

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 265/TT/2019

Coram:

**Shri P. K. Pujari, Chairperson
Shri I. S. Jha, Member
Shri Pravas Kumar Singh, Member**

Date of Order: 7.11.2021

In the matter of:

Petition for determination of tariff of the Inter-State transmission lines connecting two States along with the bays for the Transmission Corporation of Andhra Pradesh Limited (APTRANSCO) owned transmission lines/system for the period from 1.4.2019 to 31.3.2024 for inclusion in PoC mechanism in accordance with Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2019.

And in the matter of:

Transmission Corporation of Andhra Pradesh Limited (APTRANSCO),
Vidyut Soudha, Gunadala, Eluru Road,
Vijayawada - 520004

.....Petitioner

Vs

1. Transmission Corporation of Telangana Limited (TSTRANSCO),
6th Floor, A Block, Vidyut Soudha, Khairathabad,
Hyderabad 500082.
2. Karnataka Power Transmission Corporation Limited (KPTCL),
Kaveri Bhavan, Kempegowda Road,
Bangalore-560 009.
3. Tamil Nadu Transmission Corporation Limited (TANTRANSCO),
No. 144, Anna Salai,
Chennai-600002.
4. Chief Engineer (Commercial), APPCC,
Vidyut Soudha, Gunadala, Eluru Road
Vijayawada - 520004.
5. Electricity Department,



Government of Pondicherry,
Pondicherry-605001

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

.....Respondent

Parties Present:

For Petitioner: Shri S. Vallinayagam, Advocate, APTRANSCO
Shri P. Suryachandram, APTRANSCO
Ms. P. Jyotsna Rani, APTRANSCO

For Respondent: Ms. Swapna Sheshadari, Advocate, Telangana TRANSCO
& KPTCL
Shri Damodar Solanki, Advocate, Telangana TRANSCO &
KPTCL

ORDER

The Petitioner, Transmission Corporation of Andhra Pradesh Limited (APTRANSCO) is a company registered under the Companies Act, 1956 and it has been declared as the State Transmission Utility (STU) by the Government of Andhra Pradesh (AP). APTRANSCO is a deemed licensee under section 14 of the Electricity Act, 2003 for transmission of electricity in the State of Andhra Pradesh. The present petition has been filed by the Petitioner in respect of 45 APTRANSCO owned transmission lines connecting with other States and intervening transmission lines incidental to inter-State transmission of electricity for determination of tariff for 2019-24 tariff period in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations") and the Central Electricity Regulatory Commission (Sharing



of Inter- State Transmission Charges and Losses) Regulations, 2010 (hereinafter referred to as “the 2010 Sharing Regulations”):

2. The petitioner has made the following Prayer(s):

- “1) To determine the tariff for the 45 Nos. Assets for FY 2019-20 to 2023-24.*
- 2) To approve the annual fixed charges for the assets covered under this petition.*
- 3) To Reimburse the filing fee and other expenses in accordance with the Regulation 70 of the Central Electricity Regulatory Commission (Terms and conditions of tariff) Regulations, 2019. and*
- 4) To pass any other order or relief as this Hon’ble commission may deem fit and proper in the facts and circumstances of the case.”*

Background

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

- a) The Petitioner, APTRANSCO, being the State Transmission Utility (STU) and a deemed transmission licensee, is required to build, maintain and operate intra-State transmission system in the State of Andhra Pradesh as per sections 39 and 40 of the Electricity Act, 2003.
- b) The erstwhile State of Andhra Pradesh was bifurcated into new State of Andhra Pradesh and new State of Telangana on 2.6.2014 as per the Andhra Pradesh Reorganisation Act, 2014 (hereinafter referred to as “the 2014 Act”). The bifurcation resulted in number of inter-State transmission lines between new States of Andhra Pradesh and Telangana and some of these lines are partly/ wholly owned by APTRANSCO.
- c) The Commission *vide* order dated 14.3.2012 in Petition No. 15/SM/2012 had directed that tariff petition for determination of tariff for inclusion in PoC transmission charges be filed by the developers/ owners of the transmission lines or by State Transmission Utilities (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 order dated 12.5.2017 in Petition No.7/SM/2017 directed the State utilities to file tariff petitions for ISTS lines connecting two States, along with the certificate from the concerned RPC, for the 2014-19 tariff period as per the 2014 Tariff Regulations.

e) Accordingly, APTRANSCO had filed Petition No. 237/TT/2016 for determination of tariff for the FY 2016-17 only, in respect of 42 inter-State transmission lines connecting States of Telangana and Andhra Pradesh for the APTRANSCO owned transmission lines. The Commission vide Order dated 21.6.2018 in Petition No. 237/TT/2016 has granted tariff for the financial year (FY) 2016-17 in respect of all 42 natural inter-State transmission lines except for two lines (Asset-VIII and Asset-IX) which were put under commercial operation with effect from 17.11.2016. The Petitioner was directed to file a fresh petition for these 2 assets along with the required information specified in the Tariff Forms as per the 2014 Tariff Regulations.

f) Accordingly, the Petitioner filed Petition No. 10/TT/2019 for determination of tariff for the 40 number of lines for the rest of the control period viz. 2014-15, 2015-16, 2017-18 and 2018-19. In addition, the Petitioner also prayed for the determination of tariff for the 2 lines (Asset-VIII and Asset-IX i.e. 400 kV Uravakonda- Veltoor D/C Quad moose line) for 2016-17, 2017-18 and 2018-19.

g) The Commission vide order dated 5.2.2020 in Petition No. 10/TT/2019 allowed tariff for the 40 number of lines for 2017-18 and 2018-19 only. The Commission did not grant tariff for 2014-15 and 2015-16, considering that the SRPC certificates dated 31.10.2016 and 23.11.2016 cannot be given effect from the retrospective period.

h) Further, the Commission did not consider Asset-VIII and Asset-IX for grant of tariff and directed APTRANSCO to file a fresh petition for these 2 assets along with the required information such as (i) purpose of construction of these lines with all supporting documents, (ii) Auditor's Certificate certifying capital cost



as on COD , IDC/IEDC details etc., (iii) ACE claim under relevant provisions of the Tariff Regulations, (iv) complete tariff forms in line with Auditor's Certificate, (v) IDC statement with loan details and (vi) documents in respect of rate of interest claimed and effective tax rate.

i) The Petitioner has filed instant petition under the 2019 Tariff Regulations for control period 2019-24, covering 45 lines owned and operated by APTRANSCO and functioning as natural ISTS lines between AP and other States like Telangana, Karnataka, Tamil Nadu, Puducherry and PGCIL (CTU network) including above 2 lines (Asset-VIII and Asset-IX) based on following:

- (i) SRPC identified 44 lines as inter-State lines and issued certificates dated 31.10.2016, 23.11.2016, 22.3.2019 and 2.5.2019.
- (ii) 1 APTRANSCO line (400 KV VTPS – Nunna line-1) is also included in this petition as Asset-XLV for the period from 1.4.2019 to 31.3.2024 based on detailed justification submitted by the Petitioner.

j) The Petitioner has prayed for determination of tariff for the period from 1.4.2019 to 31.3.2024 for the following 45 transmission lines connecting AP with other neighbouring States i.e. Telangana, Karnataka and Pondicherry (Asset-XXXX, Asset-XXXXI, Asset-XXXXII, Asset-XXXXIII, Asset-XXXXIV and Asset-XXXXV used by the Petitioner have been substituted by the correct Roman nomenclature of Asset-XL, Asset-XLI, Asset-XLII, Asset-XLIII, Asset-XLIV and Asset-XLV, respectively):

Sr. No.	Asset	Asset Name	Voltage	Type of Conductor	COD	Length in km	Number of bays maintained by APTRANSCO	Connecting States
1	Asset-I & II	Kalpakkam-Khammam-I feeder	400 kV	D/C ACSR Twin moose	10.5.2002	239.00	2	AP-Telangana
2		Kalpakkam-Asupaka - I feeder						



3	Asset-III	Kurnool - Srisailam LB	400 kV	S/C ACSR Twin moose	6.3.2001	100.50	1	AP-Telangana
4	Asset - IV & V (*)	(a) Sattenapally - Srisailam LB – Ckt I&II (COD: 23.10.2010)	400 kV	D/C ACSR Twin moose	23.10.2010	158.40	3	AP-Telangana
5		(b) LILO of VSTS-Srisailam portion at 400kV Sattenapally Sub-station (COD: 12.2.2014)			12.2.2014	7.00		
6	Asset-VI & VII	VTPS - Suryapeta - I	400 kV	D/C ACSR Twin moose	2.4.2013	71.63	3	AP-Telangana
7		VTPS - Suryapeta - II						
8	Asset-VIII & IX	Uravakonda - Veltur - I Feeder	400 kV	D/C ACSR Quad moose	18.11.2016 (#)	246.71	3	AP-Telangana
9		Uravakonda - Veltur - II Feeder						
10	Asset-X & XI	K.V.Kota - Suryapeta - I	400 kV	D/C ACSR Quad moose	25.1.2017 (#)	89.356	3	AP-Telangana
11		K.V.Kota - Suryapeta - II						
12	Asset-XII	Chittoor - Thiruvellam	220 kV	S/C ACSR DEER	17.3.2013	28.71	1	AP-Tamil Nadu
13	Asset-XIII	Sulurpeta - Gummidipundi	220 kV	S/C ACSR ZEBRA	31.10.2012	30.74	1	AP-Tamil Nadu
14	Asset XIV (**)	(a) Ragulapadu – Allipura (COD: 25.9.1975)	220 kV	S/C ACSR Zebra/ Moose	25.9.1975	18.58	1	AP-Karnataka
		(b) LILO of Ragulapadu– Allipura (COD: 06.6.2011)			6.6.2011	20.00		
15	Asset-XV & XVI	Tallapalli-Nagarjunasagar -I feeder	220 kV	D/C ACSR Twin moose	5.8.1985	10.00	2	AP-Telangana
16		Tallapalli-Nagarjunasagar -II feeder						



17	Asset-XVII	Tallapalli-Nagarjunasagar -III feeder	220 kV	S/C ACSR Zebra	27.1.1985	11.00	1	AP-Telangana
18	Asset-XVIII	Tallapalli-Chelakurthy feeder	220 kV	S/C ACSR Zebra	21.7.2007	11.00	1	AP-Telangana
19	Asset-XIX & XX	Srisailam-RB-Dindi-I feeder	220 kV	D/C ACSR Zebra	12.9.1982	1.20	2	AP-Telangana
20		Srisailam-RB-Domalapenta feeder						
21	Asset-XXI	Srisailam-RB-Nagarjunasagar line	220 kV	S/C ACSR Moose	7.2.1989	86.00	1	AP-Telangana
22	Asset-XXII	Lower Sileru -KTPS -I feeder	220 kV	S/C ACSR Deer	31.3.1967	60.17	1	AP-Telangana
23	Asset-XXIII	Lower Sileru -KTPS -II feeder	220 kV	S/C ACSR Deer	31.3.1979	88.20	1	AP-Telangana
24	Asset-XXIV	Nunna-KTPS line	220 kV	S/C ACSR Deer	21.1.1992	61.15	1	AP-Telangana
25	Asset-XXV	Brhmanakotkur-Wanaparthy line (LIS)	220 kV	S/C ACSR Moose	29.10.2009	18.85	1	AP-Telangana
26	Asset-XXVI & XXVII (*)	220 kV Chilakallu-Narketpalli Ckt I&II (COD: 29.3.1999)	220 kV	D/C ACSR Moose	29.3.1999	10.34	2	AP-Telangana
27		LILO 220 kV Chilakallu-Narketpalli Ckt I&II (COD: 3.10.2010)	220 kV		3.10.2010	1.66		
28	Asset-XXVIII	Chilakallu-Ramapuram	132 kV	D/C ACSR Panther	21.10.1982	15.00	1	AP-Telangana
29	Asset-XXIX	Chilakallu-Sitapuram			6.4.2004		1	AP-Telangana
30	Asset-XXX	Chilakallu-Madhira line	132 kV	S/C ACSR line	27.10.2001	21.00	1	AP-Telangana
31	Asset-XXXI	Chilakallu-Kodada line	132 kV	S/C ACSR Panther	10.6.2004	11.72	1	AP-Telangana
32	Asset-XXXII	Chilakallu-Khammam line	132 kV	D/C ACSR Panther	12.2.2001	11.00	1	AP-Telangana
33	Asset-XXXIII	Chilakallu-Kusumanchi line			24.12.1985		1	AP-Telangana



34	Asset-XXXIV & XXXV	Chilakallu-Bonakal-I	132 kV	D/C ACSR Panther	20.1.1987	18.50	2	AP-Telangana
35		Chilakallu-Bonakal-II						
36	Asset-XXXVI	Sitapuram- KCP Cements line	132 kV	S/C ACSR Panther	10.5.2010	2.03	1	AP-Telangana
37	Asset-XXXVII	Tangeda-wadapally line	132 kV	S/C ACSR Panther	26.8.2010	27.38	1	AP-Telangana
38	Asset-XXXVIII	Piduguralla - Wadapally	132 kV	S/C ACSR Panther	22.2.2014	43.22	1	AP-Telangana
39	Asset-XXXIX	Nagarjunasagar RC Nagarjunasagar feeder	132 kV	S/C ACSR Bear	25.2.1983	6.00	1	AP-Telangana
40	Asset-XL & XLI	K.V. Kota - Aswarao Pet - I feeder	132 kV	D/C ACSR Panther	9.6.1982	31.05	2	AP-Telangana
41		K.V. Kota - Aswarao Pet - II feeder						AP-Telangana
42	Asset-XLII	AP Carbides - Alampur - I	132 kV	D/C ACSR Panther	20.1.1987	14.10	1	AP-Telangana
43	Asset-XLIII	AP Carbides - Alampur - II			13.1.2000		1	AP-Telangana
44	Asset--XLIV	Pratapnagar - Yanam feeder	132 kV	S/C AAAC/ ACSR Panther	21.11.2013	30.30	1	AP-Pondicherry
45	Asset-XLV	VTPS-Nunna -I	400 kV	ACSR SC/DC	26.7.2009	18.41	2	AP-PGCIL

(#) As per additional submission of APTRANSCO in rejoinder dated 18.8.2020, Asset-X & XI (K.V. Kota - Suryapet - I & II feeders) were test charged on 20.10.2016 and subsequently put into commercial operation from 25.1.2017 after completion of 400 kV Kamavarapukota Substation and Asset-VIII & IX (The AP portion of Uravakonda -Veltoor 400 kV DC line) was under commercial operation w.e.f 18.11.2016.

(*) as per order dated 5.2.2020 in 10/TT/2019

(**) Revised vide affidavit dated 18.8.2020 by APTRANSCO

k) Of the 45 transmission assets for which the Petitioner has claimed tariff for 2019-24 period, the Commission had approved tariff in respect of 40 transmission assets vide order dated 5.2.2020 in Petition No. 10/TT/2019 for 2016-17, 2017-18 and 2018-19. The status of remaining 5 transmission assets is as under:



Sr. No.	Asset No. as per petition	Asset Name	COD	Petition No. for 2014-19 tariff period	Remarks
1	Asset-VIII	Uravakonda - Veltur - I	17.11.16	237/TT/2016 and 10/TT/2019	(a)Due to non-availability of Auditor certificate, cost break-up and tariff forms as per 2014 tariff Regulation, the tariff for these two assets were not granted. Accordingly, the Petitioner was directed to file fresh petition for 2014-19 period.
2	Asset-IX	Uravakonda - Veltur - II	18.11.16		(b)Review Petition No. 18/RP/2020 against order dated 5.2.2020 in Petition No. 10/TT/2019 for allowing tariff of 2 number of lines and tariff for 40 lines for 2014-15 and 2015-16 has been dismissed vide order dated 11.8.2021.
3	Asset-X	K.V.Kota - Suryapeta – I	20.10.16	247/TT/2020	(a)The Petitioner has claimed the Tariff for 2014-19 period for these 3 assets in Petition No. 247/TT/2020 which was heard on 15.6.2021 and is pending decision.
4	Asset-XI	K.V.Kota - Suryapeta – II			
5	Asset-XLV	VTPS – Nunna -I	26.07.09		

I) The Petitioner had filed Review Petition No. 18/RP/2020 seeking review of order dated 5.2.2020 in Petition No. 10/TT/2019. The Commission has disposed of Petition No. 18/RP/2020 at the admission stage *vide* order dated 11.8.2021, wherein the Commission has held as under:

“17. In the instant case, it is observed that the SRPC certificate dated 11.9.2019 was not issued to the Review Petitioner and it was issued to TS Transco and it may not have been in the knowledge of the Review Petitioner and could not have been produced by the Review Petitioner even after due diligence in the proceedings in original petition. However, we are not able to agree to the proposition that SRPC certificate of 11.9.2019 is of such character that if the same was produced in the original petition, it might have possibly altered the impugned order dated 5.2.2020. Because the SRPC certificate produced by the Review Petitioner in the instant review petitions is of 2019 and it cannot be given retrospective effect from 2014 onwards. The Review Petitioner’s claim for tariff for the 2014-16 was disallowed by the Commission in the impugned order dated 5.2.2020 as the SRPC certificates of 2016 cannot be retrospectively applied from



2014 onwards. Therefore, we are of the view that the SRPC certificate dated 11.9.2019 would not have altered our view even if it was produced during the proceedings in the original Petition No. 10/TT/2019. Accordingly, the review on this account is also disallowed.

19. We are also not inclined to allow the Review Petitioner's request to allow tariff for Asset-VIII and Asset-IX in the instant review petition or in Petition No. 10/TT/2019 by taking into consideration the information submitted in the instant review petition as there is no mistake or error in our directions. The Petitioner has been granted liberty to file a fresh petition (with full details so as to claim tariff) in impugned order dated 5.2.2020."

m) Therefore, the tariff for Asset-VIII and Asset-IX for 2014-19 tariff period shall be determined in due course upon filing of fresh petition by the Petitioner in terms of order dated 5.2.2020 in Petition No. 10/TT/2019 read with order dated 11.8.2021 in Review Petition No.18/RP/2020.

n) The Petitioner has Petition No. 247/TT/2020 in respect of Asset-X, Asset-XI and Asset-XLV for determination of tariff for tariff period 2014-19 which is under hearing stage. Therefore, the tariff for Asset-X, Asset-XI and Asset-XLV for 2019-24 period will be determined once the tariff for 2014-19 tariff period is finalised. Therefore, we are not inclined to grant tariff for 2019-24 period for Asset-X, Asset-XI and Asset-XLV in the instant petition.

4. The Respondents are distribution licensees, power departments and transmission licensees, 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 been published in 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 in newspaper. Transmission Corporation of Telangana Limited (TSTRANSCO), Respondent No. 1, vide affidavit dated 6.8.2020 has submitted the reply and has raised issue of COD and line length of Asset-IV, Asset-



V, Asset- XXVI and Asset-XXVII. Karnataka Power Transmission Corporation Limited (KPTCL), Respondent No. 2, *vide* affidavit dated 8.8.2020 has submitted the reply and has raised issue of line length and capital cost of Asset-XIV. In response, the Petitioner has filed joint rejoinder dated 18.8.2020. The issues raised by the Respondents and clarifications submitted by the Petitioner have been discussed and dealt in relevant paragraphs of this order.

6. The hearing in this matter was held on 13.7.2020 and 27.4.2021 through video conference and the order was reserved on 27.4.2021.

7. This order is issued considering the submissions made in petition dated 12.6.2019 and the Petitioner's submissions made in affidavit dated 18.8.2020, 16.11.2020 and 7.7.2021 and replies dated 6.8.2020 and 8.8.2020 by TSTRANSCO and KPTCL, respectively.

8. Having heard the representatives of the Petitioner present at the hearing and having careful perusal of the materials on record, we proceed to dispose of the petition.

9. The Respondent No. 1, TSTRANSCO, *vide* reply dated 6.8.2020 has, with regard to COD and line length of Asset-IV, Asset-V, Asset-XXVI and Asset-XXVII, submitted as under:

(a) Asset-IV and Asset-V (Srisailam - Sattenapalli I & II): APTRANSCO has claimed COD of the 400 kV Sattenapally - Srisailam I & II lines as 12.2.2014. These lines are formed by making LILO of both the circuits of 400 kV Srisailam - Nunna- I & II lines which were originally commissioned on 23.10.2000. Therefore, the correct manner to compute the YTC charges is as under:

i) For line length of 158 km - COD – 23.10.2000



ii) For length of 7 km (i.e., LILO portion) - COD – 12.2.2014

(b) Asset-XXVI and Asset-XXVII (Srisailam - Sattenapalli I&II): APTRANSCO has claimed the line lengths of both lines, namely 220 kV Chillakallu - Pulichintala and Chillakallu - Suryapeta lines, to be 12 km and COD as 10.3.2010. These transmission lines are formed by making LILO to 220 kV Chillakallu - Narketpally I & II lines, which were originally commissioned on 29.3.1999. Out of the total length of the line, only 12 km falls within the State of AP. YTC of both the above lines can only be claimed from 29.3.1999, i.e. COD of both the lines.

10. In response, the Petitioner *vide* rejoinder dated 18.8.2020 has submitted as under:

(a) The 400 kV Srisailam-VTPS TMDC line was made LILO at 400 kV Sattenapalli Substation on 12.2.2014 to meet the loads of Guntur district. While calculating YTC for 400 kV Sattenapalli-Srisailam TMDC line (AP Portion), the latest date of commissioning of the emanating line from APTRANSCO S/S is taken as reference for the entire line instead of individual sections.

(b) VTPS – Narketpalli feeder was made LILO at Chillakallu S/S on 3.10.2010. On the same day, the 220 KV Chillakallu – Malkaram feeder made LILO at Narketpalli S/S. Due to which, the 220 kV VTPS - Narketpalli became 220 kV VTPS – Chillakallu feeder-2 and 220 kV Chillakallu – Narketpalli feeder-1 and 220 kV Chillakallu- Malkaram feeder became 220 kV Chillakallu-Narketpalli feeder-2. The Petitioner while calculating YTC for 220 kV Chillakallu – Narketpalli feeders 1 & 2 (AP Portion), the latest date of commissioning of the emanating line from APTRANSCO S/S is taken as reference for the entire line instead of individual sections.

11. We have considered the submissions of the Petitioner and Respondent. The Commission *vide* Order dated 5.2.2020 in Petition No. 10/TT/2019 at paragraph 19 and paragraph 20 has already settled the issue as under:



“19. We have considered the submissions of the petitioner and respondents. With respect to the Asset-III&IV, i.e. 400 kV Srisailam-Sattenpalli, the petitioner has claimed the COD of the Asset as 12.2.2014. It is observed that the 400 kV Srisailam - Sattenapalli line are formed by making LILO of both the circuits of 400 kV Srisailam-Nunna-I&II lines and the 400 kV Srisailam-Nunna-I&II were commissioned on 23.10.2000. Accordingly the COD of the Asset-III and Asset-IV is considered as under:

Asset Name	Asset Details	COD considered
Asset-III&IV	400 kV Srisailam-Satttenapalli Tr. line (158 km)	23.10.2000
	LILO of 400 kV VTPS- Srisailam portion at 400 kV Sattenpalli Sub-station(7 km)	12.2.2014

20. With respect to the Asset-XV & XVI i.e. 220 kV Chillakallu-Pulichintala and 220 kV Chillakallu-Suryapeta, the petitioner has claimed the line length of both the lines as 12 KM's and the COD as 10.3.2010. It is observed that 220 KV Chillakallu - Pulichintala and 220 KV Chillakallu - Suryapeta feeders are formed by making LILO to 220 KV Chillakallu - Narketpally -I & II lines which were originally commissioned on 29.03.1999. Accordingly the COD of the Asset-XV and XVI and line length of Asset-XV and XVI is considered as follows:

Asset Name	Asset Details	COD considered
Asset-XV&XVI	220 kV Chillakallu-Narket Palli Tr. line Ckt-1&II (10.34 km)	29.3.1999
	LILO of 220 kV Chillakallu-Narketpalli transmission line (1.66 km)	3.10.2010

12. Accordingly, COD of the Asset-IV, Asset-V, Asset-XXVI and Asset-XXVII shall be considered as under:

Asset Name	Asset Details	COD considered
Asset-IV & Asset-V	400 kV Srisailam-Satttenapalli Transmission line (158 km)	23.10.2000
	LILO of 400 kV VTPS- Srisailam portion at 400 kV Sattenpalli Sub-station(7 km)	12.2.2014
Asset-XXVI & Asset-XXVII	220 kV Chillakallu-NarketPalli Transmission line Ckt-1&II (10.34 km)	29.3.1999
	LILO of 220 kV Chillakallu-Narketpalli Transmission line (1.66 km)	3.10.2010

13. The Respondent No. 2, KPTCL, vide reply dated 8.8.2020 has submitted with regard to line length and capital cost of Asset-XIV, as under:



(a) **Asset-XIV (Ragalapadu-Allipura line):** The line length of 220 kV Ragalapadu-Allipura line is 71.32 km out of which 64 km is in Karnataka and 38.58 km in AP against which APTRANSCO has claimed the length of 71.32 Km in AP portion. Also, capital cost of ₹1686.09 lakh claimed by APTRANSCO for 71.32 km against KPTCL's book value of ₹37.74 lakh for line length of 64 km falling in Karnataka portion is much on higher side.

(b) Therefore, the cost should be restricted to ₹22.75 lakh for line length of 38.58 km falling in AP portion and YTC tariff to be limited to ₹135.55 lakh (considering the KPTCL book value of capital cost of ₹37.74 lakh/YTC claimed by the KPTCL of ₹224.86 lakh).

14. In response, the Petitioner *vide* rejoinder dated 18.8.2020 has submitted as under:

(a) 220 kV S/C Gooty - Lingapura line existed with line length- 151 km and COD-25.9.1975. Subsequently, LILO arrangement was done in the year 1997 for Alipura S/S and again LILO arrangement was done on 6.6.2011 for 220 kV Ragulapadu. While calculating YTC, the Petitioner considered COD of 17.10.2012 and line length of 71.32 km, inadvertently.

(b) Hence, revised calculations have been submitted herein with revised section wise details, as under:

Asset Name	Asset Details	COD considered
Asset-XIV	(i) 220 kV Ragulapadu-Alipura line (18.58 km)	25.9.1975
	(ii) LILO of 220 kV Ragulapadu-Alipura line (20 km)	6.6.2011

15. We have considered the submissions of the Petitioner and KPTCL. The Petitioner has already accepted the error as pointed out by KPTCL in respect of line length and COD of Asset-XIV and submitted the revised calculation sheet. Accordingly, the revised COD of Asset-XIV is considered as under:



Asset Name	Asset Details	COD considered
Asset-XIV	(i) 220 kV Ragulapadu-Alipura line (18.58 km)	25.9.1975
	(ii) LILO of 220 kV Ragulapadu-Alipura line (20 km)	6.6.2011

16. Accordingly, the details of 40 assets of the Petitioner identified for determination of tariff for 2019-24 tariff period is summarised as under:

Sr. No.	Asset	Asset Name	Connecting States	Line length (in km)	COD
1	Asset-I & Asset-II	400 kV Kalpaka-Khammam-I feeder	AP-Telangana	239.00	10.05.2002
2		400 kV Kalpaka-Asupaka - I feeder			
3	Asset-III	400 kV Kurnool -Srisailam LB	AP-Telangana	100.50	06.03.2001
4	Asset-IV & Asset-V (*)	(a) 400 kV Sattenapally - Srisailam LB – Ckt I & II	AP-Telangana	158.00	23.10.2000
5		(b) LILO of VSTS-Srisailam portion at 400 kV Sattenapally Sub-station		7.00	12.02.2014
6	Asset-VI & Asset-VII	400 kV VTPS - Suryapeta - I	AP-Telangana	71.63	02.04.2013
7		400 kV VTPS - Suryapeta - II			
8	Asset-XII	220 kV Chittoor - Thiruvellam	AP-Telangana	28.71	17.03.2013
9	Asset-XIII	220 kV Sulurpeta - Gummidipundi	AP-Telangana	30.74	31.10.2012
10	Asset-XIV (**)	(a) 220 kV Ragulapadu – Allipura	AP-Karnataka	18.58	25.09.1975
		(b)LILO of 220 kV Ragulapadu– Allipura line at Ragulapadu		20.00	06.06.2011
11	Asset-XV & Asset-XVI	220 kV Tallapalli- Nagarjunasagar-I	AP-Telangana	10.00	05.08.1985
12		220 kV Tallapalli- Nagarjunasagar-II			
13	Asset-XVII	220 kV Tallapalli- Nagarjunasagar-III	AP-Telangana	11.00	27.01.1985
14	Asset-XVIII	220 kV Tallapalli- Chelakurthy	AP-Telangana	11.00	21.07.2007
15	Asset-XIX & Asset-XX	220 kV Srisailam-RB-Dindi-I	AP-Telangana	1.20	12.09.1982
		220 kV Srisailam-RB-Domalapenta			
16	Asset-XXI	220 kV Srisailam-RB- Nagarjunasagar	AP-Telangana	86.00	07.02.1989
17	Asset-XXII	220 kV Lower Sileru - KTPS -I	AP-Telangana	60.17	31.03.1967
19	Asset-XXIII	220 kV Lower Sileru - KTPS -II	AP-Telangana	88.20	31.03.1979
20	Asset-XXIV	220 kV Nunna-KTPS	AP-Telangana	61.15	21.01.1992
21	Asset-XXV	220 kV Brhmanakotkur-Wanaparthy line (LIS)	AP-Telangana	18.85	29.10.2009



Sr. No.	Asset	Asset Name	Connecting States	Line length (in km)	COD
22	Asset-XXVI & Asset-XXVII (*)	220 kV Chilakallu- Narketpalli Ckt I&II	AP-Telangana	10.34	29.03.1999
23		LILO of 220 kV Chilakallu-Narketpalli Ckt I&II		1.66	03.10.2010
24	Asset-XXVIII	132 kV Chilakallu- Ramapuram	AP-Telangana	7.50	21.10.1982
25	Asset-XXIX	132 kV Chilakallu-Sitapuram	AP-Telangana	7.50	06.04.2004
26	Asset-XXX	132 kV Chilakallu-Madhira	AP-Telangana	21.00	27.10.2001
27	Asset-XXXI	132 kV Chilakallu-Kodada	AP-Telangana	11.72	10.06.2004
28	Asset-XXXII	132 kV Chilakallu-Khammam	AP-Telangana	5.50	12.02.2001
29	Asset-XXXIII	132 kV Chilakallu-Kusumanchi	AP-Telangana	5.50	24.12.1985
30	Asset-XXXIV & Asset-XXXV	132 kV Chilakallu-Bonakal-I	AP-Telangana	18.50	20.01.1987
31		132 kV Chilakallu-Bonakal-II			
32	Asset-XXXVI	132 kV Sitapuram- KCP Cements	AP-Telangana	2.03	10.05.2010
33	Asset-XXXVII	132 kV Tangeda-wadapally	AP-Telangana	27.38	26.08.2010
34	Asset-XXXVIII	132 kV Piduguralla – Wadapally	AP-Telangana	43.22	22.02.2014
35	Asset-XXXIX	132 kV Nagarjunasagar RC Nagarjunasagar	AP-Telangana	6.00	25.02.1983
36	Asset-XL & Asset-XLI	132 kV K.V. Kota-Aswaraopet-I	AP-Telangana	31.05	09.06.1982
37		132 kV K.V. Kota-Aswaraopet-II			
38	Asset-XLII	AP Carbides-Alampur-I	AP-Telangana	7.05	20.01.1987
39	Asset-XLIII	132 kV AP Carbides-Alampur-II	AP-Telangana	7.05	13.01.2000
40	Asset-XLIV	132 kV Pratapnagar - Yanam	AP-Pondicherry	30.30	21.11.2013

(*) as per order dated 5.2.2020 in 10/TT/2019

(**) Revised vide affidavit dated 18.8.2020 by APTRANSCO

17. The Petitioner has submitted that most of the lines are old and subsequently termination points in many lines have changed due to construction of LILO etc. due to which asset-wise break up of actual capital cost, additional capitalisation, repayment of loan, depreciation etc. are not available with Petitioner.



18. The Commission *vide* order dated 21.6.2018 in Petition No. 237/TT/2016 and order dated 5.2.2020 in Petition No. 10/TT/2019 allowed/ admitted the capital cost of 40 assets considered in the instant order, as under:

(₹ in lakh)

Sr. No.	Asset	Asset Name	Rationalised cost of 400 kV line (₹ lakh per km)	Transmission Line length (in km)	Multiplication factor	Gross Block (₹ in lakh)
1	Asset-I & Asset-II	Kalpaka-Khammam-I feeder	34.00	239.00	1.39	11295.14
2		Kalpaka-Asupaka – I feeder				
3	Asset-III	Kurnool -Srisailam LB	54.57	100.50	1.00	5484.29
4	Asset-IV & Asset-V	(a) Sattenapally – Srisailam LB – Ckt I&II (COD:23.10.2000)	54.57	158.00	1.39	21765.20
5		(b) LILO of VSTS-Srisailam portion at 400kV Sattenapally Sub-station (COD:12.2.2014)	94.67	7.00		
6	Asset-VI & Asset-VII	VTPS – Suryapeta – I	94.67	71.63	1.39	9425.88
7		VTPS – Suryapeta – II				
8	Asset-XII	Chittoor – Thiruvellam	65.67	28.71	0.36	678.74
9	Asset-XIII	Sulurpeta – Gummidipundi	65.67	30.74	0.36	726.73
10	Asset XIV	(a) Ragulapadu – Allipura (COD:25.9.1975)	65.67	18.58	0.36	1686.09
		(b) LILO of Ragulapadu– Allipura (COD: 6.6.2011)		20.00		
11	Asset- XV & XVI	Tallapalli-Nagarjunasagar-I	0	10.00	0	0.00
12		Tallapalli-Nagarjunasagar-II				
13	Asset-XVII	Tallapalli-Nagarjunasagar-III	0	11.00	0	0.00
14	Asset-XVIII	Tallapalli-Chelakurthy	47.04	11.00	0.36	186.28
	Asset-XIX & XX	Srisailam-RB-Dindi-I	0	1.20	0	0.00



Sr. No.	Asset	Asset Name	Rationalised cost of 400 kV line (₹ lakh per km)	Transmission Line length (in km)	Multiplication factor	Gross Block (₹ in lakh)
15		Srisailam-RB-Domalapenta				
16	Asset-XXI	Srisailam-RB-Nagarjunasagar	0	86.00	0	0.00
17	Asset-XXII	Lower Sileru – KTPS -I	0	60.17	0	0.00
19	Asset-XXIII	Lower Sileru – KTPS -II	0	88.20	0	0.00
20	Asset-XXIV	Nunna-KTPS	26.69	61.15	0.36	587.55
21	Asset-XXV	Brhmanakotkur-Wanaparthy line (LIS)	48.44	18.85	0.36	328.71
22	Asset-XXVI & XXVII	220 kV Chilakallu-Narketpalli Ckt I&II (COD:29.3.1999)	48.44	10.34	0.57	331.33
23		LILO 220 kV Chilakallu-Narketpalli Ckt I&II (COD:3.10.2010)		1.66		
24	Asset-XXVIII	Chilakallu-Ramapuram	0	7.50	0	0.00
25	Asset-XXIX	Chilakallu-Sitapuram	27.20	7.50	0.43	87.72
26	Asset-XXX	Chilakallu-Madhira	44.28	21.00	0.31	288.26
27	Asset-XXXI	Chilakallu-Kodada	27.20	11.72	0.31	98.82
28	Asset-XXXII	Chilakallu-Khammam	44.28	5.50	0.43	104.72
29	Asset-XXXIII	Chilakallu-Kusumanchi	0	5.50	0	0.00
30	Asset-XXXIV & XXXV	Chilakallu-Bonakal-I	0	18.50	0	0.00
31		Chilakallu-Bonakal-II				
32	Asset-XXXVI	Sitapuram- KCP Cements	52.26	2.03	0.31	32.89
33	Asset-XXXVII	Tangeda-wadapally	52.26	27.38	0.31	443.57
34	Asset-XXXVIII	Piduguralla – Wadapally	94.67	43.22	0.31	1268.41
35	Asset-XXXIX	Nagarjunasagar RC Nagarjunasagar	0	6.00	0	0.00
36	Asset- XL & XLI	K.V. Kota-Aswaraopet-I	0	31.05	0	0.00
37		K.V. Kota-Aswaraopet-II				
38	Asset-XLII	AP Carbides-Alampur-I	0	7.05	0	0.00



Sr. No.	Asset	Asset Name	Rationalised cost of 400 kV line (₹ lakh per km)	Transmission Line length (in km)	Multiplication factor	Gross Block (₹ in lakh)
39	Asset-XLIII	AP Carbides-Alampur-II	20.71	7.05	0.43	62.78
40	Asset-XLIV	Pratapnagar – Yanam	94.67	30.30	0.31	889.24

19. The Petitioner has not projected any Additional Capital Expenditure (ACE) during the 2019-24 tariff period. Further, the Petitioner has not claimed any initial spares for period 2019-24 tariff period. Accordingly, the capital cost as admitted *vide* order dated 21.6.2018 in Petition No. 237/TT/2016 and order dated 5.2.2020 in Petition No. 10/TT/2019 is considered as opening capital cost as on 1.4.2019 for determination of tariff for the 2019- 24 tariff period in accordance with Regulation 19 of the 2019 Tariff Regulations as under:

(₹ in lakh)							
Sr. No.	Asset	Asset Name	2019-20	2020-21	2021-22	2022-23	2023-24
1	Asset-I & Asset-II	Kalpakkam-Khammam-I feeder	11295.14	11295.14	11295.14	11295.14	11295.14
2		Kalpakkam-Asupaka – I feeder					
3	Asset-III	Kurnool -Srisailam LB	5484.29	5484.29	5484.29	5484.29	5484.29
4	Asset-IV & Asset-V	(a) Sattenapally – Srisailam LB – Ckt I & II (COD: 23.10.2010)	21765.20	21765.20	21765.20	21765.20	21765.20
5		(b) LILO of VSTS-Srisailam portion at 400kV Sattenapally Sub-station (COD: 12.2.2014)					
6	Asset-VI and Asset-VII	VTPS – Suryapeta – I	9425.88	9425.88	9425.88	9425.88	9425.88



Sr. No.	Asset	Asset Name	2019-20	2020-21	2021-22	2022-23	2023-24
7		VTPS – Suryapeta – II					
8	Asset-XII	Chittoor – Thiruvellam	678.74	678.74	678.74	678.74	678.74
9	Asset-XIII	Sulurpeta – Gummidipundi	726.73	726.73	726.73	726.73	726.73
10	Asset-XIV	(a) Ragulapadu – Allipura (COD: 25.9.1975)	1686.09	1686.09	1686.09	1686.09	1686.09
		(b) LILO of Ragulapadu– Allipura (COD: 6.6.2011)					
11	Asset- XV and Asset-XVI	Tallapalli- Nagarjunasagar-I	0.00	0.00	0.00	0.00	0.00
12		Tallapalli- Nagarjunasagar-II					
13	Asset-XVII	Tallapalli- Nagarjunasagar-III	0.00	0.00	0.00	0.00	0.00
14	Asset- XVIII	Tallapalli- Chelakurthy	186.28	186.28	186.28	186.28	186.28
15	Asset- XIX and Asset-XX	Srisailam-RB- Dindi-I	0.00	0.00	0.00	0.00	0.00
		Srisailam-RB- Domalapenta					
16	Asset-XXI	Srisailam-RB- Nagarjunasagar	0.00	0.00	0.00	0.00	0.00
17	Asset- XXII	Lower Sileru – KTPS -I	0.00	0.00	0.00	0.00	0.00
19	Asset- XXIII	Lower Sileru – KTPS -II	0.00	0.00	0.00	0.00	0.00
20	Asset- XXIV	Nunna-KTPS	587.55	587.55	587.55	587.55	587.55
21	Asset- XXV	Brhmanakotkur- Wanaparthi line (LIS)	328.71	328.71	328.71	328.71	328.71
22	Asset- XXVI & Asset-XXVII	220 kV Chilakallu- Narketpalli Ckt I&II (COD: 29.3.1999)	331.33	331.33	331.33	331.33	331.33
23		LILO 220 kV Chilakallu- Narketpalli Ckt I & II (COD: 3.10.2010)					
24	Asset- XXVIII	Chilakallu- Ramapuram	0.00	0.00	0.00	0.00	0.00
25	Asset- XXIX	Chilakallu- Sitapuram	87.72	87.72	87.72	87.72	87.72



Sr. No.	Asset	Asset Name	2019-20	2020-21	2021-22	2022-23	2023-24
26	Asset- XXX	Chilakallu-Madhira	288.26	288.26	288.26	288.26	288.26
27	Asset- XXXI	Chilakallu-Kodada	98.82	98.82	98.82	98.82	98.82
28	Asset- XXXII	Chilakallu-Khammam	104.72	104.72	104.72	104.72	104.72
29	Asset- XXXIII	Chilakallu-Kusumanchi	0.00	0.00	0.00	0.00	0.00
30	Asset- XXXIV and Asset-XXXV	Chilakallu-Bonakal-I	0.00	0.00	0.00	0.00	0.00
31		Chilakallu-Bonakal-II					
32	Asset-XXXVI	Sitapuram- KCP Cements	32.89	32.89	32.89	32.89	32.89
33	Asset-XXXVII	Tangeda-wadapally	443.57	443.57	443.57	443.57	443.57
34	Asset-XXXVIII	Piduguralla – Wadapally	1268.41	1268.41	1268.41	1268.41	1268.41
35	Asset- XXXIX	Nagarjunasagar RC Nagarjunasagar	0.00	0.00	0.00	0.00	0.00
36	Asset- XL and Asset-XLI	K.V. Kota-Aswaraopet-I	0.00	0.00	0.00	0.00	0.00
37		K.V. Kota-Aswaraopet-II					
38	Asset- XLII	AP Carbides-Alampur-I	0.00	0.00	0.00	0.00	0.00
39	Asset- XLIII	AP Carbides-Alampur-II	62.78	62.78	62.78	62.78	62.78
40	Asset- XLIV	Pratapnagar – Yanam	889.24	889.24	889.24	889.24	889.24

20. The relevant extracts of the 2020 Sharing Regulations is as under:

“(13) An intra-State transmission system for which tariff is approved by the Commission shall be included for sharing of transmission charges of DICs in accordance with Regulations 5 to 8 of these regulations, only for the period for which such tariff has been approved.”

21. The Commission vide order dated 21.6.2018 in Petition No. 237/TT/2016 and order dated 5.2.2020 in Petition No. 10/TT/2019 has already approved the transmission charges up to 31.3.2019 in respect of the forty (40) transmission lines covered under the instant petition based on SRPC certificates. SRPC had identified



44 lines and issued certificates dated 31.10.2016, 23.11.2016, 22.3.2019 and 2.5.2019 out of which only 40 assets have been considered for determination of transmission charges for the reasons already explained in earlier paragraphs. The relevant extracts of the order dated 5.2.2020 in Petition No. 10/TT/2019 is given hereunder:

“21. The SRPC vide letter dated 31.10.2016 and 23.11.2016 has certified that total forty two (42) transmission lines are inter-State lines connecting the two States. However, certificate of SRPC cannot be considered as applicable from the retrospective period from 2014 i.e. various dates of 2014 from which the tariff is claimed in respect of assets covered in the instant petition. Accordingly, after excluding Asset-VIII and Asset-IX for the reasons as discussed in Para 15 and 16 above, following 40 assets have been considered for determination of transmission charges.....”

22. The Commission in its order dated 4.5.2018 in Petition No. 112/TT/2017 has adopted a methodology for determination of transmission charges in respect of natural/ deemed ISTS lines. The relevant portion of the said order is extracted as under:

“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."

23. The above methodology adopted in Petition No. 112/TT/2017 was adopted by the Commission while determining tariff of instant assets for the 2014-19 tariff period *vide* order dated 5.2.2020 in petition No. 10/TT/2019. Accordingly, the same methodology subject to the provisions of the 2019 Tariff Regulations has been extended for the purpose of determination of tariff in respect of the instant assets for 2019-24 tariff period also. Thus, while calculating tariff in respect of the instant assets, 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 2019 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 2019 Tariff Regulations shall be applied for calculating the rate of interest on working capital on normative basis.
- (viii) O&M Expenses as per the 2019 Tariff Regulations shall be considered.
- (ix) Where the life of transmission line is more than or equal to 25 years as on 1.4.2019, only O&M Expenses and IWC shall be allowed in lieu of complete tariff.

24. A total of 41 assets {number of assets has increased to 41 since Asset-XIV has been split into Asset-XIV(a) and Asset-XIV(b)} are being considered for determination of tariff of 2019-24 tariff period out of which 18 assets namely, Asset-XIV(a), Asset-XV, Asset-XVI, Asset-XVII, Asset-XIX, Asset-XX, Asset-XXI, Asset-XXII, Asset-XXIII, Asset-XXIV, Asset-XXVIII, Asset-XXXIII, Asset- XXXIV, Asset-XXXV, Asset-XXXIX, Asset-XL, Asset-XLI and Asset-XLII have already completed twenty five years as on 1.4.2019. Therefore, as per the methodology adopted in Petition No. 112/TT/2017, only "Interest on Working Capital" and "O&M Expenses" components of tariff shall be allowable for these 18 assets. Remaining 23 assets, namely Asset-I, Asset-II, Asset-



III, Asset-IV, Asset-V, Asset-VI, Asset-VII, Asset-XII, Asset-XIII, Asset-XIV(b), Asset-XVIII, Asset-XXV, Asset-XXVI, Asset-XXVII, Asset-XXIX, Asset-XXX, Asset-XXXI, Asset-XXXII, Asset-XXXVI, Asset-XXXVII, Asset-XXXVIII, Asset-XLIII and Asset-XLIV have not completed 25 years as on 1.4.2019. Thus, in line with the aforesaid methodology, all tariff components are being allowed under the provisions of the 2019 Tariff Regulations.

25. *Vide* TV (technical validation) letter dated 3.11.2020, the Petitioner was asked to furnish the Statement of computation of Weighted Average Rate of Interest along with documentary evidence for Asset-V, Asset-VI, Asset-VII, Asset-VIII, Asset-IX, Asset-X, Asset-XI, Asset-XII, Asset-XIII, Asset-XIV, Asset-XVIII, Asset-XVI, Asset-XXVII, Asset-XXXVI, Asset-XXXVII, Asset-XXXVIII, Asset-XLIV and Asset-XLV.

26. In response, the Petitioner *vide* affidavit dated 16.11.2020 has attached the statement of computation of Weighted Average Rate of Interest and correspondence with funding agencies regarding interest rates and further submitted that the rate of interest on loans for assets with COD before 31.3.2014 has been considered from the weighted average rate of loan for APTRANSCO as a whole, as there is no individual line-wise breakup of interest rates available. The actual weighted average rate of interest on loans for APTRANSCO as a whole for FY 2019-20 has been arrived and same is projected as rate of interest from FY 2020-21 to FY 2023-24.

27. We have considered the submission of the Petitioner. The actual weighted average rate of interest on loans for APTRANSCO as a whole for FY 2019-20 has



been arrived and same is projected as rate of interest from FY 2020-21 to FY 2023-24.

Operation & Maintenance Expenses (O&M Expenses)

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

“(3) Transmission system:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (₹ Lakh per MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958



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

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;*
- v. the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme; and*
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.*



(29) *The total allowable operation and maintenance expenses for the transmission system shall be calculated by multiplying the number of sub-station bays, transformer capacity of the transformer (in MVA) and km of line length with the applicable norms for the operation and maintenance expenses per bay, per MVA and per km respectively.*

(29) © *The Security Expenses and Capital Spares for transmission system shall be allowed separately after prudence check:*

Provided that the transmission licensee shall submit the assessment of the security requirement and estimated security expenses, the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification.

(4) *Communication system: The operation and maintenance expenses for the communication system shall be worked out at 2.0% of the original project cost related to such communication system. The transmission licensee shall submit the actual operation and maintenance expenses for truing up.”*

29. The Commission *vide* ROP of hearing dated 15.6.2021 observed that the Petitioner has claimed O&M Expenses for its assets but has not submitted Form-2 in respect of many assets and directed the Petitioner to submit Form-2 of O&M Expenses as per the 2019 Tariff Regulations in respect of all the assets. In response, the Petitioner *vide* affidavit dated 7.7.2021 has submitted Form-2 of O&M Expenses as per the 2019 Tariff Regulations in respect of all the assets (after attending to the objections *vide* rejoinder dated 12/18.8.2020).

30. The Petitioner has claimed the O&M expenses of transmission lines and bays at sub-station. The Commission has been allowing O&M expense of only transmission line elements, whereas the O&M expenses of sub-station and other elements (communication, security and capital spares) are not being allowed in case of natural ISTS cases. In a recent order dated 4.2.2021 in Petition No. 276/TT/2020 of KPTCL lines, the Commission held as under:



“14. The Commission vide order dated 3.8.2020 disposed of the Review Petition No. 4/RP/2020 and held as under:

12 The first contention of KPTCL is that the Commission should have considered the bays meant for the non-ISTS lines carrying inter-State power between Karnataka and neighbouring States while approving O&M Expenses, as the line and bay are necessary for flow of power. We have considered the contention of KPTCL. The Commission in order dated 14.3.2012 in Petition No.15/SM/2012 had clearly stated in paragraph 6 that the non-ISTS lines connecting two States would be included in the computation of PoC charges and there was no mention of the bays in the said order. Accordingly, O&M Expenses are allowed only for non-ISTS lines connecting Karnataka with neighbouring States and O&M Expenses are not allowed for bays. This methodology was adopted not only in case of Karnataka but in case of all other States uniformly. Further, the same methodology was adopted while granting tariff for the 2011-14 period for the non-ISTS lines owned by Karnataka in order dated 12.2.2013 in Petition No.225/TT/2013 and this issue was not raised by KPTCL then. The Commission is consistently of the view that tariff, including O&M Expenses would be granted only for the transmission lines and not for the bays and as such there is no error apparent in this regard.....

13.....According to this approved normative methodology, besides other things, the useful life of the transmission line is deemed to be 25 years and for transmission lines of more than 25 years old as on 1.4.2014, only O&M Expenses and IWC are allowed. In view of the above, in case of Assets-3 to 7 covered in the impugned order, which are more than 25 years old as on 1.4.2014, only O&M Expenses and IWC were allowed. Further, Assets-1 and 2 completed 25 years in 2017. Therefore, for Assets-1 and 2, RoE and other components of tariff were allowed up to 2016-17 and for the years 2017-18 and 2018-19, only IWC and O&M Expenses were allowed as per the approved normative methodology. As the same methodology has been adopted for all the States, we see no error apparent on record on this ground. Thus, review of the impugned order on this ground is also rejected.

14. In view of the above discussion, Review Petition No. 4/RP/2020 is disposed of at the stage of admission.”

31. In view of the above, we are granting O&M expenses for transmission lines only.

32. The normative O&M Expenses for the 2019-24 period is specified in Regulation 35(3) of 2019 Tariff Regulations. The O&M expenses has been calculated by multiplying line length (in km) with the applicable norms for the O&M expenses per km of respective line.



33. The Petitioner has submitted the technical parameters of instant lines, considered for the purpose of working out O&M expenses as under:

Sr. No.	Asset	Asset Name	Voltage	Line Type (S/C or D/C)	Number of conductor/ sub-conductors	COD	Line Length (km)
1	Asset-I & Asset-II	Kalpaka-Khammam-I feeder	400 kV	D/C	2	10.05.2002	239.0
2		Kalpaka-Asupaka – I feeder					
3	Asset-III	Kurnool –Srisailam LB	400 kV	S/C	2	06.03.2001	100.5
4	Asset-IV	(a) Sattenapally – Srisailam LB – Ckt I&II (COD:23.10.2000)	400 kV	D/C	2	23.10.2000	158.00
5	Asset-V	(b) LILO of VSTS-Srisailam portion at 400kV Sattenapally Sub-station (COD:12.2.2014)	400 kV	D/C	2	12.02.2014	7.00
6	Asset-VI & Asset-VII	VTSPS – Suryapeta – I	400 kV	D/C	2	02.04.2013	71.63
7		VTSPS – Suryapeta – II					
8	Asset-XII	Chittoor – Thiruvellam	220 kV	S/C	1	17.03.2013	28.71
9	Asset-XIII	Sulurpeta – Gummidipundi	220 kV	S/C	1	31.10.2012	30.74
10	Asset-XIV(a) & Asset-XIV(b)	(a) Ragulapadu – Allipura	220 kV	S/C	1	25.09.1975	18.58
		(b) LILO of Ragulapadu– Allipura	220 kV	S/C	1	06.06.2011	20.00
11	Asset- XV & Asset-XVI	Tallapalli-Nagarjunasagar-I	220 kV	D/C	1	05.08.1985	10.00
12		Tallapalli-Nagarjunasagar-II					
13	Asset-XVII	Tallapalli-Nagarjunasagar-III	220 kV	S/C	1	27.01.1985	11.00
14	Asset- XVIII	Tallapalli-Chelakurthy	220 kV	S/C	1	21.07.2007	11.00
15	Asset- XIX & Asset-XX	Srisailam-RB-Dindi-I	220 kV	D/C	1	12.09.1982	1.20
		Srisailam-RB-Domalapenta					
16	Asset-XXI	Srisailam-RB-Nagarjunasagar	220 kV	S/C	1	07.02.1989	86.00
17	Asset- XXII	Lower Sileru – KTPS –I	220 kV	S/C	1	31.03.1967	60.17
19	Asset- XXIII	Lower Sileru – KTPS –II	220 kV	S/C	1	31.03.1979	88.20



Sr. No.	Asset	Asset Name	Voltage	Line Type (S/C or D/C)	Number of conductor/ sub-conductors	COD	Line Length (km)
20	Asset- XXIV	Nunna-KTPS	220 kV	S/C	1	21.01.1992	61.15
21	Asset- XXV	Brhmanakotkur-Wanaparthi line (LIS)	220 kV	S/C	1	29.10.2009	18.85
22	Asset- XXVI	220 kV Chilakallu-Narketpalli Ckt I&II	220 kV	D/C	1	29.03.1999	10.34
23	Asset- XXVII	LILO 220 kV Chilakallu-Narketpalli Ckt I&II	220 kV	D/C	1	03.10.2010	1.66
24	Asset- XXVIII	Chilakallu-Ramapuram	132 kV	D/C	1	21.10.1982	7.50
25	Asset- XXIX	Chilakallu-Sitapuram	132 kV	D/C	1	06.04.2004	7.50
26	Asset- XXX	Chilakallu-Madhira	132 kV	S/C	1	27.10.2001	21.00
27	Asset- XXXI	Chilakallu-Kodada	132 kV	S/C	1	10.06.2004	11.72
28	Asset- XXXII	Chilakallu-Khammam	132 kV	D/C	1	12.02.2001	5.50
29	Asset- XXXIII	Chilakallu-Kusumanchi	132 kV	D/C	1	24.12.1985	5.50
30	Asset- XXXIV & Asset-XXXV	Chilakallu-Bonakal-I	132 kV	D/C	1	20.01.1987	18.50
31		Chilakallu-Bonakal-II					
32	Asset- XXXVI	Sitapuram- KCP Cements	132 kV	S/C	1	10.05.2010	2.03
33	Asset- XXXVII	Tangeda-wadapally	132 kV	S/C	1	26.8.2010	27.38
34	Asset- XXXVIII	Piduguralla – Wadapally	132 kV	S/C	1	22.02.2014	43.22
35	Asset- XXXIX	Nagarjunasagar RC Nagarjunasagar	132 kV	S/C	1	25.02.1983	6.00
36	Asset- XL & Asset-XLI	K.V. Kota-Aswaraopet-I	132 kV	D/C	1	09.06.1982	31.05
37		K.V. Kota-Aswaraopet-II					
38	Asset- XLII	AP Carbides-Alampur-I	132 kV	D/C	1	20.01.1987	7.05
39	Asset- XLIII	AP Carbides-Alampur-II	132 kV	D/C	1	13.01.2000	7.05
40	Asset- XLIV	Pratapnagar – Yanam	132 kV	S/C	1	21.11.2013	30.30

34. We have considered the technical parameters submitted by the Petitioner, subsequent modifications as per objections of the Respondents, TSTRANSCO and KPTCL and revised Form-2 submitted by the Petitioner submitted *vide* affidavit dated



7.7.2021. Accordingly, the details of the O&M Expenses worked out for instant transmission lines as per provisions of Regulation 35(3)(a) of the 2019 Tariff Regulations are as under:

(₹ in lakh)

Sr. No.	Asset	Asset Name	2019-20	2020-21	2021-22	2022-23	2023-24
1	Asset-I & Asset-II	Kalpakkam-Khammam-I feeder	210.559	217.968	225.616	233.503	241.629
2		Kalpakkam-Asupaka – I feeder					
3	Asset-III	Kurnool –Srisailam LB	50.552	52.361	54.170	56.079	58.089
4	Asset-IV	(a) Sattenapally – Srisailam LB – Ckt I&II (COD:23.10.2000)	139.198	144.096	149.152	154.366	159.738
5	Asset-V	(b) LILO of VSTS-Srisailam portion at 400kV Sattenapally Sub-station (COD:12.2.2014)	6.167	6.384	6.608	6.839	7.077
6	Asset-VI & Asset-VII	VTPS – Suryapeta – I	63.106	65.327	67.619	69.983	72.418
7		VTPS – Suryapeta – II					
8	Asset-XII	Chittoor – Thiruvellam	7.235	7.465	7.752	8.010	8.297
9	Asset-XIII	Sulurpeta – Gummidipundi	7.746	7.992	8.300	8.576	8.884
10	Asset-XIV(a) & Asset-XIV(b)	(a) Ragulapadu – Allipura (COD:25.9.1975)	4.682	4.831	5.017	5.184	5.370
		(b) LILO of Ragulapadu– Allipura (COD: 6.6.2011)	5.040	5.200	5.400	5.580	5.780
11	Asset- XV & Asset-XVI	Tallapalli-Nagarjunasagar-I	3.770	3.910	4.040	4.190	4.330
12		Tallapalli-Nagarjunasagar-II					
13	Asset-XVII	Tallapalli-Nagarjunasagar-III	2.772	2.860	2.970	3.069	3.179
14	Asset- XVIII	Tallapalli-Chelakurthy	2.772	2.860	2.970	3.069	3.179
15	Asset- XIX & Asset-XX	Srisailam-RB-Dindi-I	0.452	0.469	0.485	0.503	0.520
		Srisailam-RB-Domalapenta					



16	Asset-XXI	Srisailam-RB-Nagarjunasagar	21.672	22.360	23.220	23.994	24.854
17	Asset- XXII	Lower Sileru – KTPS –I	15.163	15.644	16.246	16.787	17.389
19	Asset- XXIII	Lower Sileru – KTPS –II	22.226	22.932	23.814	24.608	25.490
20	Asset- XXIV	Nunna-KTPS	15.410	15.899	16.511	17.061	17.672
21	Asset-XXV	Brhmanakotkur-Wanaparthi line (LIS)	4.750	4.901	5.090	5.259	5.448
22	Asset- XXVI	220 kV Chilakallu-Narketpalli Ckt I&II (COD:29.3.1999)	3.898	4.043	4.177	4.332	4.477
23	Asset- XXVII	LILLO 220 kV Chilakallu-Narketpalli Ckt I&II (COD:3.10.2010)	0.626	0.649	0.671	0.696	0.719
24	Asset- XXVIII	Chilakallu-Ramapuram	2.828	2.933	3.030	3.143	3.248
25	Asset- XXIX	Chilakallu-Sitapuram	2.828	2.933	3.030	3.143	3.248
26	Asset- XXX	Chilakallu-Madhira	5.292	5.460	5.670	5.859	6.069
27	Asset- XXXI	Chilakallu-Kodada	2.953	3.047	3.164	3.270	3.387
28	Asset- XXXII	Chilakallu-Khammam	2.074	2.151	2.222	2.305	2.382
29	Asset- XXXIII	Chilakallu-Kusumanchi	2.074	2.151	2.222	2.305	2.382
30	Asset- XXXIV & Asset-XXXV	Chilakallu-Bonakal-I	6.975	7.234	7.474	7.752	8.011
31		Chilakallu-Bonakal-II					
32	Asset- XXXVI	Sitapuram- KCP Cements	0.512	0.528	0.548	0.566	0.587
33	Asset- XXXVII	Tangeda-wadapally	6.900	7.119	7.393	7.639	7.913
34	Asset- XXXVIII	Piduguralla – Wadapally	10.891	11.237	11.669	12.058	12.491
35	Asset- XXXIX	Nagarjunasagar RC Nagarjunasagar	1.512	1.560	1.620	1.674	1.734
36	Assets- XL & Asset-XLI	K.V. Kota-Aswaraopet-I	11.706	12.141	12.544	13.010	13.445
37		K.V. Kota-Aswaraopet-II					
38	Asset- XLII	AP Carbides-Alampur-I	2.658	2.757	2.848	2.954	3.053
39	Asset- XLIII	AP Carbides-Alampur-II	2.658	2.757	2.848	2.954	3.053
40	Asset- XLIV	Pratapnagar – Yanam	7.636	7.878	8.181	8.454	8.757
Total			657.291	680.032	704.289	728.772	754.293



Transmission charges

35. The transmission charges allowed for the instant assets for the 2019-24 tariff period under the 2019 Tariff Regulations are as under:

(₹ in lakh)

Asset-I & Asset-II					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	231.46	231.46	231.46	231.46	231.46
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	525.22	525.22	525.22	525.22	525.22
O & M Expenses	210.56	217.97	225.62	233.50	241.63
Interest on Working Capital	20.56	19.51	18.48	18.78	19.09
Total	987.80	994.17	1000.79	1008.97	1017.41

(₹ in lakh)

Asset-III					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	112.39	112.39	112.39	112.39	112.39
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	255.02	255.02	255.02	255.02	255.02
O & M Expenses	50.55	52.36	54.17	56.08	58.09
Interest on Working Capital	7.73	7.30	6.87	6.95	7.02
Total	425.68	427.06	428.45	430.43	432.52

(₹ in lakh)

Asset-IV					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	245.59	245.59	245.59	245.59	245.59
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	557.29	557.29	557.29	557.29	557.29
O & M Expenses	139.20	144.10	149.15	154.37	159.74
Interest on Working Capital	18.14	17.15	16.19	16.39	16.59
Total	960.22	964.13	968.22	973.63	979.21

(₹ in lakh)

Asset-V					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	48.64	48.64	48.64	48.64	48.64



Asset-V					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Interest on Loan	25.06	20.37	16.83	13.29	9.76
Return on Equity	42.83	42.83	42.83	42.83	42.83
O & M Expenses	6.17	6.38	6.61	6.84	7.08
Interest on Working Capital	2.02	1.83	1.67	1.63	1.60
Total	124.72	120.06	116.58	113.24	109.90

(₹ in lakh)

Asset-VI & Asset-VII					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	497.69	497.69	497.69	497.69	497.69
Interest on Loan	256.42	208.45	172.25	136.04	99.84
Return on Equity	438.30	438.30	438.30	438.30	438.30
O & M Expenses	63.11	65.33	67.62	69.98	72.42
Interest on Working Capital	20.68	18.75	17.10	16.71	16.33
Total	1276.20	1228.52	1192.95	1158.73	1124.58

(₹ in lakh)

Asset-XII					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	35.84	35.84	35.84	35.84	35.84
Interest on Loan	15.73	12.40	9.80	7.19	4.58
Return on Equity	31.56	31.56	31.56	31.56	31.56
O & M Expenses	7.23	7.46	7.75	8.01	8.30
Interest on Working Capital	1.57	1.43	1.31	1.28	1.26
Total	91.93	88.69	86.25	83.88	81.54

(₹ in lakh)

Asset-XIII					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	38.37	38.37	38.37	38.37	38.37
Interest on Loan	16.84	13.28	10.49	7.70	4.91
Return on Equity	33.79	33.79	33.79	33.79	33.79
O & M Expenses	7.75	7.99	8.30	8.58	8.88
Interest on Working Capital	1.68	1.53	1.40	1.37	1.35
Total	98.43	94.96	92.35	89.81	87.30

(₹ in lakh)



Asset-XIV(a)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	4.68	4.83	5.02	5.18	5.37
Interest on Working Capital	0.20	0.20	0.19	0.20	0.20
Total	4.89	5.03	5.21	5.38	5.57

(₹ in lakh)

Asset-XIV(b)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	20.76	20.76	20.76	20.76	20.76
Interest on Loan	7.53	5.67	4.16	2.65	1.14
Return on Equity	18.28	18.28	18.28	18.28	18.28
O & M Expenses	5.04	5.20	5.40	5.58	5.78
Interest on Working Capital	0.92	0.84	0.77	0.76	0.75
Total	52.53	50.76	49.38	48.04	46.71

(₹ in lakh)

Asset-XV & Asset-XVI					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	3.77	3.91	4.04	4.19	4.33
Interest on Working Capital	0.16	0.16	0.15	0.16	0.16
Total	3.93	4.07	4.19	4.35	4.49

(₹ in lakh)

Asset-XVII					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	2.77	2.86	2.97	3.07	3.18
Interest on Working Capital	0.12	0.12	0.11	0.12	0.12
Total	2.89	2.98	3.08	3.19	3.30

(₹ in lakh)

Asset-XVIII					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	9.84	3.82	3.82	3.82	3.82
Interest on Loan	0.57	0.00	0.00	0.00	0.00
Return on Equity	8.66	8.66	8.66	8.66	8.66
O & M Expenses	2.77	2.86	2.97	3.07	3.18
Interest on Working Capital	0.41	0.29	0.28	0.28	0.28
Total	22.25	15.63	15.73	15.83	15.94

(₹ in lakh)



Asset-XIX & Asset-XX					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	0.45	0.47	0.48	0.50	0.52
Interest on Working Capital	0.02	0.02	0.02	0.02	0.02
Total	0.47	0.49	0.50	0.52	0.54

(₹ in lakh)

Asset-XXI					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	21.67	22.36	23.22	23.99	24.85
Interest on Working Capital	0.94	0.91	0.88	0.91	0.94
Total	22.62	23.27	24.10	24.90	25.80

(₹ in lakh)

Asset-XXII					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	15.16	15.64	16.25	16.79	17.39
Interest on Working Capital	0.66	0.64	0.62	0.64	0.66
Total	15.82	16.28	16.86	17.42	18.05

(₹ in lakh)

Asset-XXIII					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	22.23	22.93	23.81	24.61	25.49
Interest on Working Capital	0.97	0.93	0.90	0.93	0.97
Total	23.19	23.86	24.72	25.54	26.46

(₹ in lakh)

Asset-XXIV					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	15.41	15.90	16.51	17.06	17.67
Interest on Working Capital	0.67	0.65	0.63	0.65	0.67
Total	16.08	16.55	17.14	17.71	18.34

(₹ in lakh)

Asset-XXV					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	17.36	17.36	17.36	6.74	6.74
Interest on Loan	3.65	2.22	0.96	0.00	0.00
Return on Equity	15.29	15.29	15.29	15.29	15.29
O & M Expenses	4.75	4.90	5.09	5.26	5.45
Interest on Working Capital	0.75	0.69	0.63	0.49	0.50
Total	41.79	40.45	39.32	27.77	27.96



(₹ in lakh)

Asset-XXVI					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	2.12	2.12	2.12	2.12	2.12
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	4.81	4.81	4.81	4.81	4.81
O & M Expenses	3.90	4.04	4.18	4.33	4.48
Interest on Working Capital	0.27	0.26	0.25	0.26	0.26
Total	11.10	11.23	11.35	11.51	11.66

(₹ in lakh)

Asset-XXVII					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	0.84	0.84	0.84	0.84	0.33
Interest on Loan	0.24	0.17	0.11	0.05	0.00
Return on Equity	0.74	0.74	0.74	0.74	0.74
O & M Expenses	0.63	0.65	0.67	0.70	0.72
Interest on Working Capital	0.05	0.05	0.05	0.05	0.04
Total	2.51	2.46	2.41	2.38	1.83

(₹ in lakh)

Asset-XXVIII					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	2.83	2.93	3.03	3.14	3.25
Interest on Working Capital	0.12	0.12	0.11	0.12	0.12
Total	2.95	3.05	3.14	3.26	3.37

(₹ in lakh)

Asset-XXIX					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	1.80	1.80	1.80	1.80	1.80
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	4.08	4.08	4.08	4.08	4.08
O & M Expenses	2.83	2.93	3.03	3.14	3.25
Interest on Working Capital	0.21	0.20	0.19	0.20	0.20
Total	8.92	9.01	9.10	9.22	9.32

(₹ in lakh)



Asset-XXX					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	5.91	5.91	5.91	5.91	5.91
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	13.40	13.40	13.40	13.40	13.40
O & M Expenses	5.29	5.46	5.67	5.86	6.07
Interest on Working Capital	0.52	0.49	0.47	0.48	0.48
Total	25.12	25.27	25.45	25.65	25.86

(₹ in lakh)

Asset-XXXI					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	2.03	2.03	2.03	2.03	2.03
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	4.60	4.60	4.60	4.60	4.60
O & M Expenses	2.95	3.05	3.16	3.27	3.39
Interest on Working Capital	0.23	0.22	0.21	0.21	0.22
Total	9.80	9.88	9.99	10.10	10.22

(₹ in lakh)

Asset-XXXII					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	2.64	2.64	2.64	2.64	2.64
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	6.00	6.00	6.00	6.00	6.00
O & M Expenses	2.07	2.15	2.22	2.30	2.38
Interest on Working Capital	0.22	0.21	0.20	0.20	0.20
Total	10.94	11.01	11.07	11.15	11.23

(₹ in lakh)

Asset-XXXIII					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	2.07	2.15	2.22	2.30	2.38
Interest on Working Capital	0.09	0.09	0.08	0.09	0.09
Total	2.16	2.24	2.31	2.39	2.47



(₹ in lakh)

Asset-XXXIV & Asset-XXXV					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	6.97	7.23	7.47	7.75	8.01
Interest on Working Capital	0.30	0.29	0.28	0.29	0.30
Total	7.28	7.53	7.76	8.05	8.31

(₹ in lakh)

Asset-XXXVI					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	1.74	1.74	1.74	1.74	0.67
Interest on Loan	0.50	0.35	0.22	0.10	0.00
Return on Equity	1.53	1.53	1.53	1.53	1.53
O & M Expenses	0.51	0.53	0.55	0.57	0.59
Interest on Working Capital	0.08	0.07	0.07	0.07	0.05
Total	4.35	4.21	4.10	3.99	2.84

(₹ in lakh)

Asset-XXXVII					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	23.42	23.42	23.42	23.42	9.09
Interest on Loan	6.71	4.70	2.99	1.29	0.00
Return on Equity	20.63	20.63	20.63	20.63	20.63
O & M Expenses	6.90	7.12	7.39	7.64	7.91
Interest on Working Capital	1.06	0.98	0.90	0.88	0.69
Total	58.72	56.84	55.33	53.86	38.32

(₹ in lakh)

Asset-XXXVIII					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	66.97	66.97	66.97	66.97	66.97
Interest on Loan	34.51	28.05	23.18	18.31	13.43
Return on Equity	58.98	58.98	58.98	58.98	58.98
O & M Expenses	10.89	11.24	11.67	12.06	12.49
Interest on Working Capital	2.89	2.62	2.40	2.35	2.30
Total	174.24	167.86	163.20	158.67	154.18

(₹ in lakh)

Asset-XXXIX					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	1.51	1.56	1.62	1.67	1.73



Asset-XXXIX					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Interest on Working Capital	0.07	0.06	0.06	0.06	0.07
Total	1.58	1.62	1.68	1.74	1.80

(₹ in lakh)

Asset-XL & Asset-XLI					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	11.71	12.14	12.54	13.01	13.44
Interest on Working Capital	0.51	0.49	0.48	0.49	0.51
Total	12.22	12.63	13.02	13.50	13.95

(₹ in lakh)

Asset-XLII					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	2.66	2.76	2.85	2.95	3.05
Interest on Working Capital	0.12	0.11	0.11	0.11	0.12
Total	2.77	2.87	2.96	3.07	3.17

(₹ in lakh)

Asset-XLIII					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	1.29	1.29	1.29	1.29	1.29
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	2.92	2.92	2.92	2.92	2.92
O & M Expenses	2.66	2.76	2.85	2.95	3.05
Interest on Working Capital	0.18	0.17	0.16	0.17	0.17
Total	7.04	7.13	7.22	7.33	7.43

(₹ in lakh)

Asset-XLIV					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	46.95	46.95	46.95	46.95	46.95
Interest on Loan	24.19	19.67	16.25	12.83	9.42
Return on Equity	41.35	41.35	41.35	41.35	41.35
O & M Expenses	7.636	7.878	8.181	8.454	8.757
Interest on Working Capital	2.02	1.84	1.68	1.65	1.61
Total	122.15	117.68	114.41	111.24	108.09

36. The transmission charges allowed for 2019-24 period are summarized as under:



(₹ in lakh)

Sr. No.	Asset	Asset Name	2019-20	2020-21	2021-22	2022-23	2023-24
1	Asset-I &	Kalpaka-Khammam-I feeder	987.80	994.17	1000.79	1008.97	1017.41
2	Asset-II	Kalpaka-Asupaka - I feeder					
3	Asset-III	Kurnool -Srisailam LB	425.68	427.06	428.45	430.43	432.52
4	Asset-IV (*)	(a) Sattenapally - Srisailam LB – Ckt I&II (COD:23.10.2000)	960.22	964.13	968.22	973.63	979.21
5	Asset-V (*)	(b) LILO of VSTS-Srisailam portion at 400kV Sattenapally Sub-station (COD:12.2.2014)	124.72	120.06	116.58	113.24	109.90
6	Asset-VI &	VTPS - Suryapeta - I	1276.20	1228.52	1192.95	1158.73	1124.58
7	Asset-VII	VTPS - Suryapeta - II					
8	Asset-XII	Chittoor - Thiruvellam	91.93	88.69	86.25	83.88	81.54
9	Asset-XIII	Sulurpeta - Gummidipundi	98.43	94.96	92.35	89.81	87.30
10	Asset-XIV(a) &	(a) Ragulapadu – Allipura (COD:25.9.1975)	4.89	5.03	5.21	5.38	5.57
	Asset-XIV(b) (**)	(b) LILO of Ragulapadu– Allipura (COD: 6.6.2011)	52.53	50.76	49.38	48.04	46.71
11	Asset- XV &	Tallapalli- Nagarjunasagar-I	3.93	4.07	4.19	4.35	4.49
12	Asset-XVI	Tallapalli- Nagarjunasagar-II					
13	Asset-XVII	Tallapalli- Nagarjunasagar-III	2.89	2.98	3.08	3.19	3.30
14	Asset- XVIII	Tallapalli- Chelakurthy	22.25	15.63	15.73	15.83	15.94
15	Asset- XIX &	Srisailam-RB-Dindi-I	0.47	0.49	0.50	0.52	0.54
	Asset-XX	Srisailam-RB-Domalapenta					
16	Asset-XXI	Srisailam-RB-Nagarjunasagar	22.62	23.27	24.10	24.90	25.80
17	Asset-XXII	Lower Sileru - KTPS -I	15.82	16.28	16.86	17.42	18.05
19	Asset-XXIII	Lower Sileru - KTPS -II	23.19	23.86	24.72	25.54	26.46
20	Asset-XXIV	Nunna-KTPS	16.08	16.55	17.14	17.71	18.34
21	Asset-XXV	Brhmanakotkur-Wanaparthy line	41.79	40.45	39.32	27.77	27.96
22	Asset-XXVI (*)	220 kV Chilakallu- Narketpalli Ckt I&II (COD:29.3.1999)	11.10	11.23	11.35	11.51	11.66
23	Asset-XXVII (*)	LILO 220 kV Chilakallu- Narketpalli Ckt I&II (COD:3.10.2010)	2.51	2.46	2.41	2.38	1.83
24	Asset-XXVIII	Chilakallu- Ramapuram	2.95	3.05	3.14	3.26	3.37
25	Asset-XXIX	Chilakallu-Sitapuram	8.92	9.01	9.10	9.22	9.32
26	Asset-XXX	Chilakallu-Madhira	25.12	25.27	25.45	25.65	25.86
27	Asset-XXXI	Chilakallu-Kodada	9.80	9.88	9.99	10.10	10.22
28	Asset-XXXII	Chilakallu-Khammam	10.94	11.01	11.07	11.15	11.23
29	Asset-XXXIII	Chilakallu-Kusumanchi	2.16	2.24	2.31	2.39	2.47
30	Asset- XXXIV &	Chilakallu-Bonakal-I	7.28	7.53	7.76	8.05	8.31
31	Asset-XXXV	Chilakallu-Bonakal-II					



Sr. No.	Asset	Asset Name	2019-20	2020-21	2021-22	2022-23	2023-24
32	Asset- XXXVI	Sitapuram- KCP Cements	4.35	4.21	4.10	3.99	2.84
33	Asset- XXXVII	Tangeda-wadapally	58.72	56.84	55.33	53.86	38.32
34	Asset- XXXVIII	Piduguralla – Wadapally	174.24	167.86	163.20	158.67	154.18
35	Asset- XXXIX	Nagarjunasagar RC Nagarjunasagar	1.58	1.62	1.68	1.74	1.80
36	Asset- XL	K.V. Kota-Aswaraopet-I	12.22	12.63	13.02	13.50	13.95
37	& Asset-XLI	K.V. Kota-Aswaraopet-II					
38	Asset-XLII	AP Carbides-Alampur-I	2.77	2.87	2.96	3.07	3.17
39	Asset-XLIII	AP Carbides-Alampur-II	7.04	7.13	7.22	7.33	7.43
40	Asset-XLIV	Pratapnagar - Yanam	122.15	117.68	114.41	111.24	108.09

Filing Fee and the Publication Expenses

37. The Petitioner has sought reimbursement of expenditure by beneficiaries towards petition fee, and other expenses in relation to filing of Petition. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

Sharing of Transmission Charges

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



Regulation 57 of the 2019 Tariff Regulations. Further, the transmission charges allowed in this order shall be adjusted against ARR approved by APERC.

39. This order disposes of Petition No. 265/TT/2019 in terms of the above discussion and findings.

Sd/-
(Pravas Kumar Singh)
Member

Sd/-
(I.S. Jha)
Member

Sd/-
(P. K. Pujari)
Chairperson

