the average cost of transmission line has been back derived considering the 1992-93 average cost. Similarly, abnormal dip/spikes in the transmission line cost for the years 1996-97, 2001-02 and 2004-05 has been corrected by considering the average values of the transmission line costs in the immediate preceding and succeeding years.

17. While calculating tariff, the following has been considered:-

- (i) Useful life of the transmission line shall be deemed to be 25 years.
- (ii) Prevailing depreciation rates as per the 2014 Tariff Regulations shall be considered uniformly for all the previous tariff periods so as to do away with the Advance Against Depreciation which was in vogue during earlier tariff periods. Notwithstanding the depreciation considered as recovered earlier, for the purpose of these tariff calculations, remaining depreciable value shall be spread over the remaining useful life of the transmission line, where the elapsed life is more than or equal to 12 years.
- (iii) Normative Debt-Equity ratio shall be 70:30.
- (iv) Normative loan repayment during a year shall be deemed to be equal to the depreciation allowed for that year.
- (v) Rate of Interest on normative loan shall be the weighted average rate of interest as derived on the basis of PGCIL's Balance Sheet.
- (vi) In order to avoid complexity, grossing up of rate of Return on Equity with tax rate is being dispensed with.
- (vii) Bank rate as defined in 2014 Tariff Regulations, 2014 as on 1.4.2014 shall be applied for calculating the rate of interest on working capital on normative basis.
- (viii) O & M Expenses as per the 2014 Tariff Regulations shall be considered.
- (ix) Where the life of transmission line is more than or equal to 25 years as on 1.4.2014, only O & M Expenses and IWC shall be allowed in lieu of complete tariff.

18. Thus, in effect, this is a normative tariff working methodology which shall be applied in those cases where the audited capital cost information is not available."

16. The same methodology is adopted for calculating the tariff for aforesaid 36 assets owned by TCTL. Asset-11, Asset-12, Asset-13, Asset-18, Asset-19, Asset-20, Asset-21, Asset-22, Asset-23, Asset-27, Asset-30, Asset-33, Asset-34, Asset-35, Asset-37 and Asset-38 have already completed twenty five years as on 1.4.2014. Therefore, as per the above methodology, only —Interest on Working Capital and —O & M Expenses components of tariff shall be allowable for these 16 assets. Remaining 20 assets (Asset-1 to Asset-7, Asset-10, Asset-14 to Asset-17, Asset-24 to Asset-26, Asset-28 & Asset-29, Asset-31, Asset-32 and Asset-36) have not completed 25 years as on 1.4.2014. Thus, in line with the aforesaid methodology, all tariff components are being allowed."

15. Accordingly, as stated above, the transmission charges for the above mentioned

29 Assets (Assets- 1, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 22, 23, 24, 25,

26, 27, 28, 30, 31, 32, 33, 34, 35 and 36), in the absence of their capital cost, are determined as per the methodology adopted by the Commission in order dated 13.1.2020 in Petition No. 2/TT/2019. Further, as per the above methodology adopted by the Commission in order dated 13.1.2020 in Petition No. 2/TT/2019, the assets which have already completed twenty-five years as on 1.4.2014, are allowed for only 'Interest on Working Capital' and 'O&M Expenses', and the assets which have not completed 25 years as on 1.4.2014, are entitled to all the five components of tariff. As such in the instant case, for 16 assets (Assets-8 to 15, Assets- 22 to Asset-28), which have already completed 25 years of useful life, only Interest on Working Capital and O&M Expenses components of tariff are allowable.

16. Since the bifurcation of Andhra Pradesh and Telangana States is effective from 2.6.2014, the tariff for the period 2014-15 shall be calculated from 2.6.2014 to 31.3.2015 on pro-rata basis. Taking into consideration the SRPC's Certificate dated 11.9.2019, the tariff for Asset- 17: 220 kV Tandur-Sedam transmission line is also allowed from 2.6.2014 to 31.3.2019.

17. The transmission charges of the natural ISTS lines considered in the petition shall be recovered on monthly basis in accordance with Regulation 43 of Central Electricity Regulatory Commission (Terms and Condition of Tariff) Regulations, 2014 and shall be shared by the beneficiaries and long-term transmission customers in terms of Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 as amended from time to time. Further, the transmission charges allowed in this order shall be adjusted against the ARR approved by the State Commission.

18. The details of the computation of the transmission charges, other than O&M Expenses, for the above assets are given in the Annexure of this order. The details of computation of O&M Expenses and the summary of the transmission charges approved for the existing assets are as follows:

Operation & Maintenance Expenses (O&M Expenses)

19. The Regulation 29(4)(a) of the 2014 Tariff Regulations provides for following O&M norms for the transmission systems:

“29. Operation and Maintenance Expenses:

(4). Transmission System

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

<i>Norms for AC and HVDC lines (in Rs Lakh per km)</i>					
	<i>2014-15</i>	<i>2015-16</i>	<i>2016-17</i>	<i>2017-18</i>	<i>2018-19</i>
<i>Single Circuit (Bundled Conductor with six or more sub-conductors)</i>	0.707	0.731	0.755	0.780	0.806
<i>Single Circuit (Bundled Conductor with four subconductors)</i>	0.606	0.627	0.647	0.669	0.691
<i>Single Circuit (Twin & Triple Conductor)</i>	0.404	0.418	0.432	0.446	0.461
<i>Single Circuit (Single Conductor)</i>	0.202	0.209	0.216	0.223	0.230
<i>Double Circuit (Bundled conductor with four or more sub-conductors)</i>	1.062	1.097	1.133	1.171	1.210
<i>Double Circuit (Twin & Triple Conductor)</i>	0.707	0.731	0.755	0.780	0.806
<i>Double Circuit (Single Conductor)</i>	0.303	0.313	0.324	0.334	0.346
<i>Multi Circuit (Bundled</i>	1.863	1.925	1.989	2.055	2.123

conductor with four or more sub-conductors)					
Multi Circuit (Twin & Triple Conductor)	1.240	1.282 1	0.324	1.368	1.413

20. The details of the transmission assets and length in km considered for the calculation of O&M Expenses are as follows:

Sl. No.	Asset	Type of conductor	Date of Commercial Operation	Total length in Ckt-km	Length of the line Telangana Portion (in Ckt-km)	Length approved in km for the purpose of tariff calculation	Asset renamed in the instant Petition
1	400 kV Srisailem-Kurnool (SC)	S/C ACSR Twin Moose	6.3.20021	102	1.5	1.5	Asset-1
2 and 3	400 kV Srisailem-Sattenapalli Ckt-I	D/C ACSR Twin Moose	12.2.2014	166	0.4	0.4	Assets-6 and 7
	400 kV Srisailem-Sattenapalli Ckt-II		12.2.2014	166	0.4		
4	220 kV Lower Sileru-KTPS-I	S/C ACSR Deer	31.3.1967	141.17	81	81	Asset-8
5	220 kV Lower Sileru-KTPS-II		31.3.1979	113.2	25	25	Asset-9
6 and 7	220 kV Srisailem-Dindi-I	D/C ACSR Zebra	12.9.1982	81.2	80	80	Assets-10 and 11
	220 kV Srisailem-Dindi-II		12.09.1982	81.2	80		
8	220 kV Tallapali-Nagarjuna sagar-III	S/C ACSR Zebra	27.1.1985	15	4	4	Asset-12
9 and 10	220 kV Tallapali-Nagarjuna sagar-I	D/C ACSR Twin Moose	5.8.1985	12.1	2.1	2.1	Assets-13 and 14
	220 kV Tallapali-Nagarjuna sagar-II		5.8.1985	12.1	2.1		
11	220 kV Nagarjuna sagar Receiving station-Srisailem SC line	S/C ACSR Deer	7.2.1989	90	4	4	Asset-15

12	220 kV Nunna-KTPS	S/C ACSR Deer	21.1.1992	125.6	64.45	64.45	Asset-16
13	220 kV Tallapalli-Chalakurthy	S/C ACSR Zebra	21.7.2007	38.4	27.4	27.4	Asset-18
14	220 kV Brahmakotkur-Wanaparthy (LIS)	S/C ACSR Moose	29.10.2009	97.64	78.79	78.79	Assets-19
15	132 kV Chillakallu-Ramapuram	D/C ACSR Panther	21.10.1982	21.67	6.67	3.335	Assets-22
16	132 kV Kota-Aswaraopet-I	D/C ACSR Panther	9.6.1982	36.5	5.5	5.5	Asset-23 and Asset-24
17	132 kV Kota-Aswaraopet-II		9.6.1982	36.5	5.5		
18	132 kV Nagarjunasagar-RCPH	S/C ACSR Beer	25.2.1983	13.7	7.7	7.7	Asset-25
19	132 kV Chillakallu-Kusumanchi	D/C ACSR Panther	24.12.1985	58	47	23.5	Assets-26
20	132 kV Chillakallu-Bonakallu-I	D/C ACSR Panther	20.1.1987	20	2.8	2.8	Asset-27 and Asset-28
21	132 kV Chillakallu-Bonakallu-II		20.1.1987	20	2.8		
22	132 kV Chillakallu-Madhira	S/C ACSR Panther	27.10.2001	28	7	7	Asset-30
23	132 kV Chillakallu-Khammam	D/C ACSR Panther	2.12.2001	46	35	17.5	Asset-31
24	132 kV Chillakallu-Sitapuram	D/C ACSR Panther	6.4.2004	17	2.5	2.5	Asset-32
25	132 kV Chillakallu-Kodada	S/C ACSR Panther	10.6.2004	21.56	9.84	9.84	Asset-33
26	132 kV Sitapuram-KCP	S/C ACSR Panther	10.5.2010	2.4	0.37	0.37	Asset-34
27	132 kV Tangeda-Wadapalli	S/C ACSR Panther	26.8.2010	29.74	2.36	2.36	Asset-35
28	132 kV Piduguralla-Wadapalli	S/C ACSR Panther	22.2.2014	44.58	2.36	2.36	Asset-36
29	220 kV Tandur-Sedam line	S/C ACSR Panther	28.2.2014	44.5	9.46	9.46	Asset-17

21. We have considered the submissions of the Petitioner. The O&M Expenses allowed in respect of above-mentioned transmission assets as per Regulation 29(4) of the 2014 Tariff Regulations are as follows:

Asset	O&M Expenses				
	2014-15 (Pro-rata for 302 days)	2015-16	2016-17	2017-18	2018-19
Asset-1	0.5	0.63	0.65	0.67	0.69
Assets- 6 and 7	0.23	0.29	0.30	0.31	0.32
Asset- 8	27.17	33.86	34.99	36.13	37.34
Asset-9	8.38	10.45	10.80	11.15	11.53
Assets-10 and 11	46.95	58.48	60.40	62.4	64.48
Asset-12	1.34	1.67	1.73	1.78	1.84
Assets-13 and 14	1.23	1.54	1.59	1.64	1.69
Asset-15	1.34	1.67	1.73	1.78	1.84
Asset-16	21.61	26.94	27.84	28.74	29.71
Asset-18	9.19	11.45	11.84	12.22	12.63
Assets-19	26.42	32.93	34.04	35.14	36.32
Assets- 22	1.96	2.44	2.52	2.60	2.69
Asset-23 and 24	1.84	2.30	2.38	2.45	2.54
Asset-25	2.58	3.22	3.33	3.43	3.55
Assets-26	13.79	17.18	17.74	18.33	18.94
Assets-27and 28	1.64	2.05	2.11	2.18	2.26
Asset-30	2.35	2.93	3.02	3.12	3.23
Asset-31	10.27	12.79	13.21	13.65	14.11
Asset-32	1.47	1.83	1.89	1.95	2.02
Asset-33	3.30	4.11	4.25	4.39	4.54
Asset-34	0.12	0.15	0.16	0.17	0.17
Asset-35	1.39	1.73	1.78	1.84	1.90
Asset-36	0.79	0.99	1.02	1.05	1.09
Asset-37					

	O&M Expenses				
	2014-15 (Pro-rata for 302 days)	2015-16	2016-17	2017-18	2018-19
Asset- 17	3.17	3.95	4.08	4.22	4.36

22. Accordingly, computation of transmission charges for the existing 29 assets for the year 2014-15 (pro-rata from 2.6.2014 to 31.3.2015 i.e. 303 days), 2015-16, 2016-17, 2017-18 and 2018-19 are as follows:

(₹ in lakh)

Asset-1	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1.39	1.70	1.70	1.70	1.70
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	3.16	3.81	3.81	3.81	3.81
Interest on Working Capital	0.13	0.16	0.16	0.16	0.17
O & M Expenses	0.50	0.63	0.65	0.67	0.69
Total	5.19	6.30	6.32	6.34	6.37

(₹ in lakh)

Assets-6 & 7	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.52	0.63	0.63	0.63	0.63
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1.17	1.41	1.41	1.41	1.41
Interest on Working Capital	0.05	0.06	0.06	0.06	0.06
O & M Expenses	0.23	0.29	0.30	0.31	0.32
Total	1.97	2.40	2.41	2.42	2.43

(₹ in lakh)

Asset-8	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	1.50	1.87	1.93	2.00	2.06
O & M Expenses	27.17	33.86	34.99	36.13	37.34
Total	28.67	35.73	36.93	38.12	39.40

(₹ in lakh)

Asset-9	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.37	0.58	0.60	0.62	0.64
O & M Expenses	8.38	10.45	10.80	11.15	11.53
Total	8.76	11.03	11.40	11.77	12.16

(₹ in lakh)

Assets-10 & 11	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	2.59	3.23	3.34	3.45	3.56
O & M Expenses	46.95	58.48	60.40	62.40	64.48
Total	49.55	61.71	63.74	65.85	68.04

(₹ in lakh)

Asset- 12	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.07	0.09	0.10	0.10	0.10
O & M Expenses	1.34	1.67	1.73	1.78	1.84
Total	1.42	1.76	1.82	1.88	1.95

(₹ in lakh)

Assets- 13 & 14	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.07	0.08	0.09	0.09	0.09
O & M Expenses	1.23	1.54	1.59	1.64	1.69
Total	1.30	1.62	1.67	1.73	1.79

(₹ in lakh)

Asset-15	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.07	0.09	0.10	0.10	0.10
O & M Expenses	1.34	1.67	1.73	1.78	1.84
Total	1.42	1.76	1.82	1.88	1.95

(₹ in lakh)

Asset-16	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	11.72	15.32	15.32	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	26.59	32.03	32.03	0.00	0.00
Interest on Working Capital	2.08	2.58	2.63	1.59	1.64
O & M Expenses	21.61	26.94	27.84	28.74	29.71
Total	62.00	76.87	77.82	30.33	31.35

(₹ in lakh)

Asset- 18	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	20.34	24.50	24.50	24.50	24.50
Interest on Loan	9.90	10.41	8.70	7.02	5.46
Return on Equity	17.91	21.58	21.58	21.58	21.58
Interest on Working Capital	1.62	1.93	1.91	1.90	1.88
O & M Expenses	9.19	11.45	11.84	12.22	12.63
Total	58.95	69.87	68.53	67.22	66.05

(₹ in lakh)

Assets-19	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	60.22	72.55	72.55	72.55	72.55
Interest on Loan	37.88	41.22	36.24	31.39	27.20
Return on Equity	53.04	63.89	63.89	63.89	63.89
Interest on Working Capital	4.94	5.91	5.85	5.80	5.77
O & M Expenses	26.42	32.93	34.04	35.14	36.32
Total	182.51	216.50	212.56	208.77	205.73

(₹ in lakh)

Assets-22	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.11	0.13	0.14	0.14	0.15
O & M Expenses	1.96	2.44	2.52	2.60	2.69
Total	2.07	2.57	2.66	2.75	2.84

(₹ in lakh)

Asset-23 & 24	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.10	0.13	0.13	0.14	0.14
O & M Expenses	1.84	2.30	2.38	2.45	2.54
Total	1.95	2.43	2.51	2.59	2.68

(₹ in lakh)

Asset-25	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.14	0.18	0.18	0.19	0.20
O & M Expenses	2.58	3.22	3.33	3.43	3.55
Total	2.73	3.40	3.51	3.62	3.75

(₹ in lakh)

Assets- 26	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.76	0.95	0.98	1.01	1.05
O & M Expenses	13.79	17.18	17.74	18.33	18.94
Total	14.55	18.13	18.72	19.34	19.99

(₹ in lakh)

Asset-27 & 28	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.09	0.11	0.12	0.12	0.12
O & M Expenses	1.64	2.05	2.11	2.18	2.26
Total	1.73	2.16	2.23	2.30	2.38

(₹ in lakh)

Asset- 30	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1.63	2.00	2.00	2.00	2.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	3.71	4.47	4.47	4.47	4.47
Interest on Working Capital	0.25	0.31	0.32	0.32	0.33
O & M Expenses	2.35	2.93	3.02	3.12	3.23
Total	7.94	9.70	9.80	9.91	10.02

(₹ in lakh)

Asset-31	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	5.67	6.92	6.92	6.92	6.92
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	12.86	15.49	15.49	15.49	15.49
Interest on Working Capital	0.99	1.22	1.25	1.27	1.30
O & M Expenses	10.27	12.79	13.21	13.65	14.11
Total	29.80	36.43	36.88	37.34	37.82

(₹ in lakh)

Asset-32	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1.28	1.54	1.54	0.62	0.62
Interest on Loan	0.35	0.32	0.21	0.00	0.00
Return on Equity	1.13	1.36	1.36	1.36	1.36
Interest on Working Capital	0.14	0.18	0.18	0.15	0.16
O & M Expenses	1.47	1.83	1.89	1.95	2.02
Total	4.37	5.23	5.18	4.08	4.15

(₹ in lakh)

Asset-33	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	3.64	4.38	4.38	1.76	1.76
Interest on Loan	0.99	0.92	0.61	0.00	0.00
Return on Equity	3.20	3.86	3.86	3.86	3.86
Interest on Working Capital	0.36	0.44	0.44	0.37	0.38
O & M Expenses	3.30	4.11	4.25	4.39	4.54
Total	11.50	13.71	13.54	10.38	10.53

(₹ in lakh)

Asset-34	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.26	0.32	0.32	0.32	0.32
Interest on Loan	0.18	0.20	0.18	0.16	0.14
Return on Equity	0.23	0.28	0.28	0.28	0.28
Interest on Working Capital	0.02	0.03	0.03	0.03	0.03
O & M Expenses	0.12	0.15	0.16	0.17	0.17
Total	0.82	0.98	0.96	0.95	0.93

(₹ in lakh)

Asset-35	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1.68	2.02	2.02	2.02	2.02
Interest on Loan	1.17	1.29	1.15	1.02	0.91
Return on Equity	1.48	1.78	1.78	1.78	1.78
Interest on Working Capital	0.18	0.21	0.21	0.21	0.21
O & M Expenses	1.39	1.73	1.78	1.84	1.90
Total	5.89	7.03	6.94	6.87	6.82

(₹ in lakh)

Asset-36	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	3.04	3.66	3.66	3.66	3.66
Interest on Loan	2.77	3.13	2.88	2.65	2.48
Return on Equity	2.67	3.22	3.22	3.22	3.22
Interest on Working Capital	0.24	0.28	0.28	0.28	0.28
O & M Expenses	0.79	0.99	1.02	1.05	1.09
Total	9.51	11.28	11.06	10.86	10.73

23. The transmission charges approved for Asset-17 for 2014-15 (pro-rata from 2.6.2014 to 31.3.2015 i.e. 303 days), 2015-16, 2016-17, 2017-18 and 2018-19 are as follows:

(₹ in lakh)					
Asset-17	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	3.16	3.87	3.87	3.87	3.87
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	7.17	8.64	8.64	8.64	8.64
Interest on Working Capital	0.41	0.51	0.51	0.52	0.53
O & M Expenses	3.17	3.95	4.08	4.22	4.36
Total	13.92	16.97	17.10	17.25	17.40

B. Determination of the Tariff of the newly created 8 LILOs of the existing lines

24. The details of the transmission lines alongwith the LILOs of the existing transmission assets claimed by the Petitioner is as follows:

Asset named in the petition	Asset renamed in the instant petition	Name of the transmission line	Total Line length (in Ckt. km)	Length of line in Ckt-km (Telangana Portion)	COD
Asset-II	Asset-2	400 kV Kalpaka-Khammam D/C line	360	121	10.5.2002
		a) 400 kV Kalpaka-Asupaka-I	264.50	8.50	10.5.2002
		b) LILO of Kalpaka to Asupaka SS		17.00	9.8.2017
Asset-III	Asset-3	400 kV Kalpaka-Khammam-II	360 .00	121.00	10.5.2002
Asset-IV	Asset-4	400 kV VTPS-Malkaram D/C line	260.95	189.32	1.4.2013 (Ckt-I) and 13.2.2013 (Ckt-II)
		a) 400 kV VTPS-Suryapeta-I		54.66	2.4.2013
		b) LILO of VTPS-Suryapet-I		2.00	14.4.2018
Asset-V	Asset-5	a) 400 kV VTPS-Suryapeta-II		54.66	2.4.2013
		b) LILO of VTPS-Suryapet-II		2.00	14.4.2018
Asset-XX	Asset-20	220 kV Chillakallu-Narketpalli D/C line	120.00	108.00	10.3.2010

		a) 220 kV Chillakallu- Suryapeta	65.80	38.62	29.3.2019
		b) LILO of Chillakallu to Suryapeta SS		41.68 CKM	21.12.2016
Asset-XXI	Asset-21	a) 220 kV Chillakallu- Pulichintala		Out of 78.78.CKM, 18.08 CKM is pertains to Telangana	29.3.1999
		b) LILO of Chillakallu to Pulichintala		Out of 78.78.CKM, 48.70 CKM is pertains to Telangana	5.12.2018
Asset-XXIX	Asset-29	132 kV A.P. Carbides-Alampur-I			17.5.2004
		a) 132 kV A.P. Carbides-Alampur-I	19.70	4.66	20.1.1987
		b) LILO of A.P. Carbides to Wanaparthi at Alampur SS		1.20	17.5.2004
Asset-XXXVII	Asset-37	132 kV A.P. Carbides-Alampur-II			13.1.2000
		a) 132 kV A.P. Carbides-Alampur-II	19.70	4.66	13.1.2000
		b) LILO of A.P. Carbides to Gadwal at Alampur SS		1.20	6.9.2014

25. The Petitioner in the instant petition, in addition to the natural inter-State lines approved by the Commission vide its order dated 13.1.2020 in Petition No. 2/TT/2019, has claimed the tariff for LILOs of the existing assets, namely, Assets-2, 4, 5, 10 21 , 29 and 37. The Commission through Record of Proceedings dated 24.11.2022 directed the Petitioner to submit the purpose of creating the LILOs of the existing lines and to furnish the SCM/RPC approval, if any. In response, the Petitioner vide affidavit dated 11.1.2023 has submitted the following:

Sl. No.	Assets	COD	Asset No.	Purpose of Creating LILO	SCM/ RPC Approval
1	400 kV Kalpaka-Asupaka	9.8.2017	Asset-2	For extension of 400 kV and 220 kV supply to Indira Sagar Rudramakota Lift Irrigation Project in Khammam District for a CMD of 229.096 MW for three pumping stages at Medipally, Asupaka, Bandarugudem, under Bulk Load works, to facilitate cultivation of 2 lakh acres of land.	41 st Standing Committee Meeting on Power System Planning for Southern Region held on 22.9.2017 at Chennai.
	(a) Part of Old Line 400 kV Kalpaka-Khammam-I	10.5.2002			
	(b) LILO of Kalpaka to Khammam-I at Asupaka Sub-station	9.8.2017			
2	400 kV VTPS-Suryapet-I	30.3.2016	Asset-4	Under Transmission System Improvement Scheme-Construction of 400/220/132 kV Suryapeta on stand-alone basis	39 th Standing Committee Meeting on Power System Planning for Southern Region held on 28th-29th December, 2015 at New Delhi.
	(a) Part of Old Main Line 400 kV VTPS-Malkaram-I	2.4.2013			
	(b) LILO of VTPS to Malkaram-I at Suryapet Sub-station	30.3.2016			
3	400 kV VTPS-Suryapet-II	14.4.2018	Asset-5	Under Transmission System Improvement Scheme-Construction of 400/220/132 kV Suryapeta on stand-alone basis	39 th Standing Committee Meeting on Power System Planning for Southern Region held on 28th-29th December, 2015 at New Delhi.
	(a) Part of Old Line 400 kV VTPS-Malkaram-II	2.4.2013			
	(b) LILO of VTPS to Malkaram-II at Suryapet Sub-station	14.4.2018			
4	220 kV Chillakallu-Suryapeta	21.12.2016	Asset-20	Evacuation of power from Hinduja National Power Corporation Limited, Vishakhapatnam	Not Available
	(a) Part of old line 220 kV Chillakallu-Narketpally-I	29.3.1999			
	(b) LILO of Chillakallu to Narketpally-I at Suryapeta Sub-station	21.12.2016			
5	220 kV Chillakallu-Pulichintala	5.12.2018	Asset-21	Evacuation of power from Pulichintala Hydro Electric Project	Not Available
	(a) Part of Old Line 220 kV Chillakallu-Narketpally-II	29.3.1999			
	(b) LILO of Chillakallu to Narketpally-II at Pulichintala Sub-station	5.12.2018			

Asset-2: (400 kV Kalpaka-Khammam-I and II)

26. SRPC, vide its letter dated 11.9.2019, has certified the Asset-II: 400 kV Kalpaka-Khammam-I and II as natural ISTS line from 2.6.2014. The Petitioner has made the LILO of Kalpaka to Khammam-I at Asupaka Sub-station and claimed COD of the LILO

as 9.8.2017. The LILO is for providing supply to Indira Sagar Rudramakota Lift Irrigation Project in Khammam District for a CMD of 229.096 MW for three pumping stages at Medipally, Asupaka, Bandarugudem, under Bulk Load works, to facilitate cultivation of 2 lakh acres of land. The Petitioner has discussed about this in the 41st Standing Committee Meeting on Power System Planning for Southern Region held on 22.9.2017.

27. We have gone through the submissions of the Petitioner. The relevant extracts of the minutes of the meeting of 41st SCM of SR held on 22.9.2017 are as follows:

“41.0 400/220 kV Asupaka S/S with 2x315 MVA and LILO of one circuit of 400 kV Kalpaka –Khammam D/C Line at Asupaka

41.1 Representative of TSTRANSCO stated that APTRANSCO (before bifurcation of states) had envisaged 400/220 kV Sub-station at Asupaka (2x315 MVA) with LILO of one circuit of 400kV Kalpaka - Khammam D/C Line at Asupaka SS and following 220 kV downstream connectivity to meet the Lift Irrigation (LI) loads under Indira Sagar Rudramakota Lift Irrigation Scheme:

- i) Asupaka - Medipally 220kV D/C line (12.01km)*
- ii) Asupaka - Bandarugudem 220kV D/C line (14.84km)*
- iii) 220/11kV Medipally Substation (2x25MVA)*
- iv) 220/11kV Asupaka SS (3x50MVA)*
- v) 220/11kV Bandarugudem SS (3x50MVA)*

41.2 After formation of Telangana State, the works in 220 kV substations at Medipally and Bandarugudem were stopped as the intake pump house and gravity canal etc came under the geographical limits of Andhra Pradesh. But work at Asupaka was in progress. For effective utilization of 400/220 kV Asupaka Substation which came under newly created Telangana state, TSTRANSCO revised 220/132 kV downstream connectivity as follows:

- i) Upgradation of existing 132/33 kV Aswaraopet SS to 220 kV with 2x100 MVA, 220/11kV transformer.*
- ii) Asupaka -Aswarapet 220kV D/C (20km)*
- iii) Stringing of 2nd circuit on the existing Aswaraopet - B.Gangaram 132 kV S/C Line on D/C tower (30 km).*

*41.3 TSTRANSCO had approached CEA in May 2017 with request for approval to charge 400/220kV Asupaka S/S (with 2x315 MVA ICTs) with **LILO of one circuit of Kalpaka – Khammam Line 400kV D/C Asupaka Substation.***

41.4 Director (PSPA-II), CEA informed that a meeting was held in CEA with CTU, TSTRANSCO & APTRANSCO on 10th July 2017, wherein it was agreed in principle to allow TSTRANSCO to charge 400kV Asupaka S/S (2x315MVA,400/220kV) and LILO of one circuit of Kalpaka-Khammam 400Kv D/c Line at Asupaka. Further, CTU was advised to carry out the study for reactive compensation requirement at 400kV Asupaka Substation for line charging and over voltage control.

41.5 Representative of CTU stated that they had carried out charging studies and it was observed that total rise in voltage without reactor while charging from Kalpaka end was 19.7kV. Therefore, it was suggested to provide 1x63 MVAR (400kV) Switchable line reactor at Asupaka substation. Further, to control high voltage under light load condition bus reactor of 1x80 MVAR,400kV was also to be provided. TSTRANSCO agreed for the same

41.6 Member (Power System), CEA stated that as Asupaka substation was not agreed in any standing committee meeting. He suggested to avoid such pro facto approvals in future.

41.7 Members agreed with the proposal of TSTRANSCO.”

28. As per the above minutes of the meeting of 41st SCM of SR held on 22.9.2017, the purpose of creation of the LILO of one circuit of Kalpaka–Khammam Line 400 kV D/C Asupaka Sub-station is to supply power to Lift Irrigation (LI) loads under Indira Sagar Rudramakota Lift Irrigation Scheme. The sole beneficiary of this LILO is Telangana and no other inter-State beneficiaries are utilising the above mentioned LILO. Therefore, we are of the view that the LILO of one circuit of Kalpaka-Khammam Line at 400 kV D/C Asupaka Sub-station is not to be treated as the natural inter-State transmission line.

29. It is further observed that 400 kV Kalpaka-Khammam-I and II was approved as natural ISTS line from 2.6.2014. The Petitioner has made LILO of Kalpaka- Khammam-I at Asupaka Sub-station on 9.8.2017, and with this LILO, the line is bifurcated into 400 kV Kalpaka-Asupaka and 400 kV Asupaka-Khammam lines, and only 400kV Kalpaka-Asupaka line could be considered as natural ISTS line. As discussed above, LILO of kalpakaka to Khammam-I at Asupaka transmission line is not considered as ISTS and 400 kV Kalpaka-Asupaka line treated as ISTS line from 9.8.2017 and the line length considered as 8.50 Ckm.

30. In view of the above, the 400 kV Kalpaka-Khammam-I&II lines considered as ISTS lines from 2.6.2014 to 8.8.2017 and line length of Telangana portion has been considered as 121 Ckm. Due to creation of LILO from 8.9.2017, the transmission lines are renamed and granted transmission tariff for 400 kV Kalpaka-Asupaka-I from

8.9.2017 for about 8.50 Ckm under Telangana Portion and 400 kV Kalpaka-Khammam-II from 2.6.2014 for about 121.00 Ckm respectively. The details of the same is as follows:

<u>Name of the line</u>	Date of Commercial Operation	Total length in Ckt-km	Length of the line Telangana Portion (in Ckt-km)	Length approved in KM for the purpose of tariff calculation	Asset renamed in the instant Petition
400 kV Kalpaka-Khammam-I	10.5.2002	360	121	121	
a) 400 kV Kapaka-Aupaka SC line	10.05.2002	264.5	8.5	8.5	Asset-2
b) LILO of Kapaka to Asupaka SS	9.8.2017		17.00	0	Tariff not granted
400 kV Kalpaka-Khammam II	10.05.2002	360	121	121	Asset-3

Assets-4 and 5: 400 kV VTPS-Malkaram Ckts-I and II:

31. The Petitioner has made the LILO of the existing 400 kV VTPS-Malkaram D/C line at Suryapeta and claimed COD of the same as 30.3.2016. The Petitioner has submitted that the purpose of the LILO is for system improvement of the existing system and this matter was discussed in the 39th Standing Committee Meeting on Power System Planning for Southern Region held on 28th-29th December, 2015 at New Delhi.

32. We have gone through the submissions of the Petitioner. The relevant extracts of the minutes of the 39th SCM of SR are as follows:

“7.0 Transmission evacuation schemes of Manuguru TPP (4x270 MW), Kothagudem TPS Stage- VII (1x800 MW).

7.1 Director, CEA stated that TSTRANSCO had requested to get approval of the Standing Committee meeting on Power system Planning of Southern Region for their proposed evacuation schemes of Manuguru TPP, Kothagudem TPS STG-VII and Damercharela TPP(2x600+4x800 MW).

7.2 He said that TSTRANSCO has also proposed to convert 220 kV Dindi switching station into 400/220kV conventional SS by April, 2016, to draw about 500 MW to meet the state programme of providing 9 hrs day time agricultural supply. Creation of Dindi 400/220 kV substation and its connectivity line was part of transmission system for Damercharela(2x600+4x800 MW). He explained that 14 as Damarcharela Generation cannot be expected by 2019, TSTRANSCO has proposed to either LILO one circuit of 400kV Srisailem- Mamidipalli line or LILO of 400kV Nagarjuna Sagar-Kurnool ISTS line at the proposed Dindi 400/220kV SS.

7.3 Director(Projects), TSTRANSCO said that based on the Joint studies carried out with PGCIL and CEA on 26.06.2015, 'in-principle' approval was given by CEA for (i) Transmission system for Manuguru(4x270 MW) TPS, (ii) Transmission system for Kothagudem VII (1x800MW) TPS, (iii) Common transmission system for Manuguru(4x270 MW) TPS and (iv) Transmission system for Dindi 400/220kV SS.

7.4 The TSTRANSCO proposal was discussed and it was also decided to include 1x125 MVAR bus reactor at Manuguru and Kothagudem. TSTRANSCO also requested to LILO 400kV Nagarjuna Sagar-Kurnool ISTS line at the proposed Dindi 400/220 kV SS. PGCIL said that as per the studies carried out the LILO of 400 kV Nagarjuna Sagar-Kurnool at Dindi is not effective, as such it may be considered later, the same was agreed.

7.5 COO(CTU) stated that the Bommanpally-Khammam 400 kV DC line is required only for reliability purpose and not for evacuation of power. Director, CEA also endorsed the same. Accordingly, it was decided that Bommanpally-Khammam 400 kV DC line by TSTRANSCO would be considered in the SCPSPSR after Bommanpally -Jangaon, Bommanpally - Suryapeta lines become available.

7.6 After discussions following was agreed to be implemented by TSTRANSCO as **state transmission projects:**

A) Manuguru(4x270 MW) TPS:

i) Manuguru TSGENCO plant switchyard to proposed 400/220kV Bommanapalli SS with Quad Moose 400 kV DC line.

ii) 1x125 MVAR Bus reactor at Manuguru switchyard

B) Kothagudem VII(1x800MW) TPS:

i) KTPS Stage VII switchyard to proposed 400/220kV Bommanapalli SS with Quad Moose 400kVDC line.

ii) 1x125 MVAR Bus reactor at KTPS Stage VII switchyard

C) Common transmission system for Manuguru(4x270 MW) TPS and Kothagudem VII(1x800MW) TPS:

i) From proposed 400/220kV Bommanapalli SS to upcoming Suryapet 400/220/132kV SS by Quad Moose 400kV DC line – about 125 km

ii) From proposed 400/220 kV Bommanapalli SS to proposed 400/220kV Jangaon SS by Quad Moose 400kV DC line –about 120 km 15

iii) From proposed 400/220 kV Jangaon SS to proposed 400kV Tippapur LI SS by Quad Moose 400kV DC line –about 70 km

iv) From proposed 400/220 kV Bommanapalli SS to proposed 220/132kV Kallur SS by Single Moose 220 kV DC line-about 70 km

v) From proposed 400/220 kV Bommanapalli SS to proposed 220/132kV Pedagopathi SS by Single Moose 220 kV DC lineabout 110 km

vi) From proposed 400/220 kV Bommanapalli SS to proposed 220/132kV Bommanapalli SS by Single Moose 220kV DC line.

vii) From Proposed 400/220 kV Jangaon SS to Upcoming 220/132 kV Jangaon SS by Single Moose 220 kV DC Line – about 15 km

viii) From Proposed 400/220 kV Jangaon SS to Existing 220/132 kV Husnabad SS by Single Moose 220 kV DC Line – about 60 km

ix) From Proposed 400/220 kV Jangaon SS to Existing 220/132 kV Bhongiri SS by Single Moose 220 kV DC Line – about 70 km

x) 400/220 kV Bommanapalli SS with 2 x 315 MVA

xi) 400/220 kV Jangaon SS with 3 x 500 MVA xii) 220/132 kV Kallur SS with 3 x 50 MVA

xiii) 220/132 kV Husnabad SS with 2 x 80 MVA.

xiv) LILO of both circuits of Malkaram- Vijaywada 400 kV DC line at Suryapeta 400 kV S/S instead of LILO of only one circuit

D) Dindi 400/220 kV SS

i) LILO of both circuits of 400 kV Srisailem –Mamdipally DC line at Dindi 400/220 kV S/S.”

33. On perusal of the above minutes of the 39th SCM of SR held on 28th-29th December, 2015, we find that in the said meeting the above-mentioned Transmission System was agreed upon for evacuation of power from Manuguru TPP (4x270 MW), Kothagudam TPS Stage-VII (1x800 MW and it was to be implemented by TSTRANSCO as State Transmission Project. The purpose of creation of LILO of both circuits of Malkaram-Vijaywada 400 kV DC line at Suryapeta 400 kV Sub-station instead of LILO of only one circuit is approved as a State Transmission Project and not as an ISTS Project. In view of this, the tariff in respect of LILO of one circuit of Malkaram-Vijayawada 400 kV DC line at Suryapeta is not allowed.

34. It is observed that the Petitioner has commissioned LILO of one circuit of Malkaram-Vijaywada 400 kV DC line at Suryapeta on 30.3.2016 and 14.4.2018. As discussed above, we are not granting tariff for LILO of VTPS to Malkaram-I at Suryapet SS and LILO of VTPS-Suryapet-II. In case of Asset-IV, due to creation of LILO on 30.3.2016, the length of 400 kV VTPS-Suryapeta-I has been considered as 54.66 ckm under Telangana Portion and granted tariff from 2.6.2014. In case of Asset-V, due to creation of LILO on 14.4.2018, the transmission tariff for 400 kV VTPS-Suryapeta-II has been granted from 2.6.2014 for about 54.66 ckm under Telangana Portion.

<u>Name of the line</u>	Total length in Ckt-km	Length of the line Telangana Portion (in Ckt-km)	Length approved in km for the purpose of tariff calculation	Asset renamed in the instant petition
400 kV VTPS-Malkaram-I&II	1.4.2013	260.95	189.32	
a) 400 kV VTPS-Suryapet-I	2.4.2013	129	54.66	Asset-4
b) LILO of VTPS to Malkaram-I at Suryapet SS	30.3.2016		2	Tariff not granted
a) 400 kV VTPS-Suryapet-II	2.4.2013	129	54.66	Asset-5
b) LILO of VTPS-Suryapet-II	14.4.2018		2	Tariff not granted

Assets-20 and 21: (220 kV Chillakallu-Narketpalli-I & II)

35. SRPC vide its letter dated 11.9.2019 has certified 220 kV Chillakallu-Narketpalli-I &II lines as natural ISTS lines from 2.6.2014. The Petitioner has made LILO of the existing Chillakallu-Narketpalli line-I at Suryapet Sub-station and line-II at Pulichintala Sub-station and claimed the COD of the same as 21.12.2016 and 5.12.2018 respectively. The Petitioner has submitted that the purpose of creation of these LILOs is to evacuate power from Hinduja Thermal Power Station. The Petitioner has not submitted any SCM/RPC approval for the same.

36. We have gone through the submissions of the Petitioner. The relevant minutes of the 36th SCM of SR is as follows:

“9.2 Power evacuation system from 1040 MW power plant of M/s Hinduja at Vishakapatnam

9.2.1 For evacuation of power from 1040 MW power plant of M/s Hinduja following is proposed by APTRANSCO:

- (i) 400 kV twin moose D/c line from Kalpaka S/s to Hinduja (HNPCL) Switchyard.*
- (ii) A new 400/220 kV KV Kota S/s with 2x315 MVA capacity and 400 kV twin moose D/c line from HNPCL switchyard to the proposed KV Kota S/s.*

(iii) 400/220 kV Suryapet S/s with 2x315MVA capacity and 400kV quad moose D/c line from proposed KV Kota S/s to proposed Suryapet S/s.

(iv) 400 kV quad moose D/c line from proposed Suryapet S/s to 400/220 kV Yedumailaram(Shankarapally). (this line is to be made through Manikonda which can be made LILO upon realization of 400 kV Manikonda S/s). 11

(v) 400 kV twin moose D/c line from proposed KV Kota S/s to Vemagiri S/s.

9.2.2 COO (CTU), PGCIL said that the Hinduja generation project is getting ready for commissioning and APTRANSCO is very late in formulating its proposal for a sufficient transmission system which would enable evacuation of power from the project.

9.2.3 ED(SRLDC), POSOCO said that in view of the constraints in the system beyond Vemagiri, full evacuation of power from Hinduja project may not be possible as APTARNSCO is yet to start construction of above transmission system.

9.2.4 Member agreed for the above proposed transmission system. It was also agreed that in the absence of above transmission system the generation at Hinduja may have to be backed-down to avoid over-loadings in the grid. It was indicated that about 600 MW of power may be injected into ISTS either at Vemagiri or at Hinduja. The actual quantum of gas based injections at Vemagiri and that at Hinduja power project that may be allowed under different scenarios would be worked through operational studies on case to case basis.”

37. The Petitioner has submitted that the purpose of creation of the LILO is to evacuate power from Hinduja Thermal Power Station. However, on perusal of above minutes, we note that Suryapet-kV Kota 400 kV D/C line is the only ISTS line approved for evacuation of power from 1040 MW power plant of Hinduja at Visakhapatnam. Accordingly, we are not inclined to approve the tariff for LILO of the 220 kV Chillakallu-Narketpalli-I at Suryapeta Sub-station and 220 kV Chillakallu-Narketpalli-II at Pulichintala Sub-station.

38. The details of the transmission assets considered for grant of tariff is as follows:

<u>Name of the line</u>	Total length in Ckt-km	Length of the line Telangana Portion (in CKt-km)	Length approved in km for the purpose of tariff calculation	Asset renamed in the instant petition
a) 220 kV Chillakallu-Suryapeta	29.3.1999	65.80	38.62	Asset-20
b) LILO of Chillakallu-Narketpalli-I	21.12.2016		41.68	Tariff not granted

at Suryapeta SS					
a) 220 kV Chillakallu- Pulichintala	29.3.1999	65.80	18.08		Asset-21
b) LILO of Chillakallu- Narketpally-I at Pulichintala SS	5.12.2018		48.7		Tariff not granted

Asset-29 and Asset-37:

39. The Commission vide its order dated 13.1.2020 in Petition No. 2/TT/2019 has granted the tariff for 132 kV A.P. Carbides-Alampur and 132 kV A.P. Carbides-Gadwal transmission lines. The Petitioner in the instant petition has claimed tariff for LILO of A.P. Carbides to Wanaparthy at Alampur Sub-station and LILO of A.P. Carbides to Gadwal at Alampur Sub-station. From the perusal of record, it is observed that the Petitioner has not mentioned the purpose of creation of the LILO at Alampur Sub-station and we further observe that the LILO at Alampur Sub-station is supplying power to Telanga only. In view of the aforesaid facts, we are not inclined to grant tariff for the LILO of A.P. Carbides to Wanaparthy at Alampur Sub-station and the LILO of A.P. Carbides to Gadwal at Alampur Sub-station. Accordingly, the details of the transmission assets considered for grant of tariff is as follows

<u>Name of the line</u>	Date of Commercial Operation	Total length in Ckt- km	Length of the line Telangana Portion (in CKt- km)	Length approved in KM for the purpose of tariff calculation	Asset renamed in the instant Petition
a) 132 kV A.P. Carbides-Alampur-I	20.1.1987	19.7	4.66	4.66	Asset-29

b) LILO of A.P Carbides to Wanaparthy at Alampur SS	17.5.2004		1.2	-	Tariff not granted
a) 132 kV A.P. Carbides-Alampur-II	13.1.2000	19.7	4.66	4.66	Asset-37
b) LILO of A.P Carbides to Gadwal at Alampur SS	6.9.2014		1.2	-	Tariff not granted

40. In view of the above discussions, the tariff in respect of the following LILOs is not allowed:

Sl. No.	Name of the LILO
1	LILO of Kalpaka to Khammam-I at Asupaka Sub-station
2	LILO of VTPS to Malkaram-I at Suryapet Sub-station
3	LILO of VTPS-Suryapet-II
4	LILO of Chillakallu to Narketpally-I at Suryapeta Sub-station
5	LILO of Chillakallu to Narketpally-II at Pulichintala Sub-station
6	LILO of A.P. Carbides to Wanaparthy at Alampur Sub-station
7	LILO of A.P. Carbides to Gadwal at Alampur Sub-station

Operation and maintenance expenses

41. The details of the transmission assets and length in km considered for the calculation of O&M Expenses are as follows:

Sl. No.	Asset	Date of Commercial Operation	Total length in Ckt-km	Length of the line Telangana Portion (in Ckt-km)	Length approved in km for the purpose of tariff calculation	Asset renamed in the instant petition
1	Asset-2 400 kV Kapaka-Aupaka SC line*	10.5.2002	365	121 ckm from 6.6.2014 to 8.8.2017 and from 9.8.2017 the length of line is 8.5 ckm	121 ckm from 6.6.2014 to 8.8.2017 and from 9.8.2017 the length of line is 8.5 ckm	Asset-2

2	Asset-3	10.5.2002	365	121	121	Asset-3
3	Asset-4 400 kV VTPS- Suryapet-I	2.4.2013	129.00	54.66	54.66	Asset-4
4	Asset-5 400 kV VTPS- Suryapet-II	2.4.2013	129.00	54.66	54.66	Asset-5
5	Asset-20 220 kV Chillakallu- Suryapeta	29.3.1999	65.80	38.62	38.62	Asset-20
6	Asset-21 220 kV Chillakallu- Pulichintala	29. 3.1999	65.80	18.08	18.08	Asset-21
7	Asset-29 132 kV A.P. Carbides- Alampur-I	20.1.1987	19.7	4.66	4.66	Asst-29
8	Asset-37 132 kV A.P. Carbides- Alampur-II	13.1.2000	19.7	4.66	4.66	Asset-37

42. The asset wise O&M Expenses has been worked out as per the norms specified under 2014 Tariff Regulations and the same is as follows:

Asset-2:

2014-15	2015-16	2016-17	2017-18		2018-19
			1.4.2017 to 8.8.2017	9.8..2017 to 31.3.2018	
71.02	88.45	91.36	33.61	4.25	6.85

Asset-3:

2014-15	2015-16	2016-17	2017-18	2018-19
71.02	88.45	91.36	94.38	97.53

Asset-4:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
32.08	39.96	41.27	42.63	44.06

Asset-5:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
32.08	39.96	41.27	42.63	44.06

Asset-20:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
22.67	28.23	29.16	30.12	31.13

Asset-21:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
10.61	13.22	13.65	14.10	14.57

Asset-29:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
2.73	3.41	3.52	3.63	3.76

Asset-37:

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
2.73	3.41	3.52	3.63	3.76

43. Accordingly, computation of transmission charges for newly created LILOs of the existing assets for the year 2014-15 (pro-rata from 2.6.2014 to 31.3.2015 i.e. 303 days), 2015-16, 2016-17, 2017-18 and 2018-19 are as follows:

(₹ in lakh)

Asset-2(a)	2014-15	2015-16	2016-17	2017-18 (6.6.2014 to 8.8.2017)
Depreciation	180.32	87.14	87.14	31.04
Interest on Loan	23.64	0.00	0.00	0.00
Return on Equity	158.81	191.30	191.30	68.13
Interest on Working Capital	12.27	11.30	11.46	4.14
O & M Expenses	71.02	88.45	91.36	33.61
Total	446.05	378.19	381.26	136.92

(₹ in lakh)		
Asset-2(b)	2017-18 (9.8.2017 to 31.3.2018)	2018-19
Depreciation	3.50	5.61
Interest on Loan	0.00	0.00
Return on Equity	8.65	13.44
Interest on Working Capital	0.51	0.82
O & M Expenses	4.25	6.85
Total	16.91	26.71

(₹ in lakh)					
Asset-3	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	250.65	121.13	121.13	121.13	121.13
Interest on Loan	32.85	0.00	0.00	0.00	0.00
Return on Equity	220.74	265.91	265.91	265.91	265.91
Interest on Working Capital	15.53	13.80	13.96	14.12	14.30
O & M Expenses	71.02	88.45	91.36	94.38	97.53
Total	590.79	489.28	492.35	495.54	498.86

(₹ in lakh)					
Asset-4	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	315.27	379.78	379.78	379.78	379.78
Interest on Loan	288.04	324.70	299.23	275.20	257.99
Return on Equity	277.65	334.46	334.46	334.46	334.46
Interest on Working Capital	2.23	26.12	25.61	25.13	24.81
O & M Expenses	32.08	39.96	41.27	42.63	44.06
Total	915.27	1105.02	1080.35	1057.21	1041.10

(₹ in lakh)					
Asset-5	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	315.27	379.78	379.78	379.78	379.78
Interest on Loan	288.04	324.70	299.23	275.20	257.99
Return on Equity	277.65	334.46	334.46	334.46	334.46
Interest on Working Capital	2.23	26.12	25.61	25.13	24.81
O & M Expenses	32.08	39.96	41.27	42.63	44.06
Total	915.27	1105.02	1080.35	1057.21	1041.10

(₹ in lakh)					
Asset-20	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	16.02	19.66	19.66	19.66	19.66
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	36.35	43.78	43.78	43.78	43.78
Interest on Working Capital	0.82	3.02	3.07	3.12	3.18
O & M Expenses	22.67	28.23	29.16	30.12	31.13
Total	75.85	94.69	95.67	96.69	97.75

(₹ in lakh)					
Asset-21	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	7.50	9.20	9.20	9.20	9.20
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	17.02	20.50	20.50	20.50	20.50
Interest on Working Capital	0.38	1.41	1.44	1.46	1.49

O & M Expenses	10.61	13.22	13.65	14.10	14.57
Total	35.51	44.33	44.79	45.27	45.76

(₹ in lakh)

Asset-29	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.15	0.19	0.19	0.20	0.21
O & M Expenses	2.73	3.41	3.52	3.63	3.76
Total	2.89	3.59	3.71	3.84	3.96

(₹ in lakh)

Asset-37	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.15	0.19	0.19	0.20	0.21
O & M Expenses	2.73	3.41	3.52	3.63	3.76
Total	2.89	3.59	3.71	3.84	3.96

C. Determination of tariff for New ISTS Lines

Date of Commercial Operation ('COD')

44. Regulation 4(3) of the 2014 Tariff Regulations provides as follows:

"4. Date of Commercial Operation: *The date of commercial operation of a generating station or unit or block thereof a transmission system or element thereof shall be determined as under:*

(3) Date of Commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end:

Provided that:

(i) Where the transmission line or Sub-station is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavour to commission the generating station and the transmission system simultaneously as far as practicable and shall ensure the same through appropriate Implementation Agreement in accordance with Regulation 12(2) of these Regulations.

(ii) in case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof."

45. The Petitioner has claimed COD in respect of Assets-38 & 39 i.e. 400 kV D/C Uravakonda–Veltoor line-I & II as 17.11.2016 and 18.11.2016 respectively, and in respect of Assets-40 & 41 i.e. 400 kV D/C Suryapeta-K.V. Kota line-I & II respectively as 20.10.2016.

46. The Commission through its Record of Proceedings dated 24.11.2022 directed the Petitioner to submit the purpose of construction of these transmission lines and their power flow details. In response, the Petitioner has submitted that Asset-38 & 39 are meant for evacuation of wind power from Kadapa, Anantapur and Kurnool districts of Andhra Pradesh while Asset-40 & 41 are for evacuation of power from Hinduja National Power Corporation Limited.

47. We have considered the submissions of the Petitioner. It is observed that Suryapeta-kV Kota 400 kV D/C line as a part of power evacuation system from 1040 MW Power Plant of Hinduja at Visakhapatnam was discussed and agreed for implementation by Andhra Pradesh before its bifurcation. The Scheme was discussed in the 36th meeting of the Standing Committee on Power System Planning of Southern Region held on 4.9.2013. The relevant minutes of the 36th SCM of SR is extracted as follows:

“9.2 Power evacuation system from 1040 MW power plant of M/s Hinduja at Vishakapatnam

9.2.1 For evacuation of power from 1040 MW power plant of M/s Hinduja following is proposed by APTRANSCO:

(i) 400 kV twin moose D/c line from Kalpaka S/s to Hinduja (HNPCL) Switchyard.

(ii) A new 400/220 kV KV Kota S/s with 2x315MVA capacity and 400kV twin moose D/c line from HNPCL switchyard to the proposed KV Kota S/s.

(iii) 400/220kV Suryapet S/s with 2x315MVA capacity and 400kV quad moose D/c line from proposed KV Kota S/s to proposed Suryapet S/s.

(iv) 400kV quad moose D/c line from proposed Suryapet S/s to 400/220kV Yeddumailaram (Shankarapally). (this line is to be made through Manikonda which can be made LILO upon realization of 400kV Manikonda S/s).

(v) 400kV twin moose D/c line from proposed KV Kota S/s to Vemagiri S/s.

9.2.2 COO(CTU), PGCIL said that the Hinduja generation project is getting ready for commissioning and APTRANSCO is very late in formulating its proposal for a sufficient transmission system which would enable evacuation of power from the project.

9.2.3 ED(SRLDC), POSOCO said that in view of the constraints in the system beyond Vemagiri, full evacuation of power from Hinduja project may not be possible as APTARNSCO is yet to start construction of above transmission system.

9.2.4 Member agreed for the above proposed transmission system. It was also agreed that in the absence of above transmission system the generation at Hinduja may have to be backed-down to avoid over-loadings in the grid. It was indicated that about 600 MW of power may be injected into ISTS either at Vemagiri or at Hinduja. The actual quantum of gas based injections at Vemagiri and that at Hinduja power project that may be allowed under different scenarios would be worked through operational studies on case to case basis."

48. After the bifurcation of Andhra Pradesh, K.V. Kota is located in Andhra Pradesh and Suryapet is located in Telangana. Hence, these transmission lines would carry electricity from the geographical area of Andhra Pradesh State into the geographical area of Telangana State. It is further observed that SRPC vide its letter dated 2.5.2019 has certified the 400 kV K.V. Kota-Suryapeta D/C line as ISTS line. Accordingly, we approve 400 kV K.V. Kota-Suryapeta D/C line as ISTS line.

49. It is further observed that SRPC vide its letter dated 23.11.2016 has certified the 400 kV Uravakonda-Veltoor D/C line as ISTS line. Section 2(36)(i) of the Electricity Act, 2003 states that inter-State transmission system includes any system for the conveyance of electricity by means of main transmission line from the territory of one State to another State. In the instant case, 400 kV Uravakonda-Veltoor D/C line is connecting line between Andhra Pradesh and Telangana. SRPC has also certified this transmission line as ISTS line. Therefore, we approve 400 kV D/C Uravakonda-Veltoor line as an ISTS line.

50. The Petitioner has submitted that 400 kV D/C Uravakonda-Veltoor line was put under commercial operation from 18.11.2016. In this regard, the Petitioner has submitted SRPC Certificate dated 23.11.2016 indicating that 400 kV D/C Uravakonda-Veltoor is natural inter-State line between the States of Andhra Pradesh and Telangana which was declared under commercial operation on 18.11.2016. In view of above, COD

of 400 kV D/C Uravakonda-Veltoor line is considered as 18.11.2016 for the purpose of tariff determination.

51. The Petitioner has submitted that Asset-40 & 41 viz 400 kV K.V. Kota- Suryapet-I & II feeders respectively were test charged on 20.10.2016 and subsequently declared under commercial operation from 25.1.2017 after completion of 400 kV Suryapet Sub-station. In this regard, the Petitioner has submitted SRPC Certificate dated 2.5.2019, minutes of 31st SRPC meeting indicating the commercial operation of the said line, SRPC Certificate dated 11.9.2019 indicating that the said lines are natural inter-State lines between the States of Andhra Pradesh and Telangana. In addition to this SRPC's letter dated 11.6.2020 shows certification of the said lines as natural ISTS lines. In view of above, COD of Asset-40 & 41 is considered as 25.1.2017 for the purpose of tariff determination.

Capital Cost

52. Regulations 9(1) and 9(2) of the 2014 Tariff Regulations provide as follows:

“9. 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;*
- (bi) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period shall form part of the capital cost.*
- (c) *Increase in cost in contract packages as approved by the Commission;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;*
- (e) *Capitalised initial spares subject to the ceiling rates in accordance with the Regulation 11 of these regulations;*

- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations;*
- (h) *Adjustment of any revenue earned by the transmission licensee by using the assets before COD;”*

53. The Petitioner has claimed the following estimated capital cost as on COD in respect of Asset-38 & 39 and Asset-40 & 41 and has submitted Auditor's Certificate in support of the same:

(₹ in lakh)				
Assets	Asset Name	Capital cost excluding IDC, as on 31.3.2017	IDC till 31.3.2017	Capital cost as on 31.3.2017
Asset-38 & 39	400 kV Uravakonda-Veltloor-I & II feeder	16468.05	1932.00	18400.05
Asset-40 & 41	400 kV Suryapeta-K.V. Kota-I & II feeder	20520.08	2407.38	22927.46

54. The Petitioner has submitted copy of Investment Approval (IA) duly approved by TSERC vide Letter No. TSERC /Secy./ Dir.(Eng.) / DD (Trans) / F:E700:27/2013/ Dated 21.1.2015 for 400 kV Suryapeta Sub-station and associated lines. The Petitioner has submitted that 400 kV Suryapeta Sub-station was originally proposed with LILO from 400 kV Kamavarapukota to Shankarapalli QMDC line and administrative approval for the said line was issued vide T.O.O. (CE Construction/400 kV-II) Ms. No. 01, dated 17.1.2014 to the erstwhile State Andhra Pradesh in two parts viz Kamavarapukota to Suryapeta and Suryapeta to Shakarapalli. After the bifurcation of erstwhile State of Andhra Pradesh, the Kamavarapukota-Suryapeta line was executed in two phases i.e. 400 kV Kamavarapukota-Chinakorukondi (Andhra Pradesh portion) and Chinakorukondi-Suryapeta (Telangana State portion). The Petitioner has also submitted revised administrative approval dated 4.12.2014 wherein an amount of ₹56702.33 lakh has been approved for 400 kV Quad D/C line proposed 400/220 kV Kamavarapu Kota Sub-station to proposed 400/220/132 kV Suryapet Sub-station.

55. The Petitioner has submitted the administrative approval dated 15.11.2012 for evacuation of 3150 MW power from Wind Generators in Kadapa, Anantapur and Kurnool districts of erstwhile Andhra Pradesh wherein it is mentioned that the Finance Wing of APTRANSCO will be requested for funds of Phase-I works at an estimated cost of ₹1776.76 crore initially out of the total estimated cost of ₹3033.69 crore including IDC of ₹324.05 crore for comprehensive scheme. The Petitioner has submitted the abstract cost estimate wherein the details of the cost the instant transmission line, which is as follows:

Description of the line/Sub-station	Length/Capacity	(₹ in lakh) Estimated cost
400 kV D/C Quad Moose line from 400 kV Uravakonda Sub-station to 400 kV Veltoor Sub-station	190 km	45600

56. The Petitioner has submitted erstwhile APERC's letter dated 28.10.2013 wherein the Investment Approval for Phase-I is mentioned at an expenditure of ₹203700 lakh. The said Investment Approval for Phase-I also mentions the estimated cost of 400 kV D/C Quad Moose line from 400 kV Uravakonda Sub-station to 400 kV Veltoor Sub-station as ₹45600 lakh.

57. We have considered the submissions of the Petitioner. The Petitioner has placed the copy of administrative approval dated 25.3.2013 in respect of Asset-38 & 39. The said administrative approval dated 25.3.2013 was further approved by APERC on 28.10.2013 and Investment Approval (IA) for Phase-I at an expenditure of ₹203700 lakh was accorded wherein the estimated cost of 400 kV D/C Quad Moose line from 400 kV Uravakonda Sub-station to 400 kV Veltoor Sub-station is about ₹45600 lakh.

58. On perusal of the said investment Approval (IA), it is observed that the IA was granted for erection of 400 kV Quad Moose D/C line from 400/220 kV Uravakonda Sub-station to 400 kV Mahaboobnagar (Veltoor) Sub-station having length of 190 km at an

estimated cost of ₹45600 lakh. However, the Petitioner has claimed the line length in respect of Asset-38 & 39 as 73.60 km for the Petitioner's portion. The Petitioner has submitted the IA which shows the FR cost of entire transmission line of 190 km from 400 kV Uravakonda Sub-station to 400 kV Mahaboobnagar (Veltor) Sub-station. However, the apportioned FR cost in respect of Telangana State portion of ISTS line (400 kV Uravakonda-Veltor-I&II Transmission Line having length of 73.60 km) executed by the Petitioner post bifurcation of the State of Andhra Pradesh is neither made available nor execution schedule for the same is made available. Further, Petitioner in Form-12 has not furnished the details of time over-run. The Petitioner has also not provided Form-5.

59. The Petitioner has placed on record a copy of IA dated 17.1.2014 in respect of Asset-40 & 41 and the same was further approved by APERC on 12.3.2014. Thus, these two assets were envisaged as a part of intra-State Transmission System under the undivided State of Andhra Pradesh. It is observed that post bifurcation of the State of Andhra Pradesh, Asset-40 & 41 stand natural ISTS lines connecting the States of Andhra Pradesh and Telangana. TSRANSCO is now claiming tariff in respect of Telangana portion of these natural ISTS lines.

60. On perusal of the IA, it is further observed that the IA was granted for erection of 400 kV Quad Moose D/C line from 400/220 kV Kamavarapukota Sub-station-Suryapeta 400/220/132 kV Sub-station having length of 212 km at an estimated cost of ₹56702.33 lakh. However, the Petitioner has claimed the line length in respect of Asset-40 & 41 as 86.40 km for TSTRANSCO portion. The Petitioner has submitted the IA which shows the FR cost of the entire transmission line of 212 km from Kamavarapukota Sub-station to Suryapeta 400/220/132 kV Sub-station. However, the apportioned FR cost in respect of Telangana State portion of ISTS line (400 kV K.V. Kota-Suryapeta-I and II

Transmission Line having length of 86.40 km) executed by TSTRANSCO post bifurcation of the State of Andhra Pradesh is not made available nor execution schedule for the same is furnished. The Petitioner in Form-12 has not furnished the details of time over-run. The Petitioner has also not provided Form-5.

61. The Petitioner is directed to submit the revised investment approval post bifurcation of the State of Andhra Pradesh for the assets 38 to 41 and also submit Form-5 and Form-12 at the time of truing up of 2014-19 tariff period.

62. Accordingly, capital cost considered in respect of Asset-38 & 39, Asset-40&41 as on COD under Regulation 9(2) of the 2014 Tariff Regulations is as follows:

(₹ in lakh)	
Assets	Capital cost allowed as on COD
Asset-38 & 39	14769.07
Asset-40 & 41	20164.46

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

63. As per the Auditor’s Certificate, the Petitioner has claimed IDC of ₹1932.00 lakh and ₹2407.39 lakh in the case of Asset-38 & 39 and Asset-40 & 41 I respectively. The Petitioner has not claimed any IEDC.

64. The capital cost in respect of Asset-38 & 39 and Asset-40 & 41 is allowed provisionally without capitalizing IDC of ₹1932.00 lakh and ₹2407.39 lakh in the case of Asset-38 & 39 and Asset-40 & 41 respectively as claimed in the Auditor’s Certificate and the same will be reviewed at the time of truing up. The Petitioner is directed to provide duly approved apportioned capital cost as per the FR in respect of Asset-38 & 39 and Asset-40 & 41 along with the details of scheduled date of commercial operation at the time of truing up. The Petitioner is further directed to provide awarded cost for the Asset-38 & 39 and Asset-40 & 41 at the time of truing up.

Initial Spares

65. The Petitioner has not claimed any Initial Spares for the assets in the instant petition.

66. The capital cost considered in respect of Asset-38 & 39 and Asset-40 & 41 as on COD under Regulation 9(2) of the 2014 Tariff Regulations is as follows:

(₹ in lakh)				
Assets	COD	Pro-rata capital cost (hard cost) claimed as on COD as per Auditor's Certificate (excluding IDC)	IDC (capitalised)	Capital cost considered for the purpose of tariff as on COD
Asset-38 & 39	18.11.2016	14769.07	0.00	14769.07
Asset-40 & 41	25.1.2017	20164.46	0.00	20164.46

Additional Capital Expenditure ("ACE")

67. Regulation 14 of the 2014 Tariff Regulations provides as follows:

"14. Additional Capitalisation and De-capitalisation:

(1) The capital expenditure in respect of the 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:

- (i) Undischarged liabilities recognized to be payable at a future date;*
- (ii) Works deferred for execution;*
- (iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;*
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and*
- (v) Change in law or compliance of any existing law:*

Provided that 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 shall be submitted along with the application for determination of tariff."

68. As per the Auditor's certificate dated 22.6.2020, the Petitioner has claimed the following Additional Capital Expenditure (ACE):

Asset-38 & 39

(₹ in lakh)		
Sl. No.	Particulars	Total
1	Expenditure from 1.4.2016 to 31.3.2017	5170.74

2	Expenditure from 1.4.2017 to 31.3.2018	392.48
3	Expenditure from 1.4.2018 to 31.3.2019	12.59

Asset-40 & 41

		(₹ in lakh)
Sl. No.	Particulars	Total
1	Expenditure from 1.4.2016 to 31.3.2017	2197.41
2	Expenditure from 1.4.2017 to 31.3.2018	-
3	Expenditure from 1.4.2018 to 31.3.2019	-

69. We have considered the submissions of the Petitioner. It is observed that the Petitioner has not submitted the details of ACE and regulation under which the proposed ACE is claimed. Due to non-submission of the details and justifications, we are not inclined to allow the ACE claimed by the Petitioner. The Petitioner is directed to submit the justification of ACE and details of ACE claimed at the truing-up and the same will be reviewed at the time of truing-up.

Capital Cost for 2014-19 tariff period

70. In view of above, the capital cost considered in respect of Asset-38 & 39 and Asset-40 & 41 for 2014-19 tariff period is as follows:

(₹ in lakh)			
Assets	Capital cost allowed as on COD	ACE allowed in 2014-19 period	Total cost allowed up to 31.3.2019
Asset-38 & 39	14769.07	0.00	14769.07
Asset-40 & 41	20164.46	0.00	20164.46

Debt-Equity ratio

71. Regulation 19 of the 2014 Tariff Regulations provides as follows:

“19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. 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:

- where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
- the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
- 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, 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 1.4.2014, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt: equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 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.”

72. The Petitioner in Form 6 has considered debt-equity ratio of 70:30. The debt-equity ratio of 70:30 has been considered in respect of the following assets as on COD and 31.3.2019 in accordance with Regulation 19 of the 2014 Tariff Regulations:

Asset-38 & 39

Particulars	Capital Cost as on COD		Capital Cost as on 31.3.2019	
	Amount (₹ in lakh)	(in %)	Amount (₹ in lakh)	(in %)
Debt	10338.35	70.00	10338.35	70.00
Equity	4430.72	30.00	4430.72	30.00
Total	14769.07	100.00	14769.07	100.00

Particulars	Capital Cost as on COD		Capital Cost as on 31.3.2019	
	Amount (₹ in lakh)	(in %)	Amount (₹ in lakh)	(in %)
Debt	14115.12	70.00	14115.12	70.00
Equity	6049.34	30.00	6049.34	30.00
Total	20164.46	100.00	20164.46	100.00

Depreciation

73. Regulation 27 of the 2014 Tariff Regulations provides as follows:

“27. 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 or elements thereof.

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 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.

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

(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-II** 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 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 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 during the fa end of the project(five years before the 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 during the fag end of the project.

(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.”

74. Weighted Average Rate of Depreciation (WAROD) at Annexure-XXX and Annexure-XXXI have been worked out after considering the depreciation rates of the assets as specified in the 2014 Tariff Regulations. In the present petition, date of commercial operation of Asset-38 & 39 and Asset-40 & 41 has been considered as 18.11.2016 and 25.1.2017 respectively. Accordingly, they will complete 12 years beyond 2018-19 and thus depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-II.

75. Accordingly, depreciation has been worked out on the basis of capital expenditure as on COD and additional capitalization incurred/ projected to be incurred thereafter, wherein depreciation for the first year has been calculated on pro-rata basis for the year/ part of year.

(₹ in lakh)

Sr. No.	Particulars	Asset-38 & 39		
		2016-17 (Pro-rata for 134 days)	2017-18	2018-19
A	Opening Gross Block	14769.07	14769.07	14769.07
B	Addition during the year 2014-19 due to projected ACE	0.00	0.00	0.00
C	Closing Gross Block (A+B)	14769.07	14769.07	14769.07
D	Average Gross Block (A+C)/2	14769.07	14769.07	14769.07
E	Weighted average rate of Depreciation (WAROD) (in %)	5.2800	5.2800	5.2800
F	Balance useful life (at the beginning of the year)	25	25	24
G	Lapsed Life (at the beginning of the year)	0	0	1
H	Aggregated Depreciable Value	13292.17	13292.17	13292.17
I	Combined Depreciation during the year	286.29	779.81	779.81
J	Aggregate Cumulative Depreciation (at the end of the year)	286.29	1066.09	1845.90
K	Remaining Depreciable Value (H-J)	13005.88	12226.07	11446.27

(₹ in lakh)

Sr. No.	Particulars	Asset-40 & 41		
		2016-17 (Pro-rata for 66 days)	2017-18	2018-19
A	Opening Gross Block	20164.46	20164.46	20164.46
B	Addition during the year 2014-19 due to projected ACE	0.00	0.00	0.00
C	Closing Gross Block (A+B)	20164.46	20164.46	20164.46
D	Average Gross Block (A+C)/2	20164.46	20164.46	20164.46
E	Weighted average rate of Depreciation (WAROD) (in %)	5.2800	5.2800	5.2800
F	Balance useful life (at the beginning of the year)	25	25	24
G	Lapsed Life (at the beginning of the year)	0	0	1
H	Aggregated Depreciable Value	18148.02	18148.02	18148.02
I	Combined Depreciation during the year	192.52	1064.68	1064.68
J	Aggregate Cumulative Depreciation (at the end of the year)	192.52	1257.20	2321.89
K	Remaining Depreciable Value (H-J)	17955.50	16890.81	15826.13

Interest on Loan (“IoL”)

76. Regulation 26 of the 2014 Tariff Regulations provides as follows:

“26. Interest on loan capital: (1) *The loans arrived at in the manner indicated in Regulation 19 of these regulations shall be considered as gross normative loan for calculation of interest on loan.*

(2) *The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*

(3) *The repayment for each of the year of the tariff period 2014-19 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.

(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 generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.*

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

(9) *In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:*

Provided that the beneficiaries or the long term transmission customers /DICs shall not

withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of refinancing of loan.”

77. The Petitioner has submitted that the loan for scheme is funded solely by Rural Electrification Corporation Limited (RCE) at a fixed rate of interest of 10.5% per year. However, the Petitioner has not submitted any supporting document for the same. Further, it is observed that the amount of loan as per Form-9C is not matching with the amount of loan apportioned as per Form-6.

78. The Petitioner is directed to submit the supporting documents for loan amount drawn including the dates of drawl of loan, dates of repayment of loan and rate of interest of loan at the time of true-up. Therefore, IoL has been allowed in respect of the transmission assets in accordance with Regulation 26 of the 2014 Tariff Regulations and the same is as follows:

(₹ in lakh)

	Particulars	Asset-38 & 39		
		2016-17 (Pro-rata for 134 days)	2017-18	2018-19
A	Gross Normative Loan	10338.35	10338.35	10338.35
B	Cumulative Repayments upto Previous Year	0.00	286.29	1066.09
C	Net Loan-Opening (A-B)	10338.35	10052.07	9272.26
D	Additions	0.00	0.00	0.00
E	Repayment during the year	286.29	779.81	779.81
F	Net Loan-Closing (C+D-E)	10052.07	9272.26	8492.45
G	Average Loan (C+F)/2	10195.21	9662.16	8882.36
H	Weighted Average Rate of Interest on Loan (in %)	10.500	10.500	10.500
I	Interest on Loan (G*H)	393.00	1014.53	932.65

(₹ in lakh)

	Particulars	Asset-40 & 41		
		2016-17 (Pro-rata for 66 days)	2017-18	2018-19
A	Gross Normative Loan	14115.12	14115.12	14115.12
B	Cumulative Repayments upto Previous Year	0.00	192.52	1257.20
C	Net Loan-Opening (A-B)	14115.12	13922.60	12857.92

	Particulars	Asset-40 & 41		
		2016-17 (Pro-rata for 66 days)	2017-18	2018-19
D	Additions	0.00	0.00	0.00
E	Repayment during the year	192.52	1064.68	1064.68
F	Net Loan-Closing (C+D-E)	13922.60	12857.92	11793.24
G	Average Loan (C+F)/2	14018.86	13390.26	12325.58
H	Weighted Average Rate of Interest on Loan (in %)	10.500	10.500	10.500
I	Interest on Loan (G*H)	266.17	1405.98	1294.19

Return on Equity ("RoE")

79. Regulations 24 and 25 of the 2014 Tariff Regulations provide as follows:

"24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 19 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 further that:

- i. In case of projects commissioned on or after 1st April 2014, an additional return of 0.50% shall be allowed, if such projects are completed within the timeline specified in Annexure-I;
- ii. the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever;
- iii. additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid;
- iv. the rate of return of a new project shall be reduced by 1% 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)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system;
- v. as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues;
- vi. additional RoE shall not be admissible for transmission line having length of less than 50 kilometers."

25. Tax on Return on Equity. (1) The base rate of return on equity as allowed by the

Commission under Regulation 24 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 on income from other business streams including deferred tax liability (i.e. income on business other than business of generation or transmission, as the case may be) shall not be considered 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) @ 20.96 % including surcharge and cess:

$$\text{Rate of return on equity} = 15.50 / (1 - 0.2096) = 19.610\%$$

(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 2014-15 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 2014-15 to 2018-19 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/DICs, as the case may be, on year to year basis.”

80. As per tariff Form-8, the Petitioner has claimed effective tax rate/MAT rate of 34.608% and 34.944% applicable during 2017-18 and 2018-19 respectively. However, the Petitioner has not submitted any supporting documents for the same. Therefore, effective tax rate during 2014-19 tariff period has been considered as zero for the purpose of grossing up of rate of RoE. This is subject to submission of the following information at the time of truing up:

“To arrive at the Effective Tax Percentage for true up tariff for 2014-19 period, the Petitioner may be directed to submit the details (Section wise of Income Tax Act) of 'Total Tax & Interest paid', 'Assessed MAT Income' and 'Refund of Tax and interest recovered thereon or additional payment of tax and penalty for short deposited tax' duly certified by the Auditor in accordance with applicable Auditing Standard and Implementation Guideline and to submit the information separately for 'Tariff Income' and 'Non-Tariff Income' duly reconciled with Books of Accounts.”

81. Accordingly, RoE is allowed on the basis of MAT rates applicable in the respective years:

(₹ in lakh)				
	Particulars	Asset-38 & 39		
		2016-17 (Pro-rata for 134 days)	2017-18	2018-19
A	Opening Equity	4430.72	4430.72	4430.72
B	Additions	0.00	0.00	0.00
C	Closing Equity	4430.72	4430.72	4430.72
D	Average Equity	4430.72	4430.72	4430.72
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50
F	MAT Rate for respective year (in %)	0.000	0.000	0.000
G	Rate of Return on Equity (in %)	15.500	15.500	15.500
A	Return on Equity	252.13	686.76	686.76

(₹ in lakh)				
	Particulars	Asset-40 & 41		
		2016-17 (Pro-rata for 66 days)	2017-18	2018-19
A	Opening Equity	6049.34	6049.34	6049.34
B	Additions	0.00	0.00	0.00
C	Closing Equity	6049.34	6049.34	6049.34
D	Average Equity	6049.34	6049.34	6049.34
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50
F	MAT Rate for respective year (in %)	0.000	0.000	0.000
G	Rate of Return on Equity (in %)	15.500	15.500	15.500
A	Return on Equity	169.55	937.65	937.65

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

82. The details of the transmission lines and line length in km are as follows:

Asset	Name of the line	COD considered	Length of line in km
Assets- 38	400 kV Uravakonda-Veltoor-I	18.11.2016	73.60
Asset- 39	400 kV Uravakonda-Veltoor-II		
Asset-40	400 kV Suryapeta-KV Kota line-I	25.1.2017	86.40
Asset-41	400 kV Suryapeta-KV Kota line-II		

83. Regulation 29(4) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. Norms specified in respect of the transmission assets are as follows:

Element	Norms for 2016-17	Norms for 2017-18	Norms for 2018-19
Transmission Line: Double Circuit (Bundled conductor with four or more sub-conductors) (in ₹ lakh per km)	1.133	1.171	1.210

84. We have considered the submissions of the Petitioner. The Petitioner has not claimed capital cost of the 2 number of 400 kV bays at Veltoor and Suryapet Sub-stations and has claimed the O&M Expenses towards 2 number of 400 kV bays at Veltoor and Suryapet Sub-stations. We are of the view that the O&M Expenses of the transmission assets can be allowed only if the capital cost of the assets is approved by the Commission under ISTS. In the instant case, tariff is allowed for the transmission line only. Accordingly, the O&M Expenses are allowed for the transmission line only.

85. The details of O&M Expenses allowed in respect of transmission assets as per the provisions of Regulation 29(3)(a) of the 2014 Tariff Regulations are as follows:

(₹ in lakh)			
O & M Expenses	2016-17	2017-18	2018-19
400 kV Uravakonda-Veltoor DC (ACSR Quad Moose) line Length in km: 123.355	30.39	86.18	89.05
400 kV Suryapeta-kV Kota line-I&II	97.89	101.17	104.54

Interest on Working Capital ("IWC")

86. Regulation 28(1)(c), Regulation 28(3), Regulation 28(4) and Regulation 3(5) of the 2014 Tariff Regulations specify as follows:

"28. Interest on Working Capital: (1) The working capital shall cover:

.....

(c) Hydro generating station including pumped storage hydro electric generating station and transmission system including communication system:

- (i) Receivables equivalent to two months of fixed cost;*
- (ii) Maintenance spares @ 15% of operation and maintenance expenses specified in Regulation 29; and*
- (iii) Operation and maintenance 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 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 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:

(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:-

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

87. The Interest on Working Capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations.

(i) Maintenance spares: Maintenance spares have been worked out based on 15% of Operation and Maintenance expenses specified in Regulation 28.

(ii) O & M expenses: O&M expenses have been considered for one month.

(ii) Receivables: The receivables have been worked out on the basis 2 months of annual transmission charges as worked out above.

(iv) Rate of interest on working capital: As per Proviso 3 of Regulation 28 of 2014 Tariff Regulation, SBI Base Rate Plus 350 bps as on 1.4.2016 (i.e.12.80%) has been considered as the rate of interest on working capital for the assets.

88. The components of the working capital and interest allowed thereon in respect of the transmission assets are as follows:

(₹ in lakh)

	Particulars	Asset-38 & 39		
		2016-17 (Pro-rata for 134 days)	2017-18	2018-19
A	Working Capital for O&M Expenses (one month of O&M Expenses)	6.90	7.18	7.42
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	12.42	12.93	13.36
C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	446.58	437.64	424.20
D	Total Working Capital (A+B+C)	465.89	457.75	444.98
E	Rate of Interest (in %)	12.80	12.80	12.80
F	Interest of working capital (D*E)	21.89	58.59	56.96

(₹ in lakh)

	Particulars	Asset-40 & 41		
		2016-17 (Pro-rata for 66 days)	2017-18	2018-19
A	Working Capital for O&M Expenses (one month of O&M Expenses)	45.11	8.43	8.71
B	Working Capital for Maintenance Spares (Maintenance Spares @15% of O&M Expenses)	81.20	15.18	15.68
C	Working Capital for Receivables (Receivable equivalent to two months of fixed cost)	686.62	598.18	579.73
D	Total Working Capital (A+B+C)	812.94	621.78	604.12
E	Rate of Interest (in %)	12.80	12.80	12.80
F	Interest of working capital (D*E)	18.82	79.59	77.33

Annual Fixed Charges of 2014-19 Tariff Period

89. The transmission charges allowed for the transmission assets for 2014-19 tariff period are as follows:

(₹ in lakh)

	Particulars	Asset-38 & 39		
		2016-17 (Pro-rata for 134 days)	2017-18	2018-19
A	Depreciation	286.29	779.81	779.81
B	Interest on Loan	393.00	1014.53	932.65

	Particulars	Asset-38 & 39		
		2016-17 (Pro-rata for 134 days)	2017-18	2018-19
C	Return on Equity	252.13	686.76	686.76
D	O&M Expenses	30.39	86.18	89.05
E	Interest on Working Capital	21.89	58.59	56.96
F	Total (A+B+C+D+E)	983.70	2625.87	2545.22

(₹ in lakh)

	Particulars	Asset-40 & 41		
		2016-17 (Pro-rata for 66 days)	2017-18	2018-19
A	Depreciation	192.52	1064.68	1064.68
B	Interest on Loan	266.17	1405.98	1294.19
C	Return on Equity	169.55	937.65	937.65
D	O&M Expenses	97.89	101.17	104.54
E	Interest on Working Capital	18.82	79.59	77.33
F	Total (A+B+C+D+E)	744.94	3589.07	3478.38

Sharing of Transmission Charges

90. The billing, collection and disbursement of the transmission charges (AFC) approved in this order for the transmission asset shall be governed by the provisions of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 as provided in Regulation 43 of the 2014 Tariff Regulations.

91. To summarise:

- The Annual Fixed Charges allowed for Existing ISTS Lines for the 2014-19 tariff period are as follows:

(₹ in lakh)						
Annual Fixed Charges	2014-15	2015-16	2016-17	2017-18	2018-19	
Asset- 1	5.19	6.30	6.32	6.34	6.37	
Assets-6 & 7	1.97	2.40	2.41	2.42	2.43	
Asset-8	28.67	35.73	36.93	38.12	39.40	
Asset-9	8.76	11.03	11.40	11.77	12.16	
Assets-10 & 11	49.55	61.71	63.74	65.85	68.04	
Asset-12	1.42	1.76	1.82	1.88	1.95	
Assets-13 & 14	1.30	1.62	1.67	1.73	1.79	
Asset-15	1.42	1.76	1.82	1.88	1.95	

Asset-16	62.00	76.87	77.82	30.33	31.35
Asset-18	58.95	69.87	68.53	67.22	66.05
Assets-19	182.51	216.50	212.56	208.77	205.73
Assets-22	2.07	2.57	2.66	2.75	2.84
Asset-23 & 24	1.95	2.43	2.51	2.59	2.68
Asset-25	2.73	3.40	3.51	3.62	3.75
Assets-26	14.55	18.13	18.72	19.34	19.99
Asset-27 & 28	1.73	2.16	2.23	2.30	2.38
Asset-30	7.94	9.70	9.80	9.91	10.02
Asset-31	29.80	36.43	36.88	37.34	37.82
Asset-32	4.37	5.23	5.18	4.08	4.15
Asset-33	11.50	13.71	13.54	10.38	10.53
Asset-34	0.82	0.98	0.96	0.95	0.93
Asset-35	5.89	7.03	6.94	6.87	6.82
Asset-36	9.51	11.28	11.06	10.86	10.73

b) The Annual Fixed Charges allowed for Asset-17 for 2014-19 tariff period are as follows:

	(₹ in lakh)				
Annual Fixed Charges	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-17	13.92	16.97	17.10	17.25	17.40

c) The Annual Fixed Charges allowed for newly created LILOs of the existing assets for the 2014-19 tariff period are as follows:

	(₹ in lakh)				
Annual Fixed Charges	2014-15	2015-16	2016-17	2017-18 (From 1.4.2017 to 8.8.2017)	2018-19
Asset-2(a)	446.05	378.19	381.26	136.92	-

	(₹ in lakh)				
Annual Fixed Charges	2014-15	2015-16	2016-17	2017-18 (From 9.8.2017 to 31.3.2018)	2018-19
Asset-2(b)	-	-	-	16.91	26.71

	(₹ in lakh)				
Annual Fixed Charges	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-3	590.79	489.28	492.35	495.54	498.86
Asset-4	915.27	1105.02	1080.35	1057.21	1041.10
Asset-5	915.27	1105.02	1080.35	1057.21	1041.10
Asset-20	75.85	94.69	95.67	96.69	97.75
Asset-21	35.51	44.33	44.79	45.27	45.76
Asset-29	2.89	3.59	3.71	3.84	3.96
Asset-37	2.89	3.59	3.71	3.84	3.96

d) The Annual Fixed Charges allowed for Newly Commissioned ISTS Lines for the 2014-19 tariff period are as follows:

(₹ in lakh)			
Annual Fixed Charges	2016-17 (Pro-rata for 134 days)	2017-18	2018-19
Assets- 38 & 39	983.70	2625.87	2545.22

(₹ in lakh)			
Annual Fixed Charges	2016-17 (Pro-rata for 66 days)	2017-18	2018-19
Assets- 40 & 41	744.94	3589.07	3478.38

92. Annexure to this order will form part of this order.

93. It is observed that the Petitioner has also filed Petition No.127/TT/2022 for determination of tariff of the inter-State transmission lines owned by it for the period 2019-24 in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, for inclusion in the common pool. The said petition was also heard on 24.11.2022 alongwith the instant petition and the order was reserved in the said petition. The Petitioner is directed to submit the details of the ACE, details of the loan amount and the documents in support of the MAT claimed by the Petitioner in case of the Assets-38 to Asset-41 (and other details for truing up the tariff of the 2014-19 tariff period allowed in the instant order) in Petition No.127/TT/2022 with a copy to the Respondents. The Petition No.127/TT/2022 shall be relisted for the purpose of truing up the tariff allowed for the transmission assets in the instant order for the 2014-19 tariff period.

94. This order disposes of Petition No. 325/TT/2022 in terms of the above discussion and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member

Annexure-I**Details of the tariff approved for the 2014-19 tariff period for Asset-1 is as follows:**

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	81.86	81.86	81.86	81.86	81.86
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	81.86	81.86	81.86	81.86	81.86
Average Gross Block	81.86	81.86	81.86	81.86	81.86
Depreciation					
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable value	73.67	73.67	73.67	73.67	73.67
Elapsed Life (at the beginning of the year)	13.00	14.00	15.00	16.00	17.00
Balance useful life of the asset (at the beginning of the year)	12.00	11.00	10.00	9.00	8.00
Remaining Depreciable value	20.13	18.74	17.03	15.33	13.63
Cumulative Depreciation (at the end of the year)	54.93	56.64	58.34	60.04	61.75
Depreciation	1.39	1.70	1.70	1.70	1.70
Interest on Loan					
Gross Normative Loan	57.30	57.30	57.30	57.30	57.30
Cumulative Repayment upto Previous Year	57.30	57.30	57.30	57.30	57.30
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	7.1141%	7.1680%	7.2104%	7.2993%	7.6092%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					

Opening Equity	24.56	24.56	24.56	24.56	24.56
Average Equity	24.56	24.56	24.56	24.56	24.56
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	3.16	3.81	3.81	3.81	3.81
Interest on Working Capital					
Maintenance Spares	0.09	0.09	0.10	0.10	0.10
O & M expenses	0.05	0.05	0.05	0.06	0.06
Receivables	1.04	1.05	1.05	1.06	1.06
Total	1.18	1.20	1.20	1.21	1.22
Interest	0.13	0.16	0.16	0.16	0.17
Annual Transmission Charges					
Depreciation	1.39	1.70	1.70	1.70	1.70
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	3.16	3.81	3.81	3.81	3.81
Interest on Working Capital	0.13	0.16	0.16	0.16	0.17
O & M Expenses	0.50	0.63	0.65	0.67	0.69
Total	5.19	6.30	6.32	6.34	6.37

Annexure-II

Details of the tariff approved for the 2014-19 tariff period for Assets-6 & 7 is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	30.34	30.34	30.34	30.34	30.34
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	30.34	30.34	30.34	30.34	30.34
Average Gross Block	30.34	30.34	30.34	30.34	30.34
Depreciation					
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable value	27.31	27.31	27.31	27.31	27.31
Elapsed Life (at the beginning of the year)	13.00	14.00	15.00	16.00	17.00
Balance useful life of the asset (at the beginning of the year)	12.00	11.00	10.00	9.00	8.00
Remaining Depreciable value	7.46	6.94	6.31	5.68	5.05
Cumulative Depreciation (at the end of the year)	20.36	20.99	21.62	22.25	22.89
Depreciation	0.52	0.63	0.63	0.63	0.63
Interest on Loan					
Gross Normative Loan	21.24	21.24	21.24	21.24	21.24
Cumulative Repayment upto Previous Year	21.24	21.24	21.24	21.24	21.24
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	7.1141%	7.1680%	7.2104%	7.2993%	7.6092%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	9.10	9.10	9.10	9.10	9.10
Average Equity	9.10	9.10	9.10	9.10	9.10
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	1.17	1.41	1.41	1.41	1.41
Interest on Working Capital					
Maintenance Spares	0.04	0.04	0.05	0.05	0.05
O & M expenses	0.02	0.02	0.03	0.03	0.03
Receivables	0.40	0.40	0.40	0.40	0.40
Total	0.46	0.47	0.47	0.48	0.48
Interest	0.05	0.06	0.06	0.06	0.06

Annual Transmission Charges					
Depreciation	0.52	0.63	0.63	0.63	0.63
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1.17	1.41	1.41	1.41	1.41
Interest on Working Capital	0.05	0.06	0.06	0.06	0.06
O & M Expenses	0.23	0.29	0.30	0.31	0.32
Total	1.97	2.40	2.41	2.42	2.43

Annexure-III

Details of the tariff approved for the 2014-19 tariff period for Asset-8 is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	0.00	0.00	0.00	0.00	0.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	0.00	0.00	0.00	0.00	0.00
Average Gross Block	0.00	0.00	0.00	0.00	0.00
Depreciation					
Rate of Depreciation	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciable value	0.00	0.00	0.00	0.00	0.00
Elapsed Life (at the beginning of the year)	47.00	48.00	49.00	50.00	51.00
Balance useful life of the asset (at the beginning of the year)	0.00	0.00	0.00	0.00	0.00
Remaining Depreciable value	0.00	0.00	0.00	0.00	0.00
Cumulative Depreciation (at the end of the year)	0.00	0.00	0.00	0.00	0.00
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan					
Gross Normative Loan	0.00	0.00	0.00	0.00	0.00
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	0.00	0.00	0.00	0.00	0.00
Average Equity	0.00	0.00	0.00	0.00	0.00
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital					
Maintenance Spares	4.91	5.08	5.25	5.42	5.60

O & M expenses	2.73	2.82	2.92	3.01	3.11
Receivables	5.75	5.95	6.15	6.35	6.57
Total	13.39	13.85	14.32	14.78	15.28
Interest	1.50	1.87	1.93	2.00	2.06
Annual Transmission Charges					
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	1.50	1.87	1.93	2.00	2.06
O & M Expenses	27.17	33.86	34.99	36.13	37.34
Total	28.67	35.73	36.93	38.12	39.40

Annexure-IV

Details of the tariff approved for the 2014-19 tariff period for Asset-9 is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	0.00	0.00	0.00	0.00	0.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	0.00	0.00	0.00	0.00	0.00
Average Gross Block	0.00	0.00	0.00	0.00	0.00
Depreciation					
Rate of Depreciation	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciable value	0.00	0.00	0.00	0.00	0.00
Elapsed Life (at the beginning of the year)	35.00	36.00	37.00	38.00	39.00
Balance useful life of the asset (at the beginning of the year)	0.00	0.00	0.00	0.00	0.00
Remaining Depreciable value	0.00	0.00	0.00	0.00	0.00
Cumulative Depreciation (at the end of the year)	0.00	0.00	0.00	0.00	0.00
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan					
Gross Normative Loan	0.00	0.00	0.00	0.00	0.00
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	0.00	0.00	0.00	0.00	0.00

Average Equity	0.00	0.00	0.00	0.00	0.00
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital					
Maintenance Spares	1.52	1.57	1.62	1.67	1.73
O & M expenses	0.05	0.87	0.90	0.93	0.96
Receivables	1.76	1.84	1.90	1.96	2.03
Total	3.32	4.28	4.42	4.56	4.72
Interest	0.37	0.58	0.60	0.62	0.64
Annual Transmission Charges					
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.37	0.58	0.60	0.62	0.64
O & M Expenses	8.38	10.45	10.80	11.15	11.53
Total	8.76	11.03	11.40	11.77	12.16

Annexure-V

Details of the tariff approved for the 2014-19 tariff period for Assets-10 & 11 is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	0.00	0.00	0.00	0.00	0.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	0.00	0.00	0.00	0.00	0.00
Average Gross Block	0.00	0.00	0.00	0.00	0.00
Depreciation					
Rate of Depreciation	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciable value	0.00	0.00	0.00	0.00	0.00
Elapsed Life (at the beginning of the year)	31.00	32.00	33.00	34.00	35.00
Balance useful life of the asset (at the beginning of the year)	0.00	0.00	0.00	0.00	0.00
Remaining Depreciable value	0.00	0.00	0.00	0.00	0.00
Cumulative Depreciation (at the end of the year)	0.00	0.00	0.00	0.00	0.00
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan					
Gross Normative Loan	0.00	0.00	0.00	0.00	0.00
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00

Return on Equity					
Opening Equity	0.00	0.00	0.00	0.00	0.00
Average Equity	0.00	0.00	0.00	0.00	0.00
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital					
Maintenance Spares	8.48	8.77	9.06	9.36	9.67
O & M expenses	4.71	4.87	5.03	5.20	5.37
Receivables	9.95	10.29	10.62	10.97	11.34
Total	23.14	23.93	24.72	25.53	26.39
Interest	2.59	3.23	3.34	3.45	3.56
Annual Transmission Charges					
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	2.59	3.23	3.34	3.45	3.56
O & M Expenses	46.95	58.48	60.40	62.40	64.48
Total	49.55	61.71	63.74	65.85	68.04

Annexure-VI

Details of the tariff approved for the 2014-19 tariff period for Asset-12 is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	0.00	0.00	0.00	0.00	0.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	0.00	0.00	0.00	0.00	0.00
Average Gross Block	0.00	0.00	0.00	0.00	0.00
Depreciation					
Rate of Depreciation	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciable value	0.00	0.00	0.00	0.00	0.00
Elapsed Life (at the beginning of the year)	29.00	30.00	31.00	32.00	33.00
Balance useful life of the asset (at the beginning of the year)	0.00	0.00	0.00	0.00	0.00
Remaining Depreciable value	0.00	0.00	0.00	0.00	0.00
Cumulative Depreciation (at the end of the year)	0.00	0.00	0.00	0.00	0.00
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan					
Gross Normative Loan	0.00	0.00	0.00	0.00	0.00
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00

Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	0.00	0.00	0.00	0.00	0.00
Average Equity	0.00	0.00	0.00	0.00	0.00
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital					
Maintenance Spares	0.24	0.25	0.26	0.27	0.28
O & M expenses	0.13	0.14	0.14	0.15	0.15
Receivables	0.28	0.29	0.30	0.31	0.32
Total	0.66	0.68	0.71	0.73	0.75
Interest	0.07	0.09	0.10	0.10	0.10
Annual Transmission Charges					
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.07	0.09	0.10	0.10	0.10
O & M Expenses	1.34	1.67	1.73	1.78	1.84
Total	1.42	1.76	1.82	1.88	1.95

Annexure-VII

Details of the tariff approved for the 2014-19 tariff period for Assets-13 & 14 is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	0.00	0.00	0.00	0.00	0.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	0.00	0.00	0.00	0.00	0.00
Average Gross Block	0.00	0.00	0.00	0.00	0.00
Depreciation					
Rate of Depreciation	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciable value	0.00	0.00	0.00	0.00	0.00
Elapsed Life (at the beginning of the year)	28.00	29.00	30.00	31.00	32.00
Balance useful life of the asset (at the beginning of the year)	0.00	0.00	0.00	0.00	0.00
Remaining Depreciable value	0.00	0.00	0.00	0.00	0.00

Cumulative Depreciation (at the end of the year)	0.00	0.00	0.00	0.00	0.00
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan					
Gross Normative Loan	0.00	0.00	0.00	0.00	0.00
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	0.00	0.00	0.00	0.00	0.00
Average Equity	0.00	0.00	0.00	0.00	0.00
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital					
Maintenance Spares	0.22	0.23	0.24	0.25	0.25
O & M expenses	0.12	0.13	0.13	0.14	0.14
Receivables	0.26	0.27	0.28	0.29	0.30
Total	0.61	0.63	0.65	0.67	0.69
Interest	0.07	0.08	0.09	0.09	0.09
Annual Transmission Charges					
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.07	0.08	0.09	0.09	0.09
O & M Expenses	1.23	1.54	1.59	1.64	1.69
Total	1.30	1.62	1.67	1.73	1.79

Annexure-VIII

Details of the tariff approved for the 2014-19 tariff period for Asset-15 is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	0.00	0.00	0.00	0.00	0.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	0.00	0.00	0.00	0.00	0.00
Average Gross Block	0.00	0.00	0.00	0.00	0.00
Depreciation					
Rate of Depreciation	0.00%	0.00%	0.00%	0.00%	0.00%

Depreciable value	0.00	0.00	0.00	0.00	0.00
Elapsed Life (at the beginning of the year)	25.00	26.00	27.00	28.00	29.00
Balance useful life of the asset (at the beginning of the year)	0.00	0.00	0.00	0.00	0.00
Remaining Depreciable value	0.00	0.00	0.00	0.00	0.00
Cumulative Depreciation (at the end of the year)	0.00	0.00	0.00	0.00	0.00
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan					
Gross Normative Loan	0.00	0.00	0.00	0.00	0.00
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	0.00	0.00	0.00	0.00	0.00
Average Equity	0.00	0.00	0.00	0.00	0.00
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital					
Maintenance Spares	0.24	0.25	0.26	0.27	0.28
O & M expenses	0.13	0.14	0.14	0.15	0.15
Receivables	0.28	0.29	0.30	0.31	0.32
Total	0.66	0.68	0.71	0.73	0.75
Interest	0.07	0.09	0.10	0.10	0.10
Annual Transmission Charges					
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.07	0.09	0.10	0.10	0.10
O & M Expenses	1.34	1.67	1.73	1.78	1.84
Total	1.42	1.76	1.82	1.88	1.95

Annexure-IX

Details of the tariff approved for the 2014-19 tariff period for Asset-16 is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	688.87	688.87	688.87	0.00	0.00

Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	688.87	688.87	688.87	0.00	0.00
Average Gross Block	688.87	688.87	688.87	0.00	0.00
Depreciation					
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable value	619.98	619.98	619.98	0.00	0.00
Elapsed Life (at the beginning of the year)	22.00	23.00	24.00	25.00	26.00
Balance useful life of the asset (at the beginning of the year)	3.00	2.00	1.00	0.00	0.00
Remaining Depreciable value	42.35	30.63	15.32	0.00	0.00
Cumulative Depreciation (at the end of the year)	589.35	604.67	619.98	0.00	0.00
Depreciation	11.72	15.32	15.32	0.00	0.00
Interest on Loan					
Gross Normative Loan	482.21	482.21	482.21	0.00	0.00
Cumulative Repayment upto Previous Year	482.21	482.21	482.21	0.00	0.00
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	206.66	206.66	206.66	0.00	0.00
Average Equity	206.66	206.66	206.66	0.00	0.00
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	26.59	32.03	32.03	0.00	0.00
Interest on Working Capital					
Maintenance Spares	3.91	4.04	4.18	4.31	4.46
O & M expenses	2.17	2.25	2.32	2.40	2.48
Receivables	12.45	12.81	12.97	5.06	5.23
Total	18.52	19.10	19.47	11.76	12.16
Interest	2.08	2.58	2.63	1.59	1.64
Annual Transmission Charges					
Depreciation	11.72	15.32	15.32	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	26.59	32.03	32.03	0.00	0.00
Interest on Working Capital	2.08	2.58	2.63	1.59	1.64
O & M Expenses	21.61	26.94	27.84	28.74	29.71
Total	62.00	76.87	77.82	30.33	31.35

Annexure-X

Details of the tariff approved for the 2014-19 tariff period for Asset-17 (New) is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	185.83	185.83	185.83	185.83	185.83
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	185.83	185.83	185.83	185.83	185.83
Average Gross Block	185.83	185.83	185.83	185.83	185.83
Depreciation					
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable value	167.25	167.25	167.25	167.25	290.17
Elapsed Life (at the beginning of the year)	13.00	14.00	15.00	16.00	4.00
Balance useful life of the asset (at the beginning of the year)	12.00	11.00	10.00	9.00	21.00
Remaining Depreciable value	45.70	42.54	38.67	34.80	224.97
Cumulative Depreciation (at the end of the year)	124.71	128.58	132.45	136.31	82.22
Depreciation	3.16	3.87	3.87	3.87	17.02
Interest on Loan					
Gross Normative Loan	130.08	130.08	130.08	130.08	225.69
Cumulative Repayment upto Previous Year	130.08	130.08	130.08	130.08	65.20
Net Loan-Opening	0.00	0.00	0.00	0.00	160.48
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	17.02
Net Loan-Closing	0.00	0.00	0.00	0.00	143.46
Average Loan	0.00	0.00	0.00	0.00	151.97
Weighted Average Rate of Interest on Loan	7.1141%	7.1680%	7.2104%	7.2993%	7.6092%
Interest	0.00	0.00	0.00	0.00	11.56
Return on Equity					
Opening Equity	55.75	55.75	55.75	96.72	96.72
Average Equity	55.75	55.75	55.75	96.72	96.72
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	7.17	8.64	8.64	14.99	14.99
Interest on Working Capital					
Maintenance Spares	0.57	0.59	0.61	0.63	0.65
O & M expenses	0.32	0.33	0.34	0.35	0.36
Receivables	2.79	2.83	2.85	2.87	2.90
Total	3.69	3.75	3.80	3.86	3.92
Interest	0.41	0.51	0.51	0.52	0.53
Annual Transmission Charges					
Depreciation	3.16	3.87	3.87	3.87	3.87
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	7.17	8.64	8.64	8.64	8.64

Interest on Working Capital	0.41	0.51	0.51	0.52	0.53
O & M Expenses	3.17	3.95	4.08	4.22	4.36
Total	13.92	16.97	17.10	17.25	17.40

Annexure-XI

Details of the tariff approved for the 2014-19 tariff period for Asset-18 is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	464.00	464.00	464.00	464.00	464.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	464.00	464.00	464.00	464.00	464.00
Average Gross Block	464.00	464.00	464.00	464.00	464.00
Depreciation					
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable value	417.60	417.60	417.60	417.60	417.60
Elapsed Life (at the beginning of the year)	6.00	7.00	8.00	9.00	10.00
Balance useful life of the asset (at the beginning of the year)	19.00	18.00	17.00	16.00	15.00
Remaining Depreciable value	270.61	250.27	225.77	201.27	176.77
Cumulative Depreciation (at the end of the year)	167.33	191.83	216.33	240.83	265.33
Depreciation	20.34	24.50	24.50	24.50	24.50
Interest on Loan					
Gross Normative Loan	324.80	324.80	324.80	324.80	324.80
Cumulative Repayment upto Previous Year	147.00	167.33	191.83	216.33	240.83
Net Loan-Opening	177.81	157.47	132.97	108.47	83.97
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	20.34	24.50	24.50	24.50	24.50
Net Loan-Closing	157.47	132.97	108.47	83.97	59.47
Average Loan	167.64	145.22	120.72	96.22	71.72
Weighted Average Rate of Interest on Loan	7.1141%	7.1680%	7.2104%	7.2993%	7.6092%
Interest	9.90	10.41	8.70	7.02	5.46
Return on Equity					
Opening Equity	139.20	139.20	139.20	139.20	139.20
Average Equity	139.20	139.20	139.20	139.20	139.20
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	17.91	21.58	21.58	21.58	21.58
Interest on Working Capital					
Maintenance Spares	1.66	1.72	1.78	1.83	1.89
O & M expenses	0.92	0.95	0.99	1.02	1.05
Receivables	11.84	11.65	11.42	11.20	11.01
Total	14.42	14.32	14.18	14.05	13.96
Interest	1.62	1.93	1.91	1.90	1.88

Annual Transmission Charges					
Depreciation	20.34	24.50	24.50	24.50	24.50
Interest on Loan	9.90	10.41	8.70	7.02	5.46
Return on Equity	17.91	21.58	21.58	21.58	21.58
Interest on Working Capital	1.62	1.93	1.91	1.90	1.88
O & M Expenses	9.19	11.45	11.84	12.22	12.63
Total	58.95	69.87	68.53	67.22	66.05

Annexure-XII

Details of the tariff approved for the 2014-19 tariff period for Assets-19 is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	1373.97	1373.97	1373.97	1373.97	1373.97
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	1373.97	1373.97	1373.97	1373.97	1373.97
Average Gross Block	1373.97	1373.97	1373.97	1373.97	1373.97
Depreciation					
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable value	1236.57	1236.57	1236.57	1236.57	1236.57
Elapsed Life (at the beginning of the year)	4.00	5.00	6.00	7.00	8.00
Balance useful life of the asset (at the beginning of the year)	21.00	20.00	19.00	18.00	17.00
Remaining Depreciable value	946.39	886.17	813.62	741.08	668.53
Cumulative Depreciation (at the end of the year)	350.41	422.95	495.50	568.04	640.59
Depreciation	60.22	72.55	72.55	72.55	72.55
Interest on Loan					
Gross Normative Loan	961.78	961.78	961.78	961.78	961.78
Cumulative Repayment upto Previous Year	290.18	350.41	422.95	495.50	568.04
Net Loan-Opening	671.60	611.37	538.83	466.28	393.74
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	60.22	72.55	72.55	72.55	72.55
Net Loan-Closing	611.37	538.83	466.28	393.74	321.19
Average Loan	641.49	575.10	502.56	430.01	357.46
Weighted Average Rate of Interest on Loan	7.1141%	7.1680%	7.2104%	7.2993%	7.6092%
Interest	37.88	41.22	36.24	31.39	27.20
Return on Equity					
Opening Equity	412.19	412.19	412.19	412.19	412.19
Average Equity	412.19	412.19	412.19	412.19	412.19
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	53.04	63.89	63.89	63.89	63.89
Interest on Working Capital					
Maintenance Spares	4.77	4.94	5.11	5.27	5.45
O & M expenses	2.65	2.74	2.84	2.93	3.03

Receivables	36.64	36.08	35.43	34.79	34.29
Total	44.07	43.77	43.37	42.99	42.76
Interest	4.94	5.91	5.85	5.80	5.77
Annual Transmission Charges					
Depreciation	60.22	72.55	72.55	72.55	72.55
Interest on Loan	37.88	41.22	36.24	31.39	27.20
Return on Equity	53.04	63.89	63.89	63.89	63.89
Interest on Working Capital	4.94	5.91	5.85	5.80	5.77
O & M Expenses	26.42	32.93	34.04	35.14	36.32
Total	182.51	216.50	212.56	208.77	205.73

Annexure-XIII

Details of the tariff approved for the 2014-19 tariff period for Assets-22 is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	0.00	0.00	0.00	0.00	0.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	0.00	0.00	0.00	0.00	0.00
Average Gross Block	0.00	0.00	0.00	0.00	0.00
Depreciation					
Rate of Depreciation	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciable value	0.00	0.00	0.00	0.00	0.00
Elapsed Life (at the beginning of the year)	31.00	32.00	33.00	34.00	35.00
Balance useful life of the asset (at the beginning of the year)	0.00	0.00	0.00	0.00	0.00
Remaining Depreciable value	0.00	0.00	0.00	0.00	0.00
Cumulative Depreciation (at the end of the year)	0.00	0.00	0.00	0.00	0.00
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan					
Gross Normative Loan	0.00	0.00	0.00	0.00	0.00
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	0.00	0.00	0.00	0.00	0.00
Average Equity	0.00	0.00	0.00	0.00	0.00
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	0.00	0.00	0.00	0.00	0.00

Interest on Working Capital					
Maintenance Spares	0.35	0.37	0.38	0.39	0.40
O & M expenses	0.20	0.20	0.21	0.22	0.22
Receivables	0.41	0.43	0.44	0.46	0.47
Total	0.96	1.00	1.03	1.06	1.10
Interest	0.11	0.13	0.14	0.14	0.15
Annual Transmission Charges					
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.11	0.13	0.14	0.14	0.15
O & M Expenses	1.96	2.44	2.52	2.60	2.69
Total	2.07	2.57	2.66	2.75	2.84

Annexure-XIV

Details of the tariff approved for the 2014-19 tariff period for Asset-23 & 24 is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	0.00	0.00	0.00	0.00	0.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	0.00	0.00	0.00	0.00	0.00
Average Gross Block	0.00	0.00	0.00	0.00	0.00
Depreciation					
Rate of Depreciation	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciable value	0.00	0.00	0.00	0.00	0.00
Elapsed Life (at the beginning of the year)	31.00	32.00	33.00	34.00	35.00
Balance useful life of the asset (at the beginning of the year)	0.00	0.00	0.00	0.00	0.00
Remaining Depreciable value	0.00	0.00	0.00	0.00	0.00
Cumulative Depreciation (at the end of the year)	0.00	0.00	0.00	0.00	0.00
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan					
Gross Normative Loan	0.00	0.00	0.00	0.00	0.00
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00

Return on Equity					
Opening Equity	0.00	0.00	0.00	0.00	0.00
Average Equity	0.00	0.00	0.00	0.00	0.00
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital					
Maintenance Spares	0.33	0.34	0.36	0.37	0.38
O & M expenses	0.19	0.19	0.20	0.20	0.21
Receivables	0.39	0.40	0.42	0.43	0.45
Total	0.91	0.94	0.97	1.00	1.04
Interest	0.10	0.13	0.13	0.14	0.14
Annual Transmission Charges					
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.10	0.13	0.13	0.14	0.14
O & M Expenses	1.84	2.30	2.38	2.45	2.54
Total	1.95	2.43	2.51	2.59	2.68

Annexure-XV

Details of the tariff approved for the 2014-19 tariff period for Asset-25 is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	0.00	0.00	0.00	0.00	0.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	0.00	0.00	0.00	0.00	0.00
Average Gross Block	0.00	0.00	0.00	0.00	0.00
Depreciation					
Rate of Depreciation	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciable value	0.00	0.00	0.00	0.00	0.00
Elapsed Life (at the beginning of the year)	31.00	32.00	33.00	34.00	35.00
Balance useful life of the asset (at the beginning of the year)	0.00	0.00	0.00	0.00	0.00
Remaining Depreciable value	0.00	0.00	0.00	0.00	0.00
Cumulative Depreciation (at the end of the year)	0.00	0.00	0.00	0.00	0.00
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan					
Gross Normative Loan	0.00	0.00	0.00	0.00	0.00
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00

Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	0.00	0.00	0.00	0.00	0.00
Average Equity	0.00	0.00	0.00	0.00	0.00
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital					
Maintenance Spares	0.47	0.48	0.50	0.52	0.53
O & M expenses	0.26	0.27	0.28	0.29	0.30
Receivables	0.55	0.57	0.59	0.60	0.62
Total	1.27	1.32	1.36	1.41	1.45
Interest	0.14	0.18	0.18	0.19	0.20
Annual Transmission Charges					
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.14	0.18	0.18	0.19	0.20
O & M Expenses	2.58	3.22	3.33	3.43	3.55
Total	2.73	3.40	3.51	3.62	3.75

Annexure-XVI**Details of the tariff approved for the 2014-19 tariff period for Assets-26is as follows:****(₹ in lakh)**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	0.00	0.00	0.00	0.00	0.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	0.00	0.00	0.00	0.00	0.00
Average Gross Block	0.00	0.00	0.00	0.00	0.00
Depreciation					
Rate of Depreciation	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciable value	0.00	0.00	0.00	0.00	0.00
Elapsed Life (at the beginning of the year)	28.00	29.00	30.00	31.00	32.00
Balance useful life of the asset (at the beginning of the year)	0.00	0.00	0.00	0.00	0.00
Remaining Depreciable value	0.00	0.00	0.00	0.00	0.00
Cumulative Depreciation (at the end of the year)	0.00	0.00	0.00	0.00	0.00
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan					
Gross Normative Loan	0.00	0.00	0.00	0.00	0.00
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	0.00	0.00	0.00	0.00	0.00
Average Equity	0.00	0.00	0.00	0.00	0.00
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital					
Maintenance Spares	2.49	2.58	2.66	2.75	2.84
O & M expenses	1.38	1.43	1.48	1.53	1.58
Receivables	2.92	3.02	3.12	3.22	3.33
Total	6.79	7.03	7.26	7.50	7.75
Interest	0.76	0.95	0.98	1.01	1.05
Annual Transmission Charges					
Depreciation	0.00	0.00	0.00	0.00	0.00

Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.76	0.95	0.98	1.01	1.05
O & M Expenses	13.79	17.18	17.74	18.33	18.94
Total	14.55	18.13	18.72	19.34	19.99

Annexure-XVII

Details of the tariff approved for the 2014-19 tariff period for Asset-27 & 28 is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	0.00	0.00	0.00	0.00	0.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	0.00	0.00	0.00	0.00	0.00
Average Gross Block	0.00	0.00	0.00	0.00	0.00
Depreciation					
Rate of Depreciation	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciable value	0.00	0.00	0.00	0.00	0.00
Elapsed Life (at the beginning of the year)	27.00	28.00	29.00	30.00	31.00
Balance useful life of the asset (at the beginning of the year)	0.00	0.00	0.00	0.00	0.00
Remaining Depreciable value	0.00	0.00	0.00	0.00	0.00
Cumulative Depreciation (at the end of the year)	0.00	0.00	0.00	0.00	0.00
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan					
Gross Normative Loan	0.00	0.00	0.00	0.00	0.00
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	0.00	0.00	0.00	0.00	0.00
Average Equity	0.00	0.00	0.00	0.00	0.00
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital					
Maintenance Spares	0.30	0.31	0.32	0.33	0.34
O & M expenses	0.16	0.17	0.18	0.18	0.19

Receivables	0.35	0.36	0.37	0.38	0.40
Total	0.81	0.84	0.87	0.89	0.92
Interest	0.09	0.11	0.12	0.12	0.12
Annual Transmission Charges					
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.09	0.11	0.12	0.12	0.12
O & M Expenses	1.64	2.05	2.11	2.18	2.26
Total	1.73	2.16	2.23	2.30	2.38

Annexure-XVIII

Details of the tariff approved for the 2014-19 tariff period for Asset-30 is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	96.09	96.09	96.09	96.09	96.09
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	96.09	96.09	96.09	96.09	96.09
Average Gross Block	96.09	96.09	96.09	96.09	96.09
Depreciation					
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable value	86.48	86.48	86.48	86.48	86.48
Elapsed Life (at the beginning of the year)	12.00	13.00	14.00	15.00	16.00
Balance useful life of the asset (at the beginning of the year)	13.00	12.00	11.00	10.00	9.00
Remaining Depreciable value	25.60	23.96	21.97	19.97	17.97
Cumulative Depreciation (at the end of the year)	62.52	64.51	66.51	68.51	70.50
Depreciation	1.63	2.00	2.00	2.00	2.00
Interest on Loan					
Gross Normative Loan	67.26	67.26	67.26	67.26	67.26
Cumulative Repayment upto Previous Year	67.26	67.26	67.26	67.26	67.26
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	28.83	28.83	28.83	28.83	28.83
Average Equity	28.83	28.83	28.83	28.83	28.83
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	3.71	4.47	4.47	4.47	4.47

Interest on Working Capital					
Maintenance Spares	0.42	0.44	0.45	0.47	0.48
O & M expenses	0.24	0.24	0.25	0.26	0.27
Receivables	1.59	1.62	1.63	1.65	1.67
Total	2.25	2.30	2.34	2.38	2.42
Interest	0.25	0.31	0.32	0.32	0.33
Annual Transmission Charges					
Depreciation	1.63	2.00	2.00	2.00	2.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	3.71	4.47	4.47	4.47	4.47
Interest on Working Capital	0.25	0.31	0.32	0.32	0.33
O & M Expenses	2.35	2.93	3.02	3.12	3.23
Total	7.94	9.70	9.80	9.91	10.02

Annexure-XIX

Details of the tariff approved for the 2014-19 tariff period for Asset-31 is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	333.21	333.21	333.21	333.21	333.21
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	333.21	333.21	333.21	333.21	333.21
Average Gross Block	333.21	333.21	333.21	333.21	333.21
Depreciation					
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable value	299.89	299.89	299.89	299.89	299.89
Elapsed Life (at the beginning of the year)	12.00	13.00	14.00	15.00	16.00
Balance useful life of the asset (at the beginning of the year)	13.00	12.00	11.00	10.00	9.00
Remaining Depreciable value	88.77	83.10	76.17	69.25	62.32
Cumulative Depreciation (at the end of the year)	216.79	223.71	230.64	237.56	244.49
Depreciation	5.67	6.92	6.92	6.92	6.92
Interest on Loan					
Gross Normative Loan	233.24	233.24	233.24	233.24	233.24
Cumulative Repayment upto Previous Year	233.24	233.24	233.24	233.24	233.24
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	99.96	99.96	99.96	99.96	99.96

Average Equity	99.96	99.96	99.96	99.96	99.96
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	12.86	15.49	15.49	15.49	15.49
Interest on Working Capital					
Maintenance Spares	1.86	1.92	1.98	2.05	2.12
O & M expenses	1.03	1.07	1.10	1.14	1.18
Receivables	5.98	6.07	6.15	6.22	6.30
Total	8.87	9.06	9.23	9.41	9.59
Interest	0.99	1.22	1.25	1.27	1.30
Annual Transmission Charges					
Depreciation	5.67	6.92	6.92	6.92	6.92
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	12.86	15.49	15.49	15.49	15.49
Interest on Working Capital	0.99	1.22	1.25	1.27	1.30
O & M Expenses	10.27	12.79	13.21	13.65	14.11
Total	29.80	36.43	36.88	37.34	37.82

Annexure-XX

Details of the tariff approved for the 2014-19 tariff period for Asset-32 is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	29.24	29.24	29.24	29.24	29.24
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	29.24	29.24	29.24	29.24	29.24
Average Gross Block	29.24	29.24	29.24	29.24	29.24
Depreciation					
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable value	26.32	26.32	26.32	26.32	26.32
Elapsed Life (at the beginning of the year)	9.00	10.00	11.00	12.00	13.00
Balance useful life of the asset (at the beginning of the year)	16.00	15.00	14.00	13.00	12.00
Remaining Depreciable value	12.42	11.14	9.60	8.05	7.43
Cumulative Depreciation (at the end of the year)	15.18	16.72	18.26	18.88	19.50
Depreciation	1.28	1.54	1.54	0.62	0.62
Interest on Loan					
Gross Normative Loan	20.47	20.47	20.47	20.47	20.47
Cumulative Repayment upto Previous Year	13.89	15.18	16.72	20.47	20.47
Net Loan-Opening	6.57	5.29	3.75	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	1.28	1.54	1.54	0.00	0.00
Net Loan-Closing	5.29	3.75	2.20	0.00	0.00
Average Loan	5.93	4.52	2.98	0.00	0.00
Weighted Average Rate of Interest on Loan	7.1141%	7.1680%	7.2104%	7.2993%	7.6092%
Interest	0.35	0.32	0.21	0.00	0.00

Return on Equity					
Opening Equity	8.77	8.77	8.77	8.77	8.77
Average Equity	8.77	8.77	8.77	8.77	8.77
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	1.13	1.36	1.36	1.36	1.36
Interest on Working Capital					
Maintenance Spares	0.27	0.27	0.28	0.29	0.30
O & M expenses	0.15	0.15	0.16	0.16	0.17
Receivables	0.88	0.87	0.86	0.68	0.69
Total	1.29	1.30	1.30	1.14	1.16
Interest	0.14	0.18	0.18	0.15	0.16
Annual Transmission Charges					
Depreciation	1.28	1.54	1.54	0.62	0.62
Interest on Loan	0.35	0.32	0.21	0.00	0.00
Return on Equity	1.13	1.36	1.36	1.36	1.36
Interest on Working Capital	0.14	0.18	0.18	0.15	0.16
O & M Expenses	1.47	1.83	1.89	1.95	2.02
Total	4.37	5.23	5.18	4.08	4.15

Annexure-XXI

Details of the tariff approved for the 2014-19 tariff period for Asset-33 is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	82.97	82.97	82.97	82.97	82.97
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	82.97	82.97	82.97	82.97	82.97
Average Gross Block	82.97	82.97	82.97	82.97	82.97
Depreciation					
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable value	74.67	74.67	74.67	74.67	74.67
Elapsed Life (at the beginning of the year)	9.00	10.00	11.00	12.00	13.00
Balance useful life of the asset (at the beginning of the year)	16.00	15.00	14.00	13.00	12.00
Remaining Depreciable value	35.25	31.61	27.23	22.85	21.09
Cumulative Depreciation (at the end of the year)	43.06	47.45	51.83	53.58	55.34
Depreciation	3.64	4.38	4.38	1.76	1.76
Interest on Loan					
Gross Normative Loan	58.08	58.08	58.08	58.08	58.08
Cumulative Repayment upto Previous Year	39.43	43.06	47.45	58.08	58.08
Net Loan-Opening	18.65	15.02	10.63	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	3.64	4.38	4.38	0.00	0.00
Net Loan-Closing	15.02	10.63	6.25	0.00	0.00

Average Loan	16.83	12.82	8.44	0.00	0.00
Weighted Average Rate of Interest on Loan	7.1141%	7.1680%	7.2104%	7.2993%	7.6092%
Interest	0.99	0.92	0.61	0.00	0.00
Return on Equity					
Opening Equity	24.89	24.89	24.89	24.89	24.89
Average Equity	24.89	24.89	24.89	24.89	24.89
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	3.20	3.86	3.86	3.86	3.86
Interest on Working Capital					
Maintenance Spares	0.60	0.62	0.64	0.66	0.68
O & M expenses	0.33	0.34	0.35	0.37	0.38
Receivables	2.31	2.28	2.26	1.73	1.76
Total	3.24	3.24	3.25	2.75	2.81
Interest	0.36	0.44	0.44	0.37	0.38
Annual Transmission Charges					
Depreciation	3.64	4.38	4.38	1.76	1.76
Interest on Loan	0.99	0.92	0.61	0.00	0.00
Return on Equity	3.20	3.86	3.86	3.86	3.86
Interest on Working Capital	0.36	0.44	0.44	0.37	0.38
O & M Expenses	3.30	4.11	4.25	4.39	4.54
Total	11.50	13.71	13.54	10.38	10.53

Annexure-XXII

Details of the tariff approved for the 2014-19 tariff period for Asset-34 is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	5.99	5.99	5.99	5.99	5.99
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	5.99	5.99	5.99	5.99	5.99
Average Gross Block	5.99	5.99	5.99	5.99	5.99
Depreciation					
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable value	5.39	5.39	5.39	5.39	5.39
Elapsed Life (at the beginning of the year)	3.00	4.00	5.00	6.00	7.00
Balance useful life of the asset (at the beginning of the year)	22.00	21.00	20.00	19.00	18.00
Remaining Depreciable value	4.45	4.18	3.87	3.55	3.23
Cumulative Depreciation (at the end of the year)	1.21	1.53	1.85	2.16	2.48
Depreciation	0.26	0.32	0.32	0.32	0.32
Interest on Loan					
Gross Normative Loan	4.20	4.20	4.20	4.20	4.20
Cumulative Repayment upto Previous Year	0.95	1.21	1.53	1.85	2.16

Net Loan-Opening	3.25	2.98	2.67	2.35	2.03
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.26	0.32	0.32	0.32	0.32
Net Loan-Closing	2.98	2.67	2.35	2.03	1.72
Average Loan	3.12	2.83	2.51	2.19	1.88
Weighted Average Rate of Interest on Loan	7.1141%	7.1680%	7.2104%	7.2993%	7.6092%
Interest	0.18	0.20	0.18	0.16	0.14
Return on Equity					
Opening Equity	1.80	1.80	1.80	1.80	1.80
Average Equity	1.80	1.80	1.80	1.80	1.80
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	0.23	0.28	0.28	0.28	0.28
Interest on Working Capital					
Maintenance Spares	0.02	0.02	0.02	0.02	0.03
O & M expenses	0.01	0.01	0.01	0.01	0.01
Receivables	0.17	0.16	0.16	0.16	0.16
Total	0.20	0.20	0.20	0.20	0.20
Interest	0.02	0.03	0.03	0.03	0.03
Annual Transmission Charges					
Depreciation	0.26	0.32	0.32	0.32	0.32
Interest on Loan	0.18	0.20	0.18	0.16	0.14
Return on Equity	0.23	0.28	0.28	0.28	0.28
Interest on Working Capital	0.02	0.03	0.03	0.03	0.03
O & M Expenses	0.12	0.15	0.16	0.17	0.17
Total	0.82	0.98	0.96	0.95	0.93

Annexure-XXIII

Details of the tariff approved for the 2014-19 tariff period for Asset-35 is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	38.23	38.23	38.23	38.23	38.23
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	38.23	38.23	38.23	38.23	38.23
Average Gross Block	38.23	38.23	38.23	38.23	38.23
Depreciation					
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable value	34.41	34.41	34.41	34.41	34.41
Elapsed Life (at the beginning of the year)	3.00	4.00	5.00	6.00	7.00
Balance useful life of the asset (at the beginning of the year)	22.00	21.00	20.00	19.00	18.00
Remaining Depreciable value	28.35	26.68	24.66	22.64	20.62
Cumulative Depreciation (at the end of the year)	7.73	9.75	11.77	13.79	15.81
Depreciation	1.68	2.02	2.02	2.02	2.02

Interest on Loan					
Gross Normative Loan	26.76	26.76	26.76	26.76	26.76
Cumulative Repayment upto Previous Year	6.06	7.73	9.75	11.77	13.79
Net Loan-Opening	20.71	19.03	17.01	14.99	12.98
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	1.68	2.02	2.02	2.02	2.02
Net Loan-Closing	19.03	17.01	14.99	12.98	10.96
Average Loan	19.87	18.02	16.00	13.98	11.97
Weighted Average Rate of Interest on Loan	7.1141%	7.1680%	7.2104%	7.2993%	7.6092%
Interest	1.17	1.29	1.15	1.02	0.91
Return on Equity					
Opening Equity	11.47	11.47	11.47	11.47	11.47
Average Equity	11.47	11.47	11.47	11.47	11.47
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	1.48	1.78	1.78	1.78	1.78
Interest on Working Capital					
Maintenance Spares	0.25	0.26	0.27	0.28	0.29
O & M expenses	0.14	0.14	0.15	0.15	0.16
Receivables	1.18	1.17	1.16	1.15	1.14
Total	1.57	1.57	1.57	1.57	1.58
Interest	0.18	0.21	0.21	0.21	0.21
Annual Transmission Charges					
Depreciation	1.68	2.02	2.02	2.02	2.02
Interest on Loan	1.17	1.29	1.15	1.02	0.91
Return on Equity	1.48	1.78	1.78	1.78	1.78
Interest on Working Capital	0.18	0.21	0.21	0.21	0.21
O & M Expenses	1.39	1.73	1.78	1.84	1.90
Total	5.89	7.03	6.94	6.87	6.82

Annexure-XXIV

Details of the tariff approved for the 2014-19 tariff period for Asset-36 is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	69.26	69.26	69.26	69.26	69.26
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	69.26	69.26	69.26	69.26	69.26
Average Gross Block	69.26	69.26	69.26	69.26	69.26
Depreciation					
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable value	62.33	62.33	62.33	62.33	62.33
Elapsed Life (at the beginning of the year)	0.00	1.00	2.00	3.00	4.00

Balance useful life of the asset (at the beginning of the year)	25.00	24.00	23.00	22.00	21.00
Remaining Depreciable value	62.33	59.30	55.64	51.98	48.33
Cumulative Depreciation (at the end of the year)	3.04	6.69	10.35	14.01	17.66
Depreciation	3.04	3.66	3.66	3.66	3.66
Interest on Loan					
Gross Normative Loan	48.48	48.48	48.48	48.48	48.48
Cumulative Repayment upto Previous Year	0.00	3.04	6.69	10.35	14.01
Net Loan-Opening	48.48	45.45	41.79	38.13	34.48
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	3.04	3.66	3.66	3.66	3.66
Net Loan-Closing	45.45	41.79	38.13	34.48	30.82
Average Loan	46.96	43.62	39.96	36.30	32.65
Weighted Average Rate of Interest on Loan	7.1141%	7.1680%	7.2104%	7.2993%	7.6092%
Interest	2.77	3.13	2.88	2.65	2.48
Return on Equity					
Opening Equity	20.78	20.78	20.78	20.78	20.78
Average Equity	20.78	20.78	20.78	20.78	20.78
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	2.67	3.22	3.22	3.22	3.22
Interest on Working Capital					
Maintenance Spares	0.14	0.15	0.15	0.16	0.16
O & M expenses	0.08	0.08	0.08	0.09	0.09
Receivables	1.91	1.88	1.84	1.81	1.79
Total	2.13	2.11	2.08	2.06	2.04
Interest	0.24	0.28	0.28	0.28	0.28
Annual Transmission Charges					
Depreciation	3.04	3.66	3.66	3.66	3.66
Interest on Loan	2.77	3.13	2.88	2.65	2.48
Return on Equity	2.67	3.22	3.22	3.22	3.22
Interest on Working Capital	0.24	0.28	0.28	0.28	0.28
O & M Expenses	0.79	0.99	1.02	1.05	1.09
Total	9.51	11.28	11.06	10.86	10.73

Annexure-XXV

Details of the tariff approved for the 2014-19 tariff period for Asset-2(a) is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18
Gross Block	4114.00	4114.00	4114.00	4114.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00
Gross Block total	4114.00	4114.00	4114.00	4114.00

Average Gross Block	4114.00	4114.00	4114.00	4114.00
Depreciation				
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%
Depreciable value	3702.60	3702.60	3702.60	3702.60
Elapsed Life (at the beginning of the year)	11.00	12.00	13.00	14.00
Balance useful life of the asset (at the beginning of the year)	14.00	13.00	12.00	11.00
Remaining Depreciable value	1313.19	1132.87	1045.72	958.58
Cumulative Depreciation (at the end of the year)	2569.73	2656.88	2744.02	2775.06
Depreciation	180.32	87.14	87.14	31.04
Interest on Loan				
Gross Normative Loan	2879.80	2879.80	2879.80	2879.80
Cumulative Repayment upto Previous Year	2389.41	2879.80	2879.80	2879.80
Net Loan-Opening	490.39	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00
Repayment during the year	180.32	0.00	0.00	0.00
Net Loan-Closing	310.07	0.00	0.00	0.00
Average Loan	400.23	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%
Interest	23.64	0.00	0.00	0.00
Return on Equity				
Opening Equity	1234.20	1234.20	1234.20	1234.20
Average Equity	1234.20	1234.20	1234.20	1234.20
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%
Return on Equity	158.81	191.30	191.30	68.13
Interest on Working Capital				
Maintenance Spares	12.83	13.27	13.70	14.15
O & M expenses	7.13	7.37	7.61	7.86
Receivables	89.55	63.03	63.54	64.07
Total	109.52	83.67	84.86	86.09
Interest	12.27	11.30	11.46	4.14
Annual Transmission Charges				
Depreciation	180.32	87.14	87.14	31.04
Interest on Loan	23.64	0.00	0.00	0.00
Return on Equity	158.81	191.30	191.30	68.13
Interest on Working Capital	12.27	11.30	11.46	4.14
O & M Expenses	71.02	88.45	91.36	33.61
Total	446.05	378.19	381.26	136.92

Details of the tariff approved for the 2014-19 tariff period for Asset-2(b) is as follows:

(₹ in lakh)		
Particulars	2017-18	2018-19
Gross Block	289.00	289.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00
Gross Block total	289.00	289.00
Average Gross Block	289.00	289.00
Depreciation		
Rate of Depreciation	5.28%	5.28%
Depreciable value	260.10	260.10
Elapsed Life (at the beginning of the year)	13.00	14.00
Balance useful life of the asset (at the beginning of the year)	12.00	11.00
Remaining Depreciable value	65.16	61.66
Cumulative Depreciation (at the end of the year)	198.44	204.04
Depreciation	3.50	5.61
Interest on Loan		
Gross Normative Loan	202.30	202.30
Cumulative Repayment upto Previous Year	202.30	202.30
Net Loan-Opening	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00
Repayment during the year	0.00	0.00
Net Loan-Closing	0.00	0.00
Average Loan	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%
Interest	0.00	0.00
Return on Equity		
Opening Equity	86.70	86.70
Average Equity	86.70	86.70
Rate of Return on Equity	15.50%	15.50%
Return on Equity	8.65	13.44
Interest on Working Capital		
Maintenance Spares	0.99	1.03
O & M expenses	0.55	0.57
Receivables	4.38	4.45
Total	5.92	6.05
Interest	0.51	0.82
Annual Transmission Charges		
Depreciation	3.50	5.61
Interest on Loan	0.00	0.00
Return on Equity	8.65	13.44
Interest on Working Capital	0.51	0.82
O & M Expenses	4.25	6.85
Total	16.91	26.71

Annexure-XXVII**Details of the tariff approved for the 2014-19 tariff period for Asset-3 is as follows:**

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	5718.46	5718.46	5718.46	5718.46	5718.46
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	5718.46	5718.46	5718.46	5718.46	5718.46
Average Gross Block	5718.46	5718.46	5718.46	5718.46	5718.46
Depreciation					
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable value	5146.61	5146.61	5146.61	5146.61	5146.61
Elapsed Life (at the beginning of the year)	11.00	12.00	13.00	14.00	15.00
Balance useful life of the asset (at the beginning of the year)	14.00	13.00	12.00	11.00	10.00
Remaining Depreciable value	1825.33	1574.69	1453.56	1332.43	1211.30
Cumulative Depreciation (at the end of the year)	3571.93	3693.06	3814.19	3935.32	4056.45
Depreciation	250.65	121.13	121.13	121.13	121.13
Interest on Loan					
Gross Normative Loan	4002.92	4002.92	4002.92	4002.92	4002.92
Cumulative Repayment upto Previous Year	3321.28	4002.92	4002.92	4002.92	4002.92
Net Loan-Opening	681.64	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	250.65	0.00	0.00	0.00	0.00
Net Loan-Closing	430.99	0.00	0.00	0.00	0.00
Average Loan	556.32	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	32.85	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	1715.54	1715.54	1715.54	1715.54	1715.54
Average Equity	1715.54	1715.54	1715.54	1715.54	1715.54
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	220.74	265.91	265.91	265.91	265.91
Interest on Working Capital					
Maintenance Spares	12.83	13.27	13.70	14.16	14.63
O & M expenses	7.13	7.37	7.61	7.87	8.13
Receivables	118.61	81.55	82.06	82.59	83.14
Total	138.57	102.19	103.37	104.61	105.90
Interest	15.53	13.80	13.96	14.12	14.30
Annual Transmission Charges					

Depreciation	250.65	121.13	121.13	121.13	121.13
Interest on Loan	32.85	0.00	0.00	0.00	0.00
Return on Equity	220.74	265.91	265.91	265.91	265.91
Interest on Working Capital	15.53	13.80	13.96	14.12	14.30
O & M Expenses	71.02	88.45	91.36	94.38	97.53
Total	590.79	489.28	492.35	495.54	498.86

Annexure-XXVIII

Details of the tariff approved for the 2014-19 tariff period for Asset-4 is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	7192.78	7192.78	7192.78	7192.78	7192.78
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	7192.78	7192.78	7192.78	7192.78	7192.78
Average Gross Block	7192.78	7192.78	7192.78	7192.78	7192.78
Depreciation					
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable value	6473.50	6473.50	6473.50	6473.50	6473.50
Elapsed Life (at the beginning of the year)	0.00	1.00	2.00	3.00	4.00
Balance useful life of the asset (at the beginning of the year)	25.00	24.00	23.00	22.00	21.00
Remaining Depreciable value	6473.50	6158.23	5778.46	5398.68	5018.90
Cumulative Depreciation (at the end of the year)	315.27	695.05	1074.83	1454.60	1834.38
Depreciation	315.27	379.78	379.78	379.78	379.78
Interest on Loan					
Gross Normative Loan	5034.95	5034.95	5034.95	5034.95	5034.95
Cumulative Repayment upto Previous Year	0.00	315.27	695.05	1074.83	1454.60
Net Loan-Opening	5034.95	4719.68	4339.90	3960.12	3580.34
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	315.27	379.78	379.78	379.78	379.78
Net Loan-Closing	4719.68	4339.90	3960.12	3580.34	3200.56
Average Loan	4877.31	4529.79	4150.01	3770.23	3390.45
Weighted Average Rate of Interest on Loan	7.1141%	7.1680%	7.2104%	7.2993%	7.6092%
Interest	288.04	324.70	299.23	275.20	257.99
Return on Equity					
Opening Equity	2157.83	2157.83	2157.83	2157.83	2157.83
Average Equity	2157.83	2157.83	2157.83	2157.83	2157.83
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	277.65	334.46	334.46	334.46	334.46
Interest on Working Capital					
Maintenance Spares	5.80	5.99	6.19	6.40	6.61
O & M expenses	3.22	3.33	3.44	3.55	3.67

Receivables	10.90	184.17	180.06	176.20	173.52
Total	19.91	193.49	189.69	186.15	183.80
Interest	2.23	26.12	25.61	25.13	24.81
Annual Transmission Charges					
Depreciation	315.27	379.78	379.78	379.78	379.78
Interest on Loan	288.04	324.70	299.23	275.20	257.99
Return on Equity	277.65	334.46	334.46	334.46	334.46
Interest on Working Capital	2.23	26.12	25.61	25.13	24.81
O & M Expenses	32.08	39.96	41.27	42.63	44.06
Total	915.27	1105.02	1080.35	1057.21	1041.10

Annexure-XXIX

Details of the tariff approved for the 2014-19 tariff period for Asset-5 is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	7192.78	7192.78	7192.78	7192.78	7192.78
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	7192.78	7192.78	7192.78	7192.78	7192.78
Average Gross Block	7192.78	7192.78	7192.78	7192.78	7192.78
Depreciation					
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable value	6473.50	6473.50	6473.50	6473.50	6473.50
Elapsed Life (at the beginning of the year)	0.00	1.00	2.00	3.00	4.00
Balance useful life of the asset (at the beginning of the year)	25.00	24.00	23.00	22.00	21.00
Remaining Depreciable value	6473.50	6158.23	5778.46	5398.68	5018.90
Cumulative Depreciation (at the end of the year)	315.27	695.05	1074.83	1454.60	1834.38
Depreciation	315.27	379.78	379.78	379.78	379.78
Interest on Loan					
Gross Normative Loan	5034.95	5034.95	5034.95	5034.95	5034.95
Cumulative Repayment upto Previous Year	0.00	315.27	695.05	1074.83	1454.60
Net Loan-Opening	5034.95	4719.68	4339.90	3960.12	3580.34
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	315.27	379.78	379.78	379.78	379.78
Net Loan-Closing	4719.68	4339.90	3960.12	3580.34	3200.56
Average Loan	4877.31	4529.79	4150.01	3770.23	3390.45
Weighted Average Rate of Interest on Loan	7.1141%	7.1680%	7.2104%	7.2993%	7.6092%
Interest	288.04	324.70	299.23	275.20	257.99
Return on Equity					
Opening Equity	2157.83	2157.83	2157.83	2157.83	2157.83
Average Equity	2157.83	2157.83	2157.83	2157.83	2157.83

Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	277.65	334.46	334.46	334.46	334.46
Interest on Working Capital					
Maintenance Spares	5.80	5.99	6.19	6.40	6.61
O & M expenses	3.22	3.33	3.44	3.55	3.67
Receivables	10.90	184.17	180.06	176.20	173.52
Total	19.91	193.49	189.69	186.15	183.80
Interest	2.23	26.12	25.61	25.13	24.81
Annual Transmission Charges					
Depreciation	315.27	379.78	379.78	379.78	379.78
Interest on Loan	288.04	324.70	299.23	275.20	257.99
Return on Equity	277.65	334.46	334.46	334.46	334.46
Interest on Working Capital	2.23	26.12	25.61	25.13	24.81
O & M Expenses	32.08	39.96	41.27	42.63	44.06
Total	915.27	1105.02	1080.35	1057.21	1041.10

Annexure-XXX

Details of the tariff approved for the 2014-19 tariff period for Asset-20 is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	941.58	941.58	941.58	941.58	941.58
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	941.58	941.58	941.58	941.58	941.58
Average Gross Block	941.58	941.58	941.58	941.58	941.58
Depreciation					
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable value	847.42	847.42	847.42	847.42	847.42
Elapsed Life (at the beginning of the year)	15.00	16.00	17.00	18.00	19.00
Balance useful life of the asset (at the beginning of the year)	10.00	9.00	8.00	7.00	6.00
Remaining Depreciable value	192.95	176.93	157.27	137.62	117.96
Cumulative Depreciation (at the end of the year)	670.49	690.15	709.81	729.47	749.12
Depreciation	16.02	19.66	19.66	19.66	19.66
Interest on Loan					
Gross Normative Loan	659.11	659.11	659.11	659.11	659.11
Cumulative Repayment upto Previous Year	659.11	659.11	659.11	659.11	659.11
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00

Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	282.47	282.47	282.47	282.47	282.47
Average Equity	282.47	282.47	282.47	282.47	282.47
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	36.35	43.78	43.78	43.78	43.78
Interest on Working Capital					
Maintenance Spares	4.10	4.23	4.37	4.52	4.67
O & M expenses	2.28	2.35	2.43	2.51	2.59
Receivables	0.90	15.78	15.95	16.12	16.29
Total	7.27	22.37	22.75	23.14	23.55
Interest	0.82	3.02	3.07	3.12	3.18
Annual Transmission Charges					
Depreciation	16.02	19.66	19.66	19.66	19.66
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	36.35	43.78	43.78	43.78	43.78
Interest on Working Capital	0.82	3.02	3.07	3.12	3.18
O & M Expenses	22.67	28.23	29.16	30.12	31.13
Total	75.85	94.69	95.67	96.69	97.75

Annexure-XXXI

Details of the tariff approved for the 2014-19 tariff period for Asset-21 is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	440.80	440.80	440.80	440.80	440.80
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	440.80	440.80	440.80	440.80	440.80
Average Gross Block	440.80	440.80	440.80	440.80	440.80
Depreciation					
Rate of Depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
Depreciable value	396.72	396.72	396.72	396.72	396.72
Elapsed Life (at the beginning of the year)	15.00	16.00	17.00	18.00	19.00
Balance useful life of the asset (at the beginning of the year)	10.00	9.00	8.00	7.00	6.00
Remaining Depreciable value	90.33	82.83	73.63	64.42	55.22
Cumulative Depreciation (at the end of the year)	313.89	323.09	332.30	341.50	350.70
Depreciation	7.50	9.20	9.20	9.20	9.20
Interest on Loan					
Gross Normative Loan	308.56	308.56	308.56	308.56	308.56
Cumulative Repayment upto Previous Year	308.56	308.56	308.56	308.56	308.56

Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	132.24	132.24	132.24	132.24	132.24
Average Equity	132.24	132.24	132.24	132.24	132.24
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	17.02	20.50	20.50	20.50	20.50
Interest on Working Capital					
Maintenance Spares	1.92	1.98	2.05	2.12	2.19
O & M expenses	1.07	1.10	1.14	1.18	1.21
Receivables	0.42	7.39	7.46	7.54	7.63
Total	3.41	10.47	10.65	10.83	11.03
Interest	0.38	1.41	1.44	1.46	1.49
Annual Transmission Charges					
Depreciation	7.50	9.20	9.20	9.20	9.20
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	17.02	20.50	20.50	20.50	20.50
Interest on Working Capital	0.38	1.41	1.44	1.46	1.49
O & M Expenses	10.61	13.22	13.65	14.10	14.57
Total	35.51	44.33	44.79	45.27	45.76

Annexure-XXXII

Details of the tariff approved for the 2014-19 tariff period for Asset-29 is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	0.00	0.00	0.00	0.00	0.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	0.00	0.00	0.00	0.00	0.00
Average Gross Block	0.00	0.00	0.00	0.00	0.00
Depreciation					
Rate of Depreciation	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciable value	0.00	0.00	0.00	0.00	0.00
Elapsed Life (at the beginning of the year)	27.00	28.00	29.00	30.00	31.00
Balance useful life of the asset (at the beginning of the year)	0.00	0.00	0.00	0.00	0.00
Remaining Depreciable value	0.00	0.00	0.00	0.00	0.00
Cumulative Depreciation (at the end of the year)	0.00	0.00	0.00	0.00	0.00
Depreciation	0.00	0.00	0.00	0.00	0.00

Interest on Loan					
Gross Normative Loan	0.00	0.00	0.00	0.00	0.00
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	0.00	0.00	0.00	0.00	0.00
Average Equity	0.00	0.00	0.00	0.00	0.00
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital					
Maintenance Spares	0.49	0.51	0.53	0.55	0.56
O & M expenses	0.27	0.28	0.29	0.30	0.31
Receivables	0.58	0.60	0.62	0.64	0.66
Total	1.35	1.39	1.44	1.49	1.54
Interest	0.15	0.19	0.19	0.20	0.21
Annual Transmission Charges					
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.15	0.19	0.19	0.20	0.21
O & M Expenses	2.73	3.41	3.52	3.63	3.76
Total	2.89	3.59	3.71	3.84	3.96

Annexure-XXXIII

Details of the tariff approved for the 2014-19 tariff period for Asset-37 is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block	0.00	0.00	0.00	0.00	0.00
Addition during 2014-19 due to Projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Gross Block total	0.00	0.00	0.00	0.00	0.00
Average Gross Block	0.00	0.00	0.00	0.00	0.00
Depreciation					
Rate of Depreciation	0.00%	0.00%	0.00%	0.00%	0.00%
Depreciable value	0.00	0.00	0.00	0.00	0.00
Elapsed Life (at the beginning of the year)	27.00	28.00	29.00	30.00	31.00
Balance useful life of the asset (at the beginning of the year)	0.00	0.00	0.00	0.00	0.00

Remaining Depreciable value	0.00	0.00	0.00	0.00	0.00
Cumulative Depreciation (at the end of the year)	0.00	0.00	0.00	0.00	0.00
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan					
Gross Normative Loan	0.00	0.00	0.00	0.00	0.00
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan	0.00%	0.00%	0.00%	0.00%	0.00%
Interest	0.00	0.00	0.00	0.00	0.00
Return on Equity					
Opening Equity	0.00	0.00	0.00	0.00	0.00
Average Equity	0.00	0.00	0.00	0.00	0.00
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital					
Maintenance Spares	0.49	0.51	0.53	0.55	0.56
O & M expenses	0.27	0.28	0.29	0.30	0.31
Receivables	0.58	0.60	0.62	0.64	0.66
Total	1.35	1.39	1.44	1.49	1.54
Interest	0.15	0.19	0.19	0.20	0.21
Annual Transmission Charges					
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.15	0.19	0.19	0.20	0.21
O & M Expenses	2.73	3.41	3.52	3.63	3.76
Total	2.89	3.59	3.71	3.84	3.96

Annexure- XXXIV**(₹ in lakh)**

Assets-38 & 39									
2014-19	Admitted Capital Cost as on COD	ACE			Admitted Capital Cost as on 31.3.2019	Rate of Depreci ation (%)	Annual Depreciation as per Regulations		
Capital Expenditure as on COD		2016-17	2017-18	2018-19			2016-17	2017-18	2018-19
Building	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00
Transmission Line	14769.07	0.00	0.00	0.00	14769.07	5.28	779.81	779.81	779.81
Sub-Station	0.00	0.00	0.00	0.00	0.00	5.28	0.00	0.00	0.00
Total	14769.07	0.00	0.00	0.00	14769.07		779.81	779.81	779.81
Average Gross Block							14769.07	14769.07	14769.07
Weighted Average Rate of Depreciation (%)							5.28	5.28	5.28

Annexure- XXXV**(₹ in lakh)**

Assets-40 & 41									
2014-19	Admitted Capital Cost as on COD	ACE			Admitted Capital Cost as on 31.3.2019	Rate of Depreci ation (%)	Annual Depreciation as per Regulations		
Capital Expenditure as on COD		2016-17	2017-18	2018-19			2016-17	2017-18	2018-19
Building	0.00	0.00	0.00	0.00	0.00	3.34	0.00	0.00	0.00
Transmission Line	20164.46	0.00	0.00	0.00	20164.46	5.28	1064.68	1064.68	1064.68
Sub-Station	0.00	0.00	0.00	0.00	0.00	5.28	0.00	0.00	0.00
Total	20164.46	0.00	0.00	0.00	20164.46		1064.68	1064.68	1064.68
Average Gross Block							20164.46	20164.46	20164.46
Weighted Average Rate of Depreciation (%)							5.28	5.28	5.28