

**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION
AT NEW DELHI
PETITION NO. __/TT/2024**

IN THE MATTER OF:

PETITION FOR DETERMINATION OF TARIFF FOR TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED OWNED INTRA STATE TRANSMISSION LINES THAT FACILITATED THE FLOW OF INTERSTATE POWER FOR THE PERIOD FROM 1 NOVEMBER 2020 TO 31 MARCH 2021 AND FOR INCLUSION IN THE POC MECHANISM IN ACCORDANCE WITH THE CENTRAL ELECTRICITY REGULATORY COMMISSION (SHARING OF INTER-STATE TRANSMISSION CHARGES AND LOSSES) REGULATIONS, 2020 AND THE CENTRAL ELECTRICITY REGULATORY COMMISSION (TERMS AND CONDITIONS OF TARIFF) REGULATIONS, 2019.

IN THE MATTER OF:

TRANSMISSION CORPORATION OF
ANDHRA PRADESH LIMITED.

...PETITIONER

VERSUS

TRANSMISSION CORPORATION
OF TELANGANA LTD. & ORS.

...RESPONDENTS

**FOR INDEX
PLEASE SEE INSIDE**



COUNSEL FOR PETITIONER

 **UNUM LAW**

C-485, GROUND FLOOR
DEFENCE COLONY, NEW DELHI -110024

MOBILE: +91 9899675905

EMAIL: skumar@unumlaw.in
mchandok@unumlaw.in
ssareen@unumlaw.in

NEW DELHI
DATE: 20.08.2024

**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION
AT NEW DELHI
PETITION NO. __/TT/2024**

IN THE MATTER OF:

TRANSMISSION CORPORATION OF
ANDHRA PRADESH LIMITED.

...PETITIONER

VERSUS

TRANSMISSION CORPORATION
OF TELANGANA LTD. & ORS.

...RESPONDENTS

MASTER INDEX

S NO.	PARTICULARS	PAGE NO.
Vol.1		
1.	MEMO OF PARTIES	1-3
2.	PETITION FOR DETERMINATION OF TARIFF FOR TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED OWNED INTRA STATE TRANSMISSION LINES THAT FACILITATED THE FLOW OF INTERSTATE POWER FOR THE PERIOD FROM 1 NOVEMBER 2020 TO 31 MARCH 2021 AND FOR INCLUSION IN THE POC MECHANISM IN ACCORDANCE WITH THE CENTRAL ELECTRICITY REGULATORY COMMISSION (SHARING OF INTER-STATE TRANSMISSION CHARGES AND LOSSES) REGULATIONS, 2020 AND THE CENTRAL ELECTRICITY REGULATORY COMMISSION (TERMS AND CONDITIONS OF TARIFF) REGULATIONS, 2019. ALONG WITH AFFIDAVIT	4-39
3.	ANNEXURE P/1 TRUE AND CORRECT COPY OF THE CENTRAL ELECTRICITY REGULATORY COMMISSION (SHARING OF INTER-STATE TRANSMISSION CHARGES AND LOSSES) REGULATIONS, 2020	40-85
4.	ANNEXURE P/2 TRUE AND CORRECT COPY OF CERTIFICATION LETTER DATED 30 APRIL 2020 ISSUED BY SRPC	86-88
5.	ANNEXURE P/3 TRUE AND CORRECT COPY OF THE COMMON ORDER DATED 7 JULY 2021 PASSED BY THE APERC IN O.P. NO.	89-166

	47 OF 2020.	
6.	ANNEXURE P/4 TRUE AND CORRECT COPY OF LETTER DATED 10 JULY 2021 SENT BY THE PETITIONER TO RESPONDENT NO. 9	167-170
7.	ANNEXURE P/5 TRUE AND CORRECT COPY OF LETTER DATED 15 JULY 2021 SENT BY RESPONDENT NO. 9 TO PETITIONER	171-172
8.	ANNEXURE P/6 TRUE AND CORRECT COPY OF LETTER DATED 26 JULY 2021 SENT BY THE PETITIONER TO RESPONDENT NO. 9	173-174
9.	ANNEXURE P/7 TRUE AND CORRECT COPY OF THE ORDER DATED 17 MAY 2024 PASSED BY THIS HON'BLE COMMISSION IN 25MP2022	175-209
10.	ANNEXURE P/8 TRUE AND CORRECT COPY OF THE MISCELLANEOUS PETITION ALONG WITH ADDITIONAL AFFIDAVITS FILED BY THE PETITIONER IN 25 MP 2022	210-299
VOL. 2		
10.	ANNEXURE P/8 (Cont.) TRUE AND CORRECT COPY OF THE MISCELLANEOUS PETITION ALONG WITH ADDITIONAL AFFIDAVITS FILED BY THE PETITIONER IN 25 MP 2022	300-599
VOL. 3		
10.	ANNEXURE P/8 (Cont.) TRUE AND CORRECT COPY OF THE MISCELLANEOUS PETITION ALONG WITH ADDITIONAL AFFIDAVITS FILED BY THE PETITIONER IN 25 MP 2022	600-609
11.	ANNEXURE P/9 TRUE AND CORRECT COPY OF ORDER DATED 7 NOVEMBER 2021 PASSED BY THIS HON'BLE COMMISSION IN PETITION NO. 265/TT/2019.	610-654
12.	ANNEXURE P/10 TRUE AND CORRECT COPY OF THE SINGLE LINE DIAGRAM FOR THE ASSET 42A & 42B I.E NUNNA – VEMAGIRI AND VEMAGIRI SATTENAPALLI	655
13.	ANNEXURE P/11 TRUE AND CORRECT COPY OF THE AUDITOR CERTIFICATE FOR ASSETS OF CATEGORY II	656-658
14.	ANNEXURE P/12 TRUE AND CORRECT COPY OF YTC CALCULATION SHEETS FOR 42 DEEMED ISTS LINES.	659-692

15.	ANNEXURE P/13 A COPY OF THE FEES PAID WITH TRANSACTION ID NO. 29b1f82f81717156cb3e DATED 5 JULY 2024	693
16.	COURT FEES FORM	694-698
17.	VAKALATNAMA WITH LETTER OF AUTHORISATION	699 - 701



COUNSEL FOR PETITIONER

 UNUM LAW

C-485, GROUND FLOOR
DEFENCE COLONY, NEW DELHI -110024

MOBILE: +91 9899675905

EMAIL: skumar@unumlaw.in
mchandok@unumlaw.in
ssareen@unumlaw.in

NEW DELHI
DATE:20.08.2024

**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION
AT NEW DELHI
PETITION NO. ___/TT/2024**

IN THE MATTER OF:

TRANSMISSION CORPORATION OF
ANDHRA PRADESH LIMITED.

...PETITIONER

VERSUS

TRANSMISSION CORPORATION
OF TELANGANA LTD. & ORS.

...RESPONDENTS

INDEX VOL. 1

S NO.	PARTICULARS	PAGE NO.
1.	MEMO OF PARTIES	1-3
2.	PETITION FOR DETERMINATION OF TARIFF FOR TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED OWNED INTRA STATE TRANSMISSION LINES THAT FACILITATED THE FLOW OF INTERSTATE POWER FOR THE PERIOD FROM 1 NOVEMBER 2020 TO 31 MARCH 2021 AND FOR INCLUSION IN THE POC MECHANISM IN ACCORDANCE WITH THE CENTRAL ELECTRICITY REGULATORY COMMISSION (SHARING OF INTER-STATE TRANSMISSION CHARGES AND LOSSES) REGULATIONS, 2020 AND THE CENTRAL ELECTRICITY REGULATORY COMMISSION (TERMS AND CONDITIONS OF TARIFF) REGULATIONS, 2019. ALONG WITH AFFIDAVIT	4-39
3.	ANNEXURE P/1 TRUE AND CORRECT COPY OF THE CENTRAL ELECTRICITY REGULATORY COMMISSION (SHARING OF INTER-STATE TRANSMISSION CHARGES AND LOSSES) REGULATIONS, 2020	40-85
4.	ANNEXURE P/2 TRUE AND CORRECT COPY OF CERTIFICATION LETTER DATED 30 APRIL 2020 ISSUED BY SRPC	86-88
5.	ANNEXURE P/3 TRUE AND CORRECT COPY OF THE COMMON ORDER DATED 7 JULY 2021 PASSED BY THE APERC IN O.P. NO. 47 OF 2020.	89-166

6.	ANNEXURE P/4 TRUE AND CORRECT COPY OF LETTER DATED 10 JULY 2021 SENT BY THE PETITIONER TO RESPONDENT NO. 9	167-170
7.	ANNEXURE P/5 TRUE AND CORRECT COPY OF LETTER DATED 15 JULY 2021 SENT BY RESPONDENT NO. 9 TO PETITIONER	171-172
8.	ANNEXURE P/6 TRUE AND CORRECT COPY OF LETTER DATED 26 JULY 2021 SENT BY THE PETITIONER TO RESPONDENT NO. 9	173-174
9.	ANNEXURE P/7 TRUE AND CORRECT COPY OF THE ORDER DATED 17 MAY 2024 PASSED BY THIS HON'BLE COMMISSION IN 25MP2022	175-209
10.	ANNEXURE P/8 TRUE AND CORRECT COPY OF THE MISCELLANEOUS PETITION ALONG WITH ADDITIONAL AFFIDAVITS FILED BY THE PETITIONER IN 25 MP 2022	210-299

COUNSEL FOR PETITIONER


UNUM LAW

C-485, GROUND FLOOR
DEFENCE COLONY, NEW DELHI -110024

MOBILE: +91 9899675905

EMAIL: skumar@unumlaw.in
mchandok@unumlaw.in
ssareen@unumlaw.in

NEW DELHI
DATE:20.08.2024

**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION
AT NEW DELHI
PETITION NO. __/TT/2024**

IN THE MATTER OF:

TRANSMISSION CORPORATION OF
ANDHRA PRADESH LIMITED.

...PETITIONER

VERSUS

TRANSMISSION CORPORATION
OF TELANGANA LTD. & ORS.

...RESPONDENTS

MEMO OF PARTIES

Transmission Corporation of Andhra Pradesh Limited

Through its Authorised Representative
Vidyut Soudha,
Gunadala, Vijayawada -520004

....PETITIONER

VERSUS

1. Transmission Corporation of Telangana Ltd.

Through its Authorised Representative
6th Floor, A Block, Vidyut Soudha,
Khairathabad,
Hyderabad 500082.

...RESPONDENT NO. 1

2. Karnataka Power Transmission Corporation Ltd.

Through its Authorised Representative
Kaveri Bhavan, Kempegowda Road,
Bangalore-560 009.

..RESPONDENT NO. 2

3. Tamil Nadu Transmission Corporation Ltd.

Through its Authorised Representative
144, AnnaSalai,
Chennai-600002.

...RESPONDENT NO. 3



4. **Secretary, Electricity Department, Pondicherry**
Through its Authorised Representative
Electricity Department,
Government of Pondicherry,
Pondicherry-605001. **...RESPONDENT NO. 4**

5. **Kerala State Electricity Board**
Through its Authorised Representative
Vydyuthi Bhavanam, Pattom,
Thiruvananthapuram,
Kerala – 695004. **...RESPONDENT NO. 5**

6. **Central Transmission Utility of India Ltd.**
Through its Authorised Representative
1st Floor, Saudamini, Plot No.– 2, Sector– 29,
Near IFFCO Chowk Metro Station,
Gurgaon – 122 001, Haryana. **...RESPONDENT NO. 6**

7. **Southern Regional Power Committee**
Through its Authorised Representative
29, Race course Cross Road
Bengaluru 560009. **...RESPONDENT NO. 7**

8. **Southern Regional Load Despatch Centre**
Through its Authorised Representative
29, Race Course cross Road,
Bangalore-560009. **...RESPONDENT NO. 8**

9. **Grid Controller of India Limited**
Through its Authorised Representative
B-9 (1st Floor), Qutab Institutional Area, Kat-
waria Sarai, New Delhi -110016 **...RESPONDENT NO. 9**

COUNSEL FOR PETITIONER

UNUM LAW

C-485, GROUND FLOOR
DEFENCE COLONY, NEW DELHI -110024

NEW DELHI
DATE.20.08.2024

MOBILE: +91 9899675905
EMAIL: skumar@unumlaw.in
mchandok@unumlaw.in
ssareen@unumlaw.in

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke extending to the right.

**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION
AT NEW DELHI
PETITION NO. __/TT/2024**

IN THE MATTER OF:

TRANSMISSION CORPORATION OF
ANDHRA PRADESH LIMITED.

...PETITIONER

VERSUS

TRANSMISSION CORPORATION
OF TELANGANA LTD. & ORS.

...RESPONDENTS

MOST RESPECTFULLY SHEWETH:

I. CONSPECTUS OF THE PETITION

1. That by this Tariff Petition, the Petitioner, Andhra Pradesh Transmission Corporation Limited ("**APTRANSCO**") seeks determination of Yearly Transmission Charges ("**YTC**") for 42 intra-state transmission lines carrying inter-state power ("**42 Deemed ISTS lines**") certified by Southern Regional Power Committee ("**SRPC**") for the period 1 November 2020 till 31 March 2021 ("**Relevant Period**"). The Petitioner further seeks inclusion of such YTC in the Point of Connection ("**PoC**") mechanism under the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations 2020 ("**Sharing Regulations 2020**").
2. That by Order dated 7 July 2021 in O.P. No. 47 of 2020 ("**APERC Tariff Order**"), the Ld. Andhra Pradesh Electricity Regulatory Commission ("**Ld. APERC**") has determined the YTC for the 42 Deemed ISTS lines, certified by SRPC for the entire FY 2020-21, including the Relevant Period.
3. That on the strength of the APERC Tariff Order, the Petitioner, by Petition bearing 25/MP/2022 ("**Miscellaneous Petition**") before this Hon'ble Commission, sought inclusion of the YTC as determined by Ld. APERC *inter alia* for the period 2020-2021 upto 31 December 2020 in the PoC mechanism. The Petitioner sought this inclusion in accordance with the CERC (Sharing of Transmission Charges and Losses) Regulations 2010 ("**Sharing Regulations 2010**").



4. That this Hon'ble Commission by final order dated 17 May 2024 ("**25MP Order**") in the Miscellaneous Petition, approved the tariff determined by the Ld. APERC *inter alia* for FY 2020-21 upto 31 October 2020. This Commission further directed Respondent No. 9 to include this tariff in the PoC mechanism. However, this direction was passed in accordance with the Sharing Regulations 2010.
5. That this Hon'ble Commission by the 25MP Order, clarified that the claims of the Petitioner for the Relevant Period are beyond the scope of the Sharing Regulations 2010. This is on the basis that the Sharing Regulations 2020 became effective on 1 November 2020. Accordingly, all claims for the period after 1 November 2020 shall be governed by the Sharing Regulations 2020.
6. That accordingly, the Petitioner is filing this Petition under the Sharing Regulations 2020 seeking *inter alia* (i) approval of the tariff determined by APERC for the 42 Deemed ISTS lines certified by SRPC for the Relevant Period, or *alternatively* determination of tariff for the 42 Deemed ISTS lines certified by SRPC for the Relevant Period and consequently, (ii) inclusion of such tariff in the PoC mechanism under the Sharing Regulations 2020.

II. DESCRIPTION OF PARTIES

7. That the Petitioner is the State Transmission Utility ('**STU**') of Andhra Pradesh performing various functions under Sections 39 and 40 of the Electricity Act, 2003 (the "**Act**"). By virtue of the license granted to the Petitioner by the Ld. APERC, it operates and controls the transmission of power within the State of Andhra Pradesh.
8. That Respondent No. 1, the Transmission Corporation of Telangana Ltd. ("**TGTRANSCO**") is the electricity transmission company of the Government of Telangana. It is vested with powers of controlling system operations of power transmission.
9. That Respondent No. 2, the Karnataka Power Transmission Corporation Limited ("**KPTCL**") is a company incorporated under the Companies Act, 1956, wholly owned by the Government of Karnataka. KPTCL is principally vested



with the functions of transmission of power in the State of Karnataka and also Construction of Stations & Transmission.

10. That Respondent No. 3, the Tamil Nadu Transmission Corporation Ltd. ("**TAN-TRANSCO**") is the electricity transmission company of the Government of Tamil Nadu.
11. That Respondent No. 4, the Electricity Department, Pondicherry, a deemed licensee under Section 14 of the Act, and carries on the business of Transmission, Distribution and retail supply of electricity in Puducherry, Karaikal, Yanam and Mahe regions of the Union Territory of Puducherry.
12. That the Respondent No. 5, Kerala State Electricity Board ("**KSEB**"), is the licensee in the state of Kerala undertaking transmission and distribution of electricity.
13. That the Respondent No. 6, Central Transmission Utility of India Ltd. ("**CTUIL**") is a wholly owned subsidiary of the Power Grid Corporation of India Limited ("**PGCIL**") established as separate company to undertake function of Central Transmission Utility ("**CTU**") in terms of Section 38 of the Act.
14. That the Respondent No. 7, Southern Regional Power Committee ("**SRPC**") has been established under Section 2 (55) of the Act comprising of states of Andhra Pradesh, Telangana, Karnataka, Kerala, Tamil Nadu and Union Territory of Puducherry. SRPC facilitate all functions of planning relating to inter-state/ intra-state transmission system with CTU / STU. It is constituted to facilitate the stability and smooth operation of the integrated grid and the economy and efficiency in the operation of the power system in the Southern region of India.
15. That the Respondent No. 8, Southern Regional Load Despatch Centre ("**SRLDC**") is responsible for optimum scheduling and despatch of electricity in accordance with the contracts entered into with the licensees or the generating companies operating in the Southern Region of India.
16. That the Respondent No. 9, Grid Controller of India Limited ("**GCIL**") erstwhile Power System Operation Corporation Limited ("**POSOCO**") is a wholly owned



Government of India Enterprise under the Ministry of Power. It consists of five Regional Load Despatch Centres (“**RLDC**”) and a National Load Despatch Centre (“**NLDC**”).

III. FACTUAL MATRIX

17. That pursuant to the applicable provisions of the Andhra Pradesh Electricity Reform Act, 1998 (“**Reforms Act**”), the Government of Andhra Pradesh undertook the reform and restructuring of the erstwhile Andhra Pradesh State Electricity Board (“**APSEB**”). APTRANSCO was formed as a successor entity of the erstwhile APSEB through the First Statutory Transfer Scheme notified in the official gazette on 1 February 1999 to manage the Transmission and Distribution business of erstwhile APSEB. Subsequently, the State Government notified the Second Transfer Scheme on 31 March 2000 (the “**Second Transfer Scheme**”) wherein APTRANSCO retained the Transmission, SLDC and Bulk Supply business of the State with itself, while transferring the Distribution and Retail supply of the State to the four Distribution Companies formed, pursuant to obtaining independent licensees by the DISCOMs in December 2000. APTRANSCO relinquished its Distribution & Retail Supply License. Subsequently on 7 June 2005, the State Government notified the Third Transfer Scheme in its official gazette wherein the Bulk Supply business that was being dealt by APTRANSCO is vested to the DISCOMs with effect from 9 June 2005. As a result, APTRANSCO is presently carrying out solely Transmission business as the STU in the State.
18. That on 12 February 2005 Government of India (“**Goi**”) issued the National Electricity Policy (“**NEP**”). Under the NEP, it was mandated that the transmission prices shall be distance and direction sensitive, and must capture the utilization of the network by each network user. In line with this mandate, this Hon’ble Commission published the Sharing Regulations 2010 with effect from 1 July 2011. These regulations have been subsequently amended on 25 November 2011, 29 March 2012, 1 May 2015, 3 July 2015, 14 December 2017



and 27 March 2019. Thereafter, the new regulations, that is, Sharing Regulations 2020 were published by this Hon'ble Commission with effect from 1 November 2020.

True and correct copy of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 is attached herein and referred as **Annexure P/1**.

19. That the Petitioner herein owns and controls various non-ISTS lines in the State of Andhra Pradesh. These non-ISTS lines are frequently used for transmission of inter-state power, which is utilized outside Andhra Pradesh. The charges for such inter-state transmission using non-ISTS lines have been duly recovered by the Petitioner under the relevant regulations from time to time.
20. That prior to notification of the Sharing Regulations 2020, the Sharing Regulations 2010 governed the sharing of transmission losses since 1 January 2011. The procedure for recovering inter-state transmission charges for non-ISTS lines under the Sharing Regulations 2010 is broadly as follows :
 - a. Certification of non-ISTS lines as Deemed/ Deemed Inter-State Transmission System by the appropriate Regional Power Committee ('RPC');
 - b. Determination of YTC charges/ tariff by the appropriate State Commission for such non-ISTS lines;
 - c. Inclusion of such determined YTC charges/ tariff in the PoC mechanism formulated by the Implementing Agency that is GCIL;
 - d. Recovery of YTC charges by the transmission licensee.
21. That following the above procedure under the then prevailing Sharing Regulations 2010, the Petitioner sought to recover the YTC charges for the period 2015-16, 2016-17 and 2020-2021 by availing necessary certification from SRPC and consequent tariff determination/ approval of YTC charges from the Ld. APERC.
22. That by letter dated 30 April 2020, SRPC certified 42 non-ISTS lines owned by the Petitioner for the period 2020-21, carrying inter-state power in excess of



the 50% benchmark required the Sharing Regulations 2010. Based on this certification, a Petition bearing O.P. No. 47 of 2020 (“**Original Petition**”) was filed before the Ld. APERC on 5 October 2020 seeking determination of YTC under the Sharing Regulations 2010.

True and correct copy of certification letter dated 30 April 2020 issued by SRPC is attached herein and referred as **Annexure P/2**.

23. That during the pendency of the adjudication of the Original Petition before the Ld. APERC, the Sharing Regulations 2020 came into effect on 1 November 2020. The procedure for determination/ approval of YTC charges under the Sharing Regulations 2020 is distinct from the former Sharing Regulations 2010.
24. That under the Sharing Regulations 2020, the practice of certification of non-ISTS lines carrying inter-state power by the RPC has been discontinued and the revised procedure requires:
 - a. Determination of YTC charges/ tariff by the Central Commission for such non-ISTS lines;
 - b. Inclusion of such determined YTC charges/ tariff in the PoC mechanism formulated by the Implementing Agency i.e. GCIL (Respondent No. 9);
 - c. Recovery of YTC charges by the transmission licensee
25. That meanwhile, the APERC determined the tariff for the 42 Deemed ISTS lines certified by SRPC for the entire FY 2020-21, including the Relevant Period by the APERC Tariff Order.

True and correct copy of the common order dated 7 July 2021 passed by the APERC in O.P. No. 47 of 2020 is attached herein and referred as **Annexure P/3**.

26. That consequently, the Petitioner by letter dated 10 July 2021 intimated Respondent No. 9 that the YTC charges *inter alia* for the period 2020-2021 were duly determined Ld. APERC, on the basis on certification provided by SRPC.



Further, the Petitioner sought inclusion of such YTC charges in the PoC transmission charges under the Sharing Regulations 2010.

True and correct copy of letter dated 10 July 2021 sent by the Petitioner to Respondent No. 9 is attached herein and referred as **Annexure P/4**.

27. That by a response letter dated 15 July 2021, Respondent No. 9 refused to include YTC charges in the PoC mechanism citing enforcement of the Sharing Regulations 2020. The Respondent No. 9 refused the inclusion of PoC charges, on the assumption that such YTC charges are claimed under the Sharing Regulations 2020. In the said response letter, Respondent No. 9 has stated that in absence of the mandatory approval of YTC charges by this Hon'ble Commission which is a pre-requisite under the Sharing Regulations 2020, the Petitioner is not entitled to recover such YTC charges.

True and correct copy of letter dated 15 July 2021 sent by Respondent No. 9 to Petitioner is attached herein and referred as **Annexure P/5**.

28. That by letter dated 26 July 2021, Respondent No. 9 was made aware of the Removal of Difficulties order dated 14 February 2021 passed by this Hon'ble Commission by exercising power under Regulation 28 of the Sharing Regulations, 2020. By the said letter, the Petitioner requested Respondent No. 9 to reconsider its refusal in light of the Removal of Difficulties order. However, the Petitioner has not received any response to the said letter.

True and correct copy of letter dated 26 July 2021 sent by the Petitioner to Respondent No. 9 is attached herein and referred as **Annexure P/6**.

29. That accordingly, the Petitioner then assailed this refusal of Respondent No. 9 before this Hon'ble Commission in the Miscellaneous Petition.
30. That this Hon'ble Commission finally decided the Miscellaneous Petition by 25MP Order. This Hon'ble *inter alia* approved the tariff determined by APERC for FY 2020-21 until 31 October 2020 and directed the recovery of such tariff in accordance with the Sharing Regulations 2010. However, since the Sharing



Regulations 2020 became effective on 1 November 2020, this Hon'ble Commission clarified that the claims of the Petitioner for the Relevant Period will be determined in accordance with the Sharing Regulations 2020.

True and correct copy of the Order dated 17 May 2024 passed by this Hon'ble Commission in Petition No. 25MP2022 is attached herein and referred as **Annexure P/7**.

31. That in accordance with the directions of this Hon'ble Commission and the revised procedure prescribed under the Sharing Regulations 2020, the Petitioner is filing this Petition seeking approval of YTC for 42 Deemed ISTS line certified by SRPC for the Relevant Period, that is, from 1 November 2020 till 31 March 2021.

IV. DESCRIPTION OF THE ASSETS

32. That SRPC has issued certification for 44 intrastate lines carrying inter-state power for the year 2020-21 by its letter SRPC/SE-I/2020 dated 30 April 2020 ("**SRPC Certificate**"). The description of these 44 lines is set out below:

Sl. No. in SRPC certificate	Line Name	Voltage (kV)	Con-fig.D C/SC	Length (km)	COD	Asset Name
3	NUNNA2-VEMAGIRI1:T3	400	SC	145	30.12.2005	Asset 1
4	GAZUWAKA2-KALPAKKA 1:T1	400	SC	3.39	10.12.2000	Asset 2
5	GAZUWAKA2-KALPAKKA 1:T2	400	SC	3.39	27.01.2002	Asset 3
28	CHITTOOR42-CHITTOOR1:1	220	DC	17.1	14.02.2006	Asset 4



29	CHITTOOR42- CHITTOOR1:2	220		17.1		Asset 5
30	SULURPET1- NELLORE42:1	220	SC	75.7	28.04.1982	Asset 6-A
			SC	10.1	26.12.2006	Asset 6-B
33	CHITTOOR1- KALIKIRI1:1	220	SC	64.66	21.06.1970	Asset 7
34	GOOTY-PG- DHONE1:2	220	DC	90.16	24.08.2011	Asset 8
35	GOOTY-PG- DHONE1:1	220		90.16		Asset 9
36	KONDAPALLI1- CHILLA- KALLU1:1	220	SC	59.7	12.03.1997	Asset 10
37	KONDAPALLI1- CHILLA- KALLU1:2	220	SC	59.7	19.08.2000	Asset 11
38	SRISAIL- AMRB1-TALLA- PALLI:1	220	DC	98.82	01.01.1985	Asset 12
40	SRISAIL- AMRB1-TALLA- PALLI:2	220		98.82	01.01.1985	Asset 13
39	SRISAIL- AMRB1- MYDUKUR:1	220	SC	165.9 6	27.11.1969	Asset 14
41	SRISAIL- AMRB1- SOMYZULPALL I:1	220	SC	106	01.01.1985	Asset 15
42	SRISAIL- AMRB1-BELKA- LAGUDUR:1	220	SC	70.72	24.03.1980	Asset 16-A
				4.94	10.08.2011	Asset 16-B

43	VTS1-CHILLA-KALLU1:1	220	SC	67.8	28.08.1999	Asset 17
45	VTS1-CHILLA-KALLU1:2	220	SC	66.14	29.03.1999	Asset 18-A
	VTS1-CHILLA-KALLU1:2	220	SC	1.48	03.10.2010	Asset 18-B
44	VTS1-RENTACHNTHALA1:2	220	SC	110.09	30.06.1984	Asset 19-A
			SC	1.4	24.11.2008	Asset 19-B
46	KURNOOL1-BRAH-MANKTKUR:1	220	SC	23.18	29.10.2010	Asset 20
62	MACHERLA-RENT-CHNTHALA:1	132	SC	15	27.03.2013	Asset 21
1	CHITTOOR-SDSTPS:1	400	DC	192	22.07.2015	Asset 22
2	CHITTOOR-SDSTPS:2	400		192		Asset 23
6	KURNOOL2-JA-MALAMA-DUGU1:Q1	400	DC	100.86	31.03.2016	Asset 24
7	KURNOOL2-JA-MALAMA-DUGU1:Q2	400		100.86		Asset 25
9	HINDUJA-KVKOTA1:T2	400	DC	242.98	24.07.2017	Asset 26
10	HINDUJA-KVKOTA1:T1	400		242.98		Asset 27
11	JAMALAMA-DUGU1-TALA-RICH-ERUVU:Q2	400	DC	127.62	15.07.2016	Asset 28

12	JAMALAMA-DUGU1-TALARICH-ERUVU:Q1	400		127.62		Asset 29
16	URAVAKONDA-TALARICH-ERUVU:Q1	400	DC	1	01.12.2018	Asset 30
18	URAVAKONDA-TALARICH-ERUVU:Q2	400		1		Asset 31
15	URVAKONDA-HIN-DUPUR3:Q1	400	DC	126.25	23.01.2019	Asset 32
17	URVAKONDA-HIN-DUPUR3:Q2	400		126.25		Asset 33
31	SULURPET1-NELLORE42:2	220	DC	68.13	10.11.2014	Asset 34
32	SULURPET1-NELLORE42:3	220		68.13		Asset 35
48	URAVAKONDA-BORAMPALLI:2	220	DC	33.58	06.01.2017	Asset 36
49	URAVAKONDA-BORAMPALLI:1	220		33.58		Asset 37
50	URAVAKONDA-BORAMPALLI:4	220	DC	34.73	10.07.2017	Asset 38
51	URAVAKONDA-BORAMPALLI:3	220		34.73		Asset 39
47	SUZLON-W1-VAJRAKUR:1	220	SC	5.2	12.08.2016	Asset 40
61	MACHERLA-RENTACHNTHALA:2	132	SC	14.53	11.07.2016	Asset 41



8	VEMAGIRI1-SATTENA-PALLI:T1	400	SC	107.87	26.10.2015	Asset 42-A
				136.98	28.12.2005	Asset 42-B
13	NPKUNTA-HIN-DUPUR3:2	400	SC	YTC not claimed because these lines are owned by PGCIL.		
14	NPKUNTA-HIN-DUPUR3:1	400	SC			

33. That the SRPC Certificate establishes the position that these 44 intra-state lines carried more than 50% inter-state power during the FY 2020-21. Out of 44 certified intra state lines certified by SRPC and upheld by this Hon'ble Commission, two lines belong to PGCIL, while the remaining 42 belong to the Petitioner.
34. That pertinently, by the 25MP Order, this Hon'ble Commission has principally upheld the SRPC Certificate and accepted that these 42 Deemed ISTS lines carried inter-state power during the FY 2020-21.
35. That further, this Hon'ble Commission has also examined and satisfied itself as to the availability of meters at both ends of the 42 Deemed ISTS lines, thereby confirming the availability and operation of such lines. This information was duly submitted by the Petitioner before this Hon'ble Commission by Additional Affidavits in the Miscellaneous Petition.

True and correct copy of the Miscellaneous Petition along with Additional Affidavits filed by the Petitioner in 25 MP 2022 are annexed herewith collectively as **Annexure P/8**.

36. That it is on the basis of the SRPC Certificate and its own independent evaluation that this Hon'ble Commission permitted the Petitioner to recover YTC by inclusion in the PoC mechanism for 7 months of the FY 2020-21. Therefore, it



is the admitted and indisputable position that these 44 intra-state lines carried more than 50% inter-state power during FY 2020-21.

37. That therefore this certification and subsequent approval by this Hon'ble Commission for the 42 Deemed ISTS lines is squarely applicable to this Petition and YTC claims sought for the remaining 5 months of the same FY 2020-21.
38. That accordingly, the Petitioner now seeks approval/ determination of tariff for these 42 Deemed ISTS lines for the Relevant Period under the Sharing Regulations 2020.

V. COMPUTATION OF TARIFF

39. That for ease of reference and computation, the 42 Deemed ISTS lines are divided into two groups based on their commercial operation dated ("**COD**"), that is, before 2014 and after 2014.

Sl. No. in SRPC certifi- cate	Name of Asset	Volt- age (kV)	Con- figu- ration DC/S C	Length (km)	COD	Asset Name
Assets having COD before 2014 (Category 1)						
3	NUNNA2-VEMA-GIRI1:T3	400	SC	145	30.12.2005	A1
4	GAZUWAKA2-KAL-PAKKA 1:T1	400	SC	3.39	10.12.2000	A2
5	GAZUWAKA2-KAL-PAKKA 1:T2	400	SC	3.39	27.01.2002	A3
28	CHITTOOR42-CHIT-TOOR1:1	220	DC	17.1	14.02.2006	
29	CHITTOOR42-CHIT-TOOR1:2	220		17.1		A5

30	SULURPET1-NEL-LORE42:1	220	SC	75.7	28.04.1982	A6A
			SC	10.1	26.12.2006	A6B
33	CHITTOOR1-KALIKIRI1:1	220	SC	64.66	21.06.1970	A7
34	GOOTY-PG-DHONE1:2	220	DC	90.16	24.08.2011	A8
35	GOOTY-PG-DHONE1:1	220		90.16		A9
36	KONDAPALLI1-CHIL-LAKALLU1:1	220	SC	59.7	12.03.1997	A10
37	KONDAPALLI1-CHIL-LAKALLU1:2	220	SC	59.7	19.08.2000	A11
38	SRISAILAMRB1-TAL-LAPALLI:1	220	DC	98.82	01.01.1985	A12
40	SRISAILAMRB1-TAL-LAPALLI:2	220		98.82	01.01.1985	A13
39	SRISAILAMRB1-MYDUKUR:1	220	SC	165.96	27.11.1969	A14
41	SRISAILAMRB1-SOMYZULPALLI:1	220	SC	106	01.01.1985	A15
42	SRISAILAMRB1-BELKALAGUDUR:1	220	SC	70.72	24.03.1980	A16A
				4.94	10.08.2011	A16B
43	VTS1-CHILLAKALLU1:1	220	SC	67.8	28.08.1999	A17
45	VTS1-CHILLAKALLU1:2	220	SC	66.14	29.03.1999	A18A
	VTS1-CHILLAKALLU1:2	220	SC	1.48	03.10.2010	A18B
44	VTS1-RENTACHNTHALA1:2	220	SC	110.09	30.06.1984	A19A
			SC	1.4	24.11.2008	A19B
46	KURNOOL1-BRAH-MANKTKUR:1	220	SC	23.18	29.10.2010	A20
62	MACHERLA-RENT-CHNTHALA:1	132	SC	15	27.03.2013	A21
Assets having COD after 2014 (Category 2)						
1	CHITTOOR-SDSTPS:1	400	DC	192	22.07.2015	A22
2	CHITTOOR-SDSTPS:2	400		192		A23

6	KURNOOL2-JA-MALAMADUGU1:Q1	400	DC	100.86	31.03.2016	A24
7	KURNOOL2-JA-MALAMADUGU1:Q2	400		100.86		A25
9	HINDUJA-KVKOTA1:T2	400	DC	242.98	24.07.2017	A26
10	HINDUJA-KVKOTA1:T1	400		242.98		A27
11	JAMALAMADUGU1-URAVAKONDA DC LINE (P-1)	400	DC	127.62	15.07.2016	A28
12		400		127.62		A29
16	TALARICHERUVU TO LILO POINT OF JAMMALAMADUGU – URAVAKONDA DC LINE (P-2)	400	DC	1	01.12.2018	A30
18		400		1		A31
15	URVAKONDA-HINDUPUR3:Q1	400	DC	126.25	23.01.2019	A32
17	URVAKONDA-HINDUPUR3:Q2	400		126.25		A33
31	SULURPET1-NELLORE42:2	220	DC	68.13	10.11.2014	A34
32	SULURPET1-NELLORE42:3	220		68.13		A35
48	URAVAKONDA-BO-RAMPALLI:2	220	DC	33.58	06.01.2017	A36
49	URAVAKONDA-BO-RAMPALLI:1	220		33.58		A37
50	URAVAKONDA-BO-RAMPALLI:4	220	DC	34.73	10.07.2017	A38
51	URAVAKONDA-BO-RAMPALLI:3	220		34.73		A39

47	SUZLON-W1-VA-JRAKUR:1	220	SC	5.2	12.08.2016	A40
61	MACHERLA-RENTACHNTHALA:2	132	SC	14.53	11.07.2016	A41
8	VEMAGIRI1-SATTENA-PALLI:T1	400	SC	107.87	26.10.2015	A42-A
				136.98	28.12.2005	A42-B

40. That the Petitioner has determined tariff using two different methodologies.

- (1) First, the Petitioner relies upon the methodology used for tariff determination by Ld. APERC and the consequent tariff which has been determined by APERC for these 42 Deemed ISTS lines by the APERC Tariff Order.
- (2) Second, the Petitioner has determined tariff in accordance with the methodology of this Hon'ble Commission.

Each of these are explained in detail below.

A. Tariff determined by Ld. APERC by the APERC Tariff Order and approved by this Hon'ble Commission for part of the FY 2020-21:

41. That O.P. 47 of 2020 was filed by the Petitioner before Ld. APERC for determination of tariff for the 42 Deemed ISTS lines of the Petitioner carrying inter-state power for the entire FY 2020-21.
42. That by the APERC Tariff Order, the Ld. APERC has determined tariff for the 42 Deemed ISTS lines for the entire FY 2020-21 to the tune of INR 295,32,00,000 Crores (Indian Rupees Three Hundred and Ninety Five Crores and Thirty Two Lakhs only).
43. That thereafter, Petitioner had filed the Miscellaneous Petition before this Hon'ble Commission and sought inclusion of the YTC as determined by Ld. APERC *inter alia* for FY 2020-2021 upto 31 December 2020 in the PoC mechanism. The Petitioner placed substantial reliance on the APERC Tariff Order.



44. That thereafter on 17 July 2024, this Hon'ble Commission passed the final order and approved the tariff determined by the Ld. APERC *inter alia* for FY 2020-21 upto 31 October 2020. The relevant portion of the 25MP Order is extracted below for ready reference :

"39. APERC, vide Order dated 07.07.2021 in Petition bearing O.P. No. 42/2020 on 13.03.2020 and O.P. No. 4712020, directed as under:

...

As per the above, APERC has approved YTC of Rs.14.35 Cr, 85.53 Cr. and 295.32 Cr. for the FY 2015-16, FY 2016-17, and FY 2020-21, respectively, for the APTRANSCO-owned non-ISTS lines certified by the SRPC for inclusion of in the PoC transmission charges. APERC has also directed that on the inclusion of such YTC in the PoC methodology by the implementing agency, the YTC recovered shall be adjusted against the ARR of the respective years of the petitioner.

...

42. Considering the certification carried out by SRPC under provisions of the Sharing Regulations 2010 and the determination of line-wise tariff by APERC, we are of the view that the specified lines, as per details in paragraph 24 of this Order, shall be considered under PoC under the Sharing Regulations 2010 for the period 2015-16, 2016-17 and 2020-21 (up to 30.10.2020). Accordingly, we direct the implementing agency/CTUIL to include the lines as per details in paragraph 24 under POC for the period 2015-16, 2016-17, and 2020-21 (up to 30.10.2020) and raise bills accordingly. Accordingly, the liabilities of DICs for arrears of transmission charges shall be recovered from the concerned DICs through Bills under Regulation 15(2)(b) of the 2020 Sharing Regulations. We observe that once the transmission charges of non-ISTS lines are included in the ISTS pool, the availability of such lines needs to be verified by the respective RPC, and recovery of tariff should be linked with its availability, for which necessary mechanisms may be put in place by RPC. We direct that YTC of such intra-State lines shall be



included in the PoC Pool based on the availability of each of the lines to be certified by the SRPC in terms of the provisions under the CERC (Terms and Conditions of Tariff) Regulations, 2014 and CERC (Terms and Conditions of Tariff) Regulations, 2019, as applicable.”

45. That clearly, tariff for the FY 2020-21 including the Relevant Period has been determined by the Hon'ble APERC. Pertinently, for part of the FY 2020-21, this Hon'ble Commission has already granted its approval and permitted inclusion in the PoC mechanism. It is therefore prayed that for the balance period of the FY 2020-21, that is the Relevant Period in this Petition, this Hon'ble Commission be pleased to approve the tariff as determined by the Ld. APERC.
46. That the proportionate tariff determined by the Ld. APERC in respect of the 42 Deemed ISTS lines for the Relevant Period is set out below:

S. No.	Asset Name	Name of the Line	Voltage (kV)	YTC approved by APERC in OP No 47 of 2020 for FY 2020-21	YTC for 5 months of FY 2020-21 (in Lakhs)
1	A1	NUNNA2-VEMAGIRI1:T3	400	530.08	220.87
2	A2	GAZUWAKA2-KALPAKKA 1:T1	400	17.77	7.40
3	A3	GAZUWAKA2-KALPAKKA 1:T2			
4	A4	CHITTOOR42-CHITTOOR1:1	220	56.50	23.54
5	A5	CHITTOOR42-CHITTOOR1:2			
6	A6-A	SULURPET1-NELLORE42:1	220	64.61	26.92
	A6-B			19.69	8.2

7	A7	CHITTOOR1-KALIKIRI1:1	220	55.19	23.00
8	A8	GOOTY-PG-DHONE1:2	220	557.58	232.33
9	A9	GOOTY-PG-DHONE1:1			
10	A10	KONDAPALLI1-CHILLA-KALLU1:1	220	95.15	39.65
11	A11	KONDAPALLI1-CHILLA-KALLU1:2	220	121.65	50.69
12	A12	SRISAILAMRB1-TALLA-PALLI:1	220	168.69	70.29
13	A13	SRISAILAMRB1-TALLA-PALLI:2			
14	A14	SRISAILAMRB1-MYDUKUR:1	220	141.64	59.02
15	A15	SRISAILAMRB1-SOMYZULPALLI:1	220	90.47	37.70
16	A16-A	SRISAILAMRB1-BELKALA-GUDUR:1	220	60.36	25.15
	A16-B			18.19	7.58
17	A17	VTS1-CHILLAKALLU1:1	220	83.65	34.85
18	A18-A	VTS1-CHILLAKALLU1:2	220	76.4	31.83
	A18-B	VTS1-CHILLAKALLU1:2	220	4.65	1.94
19	A19-A	VTS1-RENTACHNTHALA1:2	220	93.96	39.15
	A19-B			3.84	1.60
20	A20	KURNOOL1-BRAH-MANKTKUR:1	220	72.47	30.20
21	A21	MACHERLA-RENT-CHNTHALA:1	132	51.30	21.38
22	A22	CHITTOOR-SDSTPS:1	400	6750.41	2812.67
23	A23	CHITTOOR-SDSTPS:2			
24	A24	KURNOOL2-JAMALAMA-DUGU1:Q1	400	2586 .73	1077.80
25	A25	KURNOOL2-JAMALAMA-DUGU1:Q2			

26	A26	HINDUJA-KVKOTA1:T2	400	6839.04	2849.60
27	A27	HINDUJA-KVKOTA1:T1			
28	A28	JAMMALAMADUGU –	400	2908.98	1212.08
29	A29	URAVAKONDA DC Line (Part-1)			
30	A30	TALARICHERUVU TO LILO	400	86.74	36.14
31	A31	POINT OF JAMMALAMA- DUGU – URAVAKONDA DC LINE (Part-2)			
32	A32	URVAKONDA-HIN- DUPUR3:Q1	400	3922.41	1634.34
33	A33	URVAKONDA-HIN- DUPUR3:Q2			
34	A34	SULURPET1-NELLORE42:2	220	839.42	349.76
35	A35	SULURPET1-NELLORE42:3			
36	A36	URAVAKONDA-BORAM- PALLI:2	220	643.29	268.04
37	A37	URAVAKONDA-BORAM- PALLI:1			
38	A38	URAVAKONDA-BORAM- PALLI:4	220	621.65	259.02
39	A39	URAVAKONDA-BORAM- PALLI:3			
40	A40	SUZLON-W1-VAJRAKUR:1	220	4.44	1.85
41	A41	MACHERLA- RENTACHNTHALA:2	132	43.03	17.93
42	A42-A	VEMAGIRI1-SATTENA-	400	1401.16	583.82
	A42-B	PALLI:T1		500.77	208.66
Total YTC (in Lakhs)				29531.93	12304.97
Total YTC (in Crores)				295.32	123.05

B. Tariff determined in accordance with the methodology of CERC

47. Alternatively and without prejudice to the tariff determined by APERC for the Relevant Period, the Petitioner has also computed the tariff in accordance with the methodology prescribed under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 ("**CERC Tariff Regulations 2019**") for the 42 Deemed ISTS lines. This computation is set out in detail below:

48. Capital Cost

(1) For the Assets 1 to 21 (Category - I Assets with COD before 2014):

- (a) The individual audited capital cost of these 21 assets are not available with the Petitioner. Therefore, the capital cost of these assets is computed in line with this Hon'ble Commission's methodology to determine the indicative capital cost. The benchmark cost taken by this Hon'ble Commission in its Order dated 7 November 2021 passed in Petition No. 265/TT/2019 ("**7 November Order**").

True and Correct copy of Order dated 7 November 2021 passed by this Hon'ble Commission in Petition No. 265/TT/2019 is attached herein and marked as **Annexure P/9**.

- (b) The methodology as adopted by this Hon'ble Commission in its 7 November Order is quoted as below:

"PGCIL's Annual Report data has been used as the reference data; based on which, year wise benchmark cost has been derived.

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 transmission lines' length 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 & 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 TL taken together makes it around 8.3 % of the total line length owned by PGCIL. Further, 132 kV TLs 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 TL 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		Rs 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



Therefore, for arriving at the costs of transmission lines of other voltage levels and circuit configurations, the average TL 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 States' transmission lines."

- (c) On this basis, the Capital Cost computed for the above assets is set out below:

Asset Name	Rationalised cost of 400 kV line in Rs Lakh per km	Transmission Line length, in km	Multiplication factor	Gross block in Rs Lakhs (Capital cost)
A1	40.33	145	1	5847.85
A2&3	44.28	3.39	1.39	208.65
A4&5	40.33	17.1	0.57	393.10
A6A	0	75.7	0.36	0.00
A6B	42.53	10.1	0.36	154.64
A7	0	64.66	0.36	0.00
A8&9	62.27	90.16	0.57	3200.13
A10	38.20	59.7	0.36	820.99
A11	54.57	59.7	0.36	1172.82
A12&13	0	98.82	0.57	0.00
A14	0	165.96	0.36	0.00
A15	0	106	0.36	0.00
A16A	0	70.72	0.36	0.00
A16B	62.27	4.94	0.36	110.74
A17	20.71	67.8	0.36	505.49
A18A	17.54	66.14	0.36	417.63
A18B	52.26	1.48	0.36	27.92



A19A	0	110.09	0.36	0.00
A19B	47.74	1.4	0.36	24.06
A20	52.26	23.18	0.36	436.10
A21	65.67	14.53	0.31	295.80

* For the assets which served their life time i.e. 35 years the rationalized cost is taken as "0"

(2) For the Assets 22 to 41 (Category – II , Assets with COD after 2014)

- (a) Since these lines are commissioned after 31 March 2014, the audited capital cost has been taken for calculation of YTC.
- (b) **For the Assets 22 to 41,** the Gross Block is as given below:

Asset Name	Gross block in Rs Lakhs (Capital cost)
A22 &23	43505.98
A24 &25	16293.24
A26 &27	40597.44
Asset 28,29,30,31 (Part -1)	17604.40
Asset 28,29,30,31 (Part -2)	519.57
A32 &33	33198.53
A34 &35	5086.05
A36 &37	3833.20
A38 &39	3554.54
A41	200.39



(c) **Regarding the Assets 28 to 31 (Jammalamadugu-Talaricheruvu I&II and Uravakonda-Talaricheruvu-I&II (SI No 11,12,16 & 18 of SRPC):**

- (i) The original 400 KV Jammalamadugu –Uravakonda TMDC line which was commissioned on 15 July 2016 was made double LILO to 400 KV SS Talaricheruvu on 1 December 2018. After making double Line in Line Out (“**LILO**”), the 400 KV Jammalamadugu-Uravakonda TMDC line became 400 KV Jammalamadugu – Talaricheruvu TMDC and 400 KV Uravakonda-Talaricheruvu TMDC line.
- (ii) For computing the YTC for the above four lines, the audited capital cost of 400 KV Jammalamadugu-Uravakonda TMDC line as part-1 and Talaricheruvu to LILO Point of Jammalamadugu–Uravakonda line was taken as part-2. The Gross block (capital cost) for part – 1 is Rs. 17604.40 Lakhs and for part – 2 is Rs. 519.57 Lakhs. Calculation are also carried out separately as Part-1 & 2 in view of separate CoDs.

(d) **For Asset 40**

- (i) Suzlon - Vajrakarur line was constructed by M/s Suzlon under Depository Contribution (DC) work. Hence, O&M charges and Interest on working Capital are only taken into consideration for computation of YTC.

(e) **For the Asset 42A (Category – II) & 42B (Category – I) (Vemagiri Sattenapalli - SI.No. 8 of SRPC:**

- (i) Asset 42B was commissioned prior to 2014. Accordingly, the audited capital cost for this asset is not available. Consequently, indicative capital cost in accordance with this Hon’ble Commission’s 7 November Order has been computed by the Petitioner as set out below:



Asset Name	Rationalised cost of 400 kV line in Rs Lakh per km	Transmission Line length, in km	Multiplication factor	Gross block in Rs Lakhs (Capital cost)
42B	40.33	136.98	1	5524.40

- (ii) The 400 KV Vemagiri - Nunna Feeder-1 was made LILO to Sattenapalli 400kV SS which was commissioned in the year 2015. Hence, the 400 KV Vemagiri- Nunna Feeder -1 became 400 KV Vemagiri – Sattenapalli and 400 KV Nunna - Sattenapalli feeders.

The single line diagram for Asset 42A & 42B is shown in the **Annexure P/10**.

- (iii) YTC of 400KV Vemagiri-Sattenapalli line is calculated in two parts as set out below:

a) Vemagiri to LILO point SC line (DOC: 28.12.2005) Gross block is arrived from Rationalised cost for 136.98Km of 400kV Single Ckt line (Section-B) i.e Rs. 5524.40 Lakhs.

b) LILO portion to Sattenapalli (DOC: 26.10.2015): Audited Capital cost is available for 400kV DC line from Sattenapalli to LILO point. 50% of that cost is taken as Gross Block as Line under consideration is Single Ckt from Sattenapalli to LILO point (Section-A) i.e Rs.8872.41 Lakhs

Asset Name	Gross block (in Rs. Lakhs) (Capital cost as per auditor certificate)
A42A	8872.41

True and correct copy of the auditor certificate for all assets of Category II is attached herein and referred as **Annexure P/11**.

49. Debt- Equity Ratio for all the assets

The debt- equity ratio is considered to be the normative debt-equity ratio of 70:30.

50. Depreciation for all the assets

- (1) In terms of the CERC Tariff Regulations 2019, the asset is depreciated up to 90% of the capital cost, while remaining 10% being the salvage value of the asset. The rate of depreciation is taken as 5.28% till 12 years and 1.16% beyond that till the useful life of the assets, that is, upto 35 years. The depreciation is computed as per the methodology adopted by this Hon'ble Commission in its 7 November Order. The useful life of 35 years is computed in line with the judgment dated 14 November 2022 passed by the Hon'ble Appellate Tribunal for Electricity in Appeal No. 267 of 2018.
- (2) Further, normative loan repayment during a year shall be deemed to be equal to the depreciation allowed for that year.

51. Interest on Loan

(1) For the Assets 1 to 42:

- (a) The rate of interest on loan for the assets has been considered from the weighted average rate of loan for the Petitioner as a whole, since there is no individual line wise breakup of interest rates available. The rate of interest for 2020-21 has been considered as the weighted average rate of interest on loan of FY 2020-21 as per the Tariff order for 4th CP (FY 2019-20 to FY 2023-24).

Year	2020-21



Weighted average Rate of Interest on Loan	9.98%

52. Return on Equity

- (1) Clause (1) and (2) of Regulations 30 and Clause (2) of Regulation 31 of CERC Tariff Regulations 2019 specify as under:-

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

(2) *Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system....”*

- (2) It is prayed that the return on equity be determined in accordance with the Regulations set out above.

53. Tax on Return on Equity

- (1) Regulation 31 of the CERC Tariff Regulations 2019 specify as under:

Tax on Return on Equity. (1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income

from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.

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

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

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

- (2) The tax on return on equity comprises various components which are set out below along with their respective rates:

Minimum Alternate Tax (MAT)	15%
Surcharge	12%
Health and Education Cess on MAT + Surcharge	4%
Total Minimum Alternate Tax	17.472% (component ‘t’)

54. In accordance with Regulation 31, the rate of pre-tax return on equity is computed below:

$$\begin{aligned} \text{Rate of pre-tax return on equity} &= \text{Base rate} / (1-t) \\ &= 15.5 / (1-0.17472) \end{aligned}$$



= 18.781%.

Therefore, the rate of pre-tax return on equity is computed as **18.781%**.

55. O & M Expenses

Regulation 35 of the CERC Tariff Regulations 2019 stipulates normative operation and maintenance expenses. Particularly, Regulations 35(3) provides normative operation and maintenance expenses for transmission systems for each year from 2019-2020 till 2023-2024. The Petitioner is seeking O&M expenses for the 42 Deemed ISTS lines in line with these normative rates stipulated in the CERC Tariff Regulations 2019.

56. Interest on Working Capital

In accordance with the Clause 7 of Regulation 3 of the CERC Tariff Regulations 2019 Interest on Working Capital is MCLR+350 base points. one year marginal cost of lending rate (MCLR) of the State Bank of India as on 1 April 2020 is 7.75%, by adding 350 base points to it, the rate of interest on working capital works out to be 11.25%. In accordance with the Clause 1(c) of Regulation 34 of CERC Tariff Regulations 2019 the working capital is taken as the sum of Maintenance Spares (@15% of the yearly O&M Expenses), O&M Expenses for 1 month and Receivables (equivalent to 45 days of annual fixed cost).

57. That overall, the tariff computed in line with CERC Tariff Regulations 2019 for these Assets 1 to 42. The transmission charges for the 42 Deemed ISTS lines certified by SRPC for the FY 2020-21 and proportionate value for the Relevant Period, that is, 1 November 2020 to 31 March 2021 are set out below:

Sl. No.	Asset Name	Name of the Line	Voltage (kV)	YTC for FY 2020-21	YTC for 5 months of FY 2020-21



					(in Lakhs)
1	A1	NUNNA2-VEMAGIRI1:T3	400	423.24	176.35
2	A2	GAZUWAKA2-KALPAKKA 1:T1	400	11.17	4.65
3	A3	GAZUWAKA2-KALPAKKA 1:T2			
4	A4	CHITTOOR42-CHIT- TOOR1:1	220	30.12	12.55
5	A5	CHITTOOR42-CHIT- TOOR1:2			
6	A6-A	SULURPET1-NEL-	220	20.49	8.54
	A6-B	LORE42:1		11.85	4.94
7	A7	CHITTOOR1-KALIKIRI1:1	220	17.5	7.29
8	A8	GOOTY-PG-DHONE1:2	220	417.70	174.04
9	A9	GOOTY-PG-DHONE1:1			
10	A10	KONDAPALLI1-CHILLA- KALLU1:1	220	57.14	23.81
11	A11	KONDAPALLI1-CHILLA- KALLU1:2	220	78.78	32.32
12	A12	SRISAILAMRB1-TALLA- PALLI:1	220	40.22	16.76
13	A13	SRISAILAMRB1-TALLA- PALLI:2			
14	A14	SRISAILAMRB1- MYDUKUR:1	220	44.91	18.71
15	A15	SRISAILAMRB1- SOMYZULPALLI:1	220	28.69	11.95
16	A16-A	SRISAILAMRB1-BELKALA-	220	19.14	7.97
	A16-B	GUDUR:1		14.52	6.05
17	A17	VTS1-CHILLAKALLU1:1	220	34.36	14.32
18	A18-A	VTS1-CHILLAKALLU1:2	220	34.08	14.20
	A18-B	VTS1-CHILLAKALLU1:2	220	3.58	1.49

19	A19-A	VTs1-	220	29.79	12.41
	A19-B	RENTACHNTHALA1:2		2.86	1.19
20	A20	KURNOOL1-BRAH-MANKTKUR:1	220	55.86	23.28
21	A21	MACHERLA-RENT-CHNTHALA:1	132	40.73	16.97
22	A22	CHITTOOR-SDSTPS:1	400	6859.60	2858.17
23	A23	CHITTOOR-SDSTPS:2			
24	A24	KURNOOL2-JAMALAMA-DUGU1:Q1	400	2694.82	1122.84
25	A25	KURNOOL2-JAMALAMA-DUGU1:Q2			
26	A26	HINDUJA-KVKOTA1:T2	400	6780.34	2825.14
27	A27	HINDUJA-KVKOTA1:T1			
28	A28	JAMMALAMADUGU –	400	2923.89	1218.29
29	A29	URAVAKONDA DC Line (Part-1)			
30	A30	TALARICHERUVU TO LILO	400	87.54	36.47
31	A31	POINT OF JAMMALAMA-DUGU – URVAKONDA DC LINE (Part-2)			
32	A32	URVAKONDA-HINDUPUR3:Q1	400	4187.34	1744.72
33	A33	URVAKONDA-HINDUPUR3:Q2			
34	A34	SULURPET1-NEL-LORE42:2	220	765.60	319.00
35	A35	SULURPET1-NEL-LORE42:3			
36	A36	URAVAKONDA-BORAMPALLI:2	220	628.96	262.07

37	A37	URAVAKONDA-BORAM-PALLI:1			
38	A38	URAVAKONDA-BORAM-PALLI:4	220	586.81	244.50
39	A39	URAVAKONDA-BORAM-PALLI:3			
40	A40	SUZLON-W1-VAJRAKUR:1	220	1.41	0.59
41	A41	MACHERLA-RENTACHNTHALA:2	132	35.15	14.64
42	A42-A	VEMAGIRI1-SATTENA-	400	1437.00	598.75
	A42-B	PALLI:T1		455.58	189.82
Total YTC (in Lakhs)				27444.02	12025.31
Total YTC (in Crores)				120.25	

True and correct copy of YTC calculation sheets for 42 Deemed ISTS lines is attached herein and referred as **Annexure P/12**.

58. Fee for application for determination of tariff:

- (1) As per CERC (Payment of Dees) Regulation 2012, notification dated 30 March 2012, an application/petition for determination of tariff for inter-state transmission system or in element there of shall be accompanied by a fee payable at the rate of 0.11% of the total annual transmission charges per annum claimed by the transmission licensee.
- (2) This Petition seeks determination of tariff of 42 Deemed ISTS lines certified by SRPC for the FY 2020-21 for Relevant Period of 5 months, that is, from 1 November 2020 to 31 March 2021 of FY 2020-21.
- (3) Accordingly, the application fees of Rs. 13,22,800.00 (i.e. Thirteen Lakhs Twenty Two Thousand Eight Hundred only) has paid through CERC fees payment gateway mechanism on 5 July 2024.



True and correct copy of the fees paid with Transaction ID No. 29b1f82f81717156cb3e dated 5 July 2024 is attached to the Form-I as **Annexure- P/13**.

59. The Petitioner also seeks reimbursement of 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 as quoted below:

“70. Application fee and the publication expenses: The following fees, charges and expenses shall be reimbursed directly by the beneficiary in the manner specified herein:

(1) The application filing fee and the expenses incurred on publication of notices in the application for approval of tariff, may in the discretion of the Commission, be allowed to be recovered by the generating company or the transmission licensee, as the case may be, directly from the beneficiaries or the long term customers, as the case may be.”

60. The Petitioner seeks liberty to subsequently file the actual expenses incurred in publishing the notice for determination of tariff in newspapers with invoices.

PRAYER

61. In the above circumstances, the petitioner respectfully prays the Hon’ble Commission
- i. to approve the fixed charges for the 42 Deemed ISTS lines covered under this Petition;
 - ii. to approve the tariff determined by APERC by Order dated 7 July 2021 in O.P. No. 47 of 2020 for the 42 Deemed ISTS lines of the Petitioner carrying



interstate power for 5 months of FY2020-21, that is, from 1 November 2020 till 31 March 2021

or

Alternatively, to determine the tariff of the 42 Deemed ISTS lines of the Petitioner carrying interstate power for 5 months of FY2020-21, that is, from 1 November 2020 till 31 March 2021 in accordance with the computation under Paragraph 57 of this Petition;

- iii. to pass appropriate directions to CTUIL to include the tariff determined in respect of the 42 Deemed ISTS lines in the PoC mechanism under the Sharing Regulations 2020;
- iv. to reimburse the filing fee and other expenses incurred by the Petitioner, including expenses incurred on newspaper publication, in accordance with the Regulation 70 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019;
- v. 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.

Chief General Manager/Commercial
& Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.



PETITIONER

THROUGH



 UNUM LAW

C-485, GROUND FLOOR

DEFENCE COLONY, NEW DELHI -110024

MOBILE: +91 9899675905

EMAIL: skumar@unumlaw.in

mchandok@unumlaw.in

ssareen@unumlaw.in

NEW DELHI

DATE:20.08.2024



**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI
/TT/2024**

In the matter of:

Transmission Corporation of Andhra Pradesh Limited	... Petitioner
Versus	
Transmission Corporation of Telangana Ltd & Ors.	... Respondents

AFFIDAVIT

I, Shri. Yalla Appa Rao, S/o Y. Tatayya, aged about 59 years, working as Chief General Manager / Commercial & Coordination, working for gain at the Transmission Corporation of Andhra Pradesh Limited do solemnly affirm and say as follows:

1. I am the Chief General Manager/Commercial & Coordination of APTRANSCO, the licensee company operating and controlling the Transmission Business & SLDC Activity of electricity in Andhra Pradesh pursuant to the license granted by the Hon'ble Commission. I am competent and duly authorized by APTRANSCO to affirm, swear, execute and file this affidavit in the present proceedings.
2. I have read and understood the contents of the accompanying Petition for Determination of Tariff for Intra state Lines of APTRANSCO for FY 2020-21 (i.e. for the period from 01.11.2020 to 31.03.2021). The statements made in the paragraphs of the accompanying petition shown to me are true to my knowledge derived from the official records made available to me and are based on information and advice received which I believe the same to be true and correct.

VERIFICATION:

I, the above-named deponent solemnly affirm at Vijayawada on **this 28th** day of June 2024 that the contents of the above affidavit are true to my knowledge, no part of it is false and nothing material has been concealed there from.


DEPONENT

Chief General Manager/Commercial
& Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.


DEPONENT

Chief General Manager/Commercial
& Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.




G. SIVA PRASADA RAJU
B.Com., B.L.,
ADVOCATE & NOTARY
Regd.No: 5758
23-5-6, Vandanapu Vari Street,
Satyanarayanapuram,
VIJAYAWADA-520 011.

CENTRAL ELECTRICITY REGULATORY COMMISSION**NEW DELHI**

No.L-1/250/2019/CERC

Dated: 4th May 2020**NOTIFICATION**

In exercise of the powers conferred under Section 178 read with Part V of the Electricity Act, 2003 (36 of 2003), and all other powers enabling it in this behalf, and after previous publication, the Central Electricity Regulatory Commission hereby makes the following regulations:

CHAPTER 1**PRELIMINARY****1. Short title, extent and commencement**

(1) These regulations may be called the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020.

(2) These regulations shall apply to all Designated ISTS Customers (DICs), Inter-State Transmission Licensees, National Load Despatch Centre (NLDC), Regional Load Despatch Centres (RLDCs), State Load Despatch Centres (SLDCs) and Regional Power Committees (RPCs).

(3) These regulations shall come into force from the date to be separately notified by the Commission.

2. Definitions

(1) In these Regulations, unless the context otherwise requires:-

TC**S. S.**

- a) **‘Act’** means the Electricity Act, 2003 (36 of 2003);
- b) **‘Associated Transmission System’ or ‘ATS’** means the transmission system identified for a generating station by the Central Transmission Utility in the Long Term Access grant;
- c) **‘Basic Network’** means the power system at voltage levels of 110 kV and above containing all the power system elements including generating station and transmission systems ;
- d) **‘Billing month’** means the month in which bills for transmission charges are raised by the Central Transmission Utility in accordance with these regulations;
- e) **‘Billing period’** means the month for which bills are raised in a billing month by the Central Transmission Utility;
- f) **‘buyer’** shall have the same meaning as defined in Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulation, 2014 and any subsequent amendments or re-enactments thereof;
- g) **‘COD of the Associated Transmission System’** shall mean COD of the last transmission element of the Associated Transmission System;
- h) **‘Connectivity Regulations, 2009’** means the Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009 and any subsequent amendments or re-enactments thereof;
- i) **‘Date of Commercial Operation’ or ‘COD’** shall have the same meaning as defined in the Grid Code;



- j) **‘Designated ISTS Customer’ or ‘DIC’** means the user of any transmission element(s) of the Inter-State Transmission System (ISTS) and shall include generating station, State Transmission Utility (STU), distribution licensee including State Electricity Board or its successor company, Electricity Department of State and any other entity directly connected to the ISTS and shall include an intra-State entity or a trading licensee that has obtained Medium Term Open Access or Long Term Access to ISTS;
- k) **‘Grid Code’** means the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 and any subsequent amendments or re-enactments thereof;
- l) **‘Hybrid Methodology’** means hybrid of the Marginal Participation Method and the Average Participation Method as detailed in Annexure-I of these regulations;
- m) **‘Implementing Agency’ or ‘IA’** means NLDC or such other agency designated by the Commission to undertake various functions under these regulations and such other functions as may be assigned by the Commission from time to time;
- n) **‘Monthly Transmission Charges’ or ‘MTC’** in a billing month means the transmission charges derived from the Yearly Transmission Charges for the corresponding billing period or part thereof;
- o) **‘node’** means a sub-station of a transmission system or a switchyard of a generating station and shall include injection node, drawal node and regional node;



- p) **‘Open Access Regulations, 2008’** means the Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008 and any subsequent amendments or re-enactments thereof;
- q) **‘Participation Factor’** of a node in any transmission line means the percentage usage of that line by the node, as explained in Annexure-I of these regulations;
- r) **‘Peak block’** means the block in which sum of net ISTS drawals by all States is maximum during the month;
- s) **‘Power Supply Regulations, 2010’** means the Central Electricity Regulatory Commission (Regulation of Power Supply) Regulations, 2010 as amended from time to time and any re-enactment thereof;
- t) **‘regional node’** means an injection node or a drawal node which is under the control area jurisdiction of a Regional Load Despatch Centre;
- u) **‘Regional Transmission Account’** means the monthly account of transmission charges issued by the Secretariat of respective Regional Power Committee on the basis of which the Central Transmission Utility shall raise the first bill in the billing month under these regulations;
- v) **‘Regional Transmission Deviation Account’** means the monthly account of Transmission Deviation charges issued by the Secretariat of respective Regional Power Committee on the basis of which the Central Transmission Utility shall raise the third bill in the billing month under these regulations;
- w) **‘seller’** shall have the same meaning as defined in the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related



Matters) Regulation, 2014 and any subsequent amendments or re-enactments made thereof;

- x) **‘Surge Impedance Loading’ or ‘SIL’** means loading on transmission line for various configurations as per Annexure-II to these regulations;
- y) **‘Target Region’** means the region to which Long Term Access is granted to a DIC, without identified beneficiaries in the said region;
- z) **‘Tariff Regulations, 2014’** means the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, as amended from time to time;
- aa) **‘Tariff Regulations, 2019’** means the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, as amended from time to time;
- bb) **‘Transmission Deviation’** means the deviation as specified in and computed under Regulation 12 of these regulations;
- cc) **‘Transmission Deviation Rate’** means the rate calculated in accordance with Regulation 12 of these regulations;
- dd) **‘Untied LTA’** means the quantum of Long Term Access granted to a DIC less the quantum for which buyers have been identified under Long Term Access or Medium Term Open Access or both;
- ee) **‘Yearly Transmission Charges’ or ‘YTC’** means the annual transmission charges as determined or adopted by the Commission for the transmission elements of ISTS which have achieved COD upto the last day of a billing period, and for intra-State transmission lines used for inter-State transmission of electricity as approved by the Commission;



- (2) Words and expressions used in these Regulations and not defined herein but defined in the Act or the regulations of the Commission, shall have the meanings assigned to them respectively in the Act and the regulations of the Commission.

3. Principles of sharing transmission charges

- (1) The transmission charges shall be shared amongst the DICs on monthly basis based on the Yearly Transmission Charges such that:-
- (a) The Yearly Transmission Charges are fully recovered; and
 - (b) Any adjustment on account of revision of the Yearly Transmission Charges are recovered.
- (2) Yearly Transmission Charges for transmission system shall be shared on monthly basis by DICs in accordance with Regulations 5 to 8 of these regulations subject to the exceptions provided in Clauses (3), (6), (9) and (12) of Regulation 13 of these regulations.
- (3) Long Term Access or Medium Term Open Access for projects covered under Clause (1) of Regulation 13 shall not be considered for apportionment of Yearly Transmission Charges under Regulations 5 to 8 of these regulations.
- (4) Sharing of transmission charges for DICs shall be based on the technical and commercial information provided by the DICs, inter-State transmission licensees, NLDC, RLDCs, SLDCs and CTU to the Implementing Agency.

CHAPTER 2

COMPONENTS AND SHARING OF ISTS CHARGES AND LOSSES

4. Components of Transmission Charges



Transmission charges for DICs shall have the following components:

- a. National Component (NC);
- b. Regional Component (RC);
- c. Transformer Component (TC); and
- d. AC System Component (ACC).

5. Components and sharing of National Component (NC)

(1) National Component shall be sum of the following components:

- (a) National Component-Renewable Energy (NC-RE); and
- (b) National Component-HVDC (NC-HVDC).

(2) National Component-Renewable Energy shall comprise of the Yearly Transmission Charges for transmission systems developed for renewable energy projects as identified by the Central Transmission Utility.

(3) National Component-HVDC shall comprise of the following:

- (a) 100% of Yearly Transmission Charges for “back-to-back HVDC” transmission system;
- (b) 100% of Yearly Transmission Charges for Biswanath-Chariali/ Alipurdwara to Agra HVDC transmission system;
- (c) Yearly Transmission Charges of Mundra–Mohindergarh 2500 MW HVDC transmission system corresponding to 1005 MW capacity:



Provided that Yearly Transmission Charges corresponding to 1495 MW for the said transmission system shall be borne by M/s Adani Power (Mundra) Limited or its successor company; and

(d) 30% of Yearly Transmission Charges for all other HVDC transmission systems except those covered under sub-clauses (a), (b) and (c) of this clause of this Regulation.

(4) The Yearly Transmission Charges for the National Component shall be shared by all drawee DICs and injecting DICs with untied LTA in proportion to their quantum of Long Term Access plus Medium Term Open Access and untied LTA respectively. ✓

6. Components and sharing of Regional Component (RC)

(1) Regional Component shall be sum of the following components:

(a) Regional Component of HVDC (RC-HVDC) comprising of 70% of Yearly Transmission Charges of HVDC transmission systems planned to supply power to the concerned region, except HVDC transmission systems covered under sub clauses (a),(b) and (c) of Clause (3) of Regulation 5; and

(b) Yearly Transmission Charges for static compensators (STATCOMs), static VAR compensators (SVCs), bus reactors, spare transformers, spare reactors and any other transmission element(s) located in the concerned region and identified by the Central Transmission Utility as being critical for providing stability, reliability and resilience in the grid.

Provided that where separate Yearly Transmission Charges are not available in respect of specific transmission elements, the Yearly Transmission Charges for such transmission elements shall be worked out and provided by the



Central Transmission Utility, apportioning Yearly Transmission Charges approved by the Commission for the integrated project, based on indicative capital cost.

- (2) Yearly Transmission Charges covered under sub-clause (a) of Clause (1) of this Regulation shall be shared by drawee DICs of the receiving region and injecting DICs with untied LTA in the receiving region, in proportion to their quantum of Long Term Access plus Medium Term Open Access and untied LTA, respectively.
- (3) Yearly Transmission Charges covered under sub-clause (b) of Clause (1) of this Regulation shall be shared by drawee DICs of the region and injecting DICs (with untied LTA) of the same region, in proportion to their quantum of Long Term Access plus Medium Term Open Access and untied LTA, respectively.

7. Components and sharing of Transformer Component (TC)

- (1) Transformer Component for a State shall comprise of Yearly Transmission Charges for inter-connecting transformers (ICTs) planned for drawal of power by the concerned State. A list of such transformers for each State shall be provided by the Central Transmission Utility to the Implementing Agency.

Provided that where the Yearly Transmission Charges of ICTs for a State are not available, the Yearly Transmission Charges for such transformers shall be worked out and provided by the Central Transmission Utility, apportioning Yearly Transmission Charges approved by the Commission for the integrated project, based on indicative capital cost. For transformers used for drawl requirement of more than one State, Yearly Transmission Charges shall be apportioned to such States in the ratio of number of feeders from such transformers for each State.



- (2) Transformer Component for a State shall be borne and shared by the drawee DICs located in the concerned State in proportion to their Long Term Access plus Medium Term Open Access.

8. Components and sharing of AC System Component (ACC)

- (1) AC System Component shall comprise of the Yearly Transmission Charges, excluding the Yearly Transmission Charges covered under Regulations 5 to 7 of these regulations.
- (2) AC System Component shall have following components:
- (i) Usage Based Component (AC-UBC); and
 - (ii) Balance Component (AC-BC).
- (3) The Yearly Transmission Charges of AC-UBC shall be shared by drawee DICs and injecting DICs with untied LTA corresponding to their respective usage of the transmission lines, in accordance with Regulation 9 of these regulations.
- (4) The Yearly Transmission Charges under AC-BC shall be the balance Yearly Transmission Charges for AC System Component after apportioning the charges for AC-UBC.
- (5) Transmission charges under AC-BC shall be shared by all drawee DICs and injecting DICs with untied LTA in proportion to their quantum of Long Term Access plus Medium Term Open Access and untied LTA respectively.

9. Computation of share of transmission charges under AC-UBC



- (1) Base Case shall be prepared by the Implementing Agency corresponding to the peak block for each billing period comprising of:
 - (a) Basic Network for the power system corresponding to the peak block of the billing period; and
 - (b) Actual generation and actual demand, in MW, at each node of the Basic Network corresponding to the peak block.
- (2) DICs, inter-State transmission licensees, NLDC, RLDCs, SLDCs and STUs shall provide data for sub-clauses (a) and (b) of Clause (1) of this Regulation and the Yearly Transmission Charges to the Implementing Agency in the stipulated formats as per the timelines specified in Regulation 24 of these regulations.
- (3) MTC covered under AC-UBC shall be apportioned on transmission lines of the Basic Network, whose charges have been included in the Yearly Transmission Charges. Such apportionment shall be made on per circuit kilometer basis for each conductor configuration at each voltage level as per the methodology specified in Annexure-I of these regulations, for obtaining transmission line-wise transmission charges for each conductor configuration at each voltage level.
- (4) The Implementing Agency shall run AC load flow studies on the Base Case as prepared in accordance with Clause (1) of this Regulation to determine power flow on each transmission line:

Provided that while carrying out AC load flow studies, the Implementing Agency may make minor adjustment in generation and demand data, if required, to ensure load-generation balance.
- (5) Percentage usage of each transmission line shall be computed by dividing the power flow on each transmission line obtained in accordance with Clause (4) of this Regulation



by Surge Impedance Loading of the transmission line as per Annexure-II of these regulations:

Provided that in case power flow on any transmission line is more than Surge Impedance Loading, the percentage usage shall be capped at 100%.

- (6) Percentage usage of each transmission line obtained in accordance with Clause (5) of this Regulation shall be multiplied by transmission line-wise transmission charge obtained in accordance with Clause (3) of this Regulation to obtain transmission line-wise usage-based transmission charges for each conductor configuration at each voltage level.
- (7) Transmission charges at each drawal node and each injection node with untied LTA shall be calculated as per Hybrid Methodology, using transmission line-wise usage-based transmission charges obtained in accordance with Clause (6) of this Regulation.
- (8) The Implementing Agency shall aggregate the transmission charges as obtained in accordance with Clause (7) of this Regulation at drawal nodes within the geographical boundary of the State to determine the transmission charges for the State under AC-UBC:

Provided that drawee DICs other than the distribution licensees of the State, who have taken Long Term Access or Medium Term Open Access shall be apportioned the transmission charges under AC-UBC as per the transmission charges obtained at their drawl node(s) in accordance with Clause (7) of this Regulation and such transmission charges shall not be included in the aggregate transmission charges of the State.

- (9) Injecting DICs with untied LTA shall be apportioned transmission charges under AC-UBC as per the transmission charges obtained at their injection node in accordance with Clause (7) of this Regulation.



10. Sharing of Transmission Losses

- (1) Transmission losses for ISTS shall be calculated on all India average basis by the Implementing Agency for each week, from Monday to Sunday, as under:

$$[(In - Dr) / (Ir)] \times 100$$

Where:

‘In’ denotes sum of injection into the ISTS at regional nodes for the week;

‘Dr’ denotes sum of drawal from the ISTS at regional nodes for the week;

‘Ir’ denotes sum of injection into the ISTS at regional nodes less injection from projects covered under Clause (1) of Regulation 13 of these regulations for the week.

- (2) Drawal schedule of DICs shall be prepared as per provisions of the Grid Code taking into account the transmission losses of the week preceding the last week as calculated in accordance with Clause (1) of this Regulation:

Provided that while preparing drawal schedule of DICs in respect of projects covered under Clause (1) of Regulation 13, transmission losses shall be considered as zero.

- (3) Transmission losses for ISTS shall be considered as zero while preparing injection schedule of DICs including that for Collective Transactions in the Power Exchanges.

11. Transmission charges for Short Term Open Access

- (1) Short Term Open Access Rate (in paise/kWh) shall be published for each billing month by the Implementing Agency which shall be calculated State-wise as under:

Transmission charges of the State for the billing month (in rupees) / (7200 X the quantum, in MW, of Long Term Access plus Medium Term Open Access of the State for the corresponding billing period)



- (2) Transmission charges for Short Term Open Access shall be payable by generating stations and embedded entities located in the State, as per the last published Short Term Open Access Rate for the State, along with other charges or fees as per Open Access Regulations, 2008 and the Transmission Deviation charges, if any, as per these regulations.
- (3) Transmission charges for Short Term Open Access paid by an embedded intra-State entity during a month shall be reimbursed in the following billing month to the State in which such entity is located.
- (4) Transmission charges for Short Term Open Access, paid by a DIC with untied LTA shall be offset against the transmission charges payable by the said DIC for untied LTA in the following billing month.
- (5) No transmission charges for Short Term Open Access for inter-State transmission system, shall be payable by a distribution licensee which has Long Term Access or Medium Term Open Access or both, or by a trading licensee acting on behalf of such distribution licensee:

Provided that other charges or fees as per Open Access Regulations, 2008 and the Transmission Deviation charges, if any, as per these regulations shall be payable.
- (6) Transmission charges for Short Term Open Access collected in a billing month, after adjustment as per Clauses (3) and (4) of this Regulation, shall be reimbursed to the DICs in proportion to their share in the first bill in the following billing month.

12. Transmission Deviation

- (1) Transmission Deviation, in MW, shall be computed as under:



- (a) For a generating station, net metered ex-bus injection, in a time block in excess of the sum of Long Term Access, Medium Term Open Access and Short Term Open Access:

Provided that for a hydro-generating station, overload capacity of 10% during peak season shall be taken into account.

- (b) For a State net metered ex-bus injection or net metered drawal, in a time block, in excess of the sum of Long Term Access and Medium Term Open Access.

- (c) For any drawee DIC, which is a regional entity other than distribution licensees, net metered drawal in a time block in excess of the sum of Long Term Access, Medium Term Open Access and Short Term Open Access.

- (2) Transmission Deviation Rate in Rs./MW, for a State or any other DIC located in the State, for a time block during a billing month shall be computed as under:

$1.05 \times (\text{transmission charges of the State for the billing month in Rs.}) /$
 $(\text{quantum in MW of Long Term Access plus Medium Term Open Access of}$
 $\text{the State for the corresponding billing period} \times 2880)$

- (3) The Transmission Deviation charges shall be recovered through the third bill and shall be reimbursed to the DICs in proportion to their share in the first bill in the following billing month.

CHAPTER 3

SPECIFIC CASES

13. Treatment of transmission charges and losses in specific cases

- (1) No transmission charges and losses for the use of ISTS shall be payable for:



- (a) generation based on solar power resource for the useful life of the projects commissioned during the period from 1.7.2011 to 30.6.2017.
- (b) generation based on solar or wind power resources for a period of 25 years from the date of commercial operation, fulfilling the following conditions:
- (i) Such generation capacity has been awarded through competitive bidding; and
 - (ii) Such generation capacity has been declared under commercial operation during the period from 1.7.2017 to 12.2.2018 for solar based resources or during the period from 30.9.2016 to 12.2.2018 for wind based resources; and
 - (iii) Power Purchase Agreement(s) have been executed for sale of power from such generation capacity to the Distribution Companies for compliance of their renewable purchase obligation.
- (c) generation based on solar or wind power resources , for a period of 25 years from the date of commercial operation, fulfilling the following conditions:
- (i) Such generation capacity has been awarded through competitive bidding process in accordance with the guidelines issued by the Central Government; and
 - (ii) Such generation capacity has been declared under commercial operation during the period from 13.2.2018 to 31.12.2022; and
 - (iii) Power Purchase Agreement(s) have been executed for sale of such generation capacity to all entities including Distribution Companies for compliance of their renewable purchase obligations.



- (2) Where a generating station or any other seller has been granted Long Term Access or Medium Term Open Access and has entered into Power Purchase Agreement(s) for supply of power under such Long Term Access or Medium Term Open Access, the transmission charges towards such Long Term Access or Medium Term Open Access for components identified under Regulations 5 to 8 of these regulations shall be determined at the drawal nodes, and billed to the buyer(s) after COD of generating station or unit(s) thereof:

Provided that where the generating station or any other seller is responsible to pay the transmission charges in terms of the Power Purchase Agreements, bills for transmission charges shall be raised on the buyer in terms of this clause notwithstanding the provision in the PPA and settlement of the transmission charges *inter se* between the buyer and the generating station or the seller shall be made in terms of the PPA or as may be mutually agreed.

- (3) Where COD of a generating station or unit(s) thereof is delayed and the Associated Transmission System has achieved COD, which is not earlier than its SCOD, the generating station shall pay Yearly Transmission Charges for the Associated Transmission System corresponding to Long Term Access granted for the generating station or unit(s) thereof, which have not achieved COD:

Provided that Yearly Transmission Charges in respect of Associated Transmission System shall be included for determination of transmission charges of DICs in accordance with Regulations 5 to 8 of these regulations upon the generating station or unit(s) thereof achieving COD.

- (4) Where only some of the transmission elements of the Associated Transmission System have achieved COD before the COD of the Associated Transmission System



and the generating station seeks part operationalisation of Long Term Access, the Central Transmission Utility shall part operationalize Long Term Access, subject to availability of transmission system and Yearly Transmission Charges in respect of such transmission elements of the Associated Transmission System shall be included for determination of transmission charges of DICs in accordance with Regulations 5 to 8 of these regulations.

- (5) Where only some of the transmission elements of the Associated Transmission System have achieved COD before the COD of the Associated Transmission System and if such transmission elements are certified by the respective Regional Power Committee(s) as required for improving the performance, safety and security of the grid, the Yearly Transmission Charges for such transmission elements of the Associated Transmission System shall be included for determination of transmission charges of DICs in accordance with Regulations 5 to 8 of these regulations.
- (6) If any transmission element(s) of the Associated Transmission System is required by the generating station prior to COD of the Associated Transmission System, the Yearly Transmission Charges for such transmission element(s) shall be payable by the generating station from the COD of the said transmission element(s) of the Associated Transmission System till the generating station achieves COD.
- (7) Where Long Term Access is granted to a generating station on existing margins and COD of the generating station or unit(s) thereof is delayed, the generating station shall, corresponding to the capacity that is delayed, pay transmission charges at the rate of 10% of transmission charge per MW for the State where such generating station is located:



Provided that the amount so received in a billing month, shall be reimbursed to the DICs in proportion to their share in the first bill in the following billing month.

- (8) In case a generating station or unit(s) thereof has achieved COD and the Associated Transmission System is delayed, the concerned inter-State transmission licensee(s) shall make alternate arrangement at its own cost for despatch of power of the generating station or unit(s) thereof in consultation with the Central Transmission Utility:

Provided that till such alternate arrangement is made, the inter-State transmission licensee(s) shall pay to the generating station, the Yearly Transmission Charge corresponding to the quantum of Long Term Access for the period for which the transmission system has got delayed.

- (9) Where a dedicated transmission line has already been constructed or is under construction by an inter-State transmission licensee under coordinated transmission planning of the Central Transmission Utility, the Yearly Transmission Charges for such dedicated transmission line shall be payable by the concerned generating station to the inter-State transmission licensee (including deemed inter-State transmission licensee) from the COD of the dedicated transmission line till operationalization of Long Term Access of the generating station. After operationalization of Long Term Access, Yearly Transmission Charge for the dedicated transmission line proportionate to the quantum of Long Term Access operationalized qua the quantum of Connectivity for the dedicated transmission line shall be considered in accordance with Regulations 5 to 8 of these regulations and the balance transmission charges shall continue to be paid by the generating station.



- (10) Generating stations drawing start-up power from ISTS shall pay transmission charges at the rate of Transmission Deviation Rate for the State in which they are located:

Provided that the amount so received in a billing month, shall be reimbursed to the DICs in proportion to their share in the first bill in the following billing month.

- (11) Where a generating station is connected to both ISTS and intra-State transmission system, only ISTS charges and losses shall be applicable on the quantum of Long Term Access and Medium Term Open Access corresponding to capacity connected to ISTS.

- (12) In case of a transmission system where COD has been approved in terms of proviso (ii) of Clause (3) of Regulation 4 of the Tariff Regulations, 2014 or Clause (2) of Regulation 5 of the Tariff Regulations, 2019 or where deemed COD has been declared in terms of Transmission Service Agreement under Tariff based Competitive Bidding, the Yearly Transmission Charges for the transmission system shall be:

- (a) paid by the inter-State transmission licensee whose transmission system is delayed till its transmission system achieves COD, or
- (b) paid by the generating company whose generating station or unit(s) thereof is delayed, till the generating station or unit thereof, achieves COD, or
- (c) shared in the manner as decided by the Commission on case to case basis, where more than one inter-State transmission licensee is involved or both transmission system and generating station are delayed.

- (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.



CHAPTER 4

ACCOUNTING, BILLING AND COLLECTION OF TRANSMISSION CHARGES

14. Accounting

- (1) The Implementing Agency shall publish transmission charges payable by drawee DICs and injecting DICs with untied LTA for the billing month in Rupee terms.
- (2) Regional Transmission Accounts and Regional Transmission Deviation Accounts for the billing month for the DICs shall be prepared by the Secretariat of the respective Regional Power Committee on the basis of:
 - (a) DIC-wise transmission charges for the billing month, as furnished by the Implementing Agency; and
 - (b) Meter readings of all Special Energy Meters for computation of Transmission Deviations for every time block of the corresponding billing period, as furnished by respective RLDCs.
- (3) Regional Transmission Accounts and Regional Transmission Deviation Accounts shall be issued by the Secretariat of respective Regional Power Committee to DICs, the Central Transmission Utility and inter-State transmission licensees and also be displayed on the website of respective Regional Power Committees.
- (4) Where the transmission charges were being billed to a distribution licensee or any designated agency in the State before coming into force of these regulations, the distribution licensee or the designated agency, as the case may be, shall be treated as DIC in that State for the purpose of preparation of Regional Transmission Account by



Regional Power Committees and for the purpose of billing and collection of transmission charges by the Central Transmission Utility:

Provided that after coming into force of these regulations, the States may designate any agency as DIC for the above purpose.

- (5) Timelines for preparation of Base Case, notification of transmission charges of DICs, issue of Regional Transmission Accounts and Regional Transmission Deviation Accounts and raising of bills shall be as under:

(a) Base Case for the billing period shall be prepared by the Implementing Agency by 15th day of the month following the billing period.

(b) Transmission charges payable by DICs shall be notified by the Implementing Agency by 25th day of the month following the billing period.

(c) Secretariat of the respective Regional Power Committee shall issue Regional Transmission Accounts and Regional Transmission Deviation Accounts by the end of the month following the billing period.

(d) The Central Transmission Utility shall raise the first bill and the third bill for transmission charges on DICs in first week of the second month following the billing period.

Provided that in case of delay in issuance of Regional Transmission Account for a billing month, the Central Transmission Utility may raise provisional bills based on last available Regional Transmission Account and subsequently raise adjustment bills when Secretariat of respective Regional Power Committee issues Regional Transmission Account for the said billing month.

15. Billing.



- (1) The Central Transmission Utility shall, raise the bills for transmission charges, as per the timelines specified in sub-clause (d) of Clause (5) of Regulation 14 of these regulations.
- (2) The bills for transmission charges for the DICs shall be raised by the Central Transmission Utility under the following three categories:
 - (a) The first bill of each billing month shall contain the transmission charges for the billing period in accordance with Regulations 5 to 8 of these Regulations.
 - (b) The second bill shall be raised in the months of April, July, October and January every year for the quarter ending on 31st March, 30th June, 30th September and 31st December respectively to adjust variations on account of any revision in transmission charges allowed by the Commission, including incentives as applicable:

 Provided that under-recovery or over-recovery of any amount on account of such revision in transmission charges in respect of a billing period shall be billed by the Central Transmission Utility to DICs in proportion to their first bill in the relevant billing month.
 - (c) The third bill shall be raised in each billing month for Transmission Deviation charges, along with the first bill.
- (3) The Central Transmission Utility shall raise separate bills, as per the timelines for the first bill, for transmission systems covered under Clauses (3), (6), (8), (9) and (12) of Regulation 13 and not covered under Regulations 5 to 8 of these regulations.
- (4) All bills raised by the Central Transmission Utility shall also be posted on its website.

16. Due Date



Notwithstanding any provision to the contrary in the applicable Tariff Regulations or Transmission Service Agreement under tariff based competitive bidding, due date in relation to any bill raised by the Central Transmission Utility under these regulations shall mean the forty fifth (45th) day from the date of presentation of such bill.

17. Rebate

Notwithstanding any provision to the contrary in the applicable Tariff Regulations or Transmission Service Agreement under tariff based competitive bidding, rebate on payment of bills shall be governed as under:

- (a) A rebate of 1.50% shall be allowed for payment of bills within a period of 5 days of presentation of bills.

Explanation: In case of computation of '5 days', the number of days shall be counted consecutively without considering any holiday. However, in case the last day or 5th day is an official holiday, the 5th day for the purpose of rebate shall be construed as the immediate succeeding working day.

- (b) A rebate of 1% shall be allowed where payments are made on any day after 5 days and within a period of 30 days of presentation of bills.

18. Late Payment Surcharge

Notwithstanding any provision to the contrary in the applicable Tariff Regulations or Transmission Service Agreement under tariff based competitive bidding, in case the payment of any bill for charges payable under these regulations is delayed by a DIC, beyond the due date, a late payment surcharge at the rate of 1.50% per month shall be payable by the concerned DIC.

19. Letter of Credit and other instruments of Payment Security Mechanism

- (1) The Central Transmission Utility shall, at least 3 (three) months prior to the date of



operationalization of Long Term Access or Medium Term Open Access, in respect of a DIC, give a notice to such DIC, indicating the date of operationalization of such Long Term Access or Medium Term Open Access and requiring the DIC to furnish an irrevocable, unconditional and revolving Letter of Credit through a scheduled bank or any other acceptable instrument of payment security mechanism in favour of the Central Transmission Utility. Not later than 1 (one) month prior to the date of operationalization of Long Term Access or Medium Term Open Access, the DIC shall open such Letter of Credit or provide such acceptable instrument of payment security mechanism that shall be operative from a date prior to the Due Date of its first bill.

- (2) In case tripartite agreement for securitization on account of arrears against the transmission charges with the Government of India exists, the Letter of Credit or the acceptable instrument of payment security mechanism shall have a term of 12 (twelve) months and shall be for an amount equal to 1.05 (one point zero five) times the average amount of the first bill of a year:

Provided that where such tripartite agreement does not exist, the DIC shall open the Letter of Credit or provide an acceptable instrument of payment security mechanism for an amount equal to 2.10 (two point one times) the average amount of the first bill of a year.

- (3) If at any time, the amount for which Letter of Credit or the acceptable instrument of payment security mechanism is provided, falls short of the amount specified in Clause (2) of this Regulation, the DIC shall replenish such shortfall within 7 (seven) days of intimation by the Central Transmission Utility.
- (4) If a DIC fails to pay any bill or part thereof by the Due Date, the Central Transmission Utility may encash the Letter of Credit or recover through such other



instrument of payment security mechanism provided by the DIC, the amount of the bill or part thereof that is overdue plus Late Payment Surcharge, if applicable.

- (5) In case of such encashment of the Letter of Credit or recovery through such other instrument of payment security mechanism provided by the DIC, in full or in part, by the Central Transmission Utility in accordance with these regulations, the DIC shall replenish the amount through the Letter of Credit or such other instrument of payment security mechanism, as the case may be, within 7 (seven) days of intimation of such encashment or recovery by the Central Transmission Utility.
- (6) The DICs shall renew the Letter of Credit or such other instrument of payment security mechanism, 30 (thirty) days prior to the date of expiry.
- (7) In case of failure on the part of any DIC to maintain the Letter of Credit or such other instrument of payment security mechanism for the required amount in accordance with Clause (2) of this Regulation or replenish the Letter of Credit or such other instrument of payment security mechanism in accordance with Clauses (3) and Clause (5) of this Regulation and renew the Letter of Credit or such other instrument of payment security mechanism in accordance with Clause (6) of this Regulation, CTU may regulate the power injection of or supply to the concerned DIC, as the case may be in accordance with the Power Supply Regulations, 2010.

20. Collection and Disbursement

- (1) The Central Transmission Utility shall collect transmission charges on account of the first bill for transmission system covered under Regulations 5 to 8 of these regulations and disburse the amount so collected to inter-State transmission licensees and intra-State transmission licensees in proportion to their Yearly Transmission Charges:



Provided that in case of shortfall in collection of transmission charges, the amount to be disbursed to inter-State transmission licensees and intra-State transmission licensees shall be reduced pro-rata from their share of Yearly Transmission Charges.

- (2) Transmission charges collected by the Central Transmission Utility for transmission systems covered under Clauses (3), (6), (8), (9) and (12) of Regulation 13 and not covered under Regulations 5 to 8 of these regulations shall be disbursed directly to the concerned inter-State transmission licensee or the generating company, as the case may be.
- (3) The Central Transmission Utility shall collect transmission charges under the second bill and disburse the same to the respective inter-State transmission licensees.
- (4) The Central Transmission Utility shall collect Transmission Deviation charges under the third bill and reimburse the same to the DICs, in proportion to their first bill in the following billing month.
- (5) All payments and disbursements under provisions of this regulation shall be executed through National Electronic Funds Transfer (NEFT) or Real Time Gross Settlement (RTGS) or any other means of electronic transfer approved by the Reserve Bank of India.
- (6) The charges collected shall be first adjusted towards late payment surcharge on the outstanding transmission charges and thereafter towards outstanding transmission charges, starting from the longest overdue bill.

21. Consequences of non-payment of dues by a DIC

Failure on the part of a DIC to make payment, in full, against the bills by the due date under these regulations shall make such DIC liable for action for any or combination of the following, by the Central Transmission Utility, on behalf of inter-State transmission



licensee(s):

- (a) regulation of power supply in accordance with the Power Supply Regulations 2010;
- (b) denial of Short term Open Access by RLDC or NLDC in accordance with the Open Access Regulations, 2008;
- (c) suspension or termination of Long Term Access or Medium Term Open Access in accordance with Connectivity Regulations, 2009.

22. Transition Period

Notwithstanding anything to the contrary contained in these regulations, bills for the first two billing periods, after these regulations come into force, shall be based on the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010.

CHAPTER 5

INFORMATION AND PROCEDURES

23. Procedures to be framed under these Regulations

- (1) The Implementing Agency shall, within 90 (ninety) days of the notification of these regulations, publish the detailed procedures and formats for collection of data and information from various agencies and entities for implementation of the provisions of these regulations after stakeholder consultation.
- (2) The Implementing Agency shall be responsible for development and maintenance of the software for implementation of these regulations and shall get the same audited before it is put to use.



- (3) The Central Transmission Utility, in discharge of its functions under these regulations, may make such procedure as may be necessary, which is not inconsistent with these regulations or any other regulations of the Commission.

24. Timeline for furnishing the information

- (1) On or before the end of the billing period, all entities whose transmission elements have declared COD during the billing period shall submit to the Implementing Agency, network data, date(s) of commercial operation of the new transmission element and Yearly Transmission Charge of such transmission element in the format stipulated by the Implementing Agency.
- (2) The Implementing Agency shall publish, on its website, the peak block for the billing period on the first day of the month following the billing period.
- (3) Within 7 (seven) days after end of the billing period, the Central Transmission Utility shall submit indicative cost for transmission lines for each conductor configuration at each voltage level to the Implementing Agency.
- (4) Within 7 (seven) days after end of a billing period, DICs shall submit the following to the Implementing Agency for the billing period:
- (a) MW and MVAR data for actual injection or actual drawal at various nodes or a group of nodes for peak block.
 - (b) Quantum for which buyers have been identified under Long Term Access or Medium Term Open Access or both along with details of such buyers;
 - (c) Any other information as required by the Implementing Agency
- (5) In the event of such information required by the Implementing Agency is not available within the stipulated timeframe or to the level of details required, the



Implementing Agency shall compute transmission charges based on such information from the available sources.

25. Information to be published by the Implementing Agency

- (1) The information to be made available, on its website, by the Implementing Agency shall include:
 - (a) The Basic Network, generation at nodes and drawal at nodes considered for the Base Case and the load flow results, for each billing period;
 - (b) Assumptions made in the Base Case, if any;
 - (c) Details of transformers, list of transmission elements and corresponding transmission charges considered under Regional Component for the billing period;
 - (d) Transmission System covered under National Component;
 - (e) New transmission systems added during the billing period;
 - (f) Yearly Transmission Charges for the transmission elements considered in the billing period, as submitted by the inter-State transmission licensees and intra-State transmission licensees;
 - (g) Details of Long Term Access and Medium Term Open Access in respect of each DIC for the billing period;
 - (h) Detailed calculations of indicative cost for arriving at the average cost in respect of each transmission line; and
 - (i) Transmission charges payable by each constituent for the billing month along with component-wise break-up.



- (2) All information in accordance with Clause (1) of this regulation shall be made available on the website of the Implementing Agency in editable “Microsoft Excel” format.
- (3) Interactive “query” may be designed to give results including (i) a given generator is meeting which loads and in what proportion, (ii) a given load(s) is met by which generators and in what proportion, (iii) a given DIC is using which transmission lines and in what proportion, and (iv) a given transmission is serving which DICs and in what proportion.
- (4) Any data considered sensitive by the Implementing Agency, may be provided to concerned DICs with access control.

CHAPTER 6: MISCELLANEOUS

26. Savings and Repeal.

- (1) Save as otherwise provided in these regulations, Central Electricity Regulatory Commission (Sharing of inter-state transmission charges and losses) Regulations, 2010, as amended from time to time, is hereby repealed.
- (2) Notwithstanding such repeal, anything done or any action taken or purported to have been done or taken under the repealed regulations shall be deemed to have been done or taken under these regulations.

27. Power to Relax.

The Commission may, for reasons to be recorded in writing, relax any of the provisions of these regulations on its own motion or on an application made before it by an interested person.



28. Power to Remove Difficulties

If any difficulty arises in giving effect to any of the provisions of these regulations, the Commission may, by general or specific order, make such provisions not inconsistent with the provisions of the Act, as may appear to be necessary for removing the difficulty.

sd/-

(Sanoj Kumar Jha)

Secretary



ANNEXURE-1

THE HYBRID METHODOLOGY FOR USAGE BASED TRANSMISSION CHARGES

1. Utilization of the network is generally determined in terms of either average utilization or marginal utilization of the transmission assets. Pricing of transmission services based on average or marginal utilization of the network branches is known as Average Participation or Marginal Participation method respectively. A usage-based methodology determines the power that flows through each of the lines in the system due to the existence of a certain network user.

2. Marginal Participation Method

2.1 The marginal participation method analyzes how the flows in the grid are modified when minor changes are introduced in the generation or load of agent i . The procedure shall be as follows:

- (a) Marginal Participation sensitivities A_{ij} are obtained which represent how the flow in line j changes when the generation or load at bus i is increased by 1 MW. The increase in 1 MW has to be compensated by a corresponding increase in load or generation at some other bus(es), called the slack bus(es).
- (b) Total participations for each agent are calculated as a product of its net injection by its marginal participation. If net injection is considered positive for generating stations and negative for loads, the total participation of any agent i in line j is $A_{ij}(\text{generation}_i - \text{demand}_i)$.
- (c) The cost of each line is apportioned pro-rata to the different agents according to their total participation in the corresponding line.



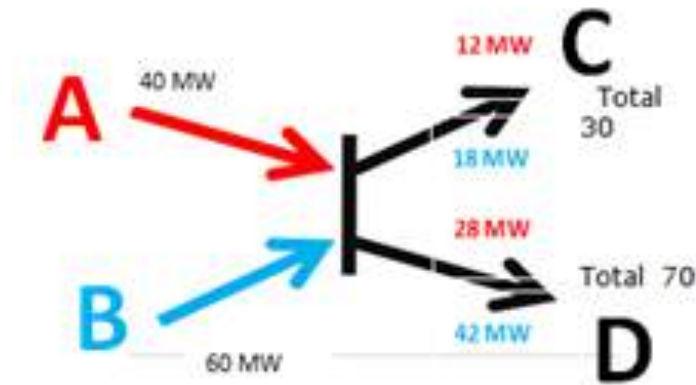
3. Average Participation Method

3.1 The procedure for average participation shall be as follows:

- (a) For every individual generating station i , a number of physical paths are constructed, starting at the node where the generator injects power into the grid, following through the lines as the power moves through the network, and finally reaching several of the loads in the system.
- (b) Similar calculations are also performed for the demands, tracing upstream the energy consumed by a certain user, from the demand bus until some generating stations are reached. One such physical path is constructed for every generator and for every demand.
- (c) In order to create such physical paths, a basic criterion is adopted wherein responsibility for the actual flows on various lines from sources to sinks is assigned according to an allocation rule, in which inflows are distributed proportionally between the outflows. An illustrative example of the proportional allocation mechanism is demonstrated in figure below.

Fig.: Average Participation Method





$$\text{Portion of A at C} = 30 \times \frac{40}{(60+40)} = 12$$

$$\text{Portion of B at C} = 30 \times \frac{60}{(60+40)} = 18$$

$$\text{Portion of A at D} = 70 \times \frac{40}{(60+40)} = 28$$

$$\text{Portion of B at D} = 70 \times \frac{60}{(60+40)} = 42$$

(d) The average participation method calculates the participation of agent i by tracking the influence in the network of a transit between node i and several ending nodes that result from the rules that conform the algorithm. In the example above, based on flow in the outgoing lines, the injection of 40MW (through the red line) is allocated to the outgoing lines in the proportion of the transfers from the two outgoing lines. Thus, the outgoing line that transfers 30 MW (i.e. 30% of the total transfer out of the bus) is allocated 30% of the 40 MW injection from the red line, i.e. 12 MW. Similar allocations are made for the other flows as well.

4. Hybrid Methodology

Under the Hybrid Methodology, the slack buses shall be selected by using the Average Participation Method, and the transmission charges on each node shall be computed using the Marginal Participation Method.

5. Steps to be followed under Hybrid Methodology

5.1 Following steps are involved in the Hybrid Methodology

- (A) Data acquisition;
- (B) Computation of load flows on the Basic Network;
- (C) Identification of slack node(s);
- (D) Determination of transmission charges; and
- (E) Determination of sharing of transmission charges

(A) DATA ACQUISITION: INPUTS TO THE MODEL

5.2 The transmission pricing model requires a set of inputs for peak block of the month as follows:

- Generation information at nodes;
- Demand information at nodes;
- Transmission circuits between these nodes and their electrical characteristics required for load flow analysis, the associated lengths of these transmission lines and their capacity and Yearly Transmission Charges (YTC) of each transmission line; and
- Identification of reference node(s).

5.3 The DICs will provide actual generation and actual drawal {MW and MVAR at each node in the Basic Network. The data provided by the DICs shall be as per the formats stipulated by the Implementing Agency. All drawee DICs shall also submit generation



from their own generating stations for the peak block during the billing period to the Implementing Agency to prepare the Base Case for load-generation balance.

5.4 Information provided by the DICs shall be verified by the Implementing Agency as per the detailed procedure stipulated by the Implementing Agency.

5.5 Inter-State transmission licensees, intra-State transmission licensees whose transmission system are included in Yearly Transmission Charges, and the DICs shall supply network data for the existing network, in the format stipulated by the Implementing Agency.

5.6 The Basic Network shall contain all the power system elements including generating station and transmission line at 110 kV and above. ~~Power flow into a lower voltage system from the voltage levels~~ indicated in the definition of the Basic Network shall be considered as load at that sub-station. Power flow from a lower voltage system into the electricity systems at the voltage levels shall be considered as generation at that sub-station.

5.7 The transmission system declared under commercial operation on or before the last day of the billing period shall be considered for computation of transmission charge for a billing month. However, Basic Network shall be considered as in the peak block of the billing period.

5.8 Dedicated transmission lines constructed, owned and operated by the inter-State transmission licensees shall be considered to be a part of the Basic Network. However, dedicated transmission lines constructed, owned and operated by generating stations shall not be considered as a part of the Basic Network and the generating station shall be deemed to be connected directly to the ISTS at the pooling point for the purpose of



modelling Basic Network. Actual injection of such generating stations at the pooling station shall be taken as actual injection at the pooling point.

5.9 The transmission charge per circuit kilometer for a transmission line for each conductor configuration at each voltage level shall be made uniform. The methodology followed shall be as follows:

5.9.1 The Central Transmission Utility shall provide indicative cost per circuit kilometer for a transmission line for each conductor configuration at each voltage level.

5.9.2 Total circuit kilometer for transmission lines for each conductor configuration at each voltage level shall be allocated uniform charges as in following illustration:

Type	Cost (Rs Lakh)	Cost (Rs Lakh) /Circuit	Actual ckt-km Type Wise	Equivalent ckt km	Indicative Cost Type Wise per ckt-km
				w.r.t 400 kV D/C Quad Moose	(Rs Lakh/ckt-km)
765 kV - D/C – HEXA	a_1	$b_1=a_1/2$	T_1	$K_1=T_1 \times (b_1/b_3)$	$I_1=^T C_M \times (K_1/K)/T_1$
765 kV - S/C – HEXA	a_2	$b_2=a_2$	T_2	$K_2=T_2 \times (b_2/b_3)$	$I_2=^T C_M \times (K_2/K)/T_2$
400 kV - D/C - Quad Moose	a_3	$b_3=a_3/2$	T_3	$K_3=T_3 \times (b_3/b_3)$	$I_3=^T C_M \times (K_3/K)/T_3$
400 kV - D/C - Twin Moose	a_4	$b_4=a_4/2$	T_4	$K_4=T_4 \times (b_4/b_3)$	$I_4=^T C_M \times (K_4/K)/T_4$
400 kV - S/C - Twin Moose	a_5	$b_5=a_5$	T_5	$K_5=T_5 \times (b_5/b_3)$	$I_5=^T C_M \times (K_5/K)/T_5$
220 kV - D/C -	a_6	$b_6=a_6/2$	T_6	$K_6=T_6 \times (b_6/b_3)$	$I_6=^T C_M \times (K_6/K)/T_6$
220 kV - S/C -	a_7	$b_7=a_7$	T_7	$K_7=T_7 \times (b_7/b_3)$	$I_7=^T C_M \times (K_7/K)/T_7$
132 kV - D/C -	a_8	$b_8=a_8/2$	T_8	$K_8=T_8 \times (b_8/b_3)$	$I_8=^T C_M \times (K_8/K)/T_8$
132 kV - S/C -	a_9	$b_9=a_9$	T_9	$K_9=T_9 \times (b_9/b_3)$	$I_9=^T C_M \times (K_9/K)/T_9$
400 kV - D/C - Triple Snowbird	a_{10}	$b_{10}=a_{10}/2$	T_{10}	$K_{10}=T_{10} \times (b_{10}/b_3)$	$I_{10}=^T C_M \times (K_{10}/K)/T_{10}$
400 kV - D/C - Twin HTLS	a_{11}	$b_{11}=a_{11}/2$	T_{11}	$K_{11}=T_{11} \times (b_{11}/b_3)$	$I_{11}=^T C_M \times (K_{11}/K)/T_{11}$
		Sum	T	K	

$^T C_M$ = Monthly Transmission Charge w.r.t. AC System Component

5.10 While carrying out the calculations under Clause 5.9 above and while computing the transmission line-wise transmission charges and transmission line-wise usage-based transmission charges in accordance with Clauses (3) and (6) of Regulation 9 of these regulations, the provisions as under shall be followed:

5.10.1 The transmission lines covered under Clause (2) of Regulation 5 shall be considered with “zero circuit kms”.

5.10.2 Where entire Yearly transmission charge is to be billed to a generating station under Clauses (3), (6) and (9) of Regulation 13, such transmission lines shall be considered at “zero circuit kms”.

5.10.3 Where Yearly Transmission Charges are to be partly included for computation of transmission charges in accordance with Regulations 5 to 8 of these Regulations and partly to be billed to the generating station or any other entity under provisions of Regulation 13 of these regulations, the circuit kilometers of such transmission lines shall be reduced pro rata corresponding to the Yearly Transmission Charges to be included for computation of transmission charges in accordance with Regulations 5 to 8 of these regulations.

Illustration:

Suppose Kudgi-Narendara transmission line has 500 circuit km and 50% of its Yearly Transmission Charges are to be billed to a generating station ‘A’ and 50% is to be included for computation of transmission charges in accordance with Regulations 5 to 8 of these regulations. For calculation of AC-UBC, circuit km for this transmission line shall be taken as 250 circuit km.

(B) COMPUTATION OF LOAD FLOWS ON THE BASIC NETWORK

5.11 The Implementing Agency shall run AC load flow on the Basic Network. In case of a STU or SEB, total injection at all injection nodes owned by the STU or SEB shall be equal to the aggregate of injection of all the entities connected in the STU or SEB



network. Similarly, total drawal at all the drawal nodes owned by a SEB or STU shall be equal to aggregate of drawal of all the entities connected in the SEB or STU network.

- 5.12 In the process of convergence of AC load flow on the Basic Network, the Implementing Agency may make certain minor adjustments in load or generation at various buses to ensure load-generation balance.

(C) IDENTIFICATION OF THE SLACK NODES: USING AVERAGE PARTICIPATION METHOD

- 5.13 According to the Kirchoff's laws, any 1 MW increase in generation (or load) at node i has to be compensated by a corresponding increase in load (or generation) at some other node(s). Thus, the calculation of quantum of injection (or drawal) at a certain bus affecting the power flow in the Basic Network depends on the choice of the node(s) that responds.

- 5.14 The external slack bus(es) for each node shall be found as follows:

- 5.14.1 For every node in a particular scenario, Average Participation Method shall be applied to each generation and each load located in the State under consideration. Tracing from load to generating station (or from generating station to load), a set of generating stations (or loads), including those outside the State and their contribution to the load (or generating station) is determined for each load (or generating station) bus.

- 5.14.2 Using the above choice of slack buses for each generating station and load, marginal participation of each generating station and load in each transmission line is computed.

(D) DETERMINATION OF TRANSMISSION CHARGES



5.15 Hybrid Methodology analyzes the modifications in power flows in the grid when minor changes are introduced in the production (or consumption) of agent i , and it assumes that the relationship of the flow through line j with the behaviour of the agent i can be considered to be linear. The procedure is as under:

5.15.1 Marginal participation sensitivities are obtained that represent the increase in power flow through each network branch j when the injection or drawal in a bus is increased by 1 MW. Flow variation in each network branch j incurred by 1 MW injection or drawal at each bus is computed for each scenario, e .

5.15.2 As already stated at Clause 5.14 of this Annexure, due to the Kirchoff's laws, any 1 MW increase in generation (or load) at node i has to be compensated by a corresponding increase in load (or generation) at some other node(s) (after adjusting for incremental system losses). Thus, the calculation of quantum of injection (or drawal) at a certain bus affecting the power flows in the Basic Network depends on the choice of the node(s) that responds. The methodology used to identify such node shall be distributed slack buses as explained above at Clause 5 (C).

5.15.3 Once the power flow variation in each transmission line incurred by each agent is obtained, it is possible to compute a usage index for each network user. This index is computed according to equation given below. Only positive increments in the direction of the power flow in the base case are considered while increments which reduce burden on transmission lines are neither given any credit nor charged for use of the system.

5.15.4 The index (for each block of months) is computed as:

$$U_{e,i,l} = \begin{cases} (|F'_{le}| - |F_{le}|) \cdot P_{le} & \text{if } |F'_{le}| - |F_{le}| > 0, \text{Sign}(F'_{le}) \text{ is same as Sign}(F_{le}) \\ 0 & \text{otherwise} \end{cases}$$



Where,

U_{eil} is the monthly usage index in line l due to injection or drawal at node i

F_{le} is the flow in line l under scenario e under base case

F_{le}^i is the flow in line l under scenario e due to injection or drawal of 1 MW at node

P_{ie} is power dispatch or demand at bus i under scenario e under base case

5.15.5 The line-wise usage-based transmission charge of each transmission line is allocated pro-rata to the different agents according to their total participation in the corresponding transmission line.

$$Cost\ Allocated_{el} = \frac{U_{eil}}{\sum_l U_{eil}} \times C_l$$

Where,

C_l is the transmission line-wise usage-based transmission charge obtained in accordance with Clause (6) of Regulation 9 of these regulations.

$$\frac{U_{eil}}{\sum_l U_{eil}}$$

is the marginal participation factor

(E) DETERMINATION OF SHARING OF TRANSMISSION CHARGES

5.16 The following steps shall be followed:

5.16.1 Using AC load flow, Marginal Participation Factors (MPF) shall be computed for determination of transmission system utilization due to marginal injection or drawal at each node.



5.16.2 For each transmission line, transmission line-wise usage-based transmission charge will be attributed to injection or drawal for the peak block. This transmission line-wise usage-based transmission charge is allocated to each agent in proportion of the change in the power flow in network branch affected by that agent.

5.16.3 The following steps shall be followed for calculation of AC-UBC charges:

(a) Following shall be taken:

- i. Transmission line-wise usage-based transmission charges for the billing month; and
- ii. Base Case

(b) Import Base Case in software

(c) Run AC load flow and obtain Marginal Flow (MF) file.

(d) Modify the Marginal Flow file obtained at clause (c) above as follows (illustration is at Clause 5.16.4 of this Annexure):

- For generating stations or sellers having no untied LTA and having identified buyers for full capacity of the generating station, reduce values of Marginal Participation Factors to zero.
- For generating stations or sellers having no identified buyers but having untied LTA, retain values of Marginal Participation Factor as obtained at sub-clause (c) of Clause 5.16.3 above.
- For generating stations or sellers having part untied LTA and part capacity with identified buyers:
 - Retain values of Marginal Participation Factor as obtained at sub-clause (c) of clause 5.16.3 above for capacity corresponding to untied LTA; and



- Reduce values of Marginal Participation Factor to zero for capacity corresponding to identified buyers.
- (e) Reduce negative Marginal Participation Factors to zero.
- (f) Reduce Marginal Participation Factors of less than 0.0001 to zero.
- (g) Normalize Marginal Flow file so as to make sum of all Marginal Participation Factors as '1'.
- (h) Multiply normalized values of Marginal Participation Factor as obtained at sub-clause (g) above for every transmission line with transmission line-wise usage-based transmission charges for that transmission line.
- (i) Node-wise transmission charges are allocated.

5.16.4 Following illustration is for sub-clause (d) of Clause (5.16.3) above of this Annexure:

(1) Suppose a generating station "A" (with installed capacity of 1000 MW) is located in Western Region and it has taken Long Term Access to Northern Region as target region for 300 MW and Western Region as target region for 400 MW. Untied LTA for "A", therefore, shall be 700 MW i.e. 300 MW in Northern Region and 400 MW in Western Region. Suppose, later on, "A" enters into Power Purchase Agreement with a buyer in Northern Region, say, distribution licensees of Haryana for 250 MW. Consequent upon entering into Power Purchase Agreement with Haryana, untied LTA of "A" would become 450 MW i.e. 50 MW (= 300 MW – 250 MW) in Northern Region and 400 MW in Western Region.

(2) If "A" has actual injection of 900 MW for the peak block of the billing period, this injection has to be segregated into injection corresponding to untied LTA and injection corresponding to Power Purchase Agreement with Haryana. This shall be done as follows:



(i) Injection corresponding to united LTA of 450 MW = $450 \times 900 / 700 = 578.6$ MW; and

(ii) Injection corresponding to identified buyer = $250 \times 900 / 700 = 321.4$ MW

(3) For the capacity under 2(i) above i.e. 450 MW, Marginal Participation Factor of "A" shall be retained as obtained at sub-clause (c) of Clause 5.16.3 of this Annexure.

(4) For the capacity under 2(ii) above i.e. 250 MW, Marginal Participation Factor of "A" shall be considered zero.

5.16.5 Transmission charges based on Hybrid Methodology (in Rs.) for DICs for each billing month will be computed.

5.17 Transmission charges as allocated to each demand node shall be grouped together within geographical boundary of a State subject to Clause 8 of Regulation 9 of these Regulations.



Annexure-II

Surge Impedance Loading to be considered for determination of utilization of transmission line under these Regulations

Voltage (KV)	S.I.L (MW)
765	2250
765 Op at 400	614
400	515
400 Op at 220	155
220	132
132	50

SIL for Transmission line built with HTLS conductor or Quad conductor shall be considered, as twice the above said values for respective voltage, for the purpose of these Regulations.

E-MAIL



भारत सरकार
केन्द्रीय विद्युत प्राधिकरण
दक्षिण क्षेत्रीय विद्युत समिति
29, रॉस कोर्स क्रॉस रोड
बेंगलूर - 560 009



Government of India
Central Electricity Authority
Southern Regional Power Committee
29, Rance Course Cross Road
BENGALURU - 560 009

Phone : 080-2228 2516 , FAX : 080-2275 9343; e-mail: secommmlargo-ke@nic.in ; web site: www.srpc,ke.nic.in

No. SRPC/SE-1/2020/

दिनांक/ Dated: 30th April, 2020

सेवा में / To

वितरण सूची के अनुसार
As per Distribution List

Sub-Certification of non-ISTS Lines carrying interstate power for the period 2020-21, which were having more than 50% utilization for interstate power transmission during the year 2019-20-Regarding

महोदय /Sir,

CERC Third Amendment of Sharing of inter-State Transmission Charges and Losses regulations, 2015, Clause 2.1.3 of Annexure-1 stipulates as below:

"Certification of non-ISTS lines carrying inter-State power, which were not approved by the RPCs on the date of notification of the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2009, shall be done on the basis of load flow studies. For this purpose, STU shall put up proposal to the respective RPC Secretariat for approval. RPC Secretariat, in consultation with RLDC, using WebNet Software would examine the proposal. The results of the load flow studies and participation factor indicating flow of Inter State power on these lines shall be used to compute the percentage of usage of these lines as inter State transmission. The software in the considered scenario will give percentage of usage of these lines by home State and other than home State. For testing the usage, tariff of similar ISTS line may be used. The tariff of the line will also be allocated by software to the home State and other than home State. Based on percentage usage of ISTS in base case, RPC will approve whether the particular State line is being used as ISTS or not..."

In compliance with the regulations, 66 non ISTS lines as listed in the Annexure are certified as lines carrying interstate power, in consultation with SRLDC. The data used for the study is taken from Quarter -I to Quarter-IV of 2019-20, which is considered for POC computation as discussed.

Yours faithfully,

संलग्नक: यथोपरि/ Encl: as above

मेका रामकृष्ण

30/4/2020

Chief Engineer
Planning, Power Systems & Commercial
ARTNANSCO, Muttu Soudha,
Mysuru-520004.

(मेका रामकृष्ण/ MEKA RAMAKRISHNA)
अधीक्षक अभियन्ता (व्य)/Superintending Engineer (C)

12 - TC
S. S.

ANNEXURE (1/2)

SL.No	Lines certified by RPC	Voltage (kV)	State
1	CHITTOOR2-SDSTPS:Q2	400	AP
2	CHITTOOR2-SDSTPS:Q1	400	AP
3	NUNNA2-VEEMAGIRI1:T1	400	AP
4	GAZIWAKA2-KALPAKKA1:T2	400	AP
5	GAZIWAKA2-KALPAKKA1:T1	400	AP
6	KURNOOL2-JAMALAMADUGU1:Q1	400	AP
7	KURNOOL2-JAMALAMADUGU1:Q2	400	AP
8	VEEMAGIRI1-SATTENAPALI1:T1	400	AP
9	HINDUJA-KVKOTA1:T2	400	AP
10	HINDUJA-KVKOTA1:T1	400	AP
11	JAMALAMADUGU1-TALARICHERI:Q2	400	AP
12	JAMALAMADUGU1-TALARICHERI:Q1	400	AP
13	NPKLINTA-HINDUPUR3:Q2	400	AP
14	NPKLINTA-HINDUPUR3:Q1	400	AP
15	URAVAKONDA-HINDUPUR3:Q1	400	AP
16	URAVAKONDA-TALARICHERI:Q1	400	AP
17	URAVAKONDA-HINDUPUR3:Q2	400	AP
18	URAVAKONDA-TALARICHERI:Q2	400	AP
19	KHAMMAM-ASUPAKA1:T1	400	TS
20	GUMDIP2-NCTPS-I-I	230	TN
21	ABISEK42-SANKNRJ2:1	230	TN
22	ABISEK42-KAYTHAR2:1	230	TN
23	ABISEK42-VERANAM2:1	230	TN
24	ABISEK42-UDAYATR2:1	230	TN
25	ABISEK42-VERANAM2:2	230	TN
26	UDMLPT2-MYVADY42:1	230	TN
27	UDMLPT2-MYVADY42:2	230	TN
28	CHITTOOR42-CHITTOOR1:1	220	AP
29	CHITTOOR42-CHITTOOR1:2	220	AP
30	SULURPET1-NELLORE42:1	220	AP
31	SULURPET1-NELLORE42:3	220	AP
32	SULURPET1-NELLORE42:2	220	AP
33	CHITTOOR1-KALIKIRI:1	220	AP
34	GOOTY-PG-DHONE1:2	220	AP
35	GOOTY-PG-DHONE1:1	220	AP
36	KONDAPALLI1-CHILLAKALLU1:1	220	AP
37	KONDAPALLI1-CHILLAKALLU1:2	220	AP
38	SRISAILAMRBI-TALLAPALLI:1	220	AP
39	SRISAILAMRBI-MYDUKUR:1	220	AP
40	SRISAILAMRBI-TALLAPALLI:2	220	AP

ANNEXURE (2/2)

SL.No	Lines certified by RPC	Voltage (kV)	State
41	SRTSAILAMRBI-SOMYZULPALLI:1	220	AP
42	SRTSAILAMRBI-BELKALAGUDUR:1	220	AP
43	VTSI-CHILLAKAII:1:1	220	AP
44	VTSI-RENTCHINTHALA:2	220	AP
45	VTSI-CHILLAKAII:1:2	220	AP
46	KURNOOLI-BRAHMANKUR:1	220	AP
47	SUZION-WI-VAIRAKUR:1	220	AP
48	URVAKONDA-BORAMPALLI:2	220	AP
49	URVAKONDA-BORAMPALLI:1	220	AP
50	URVAKONDA-BORAMPALLI:4	220	AP
51	URVAKONDA-BORAMPALLI:3	220	AP
52	SEDAMI-RAICHURTPS:1	220	KA
53	SEDAMI-SHAHAPUR:1	220	KA
54	SEDAMI-RAICHURTPS:2	220	KA
55	RAICHURTPS-RAICHUR:1	220	KA
56	RAICHURTPS-RAICHUR:2	220	KA
57	CHIKKODI-BELGAUM:2	220	KA
58	CHIKKODI-BELGAUM:1	220	KA
59	CHIKKODI-GATAPRABA:1	220	KA
60	CHIKKODI-GATAPRABA:2	220	KA
61	MACHERLA-RENTCHINTHALA:2	132	AP
62	MACHERLA-RENTCHINTHALA:1	132	AP
63	WANPATHY-CHIAMOR:1	132	TS
64	ALAMPUR-CHIAMOR:1	132	TS
65	QNSHPHD-W.PALLI:1	132	TS
66	QNSHPHD-W.PALLI:2	132	TS

Chief Engineer,
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520004

**ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION**

4th Floor, Singareni Bhavan, Red Hills, Hyderabad – 500 004

WEDNESDAY, THE SEVENTH DAY OF JULY, TWO THOUSAND AND TWENTY ONE

Present

Sri Justice C.V. Nagarjuna Reddy, Chairman

Sri P. Rajagopal Reddy, Member

Sri Thakur Rama Singh, Member

O.P.No.42 of 2020

&

O.P.No.47 of 2020

In the matter of

Determination of Yearly Transmission Charges (YTC) for Non-ISTS (intra-state) transmission lines of AP Transco carrying inter-state power for FY2015-16, FY2016-17 and FY 2020-21 for including the same in PoC Mechanism as per Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010 as amended from time to time.

Petitioner:

Transmission Corporation of Andhra Pradesh Ltd. (APTRANSCO).

The petitions came up for web public hearing finally on 24.03.2021 in the presence of Sri P. Shiva Rao, learned standing Counsel for the petitioner. After carefully considering the material available on record and after hearing the petitioner, Commission passed the following:

TC

S. S.

COMMON ORDER

1. The petitions have been filed by the Transmission Corporation of Andhra Pradesh Limited (hereinafter referred to as **the APTRANSCO**) seeking determination of Yearly Transmission Charges (YTC) for the APTRANSCO owned non-ISTS Lines (intra-state) which are certified by the Southern Regional Power Committee (hereinafter referred to as **the SRPC**) for FY2015-16, FY2016-17 and FY2020-21 for inclusion in PoC Transmission charges in accordance with Central Electricity Regulatory Commission (hereinafter referred to as **the CERC**) (Sharing of Inter-State Transmission Charges and Losses) (third amendment) Regulations, 2015 with the following prayer:

- i. approve the annual fixed charges for the assets covered under the Petitions;
- ii. determine the tariff of the Intra-State transmission lines of APTRANSCO carrying inter-state power for FY 2015-16, FY2016-17 & FY 2020-21, and
- iii. pass any other order or relief as the Commission may deem fit and proper in the facts and circumstances of the case.

2. The petition for FY2015-16 & FY2016-17 was filed on 18.03.2020 and taken on the file of the Commission as O.P.No 42 on 29.09.2020. A Public Notice along with a copy of the Petition O.P.No. 42 was placed on the website of the Commission on 30.09.2020 inviting views/objections/suggestions from interested persons/stakeholders. Further, it was informed in the Public Notice that the petition will be taken up for public hearing at 11.00 AM on 04.11.2020 through the web hearing and any interested person/organisation desirous of being heard in person, may appear before the Commission on the said date of the public hearing. However, despite the placing of the Public Notice on the website of the Commission, no objections have been received by the date of the



public hearing on 04.11.2020. Therefore, the Commission has provided one more opportunity to the stakeholders for submitting their objections and accordingly posted the date of the next public hearing to 06.01.2021.

3. The petition for the FY 2020-21 was filed on 05.10.2020 and taken on the file of the Commission on 20.11.2020 as O.P.No. 47 of 2020. A Public Notice along with a copy of the Petition O.P.No. 47 was placed on the website of the Commission on the same day inviting views/objections/suggestions from interested persons/stakeholders. Further, it was informed in the Public Notice dated 30.11.2020 that petition will be taken up for public hearing at 11.00 AM on 23.12.2020 through the web hearing and any interested person/organisation desirous of being heard in person, may appear before the Commission on the said date of the public hearing.

4. As both petitions are similar in nature and further based on APTRANSCO's letter, the Commission in the web hearing dated 06.01.2021 has ordered to tag on O.P. No.42 of 2020 along with O.P.No.47 of 2020 and decided to hear both the petitions finally on 24.03.2021.No objections have been received on the above Petitions.

5. The brief facts of the petitions are that the Southern Regional Power Committee (SRPC), in compliance with the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) (third amendment) Regulations, 2015 (Clause 2.13), has certified APTRANSCO Non-ISTS Lines carrying inter-state power for the FY2015-16 and FY2016-17 which were utilized more than 50% during the FY2014-15 and FY2015-16 vide letter No. SRPC/SE-I/2020/622-39, dt.23.01.2020 for 9 Nos and 14 Nos lines respectively. Subsequently, the SRPC vide its letter No. SRPC/SE-I/2020, dt.30.04.2020, has issued certification for 44 Nos Non-ISTS APTRANSCO Lines for FY2020-21.

Accordingly, APTRANSCO filed present petitions for determination of Yearly Transmission Charges (YTC) for all non-ISTS lines certified by the SRPC in respective years. APTRANSCO stated to have followed the procedure adopted by the CERC for determination of tariff for APTRANSCO inter-state lines for the



FY2016-17 in the order dated 21.06.2018 (petition 237/TT/2016) and claimed YTC year-wise, as under:

A) The YTC for the 9 Nos transmission lines for the FY 2015-16 are as given in the table below.

Sl. No.	Asset	Asset Name	YTC for FY 2015-16 (Rs.in Lakhs)
1	Asset I	CHITTOOR-RENIGUNTA:1	197.16
2	Asset II(A) & II(B)	CHITTOOR-NAGARI:2	98.76
			206.80
3	Asset III(A) & III(B)	SULURPETA-NELLORE-PG:1	44.73
			29.78
4	Asset -IV & V	KRISHNAPATNAM-NELLORE-AP:1	670.70
		KRISHNAPATNAM-NELLORE-AP:2	
5	Asset - VI (A) & VI(B)	NELLORE-NELLORE-PG:1	12.23
			32.31
6	Asset - VII (A) & VII(B)	NELLORE-NELLORE-PG:2	12.23
			32.31
7	Asset - VIII	NELLORE-NELLORE-PG:3	75.93
8	Asset - IX (A) & IX (B)	RENIGUNTA-NAGARI:1	17.22
			206.80
Total YTC (in Lakhs)			1636.96
Total YTC (in Crores)			16.36

B) The YTC for the 14 Nos transmission lines for the FY 2016-17 are as given in the table below.

Sl. No.	Asset	Asset Name	YTC for FY2016-17 (Rs. in Lakhs)
1	Asset - I (A) & I (B)	SULURUPETA-NELLORE42:1	46.57
			29.19
2	Asset – II	KONDAPALLI-VTPS:1	3.98
3	Asset – III	KONDAPALLI-VTPS:2	10.06
4	Asset – IV	KONDAPALLI-CHILAKALLU:1	113.67
5	Asset – V	KONDAPALLI-CHILAKALLU:2	146.65
6	Asset – VI	VTPS-CHILAKALLU:1	89.08
7	Asset – VII	VTPS-CHILAKALLU:2	253.46
8	Asset -VIII (A) & VIII (B)	VTPS-RENTACHINTALA:2	67.73
			4.71
9	Asset -IX	KURNOOL-BRAHMANKTKUR:1	89.18
10	Asset – X & XI	CHITTOOR-SDSTPS:1	8745.20
11		CHITTOOR-SDSTPS:2	
12	Asset – XII	NUNNA2-VTPS-IV:1	156.28
13	Asset – XIII	GAZUWAKA1-KALAPAKKA1:1	19.49
14	Asset – XIV	GAZUWAKA1-KALAPAKKA1:2	16.40
Total YTC (in Lakhs)			9791.65
Total YTC (in Crores)			97.91

C) The YTC for the 42 No. transmission lines for the FY 2020-21 are as given in the table below.

Sl. No.	Asset Name	Name of the Line	Voltage (kV)	YTC for FY 2020-21 (in Lakhs)
1	Asset 1	NUNNA2-VEMAGIRI1:T3	400	530.2
2	Asset 2	GAZUWAKA2-KALPAKKA 1:T1	400	17.77
3	Asset 3	GAZUWAKA2-KALPAKKA 1:T2		
4	Asset 4	CHITTOOR42-CHITTOOR1:1	220	56.51
5	Asset 5	CHITTOOR42-CHITTOOR1:2		
6	Asset 6-A	SULURPET1-NELLORE42:1	220	64.61
	Asset 6-B			19.69
7	Asset 7	CHITTOOR1-KALIKIRI1:1	220	55.19
8	Asset 8	GOOTY-PG-DHONE1:2	220	558.56
9	Asset 9	GOOTY-PG-DHONE1:1		
10	Asset 10	KONDAPALLI1-CHILLAKALLU1:1	220	95.15
11	Asset 11	KONDAPALLI1-CHILLAKALLU1:2	220	121.65
12	Asset 12	SRISAILAMRB1-TALLAPALLI:1	220	168.69
13	Asset 13	SRISAILAMRB1-TALLAPALLI:2		
14	Asset 14	SRISAILAMRB1-MYDUKUR:1	220	141.64
15	Asset 15	SRISAILAMRB1-SOMYZULPALLI:1	220	90.47
16	Asset 16-A	SRISAILAMRB1-BELKALAGUDUR:1	220	60.36
	Asset 16-B			18.22
17	Asset 17	VTS1-CHILLAKALLU1:1	220	83.65
18	Asset 18	VTS1-CHILLAKALLU1:2	220	212.26
19	Asset 19-A	VTS1-RENTACHNTHALA1:2	220	93.96
	Asset 19-B			3.85
20	Asset 20	KURNOOL1-BRAHMANKTKUR:1	220	72.57
21	Asset 21	MACHERLA-RENTCHNTHALA:1	132	51.41
22	Asset 22	CHITTOOR-SDSTPS:1	400	7475.13
23	Asset 23	CHITTOOR-SDSTPS:2		
24	Asset 24	KURNOOL2-JAMALAMADUGU1:Q1	400	2614.67
25	Asset 25	KURNOOL2-JAMALAMADUGU1:Q2		
26	Asset 26	HINDUJA-KVKOTA1:T2	400	6925.56
27	Asset 27	HINDUJA-KVKOTA1:T1		
28	Asset 28	JAMMALAMADUGU - URAVAKONDA DC Line (Part-1)	400	2943.02
29	Asset 29			
30	Asset 30	TALARICHERUVU TO LILO POINT OF JAMMALAMADUGU - URAVAKONDA DC LINE (Part-2)	400	87.95
31	Asset 31			
32	Asset 32	URVAKONDA-HINDUPUR3:Q1	400	3922.41
33	Asset 33	URVAKONDA-HINDUPUR3:Q2		
34	Asset 34	SULURPET1-NELLORE42:2	220	846.18
35	Asset 35	SULURPET1-NELLORE42:3		

Sl. No.	Asset Name	Name of the Line	Voltage (kV)	YTC for FY 2020-21 (in Lakhs)
36	Asset 36	URAVAKONDA-BORAMPALLI:2	220	650.70
37	Asset 37	URAVAKONDA-BORAMPALLI:1		
38	Asset 38	URAVAKONDA-BORAMPALLI:4	220	629.23
39	Asset 39	URAVAKONDA-BORAMPALLI:3		
40	Asset 40	SUZLON-W1-VAJRAKUR:1	220	4.44
41	Asset 41	MACHERLA-RENTACHNTHALA:2	132	43.42
42	Asset 42-A	VEMAGIRI1-SATTENAPALLI:T1	400	1416.34
	Asset 42-B			500.87
Total YTC (in Lakhs)				30576.33
Total YTC (in Crores)				305.7633

6. As shown above, the petitioner has claimed YTC of Rs.16.37 Cr. for 9 Nos lines and Rs.97.92 Cr. for 14 Nos lines for FY2015-16 & FY2016-17 respectively. The claim of YTC for 42 Nos lines is Rs.305.76 Cr. for FY2020-21. For 2 Nos of lines certified by the SRPC viz i) NPKUNTA-HINDUPUR3:2 400 KV S/C, ii) NPKUNTA-HINDUPUR3:1 400 KV S/C, which are owned by the PGCIL, the petitioner has not claimed YTC for FY2020-21.

7. After careful examination of the submissions made by the petitioner and the material available on records, in line with its last orders dated 12.07.2019 in O.P.No.44 of 2019 in the matter of determination of tariff for non-ISTS lines certified by the SRPC for FY 2019-20 and, as per the procedure adopted by the CERC in the order dated 21.06.2018 (petition 237/TT/2016) for determination of tariff for APTRANSCO non-ISTS lines for the FY2016-17 and another order dated 05.02.2020 of CERC in petition 10/TT/2019, the Commission has determined the YTC for Non-ISTS lines of APTRANSCO as certified by the SRPC for FY 2015-16 FY2016-17 and FY 2020-21, as detailed below:

- i. For all the transmission lines which have 25 years of life or more, as on 31.03.2015, 31.03.2016 and 31.03.2020 of FY 2015-16, FY 2016-17 and FY 2020-21 respectively, only O&M expenses and interest on working capital are allowed.

[FY2015-16: Asset- III(A), Asset-VI(A), Asset-VII(A)],

[FY2016-17: Asset - I, Asset-II, Asset- III(A), Asset-VI(A), Asset-VIII(A)],

[FY2020-21: Asset-VI (A), Asset-VII, Asset-XII & XIII, Asset-XIV, Asset - XV, Asset-XVI (A), Asset-XIX (A)]



- ii. For all the transmission lines which were constructed under deposit contributions from the developers and are being maintained by the petitioner, as there is no investment made by the petitioner, only O&M expenses and interest on working capital are allowed.

[FY2020-21: Asset-XL]

- iii. For all the transmission lines which have been commissioned before 31.03.2014, line-wise audited capital costs are not available with the petitioner for these lines, the rationalized cost as on the date of the Commissioning is arrived at for each line based on the reference cost considered for the 400 kV S/C line, multiplied by the factors as indicated in the table below for other voltage level & circuit configuration of lines by the CERC in various orders:

<i>Reference cost of 400 kV S/C TL</i>		<i>Rs X lakh/km</i>
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

wherever the reference data of 400 KV S/C line is not available for a particular year, it was derived based on the previous and successive year by computing the average.

[FY2015-16: Asset - I, Asset-II (A), Asset-II(B), Asset- III(B), Asset- IV & V, Asset-VI(B), Asset-VII(B), Asset-VIII, Asset-IX(A), Asset-IX(B)]

[FY2016-17: Asset-I (B), Asset-III, Asset- IV, Asset-V, Asset- VI, Asset- VII, Asset-VIII(B), Asset-IX, Asset - XII, Asset - XIII, Asset - XIV]

[FY2020-21: Asset - I, Asset - II & III, Asset- IV & V, Asset-VI (B), Asset-VIII & IX, Asset- X, Asset- XI, Asset-XVI (B), Asset-XVII, Asset-XVIII, Asset-XIX (B), Asset-XX, Asset-XXI, Asset-XLII (B)].

- iv. For all the transmission lines which have been commissioned after 31.03.2014, the line-wise audited capital costs are furnished by the petitioner and therefore the same are considered.

[FY2016-17: Asset-X & Asset-XI]

[FY2020-21: Asset-XVIII(B), Asset-XXII & XXIII, Asset-XXIV & XXV, Asset-XXVI & XXVII, Asset-XXVIII & XXIX, Asset-XXX& XXXI, Asset-XXXII &

XXXIII, Asset-XXXIV & XXXV, Asset-XXXVI & XXXVII, Asset-XXXVIII & XXXIX, Asset-XLI, Asset-XLII (A)]

- v. The Transmission lines which have been made Line in Line out (LILO) after their commissioning as part of the network expansion scheme, the old part of the line and new part of the line are considered separately for determination of the YTC and shown as part A & Part B of the asset. The date of the Commissioning of the original line is taken for the old line and the date of the commissioning for the LILO part is taken for the new line.
- vi. The Debt - Equity ratio: APTRANSCO adopted a normative debt-equity ratio of 70:30 as per the CERC orders and the same has been considered for FY2015-16, FY2016-17 and FY 2020-21 for each asset.
- vii. Depreciation: Asset is depreciated up to 90% of the capital cost, the remaining 10% being the salvage value of the asset. For all the assets the rate of depreciation is taken as 5.28% till 12 years and 2.05% beyond that till 25 years. Further, normative loan repayment during a year shall be deemed to be equal to the depreciation allowed for that year.
- viii. Interest on loan:
 APTRANSCO claimed the weighted average rate of the loan of FY2015-16 & FY2016-17 as the rate of interest on the loan for FY2015-16 & FY2016-17, at 10.60% and 10.75% respectively which are less than the cost of the debt considered by the Commission in its transmission tariff Order dated 09.05.2014 for the third control period. Hence, the same are adopted for FY2015-16 and FY2016-17 for the determination of tariff/YTC. For FY2020-21, the APTRANSCO claimed the weighted average of FY 2019-20 @ 10.10 % for 50 percent of assets and for balance assets @ 10.35 % as interest on the loan. APTRANSCO has not submitted any audited certificate in this regard. Hence, the rate of interest on the loan at 9.98 % has been considered for FY2020-21 for determination of tariff/YTC, as adopted by the Commission in its order dated 12.07.2019 for determining tariff for non-ISTS lines for FY2019-20.
 However, Asset no 32 and 33 of FY 2020-21 were stated to have been executed under subsidised interest rate of 1.72 % from kfW. Hence, the same has been considered by the Commission for these assets.



- ix. Return on Equity (RoE): APTRANSCO claimed the RoE @ 23.70 % for FY2015-16 & FY2016-17 and 15.50% for FY2020-21. As per CERC orders, it has been limited to 15.50% for FY2015-16, FY2016-17 and for FY2020-21, as claimed by the petitioner, has been considered.
- x. The CERC in its tariff regulations has specified norms of O&M expenses for transmission lines, circuit configuration wise but not voltage level wise. Whereas the Commission has specified the O&M norms per ckm in its Transmission tariff orders considering the weighted averages of all voltage levels operated by the APTRANSCO. Therefore, O&M expenses of lines have been considered as per the Transmission tariffs orders of the Commission, in line with its earlier order dated 12.07.2019. Accordingly, the year-wise O&M expenses as per the Commission's Transmission's tariffs orders which are considered for determination of tariff are shown below:

FY 2015-16	FY 2016-17	FY 2020-21
Rs.56000 per ckm	Rs.58300 per ckm	Rs.82000 per ckm

- xi. Interest on Working Capital: The rate of interest on working capital is considered as 13.5% for FY2015-16 & FY2016-17 and 11.25% for FY2020-21 as per the CERC tariff regulations. The same are accepted as these are in line with CERC orders. The working capital is taken as the sum of Maintenance of Spares (@15% of the yearly O&M Expenses), O&M Expenses for one month and Receivables equivalent to 2 months of YTC for FY2015-16 and FY2016-17 as per the CERC Tariff regulations 2014 and Receivables equivalent to 1.5 month of YTC for FY2020-21 as per the CERC 2019 tariff regulations.
- xii. The yearly transmission charges (YTC) are the sum of the depreciation, interest on the loan, return on equity, interest on working capital and O&M expenses.

Based on the above decisions, the Commission has determined tariff/YTC year-wise, for all the Non-ISTS transmission lines of APTRANSCO as per the certification of the SRPC. Year-wise and asset-wise computations of YTC are shown in the annexures.



8. The summary of the YTC determined by the Commission for the 9 Nos transmission lines for the FY 2015-16 is as given in the table below:

Sl. No.	Asset	Volta ge (kV)	Config uration	Length in KM	COD	Sl. No. as per SRPC certification	Asset Name	Annex No.	YTC in Lakhs
1	CHITTOOR-RENIGUNTA:1	220	S/C	71.86	2/16/2006	1	Asset I	I	170.90
2	CHITTOOR-NAGARI:2	220	S/C	54.49	2/13/2003	2	Asset II(A) & II(B)	II(A)	81.97
		220	S/C	41	10/15/2012			II(B)	182.40
3	SULURPETA-NELLORE-PG:1	220	S/C	75.701	4/28/1982	3	Asset III(A) & III(B)	III(A)	44.73
		220	S/C	10.1	12/26/2006			III(B)	25.89
4	KRISHNAPATNAM-NELLORE-AP:1	400	D/C	36.5	11/23/2012	4	Asset -IV &V	IV & V	586.82
5	KRISHNAPATNAM-NELLORE-AP:2	400				5			
6	NELLORE-NELLORE-PG:1	220	S/C	20.7	9/5/1981	6	Asset - VI (A) & VI(B)	VI(A)	12.23
		220	S/C	10.1	6/26/2007			VI(B)	28.00
7	NELLORE-NELLORE-PG:2	220	S/C	20.7	9/5/1981	7	Asset - VII (A) & VII(B)	VII(A)	12.23
		220	S/C	10.1	6/26/2007			VII(B)	28.00
8	NELLORE-NELLORE-PG:3	220	S/C	28.54	4/17/2005	8	Asset - VIII	VIII	65.50
9	RENIGUNTA-NAGARI:1	220	S/C	9.5	2/13/2003	9	Asset - IX (A) & IX(B)	IX(A)	14.29
		220	S/C	41	10/15/2012			IX(B)	182.40
YTC Total in Lakhs									1435.36
YTC Total in Cr.									14.35

9. The summary of the YTC determined by the Commission for the 14 Nos transmission lines for the FY 2016-17 is as given in the table below:

Sl. No.	Asset	Voltage (kV)	Configuration	Length in KM	COD	Sl. No. as per SRPC certification	Asset Name	Annex. No.	YTC in Lakhs
1	SULURUPETA-NELLORE42:1	220	S/C	75.701	4/28/1982	1	Asset - I (A) & I (B)	I(A)	46.57
		220	S/C	10.1	12/26/2006			I(B)	25.30
2	KONDAPALLI-VTPS:1	220	S/C	6.469	11/11/1989	2	Asset - II	II	3.98
3	KONDAPALLI-VTPS:2	220	S/C	6.469	3/23/1998	3	Asset - III	III	7.74
4	KONDAPALLI-CHILAKALLU:1	220	S/C	59.705	3/12/1997	4	Asset - IV	IV	81.64
5	KONDAPALLI-CHILAKALLU:2	220	S/C	59.705	8/19/2000	5	Asset - V	V	112.31
6	VTPS-CHILAKALLU:1	220	S/C	67.801	8/28/1999	6	Asset - VI	VI	68.34
7	VTPS-CHILAKALLU:2	220	S/C	67.801	10/1/2010	7	Asset - VII	VII	221.35
8	VTPS-RENTACHINTALA:2	220	S/C	110.09	6/30/1984	8	Asset -VIII (A) & VIII (B)	VIII(A)	67.73
		220	S/C	1.4	11/24/2008			VIII(B)	4.11
9	KURNOOL-BRAHMANKTKUR:1	220	S/C	23.18	10/29/2010	9	Asset -IX	IX	78.21
10	CHITTOOR-SDSTPS:1	400	D/C	192	7/17/2015	10	Asset - X & XI	X & XI	7674.53
11	CHITTOOR-SDSTPS:2	400	D/C	192	7/22/2015	11			
12	NUNNA2-VTPS-IV:1	400	S/C	18.66	26.07.2009	12	Asset - XII	XII	133.52
13	GAZUWAKA1-KALAPAKKA1:1	400	S/C	3.393	10.12.2000	13	Asset - XIII	XIII	14.83
14	GAZUWAKA1-KALAPAKKA1:2	400	S/C	3.393	27.01.2002	14	Asset - XIV	XIV	12.63
YTC Total in Lakhs									8552.78
YTC Total in Cr.									85.53

10. The summary of the YTC determined by the Commission for the 42 Nos transmission lines for the FY 2020-21 is as given in the table below:

Sl. No.	Asset	Voltage (kV)	Configuration DC/SC	Length	COD	Sl. No SRPC	Asset Name	Annex No.	YTC in Lakhs
1	NUNNA2-VEMAGIRI1:T3	400	SC	145	30.12.2005	3	A1	I	530.08
2	GAZUWAKA2-KALPAKKA 1:T1	400	DC	3.39	27.01.2002	5	A2	II & III	17.77
3	GAZUWAKA2-KALPAKKA 1:T2	400		3.39	27.01.2002	4	A3		
4	CHITTOOR42-CHITTOOR1:1	220	DC	17.1	14.02.2006	28	A4	IV & V	56.50
5	CHITTOOR42-CHITTOOR1:2	220		17.1	14.02.2006	29	A5		
6	SULURPET1-NELLORE42:1	220	SC	75.7	28.04.1982	30	A6-A	VI(A)	64.61
			SC	10.1	26.12.2006		A6-B	VI(B)	19.69
7	CHITTOOR1-KALIKIRI1:1	220	SC	64.66	21.06.1970	33	A7	VII	55.19
8	GOOTY-PG-DHONE1:2	220	DC	90.16	24.08.2011	34	A8	VIII & IX	557.58
9	GOOTY-PG-DHONE1:1	220		90.16	24.08.2011	35	A9		

Sl. No.	Asset	Voltage (kV)	Configuration DC/SC	Length	COD	Sl. No SRPC	Asset Name	Annex No.	YTC in Lakhs
10	KONDAPALLI1-CHILLAKALLU1:1	220	DC	59.7	12.03.1997	36	A10	X	95.15
11	KONDAPALLI1-CHILLAKALLU1:2	220		59.7	19.08.2000	37	A11	XI	121.65
12	SRISAILAMRB1-TALLAPALLI:1	220	DC	98.82	01.01.1985	38	A12	XII & XIII	168.69
13	SRISAILAMRB1-TALLAPALLI:2	220		98.82	01.01.1985	40	A13		
14	SRISAILAMRB1-MYDUKUR:1	220	SC	165.96	27.11.1969	39	A14	XIV	141.64
15	SRISAILAMRB1-SOMYZULPALLI:1	220	SC	106	01.01.1985	41	A15	XV	90.47
16	SRISAILAMRB1-BELKALAGUDUR:1	220	SC	70.72	24.03.1980	42	A16-A	XVI-A	60.36
				4.94	10.08.2011		A16-B	XVI-B	18.19
17	VTs1-CHILLAKALLU1:1	220	SC	67.8	28.08.1999	43	A17	XVII	83.65
18	VTs1-CHILLAKALLU1:2	220	SC	66.14	29-03-1999	45	A18-A	XVIII-A	76.4
	VTs1-CHILLAKALLU1:2	220	SC	1.48	03.10.2010	45	A18-B	XVIII-B	4.65
19	VTs1-RENTACHINTHALA1:2	220	SC	110.09	30.06.1984	44	A19-A	XIX-A	93.96
			SC	1.4	24.11.2008		A19-B	XIX-B	3.84
20	KURNOOL1-BRAHMANKTKUR:1	220	SC	23.18	29.10.2010	46	A20	XX	72.47
21	MACHERLA-RENTCHINTHALA:1	132	SC	15	27.03.2013	62	A21	XXI	51.30
22	CHITTOOR2-SDSTPS:Q2	400	DC	192	7/22/2015	1	A22	XXII & XXIII	6750.41
23	CHITTOOR2-SDSTPS:Q1	400		192		2	A23		
24	KURNOOL2-JAMALAMADUGU1:Q1	400	DC	100.86	3/31/2016	6	A24	XXIV & XXV	2586.73
25	KURNOOL2-JAMALAMADUGU1:Q2	400		100.86		7	A25		
26	HINDUJA-KVKOTA1:T2	400	DC	242.98	7/24/2017	9	A26	XXVI & XXVII	6839.04
27	HINDUJA-KVKOTA1:T1	400		242.98		10	A27		
28	JAMMALAMADUGU - URAVAKONDA	400	DC	127.62	7/15/2016	11 12	A28	XXVIII & XXIX	2908.98
29	DC Line (Part-1)	400		127.92			A29		
30	TALARICHERUVU TO LILO POINT OF JAMMALAMADUGU - URAVAKONDA DC LINE (Part-2)	400	DC	0.5	12/1/2018	16 18	A30	XXX & XXXI	86.74
31		400		0.5			A31		
32	URVAKONDA-HINDUPUR3:Q1	400	DC	126.25	1/23/2019	15	A32	XXXII & XXXIII	3922.41
33	URVAKONDA-HINDUPUR3:Q2	400		126.25		17	A33		
34	SULURPET1-NELLORE42:2	220	DC	68.13	11/10/2014	32	A34	XXXIV & XXXV	839.42
35	SULURPET1-NELLORE42:3	220		68.13		31	A35		
36	URAVAKONDA-BORAMPALLI:2	220	DC	33.58	6/1/2017	48	A36	XXXVI & XXXVII	643.29
37	URAVAKONDA-BORAMPALLI:1	220		33.58		49	A37		
38	URAVAKONDA-BORAMPALLI:4	220	DC	34.73	7/10/2017	50	A38	XXXVII	621.65

Sl. No.	Asset	Voltage (kV)	Configuration DC/SC	Length	COD	Sl. No SRPC	Asset Name	Annex No.	YTC in Lakhs
39	URAVAKONDA-BORAMPALLI:3	220		34.73		51	A39	I & XXXIX	
40	SUZLON-W1-VAJRAKUR:1	220	SC	5.2	8/12/2016	47	A40	XL	4.44
41	MACHERLA-RENTACHNTHALA:2	132	SC	14.53	7/11/2016	61	A41	XLI	43.03
42	VEMAGIRI1-SATTENAPALLI:T1	400	SC	107.87	10/12/2015	8	A42-A	XLII(A)	1401.16
				136.98	12/28/2005		A42-B	XLII(B)	500.77
	YTC total in Lakhs for FY2020-21								29531.93
	YTC total in Cr. for FY2020-21								295.32

11. As shown in paras 8,9 and 10 above, the Commission has determined YTC of Rs.14.35 Cr, 85.53 Cr. and 295.32 Cr. for the FY 2015-16, FY 2016-17 and FY 2020-21 respectively for the APTRANSCO owned non-ISTS lines certified by the SRPC for inclusion in the PoC transmission charges.

12. On inclusion of the assets covered in the petitions in the PoC methodology by the implementing agency, in line with the sharing of inter-state transmission charges and losses regulations, 2010 and the amendments thereto and upon receiving of the transmission charges, the YTC recovered shall be adjusted against the ARR of the respective years of the petitioner.

13. The petitions are ordered accordingly.

Sd/-

Thakur Rama Singh
Member

Sd/-

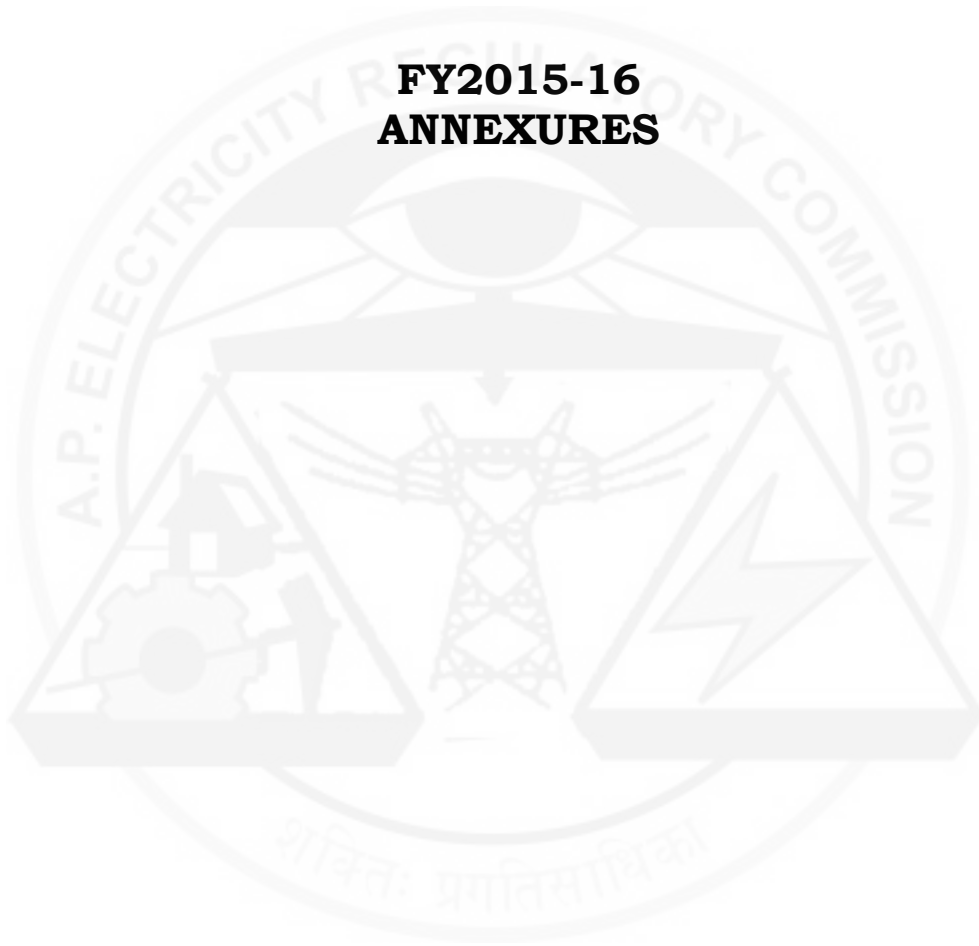
Justice C.V. Nagarjuna Reddy
Chairman

Sd/-

P. Rajagopal Reddy
Member



**FY2015-16
ANNEXURES**



Annexure - I			
Name of the Tr. System:	Asset - I	CHITTOOR - RENIGUNTA:1	
		COD:	16-02-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	25
Transmission Line length in km	71.86	Voltage, kV	220kV, S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			1043.32
Additional Capitalisation			0.00
Gross Block total			1043.32
Average Gross Block			1043.32
Depreciation			
Rate of Depreciation (%)			5.28%
Depreciable value		0.90	938.99
Elapsed Life as on 31.03.2015			9.00
Balance useful life of the asset			16.00
Remaining Depreciable value			443.20
Cumulative Depreciation			495.79
Depreciation			55.09
Interest on Loan			
Gross Normative Loan			730.32
Cumulative Repayment upto Previous Year			495.79
Net Loan-Opening			234.54
Addition due to Additional Capitalisation			0.00
Repayment during the year			55.09
Net Loan-Closing			179.45
Average Loan			206.99
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			21.94
Return on Equity			
Gross Notional Equity			313.00
Opening Equity			313.00
Average Equity			313.00
Rate of Return on Equity			15.50%
Return on Equity			48.51
Interest on Working Capital			
Maintenance Spares	15% of O&M		6.04
O & M expenses	1 Months		3.35
Receivables	2 Months		28.48
Total			37.87
Interest	13.50%		5.11
Annual Transmission Charges			
Depreciation			55.09
Interest on Loan			21.94
Return on Equity			48.51
Interest on Working Capital			5.11
O & M Expenses	71.86 KM line		40.24
Total			170.90
Norms for O&M Per Km	S/C		0.560

Annexure - II(A)			
Name of the Tr. System:	Asset-II (A)	CHITTOOR-NAGARI:2	
		COD:	13-02-2003
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	34.00	Life in years	25
Transmission Line length in km	54.49	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY2015-16
Gross Block			666.96
Additional Capitalisation			0.00
Gross Block total			666.96
Average Gross Block			666.96
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	600.26
Elapsed Life as on 31.03.2015			12.00
Balance useful life of the asset			13.00
Remaining Depreciable value			177.68
Cumulative Depreciation			422.58
Depreciation			13.67
Interest on Loan			
Gross Normative Loan			466.87
Cumulative Repayment upto Previous Year			422.58
Net Loan-Opening			44.29
Addition due to Additional Capitalisation			0.00
Repayment during the year			13.67
Net Loan-Closing			30.62
Average Loan			37.45
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			3.97
Return on Equity			
Gross Notional Equity			200.09
Opening Equity			200.09
Average Equity			200.09
Rate of Return on Equity			15.50%
Return on Equity			31.01
Interest on Working Capital			
Maintenance Spares	15% of O&M		4.58
O & M expenses	1 Months		2.54
Receivables	2 Months		13.66
Total			20.78
Interest	13.50%		2.81
Annual Transmission Charges			
Depreciation			13.67
Interest on Loan			3.97
Return on Equity			31.01
Interest on Working Capital			2.81
O & M Expenses	54.49KM line		30.51
Total			81.97
Norms for O&M Per Km	S/C		0.560

Annexure - II(B)			
Name of the Tr. System:	Asset-II(B)	CHITTOOR-NAGARI:2	
		COD:	15-10-2012
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	65.67	Life in years	25
Transmission Line length in km	41.00	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			969.29
Additional Capitalisation			0.00
Gross Block total			969.29
Average Gross Block			969.29
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	872.36
Elapsed Life as on 31.03.2015			2.00
Balance useful life of the asset			23.00
Remaining Depreciable value			770.00
Cumulative Depreciation			102.36
Depreciation			51.18
Interest on Loan			
Gross Normative Loan			678.50
Cumulative Repayment upto Previous Year			102.36
Net Loan-Opening			576.15
Addition due to Additional Capitalisation			0.00
Repayment during the year			51.18
Net Loan-Closing			524.97
Average Loan			550.56
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			58.36
Return on Equity			
Gross Notional Equity			290.79
Opening Equity			290.79
Average Equity			290.79
Rate of Return on Equity			15.50%
Return on Equity			45.07
Interest on Working Capital			
Maintenance Spares	15% of O&M		3.44
O & M expenses	1 Months		1.91
Receivables	2 Months		30.40
Total			35.76
Interest	13.50%		4.83
Annual Transmission Charges			
Depreciation			51.18
Interest on Loan			58.36
Return on Equity			45.07
Interest on Working Capital			4.83
O & M Expenses	41KM line		22.96
Total			182.40
Norms for O&M Per Km	S/C		0.560

Annexure - III(A)			
Name of the Tr. System:	Asset- III(A)	SULURPETA-NELLORE-PG:1	
		COD:	28-04-1982
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	75.70	Voltage, kV	220KV/S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			0.00
Additional Capitalisation			0
Gross Block total			
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2015			33.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		6.36
O & M expenses	1 Months		3.53
Receivables	2 Months		7.45
Total			17.34
Interest	13.50%		2.34
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			2.34
O & M Expenses	75.701 KM line		42.39
Total			44.73
Norms for O&M Per Km		S/C	0.560

Annexure - III(B)			
Name of the Tr. System:	Asset- III(B)	SULURPETA-NELLORE-PG:1	
		COD:	26-12-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	42.53	Life in years	25
Transmission Line length in km	10.10	Voltage, kV	220KV/S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			154.64
Additional Capitalisation			0
Gross Block total			
Average Gross Block			154.64
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	139.18
Elapsed Life as on 31.03.2015			8.00
Balance useful life of the asset			17.00
Remaining Depreciable value			73.86
Cumulative Depreciation			65.32
Depreciation			8.16
Interest on Loan			
Gross Normative Loan			108.25
Cumulative Repayment upto Previous Year			65.32
Net Loan-Opening			42.93
Addition due to Additional Capitalisation			0.00
Repayment during the year			8.16
Net Loan-Closing			34.76
Average Loan			38.85
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			4.12
Return on Equity			
Gross Notional Equity			46.39
Opening Equity			46.39
Average Equity			46.39
Rate of Return on Equity			15.50%
Return on Equity			7.19
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.85
O & M expenses	1 Months		0.47
Receivables	2 Months		4.32
Total			5.64
Interest	13.50%		0.76
Annual Transmission Charges			
Depreciation			8.16
Interest on Loan			4.12
Return on Equity			7.19
Interest on Working Capital			0.76
O & M Expenses	10.10 KM line		5.66
Total			25.89
Norms for O&M Per Km	S/C		0.560

Annexure - IV & V			
Name of the Tr. System:	Asset- IV & V	KRISHNAPATNAM-NELLORE-AP:1 & KRISHNAPATNAM-NELLORE-AP:2	
		COD:	23-11-2012
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	65.67	Life in years	25
Transmission Line length in km	36.50	Voltage, kV	400kV/D/C
Multiplication factor	1.39		
			FY 2015-16
Gross Block			3331.77
Additional Capitalisation			0.00
Gross Block total			3331.77
Average Gross Block			3331.77
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	2998.59
Elapsed Life as on 31.03.2015			2.00
Balance useful life of the asset			23.00
Remaining Depreciable value			2646.76
Cumulative Depreciation			351.83
Depreciation			175.92
Interest on Loan			
Gross Normative Loan			2332.24
Cumulative Repayment upto Previous Year			351.83
Net Loan-Opening			1980.40
Addition due to Additional Capitalisation			0.00
Repayment during the year			175.92
Net Loan-Closing			1804.49
Average Loan			1892.44
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			200.60
Return on Equity			
Gross Notional Equity			999.53
Opening Equity			999.53
Average Equity			999.53
Rate of Return on Equity			15.50%
Return on Equity			154.93
Interest on Working Capital			
Maintenance Spares	15% of O&M		6.13
O & M expenses	1 Months		3.41
Receivables	2Months		97.81
Total			107.35
Interest	13.50%		14.49
Annual Transmission Charges			
Depreciation			175.92
Interest on Loan			200.60
Return on Equity			154.93
Interest on Working Capital			14.49
O & M Expenses		73 KM line	40.88
Total			586.82
Norms for O&M Per Km	D/C		0.560

Annexure - VI(A)			
Name of the Tr. System:	Asset-VI(A)	NELLORE-NELLORE-PG:1	
		COD:	05-09-1981
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	20.70	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2015			34.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.74
O & M expenses	1 Months		0.97
Receivables	2Months		2.03
Total			4.73
Interest	13.50%		0.64
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			0.64
O & M Expenses	20.7KM line		11.59
Total			12.23
Norms for O&M Per Km	S/C		0.560

Annexure - VI(B)			
Name of the Tr. System:	Asset-VI(B)	NELLORE-NELLORE-PG: 1	
		COD:	26-06-2007
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	47.04	Life in years	25
Transmission Line length in km	10.10	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			171.037
Additional Capitalisation			0
Gross Block total			171.037
Average Gross Block			171.037
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	153.93
Elapsed Life as on 31.03.2015			8.00
Balance useful life of the asset			17.00
Remaining Depreciable value			81.69
Cumulative Depreciation			72.25
Depreciation			9.03
Interest on Loan			
Gross Normative Loan			119.73
Cumulative Repayment upto Previous Year			72.25
Net Loan-Opening			47.48
Addition due to Additional Capitalisation			0.00
Repayment during the year			9.03
Net Loan-Closing			38.45
Average Loan			42.96
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			4.55
Return on Equity			
Gross Notional Equity			51.31
Opening Equity			51.31
Average Equity			51.31
Rate of Return on Equity			15.50%
Return on Equity			7.95
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.85
O & M expenses	1 Months		0.47
Receivables	2Months		4.67
Total			5.99
Interest	13.50%		0.81
Annual Transmission Charges			
Depreciation			9.03
Interest on Loan			4.55
Return on Equity			7.95
Interest on Working Capital			0.81
O & M Expenses	10.10KM line		5.66
Total			28.00
Norms for O&M Per Km	S/C		0.560

Annexure - VII(A)			
Name of the Tr. System:	Asset-VII(A)	NELLORE-NELLORE-PG:2	
		COD:	05-09-1981
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	20.70	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2015			34.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.74
O & M expenses	1 Months		0.97
Receivables	2 Months		2.03
Total			4.73
Interest	13.50%		0.64
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			0.64
O & M Expenses	20.70 KM line		11.59
Total			12.23
Norms for O&M Per Km	S/C		0.560

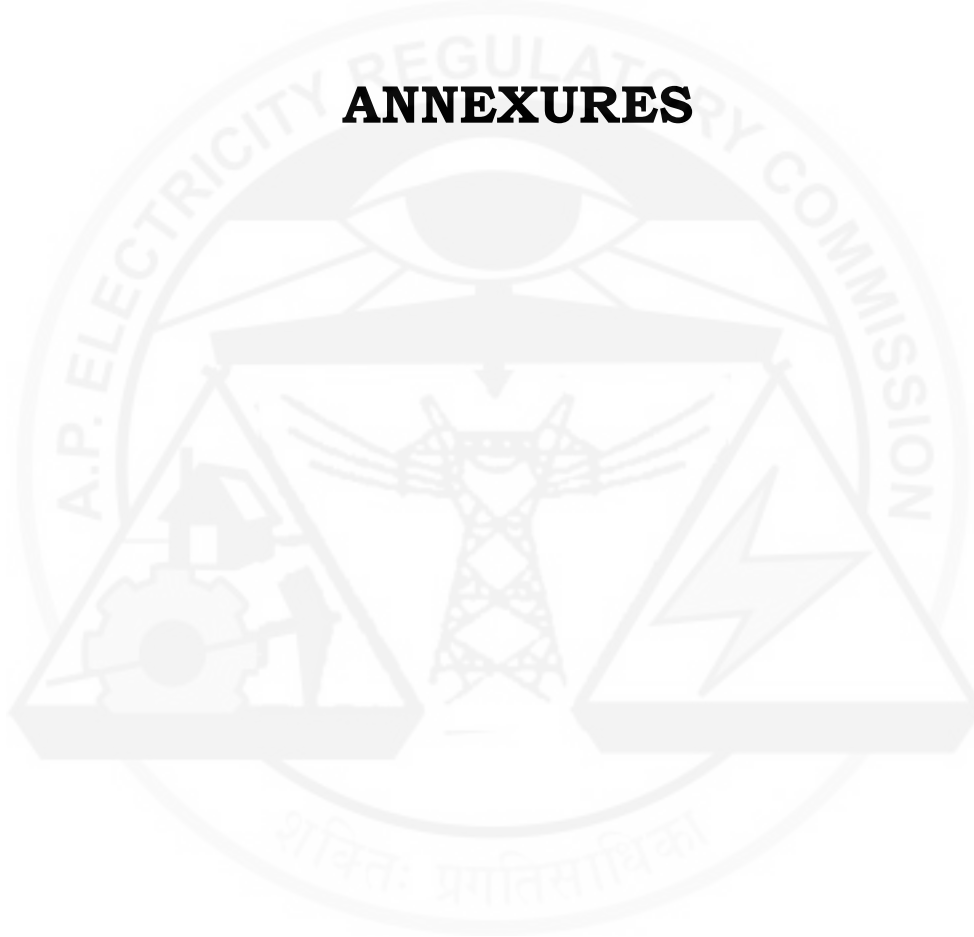
Annexure - VII(B)			
Name of the Tr. System:	Asset-VII(B)	NELLORE-NELLORE-PG:2	
		COD:	26-06-2007
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	47.04	Life in years	25
Transmission Line length in km	10.10	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			171.037
Additional Capitalisation			0
Gross Block total			171.037
Average Gross Block			171.037
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	153.93
Elapsed Life as on 31.03.2015			8.00
Balance useful life of the asset			17.00
Remaining Depreciable value			81.69
Cumulative Depreciation			72.25
Depreciation			9.03
Interest on Loan			
Gross Normative Loan			119.73
Cumulative Repayment upto Previous Year			72.25
Net Loan-Opening			47.48
Addition due to Additional Capitalisation			0.00
Repayment during the year			9.03
Net Loan-Closing			38.45
Average Loan			42.96
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			4.55
Return on Equity			
Gross Notional Equity			51.31
Opening Equity			51.31
Average Equity			51.31
Rate of Return on Equity			15.50%
Return on Equity			7.95
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.85
O & M expenses	1 Months		0.47
Receivables	2 Months		4.67
Total			5.99
Interest	13.50%		0.81
Annual Transmission Charges			
Depreciation			9.03
Interest on Loan			4.55
Return on Equity			7.95
Interest on Working Capital			0.81
O & M Expenses	10.10 KM line		5.66
Total			28.00
Norms for O&M Per Km	D/C		0.560

Annexure – VIII			
Name of the Tr. System:	Asset-VIII	NELLORE-NELLORE-PG:3	
		COD:	17-04-2005
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	25
Transmission Line length in km	28.54	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			414.367
Additional Capitalisation			0
Gross Block total			414.367
Average Gross Block			414.367
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	372.93
Elapsed Life as on 31.03.2015			10.00
Balance useful life of the asset			15.00
Remaining Depreciable value			154.14
Cumulative Depreciation			218.79
Depreciation			21.88
Interest on Loan			
Gross Normative Loan			290.06
Cumulative Repayment upto Previous Year			218.79
Net Loan-Opening			71.27
Addition due to Additional Capitalisation			0.00
Repayment during the year			21.88
Net Loan-Closing			49.39
Average Loan			60.33
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			6.40
Return on Equity			
Gross Notional Equity			124.31
Opening Equity			124.31
Average Equity			124.31
Rate of Return on Equity			15.50%
Return on Equity			19.27
Interest on Working Capital			
Maintenance Spares	15% of O&M		2.40
O & M expenses	1 Months		1.33
Receivables	2Months		10.92
Total			14.65
Interest	13.50%		1.98
Annual Transmission Charges			
Depreciation			21.88
Interest on Loan			6.40
Return on Equity			19.27
Interest on Working Capital			1.98
O & M Expenses	28.54 KM line		15.98
Total			65.50
Norms for O&M Per Km	S/C		0.560

Annexure - IX(A)			
Name of the Tr. System:	Asset-IX(A)	RENIGUNTA- NAGARI:1	
		COD:	13-02-2003
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	34.00	Life in years	25
Transmission Line length in km	9.50	Voltage, kV	220 kV / S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			116.28
Additional Capitalisation			0.00
Gross Block total			116.28
Average Gross Block			116.28
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	104.65
Elapsed Life as on 31.03.2015			12.00
Balance useful life of the asset			13.00
Remaining Depreciable value			30.98
Cumulative Depreciation			73.68
Depreciation			2.38
Interest on Loan			
Gross Normative Loan			81.40
Cumulative Repayment upto Previous Year			73.68
Net Loan-Opening			7.72
Addition due to Additional Capitalisation			0.00
Repayment during the year			2.38
Net Loan-Closing			5.34
Average Loan			6.53
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			0.69
Return on Equity			
Gross Notional Equity			34.88
Opening Equity			34.88
Average Equity			34.88
Rate of Return on Equity			15.50%
Return on Equity			5.41
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.80
O & M expenses	1 Months		0.44
Receivables	2 Months		2.38
Total			3.62
Interest	13.50%		0.49
Annual Transmission Charges			
Depreciation			2.38
Interest on Loan			0.69
Return on Equity			5.41
Interest on Working Capital			0.49
O & M Expenses	9.50KM line		5.32
Total			14.29
Norms for O&M Per Km	S/C		0.560

Annexure - IX(B)			
Name of the Tr. System:	Asset-IX(B)	RENIGUNTA- NAGARI:1	
		COD:	15-10-2012
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	65.67	Life in years	25
Transmission Line length in km	41.00	Voltage, kV	220 kV / S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			969.29
Additional Capitalisation			0.00
Gross Block total			969.29
Average Gross Block			969.29
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	872.36
Elapsed Life as on 31.03.2015			2.00
Balance useful life of the asset			23.00
Remaining Depreciable value			770.00
Cumulative Depreciation			102.36
Depreciation			51.18
Interest on Loan			
Gross Normative Loan			678.50
Cumulative Repayment upto Previous Year			102.36
Net Loan-Opening			576.15
Addition due to Additional Capitalisation			0.00
Repayment during the year			51.18
Net Loan-Closing			524.97
Average Loan			550.56
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			58.36
Return on Equity			
Gross Notional Equity			290.79
Opening Equity			290.79
Average Equity			290.79
Rate of Return on Equity			15.50%
Return on Equity			45.07
Interest on Working Capital			
Maintenance Spares	15% of O&M		3.44
O & M expenses	1 Months		1.91
Receivables	2 Months		30.40
Total			35.76
Interest	13.50%		4.83
Annual Transmission Charges			
Depreciation			51.18
Interest on Loan			58.36
Return on Equity			45.07
Interest on Working Capital			4.83
O & M Expenses	41KM line		22.96
Total			182.40
Norms for O&M Per Km	S/C		0.560

FY2016-17
ANNEXURES



Annexure - I(A)			
Name of the Tr. System:	Asset-I (A)	SULURUPETA-NELLORE42:1	
		COD:	28-04-1982
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	75.70	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2016			34.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		6.62
O & M expenses	1 Months		3.68
Receivables	2 Months		7.76
Total			18.06
Interest	13.50%		2.44
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			2.44
O & M Expenses	75.701KM line		44.13
Total			46.57
Norms for O&M Per Km	S/C		0.583

Annexure - I(B)			
Name of the Tr. System:	Asset-I (B)	SULURUPETA-NELLORE42:1	
		COD:	26-12-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	42.53	Life in years	25
Transmission Line length in km	10.10	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			154.64
Additional Capitalisation			0.00
Gross Block total			154.64
Average Gross Block			154.64
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	139.18
Elapsed Life as on 31.03.2016			9.00
Balance useful life of the asset			16.00
Remaining Depreciable value			65.69
Cumulative Depreciation			73.48
Depreciation			8.16
Interest on Loan			
Gross Normative Loan			108.25
Cumulative Repayment upto Previous Year			73.48
Net Loan-Opening			34.76
Addition due to Additional Capitalisation			0.00
Repayment during the year			8.16
Net Loan-Closing			26.60
Average Loan			30.68
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			3.30
Return on Equity			
Gross Notional Equity			46.39
Opening Equity			46.39
Average Equity			46.39
Rate of Return on Equity			15.50%
Return on Equity			7.19
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.88
O & M expenses	1 Months		0.49
Receivables	2 Months		4.22
Total			5.59
Interest	13.50%		0.75
Annual Transmission Charges			
Depreciation			8.16
Interest on Loan			3.30
Return on Equity			7.19
Interest on Working Capital			0.75
O & M Expenses	10.10KM line		5.89
Total			25.30
Norms for O&M Per Km	S/C		0.583

Annexure – II			
Name of the Tr. System:	Asset-II	KONDAPALLI-VTPS:1	
		COD:	11-11-1989
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	6.47	Voltage, kV	220 KV, S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2016			26.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.57
O & M expenses	1 Months		0.31
Receivables	2 Months		0.66
Total			1.54
Interest	13.50%		0.21
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			0.21
O & M Expenses	6.469KM line		3.77
Total			3.98
Norms for O&M Per Km	S/C		0.583

Annexure – III			
Name of the Tr. System:	Asset-III	KONDAPALLI-VTPS:2	
		COD:	23-03-1998
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	27.87	Life in years	25
Transmission Line length in km	6.47	Voltage, kV	220 KV, S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			64.90
Additional Capitalisation			0.00
Gross Block total			64.90
Average Gross Block			64.90
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	58.41
Elapsed Life as on 31.03.2016			18.00
Balance useful life of the asset			7.00
Remaining Depreciable value			9.31
Cumulative Depreciation			49.10
Depreciation			1.33
Interest on Loan			
Gross Normative Loan			45.43
Cumulative Repayment upto Previous Year			45.43
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			19.47
Cumulative Repayment upto Previous Year			3.67
Opening Equity			15.80
Repayment during the year			1.33
Closing Equity			14.47
Average Equity			15.14
Rate of Return on Equity			15.50%
Return on Equity			2.35
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.57
O & M expenses	1 Months		0.31
Receivables	2 Months		1.29
Total			2.17
Interest	13.50%		0.29
Annual Transmission Charges			
Depreciation			1.33
Interest on Loan			0.00
Return on Equity			2.35
Interest on Working Capital			0.29
O & M Expenses	6.469KM line		3.77
Total			7.74
Norms for O&M Per Km	S/C		0.583

Annexure – IV			
Name of the Tr. System:	Asset- IV	KONDAPALLI-CHILAKALLU:1	
		COD:	12-03-1997
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	38.20	Life in years	25
Transmission Line length in km	59.71	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			821.06
Additional Capitalisation			0
Gross Block total			821.06
Average Gross Block			821.06
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	738.96
Elapsed Life as on 31.03.2016			19.00
Balance useful life of the asset			6.00
Remaining Depreciable value			100.95
Cumulative Depreciation			638.00
Depreciation			16.83
Interest on Loan			
Gross Normative Loan			574.74
Cumulative Repayment upto Previous Year			574.74
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			246.32
Cumulative Repayment upto Previous Year			63.26
Opening Equity			183.06
Repayment during the year			16.83
Closing Equity			166.23
Average Equity			174.65
Rate of Return on Equity			15.50%
Return on Equity			27.07
Interest on Working Capital			
Maintenance Spares	15% of O&M		5.22
O & M expenses	1 Months		2.90
Receivables	2 Months		13.61
Total			21.73
Interest	13.50%		2.93
Annual Transmission Charges			
Depreciation			16.83
Interest on Loan			0.00
Return on Equity			27.07
Interest on Working Capital			2.93
O & M Expenses	59.705KM line		34.81
Total			81.64
Norms for O&M Per Km	S/C		0.583

Annexure – V			
Name of the Tr. System:	Asset-V	KONDAPALLI-CHILAKALLU:2	
		COD:	19-08-2000
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	54.57	Life in years	25
Transmission Line length in km	59.71	Voltage, kV	220KV,S/C
Multiplication factor	0.36		
Gross Block			1172.92
Additional Capitalisation			0
Gross Block total			1172.92
Average Gross Block			1172.92
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	1055.62
Elapsed Life as on 31.03.2016			16.00
Balance useful life of the asset			9.00
Remaining Depreciable value			216.32
Cumulative Depreciation			839.30
Depreciation			24.04
Interest on Loan			
Gross Normative Loan			821.04
Cumulative Repayment upto Previous Year			821.04
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			351.87
Cumulative Repayment upto Previous Year			18.26
Opening Equity			333.61
Repayment during the year			24.04
Closing Equity			309.58
Average Equity			321.60
Rate of Return on Equity			15.50%
Return on Equity			49.85
Interest on Working Capital			
Maintenance Spares	15% of O&M		5.22
O & M expenses	1 Months		2.90
Receivables	2 Months		18.72
Total			26.84
Interest	13.50%		3.62
Annual Transmission Charges			
Depreciation			24.04
Interest on Loan			0.00
Return on Equity			49.85
Interest on Working Capital			3.62
O & M Expenses	59.705KM line		34.81
Total			112.31
Norms for O&M Per Km	S/C		0.583

Annexure - VI			
Name of the Tr. System:	Asset- VI	VTPS-CHILAKALLU:1	
		COD:	28-08-1999
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	20.71	Life in years	25
Transmission Line length in km	67.80	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			505.50
Additional Capitalisation			0.00
Gross Block total			505.50
Average Gross Block			505.50
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	454.95
Elapsed Life as on 31.03.2016			17.00
Balance useful life of the asset			8.00
Remaining Depreciable value			82.87
Cumulative Depreciation			372.08
Depreciation			10.36
Interest on Loan			
Gross Normative Loan			353.85
Cumulative Repayment upto Previous Year			353.85
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			151.65
Cumulative Repayment upto Previous Year			18.23
Opening Equity			133.42
Repayment during the year			10.36
Closing Equity			123.06
Average Equity			101.10
Rate of Return on Equity			15.50%
Return on Equity			15.67
Interest on Working Capital			
Maintenance Spares	15% of O&M		5.93
O & M expenses	1 Months		3.29
Receivables	2Months		11.39
Total			20.61
Interest	13.50%		2.78
Annual Transmission Charges			
Depreciation			10.36
Interest on Loan			0.00
Return on Equity			15.67
Interest on Working Capital			2.78
O & M Expenses	67.801 KM line		39.53
Total			68.34
Norms for O&M Per Km	S/C		0.583

Annexure – VII			
Name of the Tr. System:	Asset- VII	VTPS-CHILAKALLU:2	
		COD:	01-10-2010
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	52.26	Life in years	25
Transmission Line length in km	67.80	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			1275.58
Additional Capitalisation			0.00
Gross Block total			1275.58
Average Gross Block			1275.58
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	1148.02
Elapsed Life as on 31.03.2016			6.00
Balance useful life of the asset			19.00
Remaining Depreciable value			743.92
Cumulative Depreciation			404.10
Depreciation			67.35
Interest on Loan			
Gross Normative Loan			892.91
Cumulative Repayment upto Previous Year			404.10
Net Loan-Opening			488.80
Addition due to Additional Capitalisation			0.00
Repayment during the year			67.35
Net Loan-Closing			421.45
Average Loan			455.13
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			48.93
Return on Equity			
Gross Notional Equity			382.67
Opening Equity			382.67
Average Equity			382.67
Rate of Return on Equity			15.50%
Return on Equity			59.31
Interest on Working Capital			
Maintenance Spares	15% of O&M		5.93
O & M expenses	1 Months		3.29
Receivables	2Months		36.89
Total			46.12
Interest	13.50%		6.23
Annual Transmission Charges			
Depreciation			67.35
Interest on Loan			48.93
Return on Equity			59.31
Interest on Working Capital			6.23
O & M Expenses	67.801 KM line		39.53
Total			221.35
Norms for O&M Per Km	S/C		0.583

Annexure - VIII(A)			
Name of the Tr. System:	Asset-VIII(A)	VTPS-RENTACHINTALA:2	
		COD:	30-06-1984
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	110.09	Voltage, kV	220kV, S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2016			32.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		9.63
O & M expenses	1 Months		5.35
Receivables	2Months		11.28
Total			26.26
Interest	13.50%		3.54
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			3.54
O & M Expenses	110.09 KM line		64.18
Total			67.73
Norms for O&M Per Km	S/C		0.583

Annexure - VIII(B)			
Name of the Tr. System:	Asset-VIII(B)	VTPS-RENTACHINTALA:2	
		COD:	24-11-2008
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	47.74	Life in years	25
Transmission Line length in km	1.40	Voltage, kV	220kV S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			24.061
Addition during 2014-19 due to Projected Additional Capitalisation			0
Gross Block total			24.061
Average Gross Block			24.061
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	21.65
Elapsed Life as on 31.03.2016			7.00
Balance useful life of the asset			18.00
Remaining Depreciable value			12.76
Cumulative Depreciation			8.89
Depreciation			1.27
Interest on Loan			
Gross Normative Loan			16.84
Cumulative Repayment upto Previous Year			8.89
Net Loan-Opening			7.95
Addition due to Additional Capitalisation			0.00
Repayment during the year			1.27
Net Loan-Closing			6.68
Average Loan			7.31
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.79
Return on Equity			
Gross Notional Equity			7.22
Opening Equity			7.22
Average Equity			7.22
Rate of Return on Equity			15.50%
Return on Equity			1.12
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.12
O & M expenses	1 Months		0.07
Receivables	2Months		0.68
Total			0.88
Interest	13.50%		0.12
Annual Transmission Charges			
Depreciation			1.27
Interest on Loan			0.79
Return on Equity			1.12
Interest on Working Capital			0.12
O & M Expenses	1.40 KM line		0.82
Total			4.11
Norms for O&M Per Km	S/C		0.583

Annexure - IX			
Name of the Tr. System:	Asset-IX	KURNOOL-BRAHMANKOTKUR:1	
		COD:	29-10-2010
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	52.26	Life in years	25
Transmission Line length in km	23.18	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			436.099
Additional Capitalisation			0
Gross Block total			436.099
Average Gross Block			436.099
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	392.49
Elapsed Life as on 31.03.2016			5.00
Balance useful life of the asset			20.00
Remaining Depreciable value			277.36
Cumulative Depreciation			115.13
Depreciation			23.03
Interest on Loan			
Gross Normative Loan			305.27
Cumulative Repayment upto Previous Year			115.13
Net Loan-Opening			190.14
Addition due to Additional Capitalisation			0.00
Repayment during the year			23.03
Net Loan-Closing			167.11
Average Loan			178.63
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			19.20
Return on Equity			
Gross Notional Equity			130.83
Opening Equity			130.83
Average Equity			130.83
Rate of Return on Equity			15.50%
Return on Equity			20.28
Interest on Working Capital			
Maintenance Spares	15% of O&M		2.03
O & M expenses	1 Months		1.13
Receivables	2Months		13.04
Total			16.19
Interest	13.50%		2.19
Annual Transmission Charges			
Depreciation			23.03
Interest on Loan			19.20
Return on Equity			20.28
Interest on Working Capital			2.19
O & M Expenses	23.18 KM line		13.51
Total			78.21
Norms for O&M Per Km	S/C		0.583

Annexure - X & XI			
Name of the Tr. System:	Asset-X & Asset-XI	CHITTOR-SDSTPS:1&CHITTOR-SDSTPS:2	
		COD:	22-07-2015
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km		Life in years	25
Transmission Line length in km	192.00	Voltage, kV	400kV,D/C
Multiplication factor			
			FY 2016-17
Gross Block			43505.98
Additional Capitalisation			309.41
Gross Block total			43815.39
Average Gross Block			43660.69
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	39155.38
Elapsed Life as on 31.03.2016			1.00
Balance useful life of the asset			24.00
Remaining Depreciable value			36858.27
Cumulative Depreciation			2297.12
Depreciation			2297.12
Interest on Loan			
Gross Normative Loan			30670.77
Cumulative Repayment upto Previous Year			2297.12
Net Loan-Opening			28373.66
Addition due to Additional Capitalisation			0.00
Repayment during the year			2297.12
Net Loan-Closing			26076.54
Average Loan			27225.10
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			2926.70
Return on Equity			
Gross Notional Equity			13051.79
Opening Equity			13051.79
Average Equity			13051.79
Rate of Return on Equity			15.50%
Return on Equity			2023.03
Interest on Working Capital			
Maintenance Spares	15% of O&M		33.58
O & M expenses	1 Months		18.66
Receivables	2 Months		1457.53
Total			1509.77
Interest	13.50%		203.82
Annual Transmission Charges			
Depreciation			2297.12
Interest on Loan			2926.70
Return on Equity			2023.03
Interest on Working Capital			203.82
O & M Expenses	384KM line		223.87
Total			7674.53
Norms for O&M Per Km	D/C		0.583

Annexure - XII			
Name of the Tr. System:	Asset - XII	NUNNA2-VTPS-IV:1	
		COD:	26-07-2009
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	48.44	Life in years	25
Transmission Line length in km	18.66	Voltage, kV	400KV,S/C
Multiplication factor	1.00		
			FY 2016-17
Gross Block			903.89
Additional Capitalisation			0.00
Gross Block total			903.89
Average Gross Block			903.89
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	813.50
Elapsed Life as on 31.03.2016			7.00
Balance useful life of the asset			18.00
Remaining Depreciable value			479.42
Cumulative Depreciation			334.08
Depreciation			47.73
Interest on Loan			
Gross Normative Loan			632.72
Cumulative Repayment upto Previous Year			334.08
Net Loan-Opening			298.65
Addition due to Additional Capitalisation			0.00
Repayment during the year			47.73
Net Loan-Closing			250.92
Average Loan			274.78
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			29.54
Return on Equity			
Gross Notional Equity			271.17
Opening Equity			271.17
Average Equity			271.17
Rate of Return on Equity			15.50%
Return on Equity			42.03
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.63
O & M expenses	1 Months		0.91
Receivables	2 Months		22.26
Total			24.79
Interest	13.50%		3.35
Annual Transmission Charges			
Depreciation			47.73
Interest on Loan			29.54
Return on Equity			42.03
Interest on Working Capital			3.35
O & M Expenses	18.66 KM line		10.88
Total			133.52
Norms for O&M Per Km	S/C		0.583

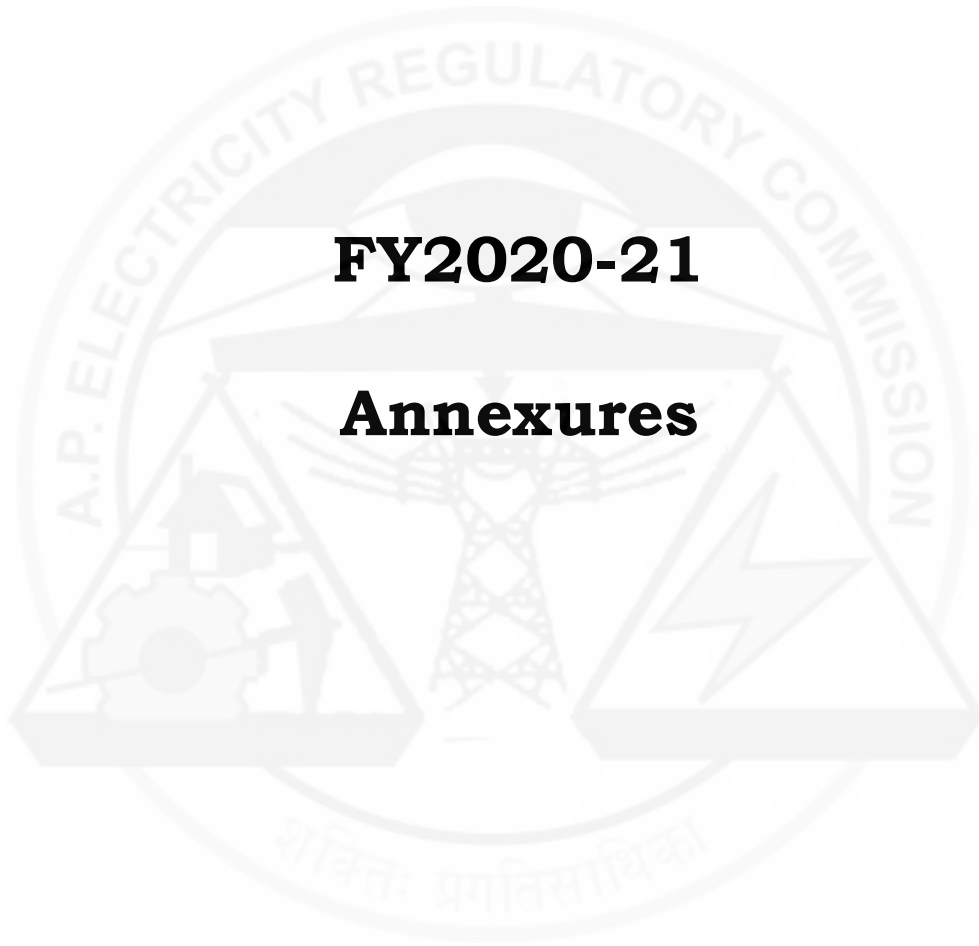


Annexure - XIII			
Name of the Tr. System:	Asset - XIII	GAZUWAKA1-KALAPAKKA1:1	
		COD:	10-12-2000
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	54.57	Life in years	25
Transmission Line length in km	3.39	Voltage, kV	400kV,S/C
Multiplication factor	1.00		
			FY 2016-17
Gross Block			185.16
Additional Capitalisation			0.00
Gross Block total			185.16
Average Gross Block			185.16
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	166.64
Elapsed Life as on 31.03.2016			15.00
Balance useful life of the asset			10.00
Remaining Depreciable value			37.94
Cumulative Depreciation			128.70
Depreciation			3.79
Interest on Loan			
Gross Normative Loan			129.61
Cumulative Repayment upto Previous Year			128.70
Net Loan-Opening			0.91
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.91
Net Loan-Closing			0.00
Average Loan			0.46
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.05
Return on Equity			
Gross Notional Equity			55.55
Opening Equity			55.55
Average Equity			55.55
Rate of Return on Equity			15.50%
Return on Equity			8.61
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.30
O & M expenses	1 Months		0.16
Receivables	2 Months		2.47
Total			2.93
Interest	13.50%		0.40
Annual Transmission Charges			
Depreciation			3.79
Interest on Loan			0.05
Return on Equity			8.61
Interest on Working Capital			0.40
O & M Expenses	3.393KM line		1.98
Total			14.83
Norms for O&M Per Km	S/C		0.583

Annexure -XIV			
Name of the Tr. System:	Asset - XIV	GAZUWAKA1-KALAPAKKA1:2	
		COD:	27-01-2002
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	44.28	Life in years	25
Transmission Line length in km	3.39	Voltage, kV	400kV,S/C
Multiplication factor	1.00		
			FY 2016-17
Gross Block			150.11
Additional Capitalisation			0.00
Gross Block total			150.11
Average Gross Block			150.11
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	135.10
Elapsed Life as on 31.03.2016			14.00
Balance useful life of the asset			11.00
Remaining Depreciable value			33.84
Cumulative Depreciation			101.26
Depreciation			3.08
Interest on Loan			
Gross Normative Loan			105.08
Cumulative Repayment upto Previous Year			101.26
Net Loan-Opening			3.82
Addition due to Additional Capitalisation			0.00
Repayment during the year			3.08
Net Loan-Closing			0.74
Average Loan			2.28
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.24
Return on Equity			
Gross Notional Equity			45.03
Opening Equity			45.03
Average Equity			45.03
Rate of Return on Equity			15.50%
Return on Equity			6.98
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.30
O & M expenses	1 Months		0.16
Receivables	2 Months		2.10
Total			2.57
Interest	13.50%		0.35
Annual Transmission Charges			
Depreciation			3.08
Interest on Loan			0.24
Return on Equity			6.98
Interest on Working Capital			0.35
O & M Expenses	3.393KM line		1.98
Total			12.63
Norms for O&M Per Km	S/C		0.583

FY2020-21

Annexures



Annexure - I			
Name of the Tr. System:	Asset - I	NUNNA2-VEMAGIRI1:T3	
		COD:	30-12-2005
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	25
Transmission Line length in km	145.00	Voltage, kV	400 kV S/C
Multiplication factor	1.00		
			FY 2020-21
Gross Block			5847.85
Additional Capitalisation			0
Gross Block total			5847.85
Average Gross Block			5847.85
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	5263.07
Elapsed Life as on 31.03.2020			14
Balance useful life of the asset			11
Remaining Depreciable value			1318.11
Cumulative Depreciation			3944.96
Depreciation			119.84
Interest on Loan			
Gross Normative Loan			4093.50
Cumulative Repayment upto Previous Year			3944.96
Net Loan-Opening			148.54
Addition due to Additional Capitalisation			0.00
Repayment during the year			119.84
Net Loan-Closing			28.70
Average Loan			88.62
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			8.84
Return on Equity			
Gross Notional Equity			1754.36
Opening Equity			1754.36
Average Equity			1754.36
Rate of Return on Equity			15.50%
Return on Equity			271.93
Interest on Working Capital			
Maintenance Spares	15% of O&M		17.84
O & M expenses	1 Months		9.91
Receivables	1.5 Months		66.26
Total			94.00
Interest	11.25%		10.58
Annual Transmission Charges			
Depreciation			119.84
Interest on Loan			8.84
Return on Equity			271.93
Interest on Working Capital			10.58
O & M Expenses for line	145.00		118.90
Total			530.08
Norms for O&M Per Km	S/C		0.820

Annexure - II & III			
Name of the Tr. System:	Asset - II & III	GAZUWAKA2-KALPAKKA1:T1 & GAZUWAKA2-KALPAKKA1:T2	
		COD:	27-01-2002
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	44.28	Life in years	25
Transmission Line length in km	3.39	Voltage, kV	400 kV D/C
Multiplication factor	1.39		
			FY 2020-21
Gross Block			208.652
Additional Capitalisation			0
Gross Block total			208.652
Average Gross Block			208.652
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	187.79
Elapsed Life as on 31.03.2020			18
Balance useful life of the asset			7
Remaining Depreciable value			29.92
Cumulative Depreciation			157.87
Depreciation			4.28
Interest on Loan			
Gross Normative Loan			146.06
Cumulative Repayment upto Previous Year			146.06
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			62.60
Cumulative Repayment upto Previous Year			11.81
Opening Equity			50.79
Repayment during the year			4.28
Closing Equity			46.51
Average Equity			48.65
Rate of Return on Equity			15.50%
Return on Equity			7.54
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.83
O & M expenses	1 Months		0.46
Receivables	1.5 Months		2.22
Total			3.52
Interest	11.25%		0.40
Annual Transmission Charges			
Depreciation			4.28
Interest on Loan			0.00
Return on Equity			7.54
Interest on Working Capital			0.40
O & M Expenses for line	3.39		5.56
Total			17.77
Norms for O&M Per Km	D/C		0.820

Annexure - IV & V			
Name of the Tr. System:	Asset- IV & V	CHITTOOR 42 - CHITTOOR 1:2 & CHITTOOR 42 - CHITTOOR 1:1	
		COD:	14-02-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	25
Transmission Line length in km	17.10	Voltage, kV	220 kV D/C
Multiplication factor	0.57		
			FY 2020-21
Gross Block			393.10
Additional Capitalisation			0.00
Gross Block total			393.10
Average Gross Block			393.10
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	353.79
Elapsed Life as on 31.03.2020			14
Balance useful life of the asset			11
Remaining Depreciable value			88.60
Cumulative Depreciation			265.18
Depreciation			8.06
Interest on Loan			
Gross Normative Loan			275.17
Cumulative Repayment upto Previous Year			265.18
Net Loan-Opening			9.98
Addition due to Additional Capitalisation			0.00
Repayment during the year			8.06
Net Loan-Closing			1.93
Average Loan			5.96
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.59
Return on Equity			
Gross Notional Equity			117.93
Opening Equity			117.93
Average Equity			117.93
Rate of Return on Equity			15.50%
Return on Equity			18.28
Interest on Working Capital			
Maintenance Spares	15% of O&M		4.21
O & M expenses	1 Months		2.34
Receivables	1.5 Months		7.06
Total			13.61
Interest	11.25%		1.53
Annual Transmission Charges			
Depreciation			8.06
Interest on Loan			0.59
Return on Equity			18.28
Interest on Working Capital			1.53
O & M Expenses for line	17.10		28.04
Total			56.50
Norms for O&M Per Km	D/C		0.820

Annexure - VI (A)			
Name of the Tr. System:	Asset-VI (A)	SULURUPETA-NELLORE42:1	
		COD:	28-04-1982
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kV line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	75.70	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			37
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		9.31
O & M expenses	1 Months		5.17
Receivables	1.5 Months		8.08
Total			22.56
Interest	11.25%		2.54
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			2.54
O & M Expenses for line	75.70		62.07
Total			64.61
Norms for O&M Per Km	S/C		0.820

Annexure - VI(B)			
Name of the Tr. System:	Asset-VI (B)	SULURUPETA-NELLORE42:1	
		COD:	26-12-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	42.53	Life in years	25
Transmission Line length in km	10.10	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			154.64
Additional Capitalisation			0.00
Gross Block total			1 54.64
Average Gross Block			154.64
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	139.18
Elapsed Life as on 31.03.2020			13
Balance useful life of the asset			12
Remaining Depreciable value			38.03
Cumulative Depreciation			101.15
Depreciation			3.17
Interest on Loan			
Gross Normative Loan			108.25
Cumulative Repayment upto Previous Year			101.15
Net Loan-Opening			7.10
Addition due to Additional Capitalisation			0.00
Repayment during the year			3.17
Net Loan-Closing			3.93
Average Loan			5.51
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.55
Return on Equity			
Gross Notional Equity			46.39
Opening Equity			46.39
Average Equity			46.39
Rate of Return on Equity			15.50%
Return on Equity			7.19
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.24
O & M expenses	1 Months		0.69
Receivables	1.5 Months		2.46
Total			4.39
Interest	11.25%		0.49
Annual Transmission Charges			
Depreciation			3.17
Interest on Loan			0.55
Return on Equity			7.19
Interest on Working Capital			0.49
O & M Expenses for line	10.10		8.28
Total			19.69
Norms for O&M Per Km	S/C		0.820

Annexure - VII			
Name of the Tr. System:	Asset-VII	CHITTOOR1-KALIKIRI1:1	
		COD:	21-06-1970
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	64.66	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			49
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		7.95
O & M expenses	1 Months		4.42
Receivables	1.5 Months		6.90
Total			19.27
Interest	11.25%		2.17
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			2.17
O & M Expenses for line	64.66		53.02
Total			55.19
Norms for O&M Per Km	S/C		0.820

Annexure - VIII & IX			
Name of the Tr. System:	Asset- VIII & IX	GOOTY - PG - DHONE 1:2 & GOOTY - PG - DHONE 1:1	
		COD:	24-08-2011
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	62.27	Life in years	25
Transmission Line length in km	90.16	Voltage, kV	220 kV D/C
Multiplication factor	0.57		
			FY 2020-21
Gross Block			3200.13
Additional Capitalisation			0
Gross Block total			3200.13
Average Gross Block			3200.13
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	2880.12
Elapsed Life as on 31.03.2020			8
Balance useful life of the asset			17
Remaining Depreciable value			1528.38
Cumulative Depreciation			1351.73
Depreciation			168.97
Interest on Loan			
Gross Normative Loan			2240.09
Cumulative Repayment upto Previous Year			1351.73
Net Loan-Opening			888.36
Addition due to Additional Capitalisation			0.00
Repayment during the year			168.97
Net Loan-Closing			719.39
Average Loan			803.87
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			80.23
Return on Equity			
Gross Notional Equity			960.04
Opening Equity			960.04
Average Equity			960.04
Rate of Return on Equity			15.50%
Return on Equity			148.81
Interest on Working Capital			
Maintenance Spares	15% of O&M		22.18
O & M expenses	1 Months		12.32
Receivables	1.5 Months		69.70
Total			104.20
Interest	11.25%		11.72
Annual Transmission Charges			
Depreciation			168.97
Interest on Loan			80.23
Return on Equity			148.81
Interest on Working Capital			11.72
O & M Expenses for line	90.16		147.86
Total			557.58
Norms for O&M Per Km	D/C		0.820

Annexure - X			
Name of the Tr. System:	Asset- X	KONDAPALLI-CHILLAKALLU1:1	
		COD:	12-03-1997
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	38.20	Life in years	25
Transmission Line length in km	59.70	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2019-20
Gross Block			820.99
Additional Capitalisation			0.00
Gross Block total			820.99
Average Gross Block			820.99
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	738.89
Elapsed Life as on 31.03.2020			23
Balance useful life of the asset			0
Remaining Depreciable value			33.58
Cumulative Depreciation			705.32
Depreciation			16.82
Interest on Loan			
Gross Normative Loan			574.70
Cumulative Repayment upto Previous Year			574.70
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			246.30
Opening Equity			246.30
Repayment till previous year			130.62
Repayment in current year			16.82
Closing Equity			98.85
Average Equity			172.58
Rate of Return on Equity			15.50%
Return on Equity			26.75
Interest on Working Capital			
Maintenance Spares	15% of O&M		7.34
O & M expenses	1 Months		4.08
Receivables	1.5 Months		11.89
Total			23.32
Interest	11.25%		2.62
Annual Transmission Charges			
Depreciation			16.82
Interest on Loan			0.00
Return on Equity			26.75
Interest on Working Capital			2.62
O & M Expenses for line	59.70		48.95
Total			95.15
Norms for O&M Per Km	D/C		0.820

Annexure - XI			
Name of the Tr. System:	Asset- XI	KONDAPALLI-CHILLAKALLU1:2	
		COD:	19-08-2000
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	54.57	Life in years	25
Transmission Line length in km	59.70	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2019-20
Gross Block			1172.82
Additional Capitalisation			0.00
Gross Block total			1172.82
Average Gross Block			1172.82
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	1055.54
Elapsed Life as on 31.03.2020			19
Balance useful life of the asset			6
Remaining Depreciable value			144.14
Cumulative Depreciation			911.40
Depreciation			24.03
Interest on Loan			
Gross Normative Loan			820.97
Cumulative Repayment upto Previous Year			820.97
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			351.85
Opening Equity			351.85
Repayment till previous year			90.42
Repayment in current year			24.03
Closing Equity			237.39
Average Equity			294.62
Rate of Return on Equity			15.50%
Return on Equity			45.67
Interest on Working Capital			
Maintenance Spares	15% of O&M		7.34
O & M expenses	1 Months		4.08
Receivables	1.5 Months		15.21
Total			26.63
Interest	11.25%		3.00
Annual Transmission Charges			
Depreciation			24.03
Interest on Loan			0.00
Return on Equity			45.67
Interest on Working Capital			3.00
O & M Expenses for line	59.70		48.95
Total			121.65
Norms for O&M Per Km	D/C		0.820

Annexure - XII & XIII			
Name of the Tr. System:	Asset-XII & XIII	SRISAILAMRB1-TALIAPLLI:1 & SRISAILAMRB1-TALIAPLLI:2	
		COD:	01-01-1985
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	98.82	Voltage, kV	220 kV D/C
Multiplication factor	0.57		
			FY 2020-21
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			35
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		24.31
O & M expenses	1 Months		13.51
Receivables	1.5 Months		21.09
Total			58.90
Interest	11.25%		6.63
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			6.63
O & M Expenses for line	98.82		162.06
Total			168.69
Norms for O&M Per Km	D/C		0.820

Annexure - XIV			
Name of the Tr. System:	Asset-XIV	SRISAILAMRB1-MYDUKUR:1	
		COD:	27-11-1969
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	165.96	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			50
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		20.41
O & M expenses	1 Months		11.34
Receivables	1.5 Months		17.62
Total			49.37
Interest	11.25%		5.55
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			5.55
O & M Expenses for line	165.96		136.09
Total			141.64
Norms for O&M Per Km	S/C		0.820

Annexure -XV			
Name of the Tr. System:	Asset – XV	SRISAILAMRB1-SOMYZULPALLI:1	
		COD:	01-01-1985
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	106.00	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			35
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		13.04
O & M expenses	1 Months		7.24
Receivables	1.5 Months		11.31
Total			31.59
Interest	11.25%		3.55
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			3.55
O & M Expenses for line	106.00		86.92
Total			90.47
Norms for O&M Per Km	S/C		0.820

Annexure - XVI(A)			
Name of the Tr. System:	Asset-XVI (A)	SRISAILAMRB1-BELKALAGUDUR:1	
		COD:	24-03-1980
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	70.72	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			40
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		8.70
O & M expenses	1 Months		4.83
Receivables	1.5 Months		7.55
Total			21.08
Interest	11.25%		2.37
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			2.37
O & M Expenses for line	70.72		57.99
Total			60.36
Norms for O&M Per Km	S/C		0.820

Annexure - XVI (B)			
Name of the Tr. System:	Asset-XVI (B)	SRISAILAMRB1-BELKALAGUDUR:1	
		COD:	10-08-2011
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	62.27	Life in years	25
Transmission Line length in km	4.94	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			110.74
Additional Capitalisation			0.00
Gross Block total			110.74
Average Gross Block			110.74
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	99.67
Elapsed Life as on 31.03.2020			8
Balance useful life of the asset			17
Remaining Depreciable value			52.89
Cumulative Depreciation			46.78
Depreciation			5.85
Interest on Loan			
Gross Normative Loan			77.52
Cumulative Repayment upto Previous Year			46.78
Net Loan-Opening			30.74
Addition due to Additional Capitalisation			0.00
Repayment during the year			5.85
Net Loan-Closing			24.89
Average Loan			27.82
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			2.78
Return on Equity			
Gross Notional Equity			33.22
Opening Equity			33.22
Average Equity			33.22
Rate of Return on Equity			15.50%
Return on Equity			5.15
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.61
O & M expenses	1 Months		0.34
Receivables	1.5 Months		2.27
Total			3.22
Interest	11.25%		0.36
Annual Transmission Charges			
Depreciation			5.85
Interest on Loan			2.78
Return on Equity			5.15
Interest on Working Capital			0.36
O & M Expenses for line	4.94		4.05
Total			18.19
Norms for O&M Per Km	S/C		0.820

Annexure - XVII			
Name of the Tr. System:	Asset-XVII	VTS1-CHILAAKALLU1:1	
		COD:	28-08-1999
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kV line Rs lakh per ckt km	20.71	Life in years	25
Transmission Line length in km	67.80	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			505.49
Additional Capitalisation			0.00
Gross Block total			505.49
Average Gross Block			505.49
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	454.94
Elapsed Life as on 31.03.2020			20
Balance useful life of the asset			5
Remaining Depreciable value			51.76
Cumulative Depreciation			403.18
Depreciation			10.36
Interest on Loan			
Gross Normative Loan			353.84
Cumulative Repayment upto Previous Year			353.84
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			151.65
Cumulative Repayment upto Previous Year			49.34
Opening Equity			102.31
Repayment during the year			10.36
Closing Equity			91.95
Average Equity			97.13
Rate of Return on Equity			15.50%
Return on Equity			15.06
Rate of Return on Equity			
Return on Equity			
Interest on Working Capital			
Maintenance Spares	15% of O&M		8.34
O & M expenses	1 Months		4.63
Receivables	1.5 Months		10.45
Total			23.43
Interest	11.25%		2.64
Annual Transmission Charges			
Depreciation			10.36
Interest on Loan			0.00
Return on Equity			15.06
Interest on Working Capital			2.64
O & M Expenses for line	67.80		55.60
Total			83.65
Norms for O&M Per Km	S/C		0.820

Annexure - XVIII-A			
Name of the Tr. System:	Asset-XVIII-A	VTS1-CHILAAKALLU1:2	
		COD:	29-03-1999
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	17.54	Life in years	25
Transmission Line length in km	66.14	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			417.63
Additional Capitalisation			0
Gross Block total			417.63
Average Gross Block			417.63
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.9	375.87
Elapsed Life as on 31.03.2020			21
Balance useful life of the asset			4
Remaining Depreciable value			34.2
Cumulative Depreciation			341.67
Depreciation			8.56
Interest on Loan			
Gross Normative Loan			292.34
Cumulative Repayment upto Previous Year			292.34
Net Loan-Opening			0
Addition due to Additional Capitalisation			0
Repayment during the year			0
Net Loan-Closing			0
Average Loan			0
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0
Return on Equity			
Gross Notional Equity			125.29
Cumulative Repayment upto Previous Year			49.32
Opening Equity			75.97
Repayment during the year			8.56
Closing Equity			67.41
Average Equity			71.69
Rate of Return on Equity			15.50%
Return on Equity			11.11
Interest on Working Capital			
Maintenance Spares	15% of O&M		8.14
O & M expenses	1 Months		4.52
Receivables	1.5 Months		9.55
Total			22.2
Interest	11.25%		2.5
Annual Transmission Charges			
Depreciation			8.56
Interest on Loan			0
Return on Equity			11.11
Interest on Working Capital			2.5
O & M Expenses for line	66.14		54.23
Total			76.4
Norms for O&M Per Km	S/C		0.82

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XVIII - B			
Name of the Tr. System:	Asset-XVIII(B)	VTS1-CHILAAKALLU1:2	
		COD:	03-10-2010
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	52.26	Life in years	25
Transmission Line length in km	1.48	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			27.92
Additional Capitalisation			0
Gross Block total			27.92
Average Gross Block			27.92
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.9	25.13
Elapsed Life as on 31.03.2020			9
Balance useful life of the asset			16
Remaining Depreciable value			11.86
Cumulative Depreciation			13.27
Depreciation			1.47
Interest on Loan			
Gross Normative Loan			19.54
Cumulative Repayment upto Previous Year			13.27
Net Loan-Opening			6.28
Addition due to Additional Capitalisation			0
Repayment during the year			1.47
Net Loan-Closing			4.8
Average Loan			5.54
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.56
Return on Equity			
Gross Notional Equity			8.38
Cumulative Repayment upto Previous Year			0
Opening Equity			8.38
Repayment during the year			0
Closing Equity			8.38
Average Equity			8.38
Rate of Return on Equity			15.50%
Return on Equity			1.3
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.18
O & M expenses	1 Months		0.1
Receivables	1.5 Months		0.58
Total			0.86
Interest	11.25%		0.1
Annual Transmission Charges			
Depreciation			1.47
Interest on Loan			0.56
Return on Equity			1.3
Interest on Working Capital			0.1
O & M Expenses for line	1.48		1.22
Total			4.65
Norms for O&M Per Km	S/C		0.82

Annexure - XIX (A)			
Name of the Tr. System:	Asset-XIX (A)	VTPS-RENTACHINTALA:2	
		COD:	30-06-1984
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	110.09	Voltage, kV	220kV, S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			35
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		13.54
O & M expenses	1 Months		7.52
Receivables	1.5 Months		11.75
Total			32.81
Interest	11.25%		3.69
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			3.69
O & M Expenses for line	110.09		90.27
Total			93.96
Norms for O&M Per Km	S/C		0.820

Annexure - XIX(B)			
Name of the Tr. System:	Asset-XIX (B)	VTPS-RENTACHINTALA:2	
		COD:	24-11-2008
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	47.74	Life in years	25
Transmission Line length in km	1.40	Voltage, kV	220kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			24.061
Additional Capitalisation			0
Gross Block total			24.061
Average Gross Block			24.061
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	21.65
Elapsed Life as on 31.03.2020			11
Balance useful life of the asset			14
Remaining Depreciable value			7.68
Cumulative Depreciation			13.97
Depreciation			1.27
Interest on Loan			
Gross Normative Loan			16.84
Cumulative Repayment upto Previous Year			13.97
Net Loan-Opening			2.87
Addition due to Additional Capitalisation			0.00
Repayment during the year			1.27
Net Loan-Closing			1.60
Average Loan			2.23
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.22
Return on Equity			
Gross Notional Equity			7.22
Opening Equity			7.22
Average Equity			7.22
Rate of Return on Equity			15.50%
Return on Equity			1.12
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.17
O & M expenses	1 Months		0.10
Receivables	1.5 Months		0.48
Total			0.75
Interest	11.25%		0.08
Annual Transmission Charges			
Depreciation			1.27
Interest on Loan			0.22
Return on Equity			1.12
Interest on Working Capital			0.08
O & M Expenses for line	1.40		1.15
Total			3.84
Norms for O&M Per Km	S/C		0.820

Annexure - XX			
Name of the Tr. System:	Asset-XX	KURNOOL1-BRAHMANKTUR:1	
		COD:	29-10-2010
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	52.26	Life in years	25
Transmission Line length in km	23.18	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			436.10
Additional Capitalisation			0.00
Gross Block total			436.10
Average Gross Block			436.10
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	392.49
Elapsed Life as on 31.03.2020			9
Balance useful life of the asset			16
Remaining Depreciable value			185.25
Cumulative Depreciation			207.23
Depreciation			~~23.03~~
Interest on Loan			
Gross Normative Loan			308.27
Cumulative Repayment upto Previous Year			207.23
Net Loan-Opening			98.04
Addition due to Additional Capitalisation			0.00
Repayment during the year			23.03
Net Loan-Closing			75.01
Average Loan			86.52
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			8.63
Return on Equity			
Gross Notional Equity			130.83
Opening Equity			130.83
Average Equity			130.83
Rate of Return on Equity			15.50%
Return on Equity			20.28
Interest on Working Capital			
Maintenance Spares	15% of O&M		2.85
O & M expenses	1 Months		1.58
Receivables	1.5 Months		9.06
Total			13.49
Interest	11.25%		1.52
Annual Transmission Charges			
Depreciation			23.03
Interest on Loan			8.63
Return on Equity			20.28
Interest on Working Capital			1.52
O & M Expenses for line	23.18		19.01
Total			72.47
Norms for O&M Per Km	S/C		0.820

Annexure - XXI			
Name of the Tr. System:	Asset-XXI	MACHERLA-RENTCHINTHALA:1	
		COD:	27-03-2013
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	65.67	Life in years	25
Transmission Line length in km	14.53	Voltage, kV	132kV/S/C
Multiplication factor	0.31		
			FY 2020-21
Gross Block			295.80
Additional Capitalisation			0.00
Gross Block total			295.80
Average Gross Block			295.80
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	266.22
Elapsed Life as on 31.03.2020			7
Balance useful life of the asset			18
Remaining Depreciable value			156.89
Cumulative Depreciation			109.33
Depreciation			15.62
Interest on Loan			
Gross Normative Loan			207.06
Cumulative Repayment upto Previous Year			109.33
Net Loan-Opening			97.73
Addition due to Additional Capitalisation			0.00
Repayment during the year			15.62
Net Loan-Closing			82.11
Average Loan			89.92
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			8.97
Return on Equity			
Gross Notional Equity			88.74
Opening Equity			88.74
Average Equity			88.74
Rate of Return on Equity			15.50%
Return on Equity			13.75
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.79
O & M expenses	1 Months		0.99
Receivables	1.5 Months		6.41
Total			9.19
Interest	11.25%		1.03
Annual Transmission Charges			
Depreciation			15.62
Interest on Loan			8.97
Return on Equity			13.75
Interest on Working Capital			1.03
O & M Expenses for line	14.53		11.91
Total			51.30
Norms for O&M Per Km		S/C	0.820

Annexure - XXII & XXIII			
Name of the Tr. System:	Asset-XXII & XXIII	CHITTOOR-SDSTPS:Q1 CHITTOOR-SDSTPS:Q2	
		COD:	22-07-2015
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	192.00	Voltage, kV	400kV,D/C
Multiplication factor	---		
			FY 2020-21
Gross Block			43505.98
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			309.41
Gross Block total			43815.39
Average Gross Block			43660.69
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	39155.38
Elapsed Life as on 31.03.2020			4
Balance useful life of the asset			21
Remaining Depreciable value			29934.25
Cumulative Depreciation			9221.14
Depreciation			2305.28
Interest on Loan			
Gross Normative Loan			30454.19
Cumulative Repayment upto Previous Year			9221.14
Net Loan-Opening			21233.05
Addition due to Additional Capitalisation			0.00
Repayment during the year			2305.28
Net Loan-Closing			18927.77
Average Loan			20080.41
Rate of Interest on Loan (%)			9.98%
Interest			2004.02
Return on Equity			
Gross Notional Equity			13051.79
Opening Equity			13051.79
Average Equity			13051.79
Base Rate of Return on Equity			15.50%
Return on Equity			2023.03
Interest on Working Capital			
Maintenance Spares	15% of O&M		47.23
O & M expenses	1 Months		26.24
Receivables	1.5 Months		843.82
Total			917.29
Interest	11.25%		103.20
Annual Transmission Charges			
Depreciation			2305.28
Interest on Loan			2004.02
Return on Equity			2023.03
Interest on Working Capital			103.20
O & M Expenses	192.00		314.88
Total			6750.41
Norms for O&M Per Km	D/C		0.820

Annexure - XXIV & XXV			
Name of the Tr. System:	Asset-XXIV & XXV	KURNOOL2-JAMMALAMADUGU 1:Q1 KURNOOL2- JAMMALAMADUGU1:Q2	
		COD:	31-03-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	100.86	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			16293.46
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			739.42
Gross Block total			17032.88
Average Gross Block			16663.17
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	14664.12
Elapsed Life as on 31.03.2020			4
Balance useful life of the asset			21
Remaining Depreciable value			11144.86
Cumulative Depreciation			3519.26
Depreciation			879.82
Interest on Loan			
Gross Normative Loan			11405.42
Cumulative Repayment upto Previous Year			3519.26
Net Loan-Opening			7886.16
Addition due to Additional Capitalisation			0.00
Repayment during the year			879.82
Net Loan-Closing			7006.35
Average Loan			7446.25
Rate of Interest on Loan (%)			9.98%
Interest			743.14
Return on Equity			
Gross Notional Equity			4888.04
Opening Equity			4888.04
Average Equity			4888.04
Rate of Return on Equity			15.50%
Return on Equity			757.65
Interest on Working Capital			
Maintenance Spares	15% of O&M		24.81
O & M expenses	1 Months		13.78
Receivables	1.5 Months		323.34
Total			361.94
Interest	11.25%		40.72
Annual Transmission Charges			
Depreciation			879.82
Interest on Loan			743.14
Return on Equity			757.65
Interest on Working Capital			40.72
O & M Expenses	100.86		165.41
Total			2586.73
Norms for O&M Per Km	D/C		0.820

Annexure - XXVI & XXVII			
Name of the Tr. System:	Asset-XXVI & XXVII	HINDUJA- KV KOTA1:T1, HINDUJA- KV KOTA1:T2	
		COD:	24-07-2017
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	242.98	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			40597.440
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			63.9
Gross Block total			40661.340
Average Gross Block			40629.390
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	36537.70
Elapsed Life as on 31.03.2020			2
Balance useful life of the asset			23
Remaining Depreciable value			32247.23
Cumulative Depreciation			4290.46
Depreciation			2145.23
Interest on Loan			
Gross Normative Loan			28418.21
Cumulative Repayment upto Previous Year			4290.46
Net Loan-Opening			24127.74
Addition due to Additional Capitalisation			0.00
Repayment during the year			2145.23
Net Loan-Closing			21982.51
Average Loan			23055.13
Rate of Interest on Loan (%)			9.98%
Interest			2300.90
Return on Equity			
Gross Notional Equity			12179.23
Opening Equity			12179.23
Average Equity			12179.23
Rate of Return on Equity			15.50%
Return on Equity			1887.78
Interest on Working Capital			
Maintenance Spares	15% of O&M		59.77
O & M expenses	1 Months		33.21
Receivables	1.5 Months		854.88
Total			947.86
Interest	11.25%		106.63
Annual Transmission Charges			
Depreciation			2145.23
Interest on Loan			2300.90
Return on Equity			1887.78
Interest on Working Capital			106.63
O & M Expenses	242.98		398.49
Total			6839.04
Norms for O&M Per Km	D/C		0.820

Annexure - XXVIII & XXIX			
Name of the Tr. System:	Asset-XXVIII & XXIX	JAMMALAMADUGU - URAVAKONDA DC Line (Part-1)	
		COD:	15-07-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	127.62	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			17604.40
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			
Gross Block total			17604.40
Average Gross Block			17604.40
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	15843.96
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			22
Remaining Depreciable value			13055.42
Cumulative Depreciation			2788.54
Depreciation			929.51
Interest on Loan			
Gross Normative Loan			12323.08
Cumulative Repayment upto Previous Year			2788.54
Net Loan-Opening			9534.54
Addition due to Additional Capitalisation			0.00
Repayment during the year			929.51
Net Loan-Closing			8605.03
Average Loan			9069.79
Rate of Interest on Loan (%)			9.98%
Interest			905.16
Return on Equity			
Gross Notional Equity			5281.32
Opening Equity			5281.32
Average Equity			5281.32
Rate of Return on Equity			15.50%
Return on Equity			818.60
Interest on Working Capital			
Maintenance Spares	15% of O&M		31.39
O & M expenses	1 Months		17.44
Receivables	1.5 Months		363.62
Total			412.46
Interest	11.25%		46.40
Annual Transmission Charges			
Depreciation			929.51
Interest on Loan			905.16
Return on Equity			818.60
Interest on Working Capital			46.40
O & M Expenses	127.62		209.30
Total			2908.98
Norms for O&M Per Km	D/C		0.820

Annexure - XXX & XXXI			
Name of the Tr. System:	Asset-XXX & XXXI	TALARICHERUVU TO LILO POINT OF JAMMALAMADUGU - URAVAKONDA DC LINE (Part-2)	
		COD:	01-12-2018
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	0.50	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			519.57
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			2.38
Gross Block total			521.95
Average Gross Block			520.76
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	467.62
Elapsed Life as on 31.03.2020			1
Balance useful life of the asset			24
Remaining Depreciable value			440.12
Cumulative Depreciation			27.50
Depreciation			27.50
Interest on Loan			
Gross Normative Loan			363.70
Cumulative Repayment upto Previous Year			27.50
Net Loan-Opening			336.21
Addition due to Additional Capitalisation			0.00
Repayment during the year			27.50
Net Loan-Closing			308.71
Average Loan			322.46
Rate of Interest on Loan (%)			9.98%
Interest			32.18
Return on Equity			
Gross Notional Equity			155.87
Opening Equity			155.87
Average Equity			155.87
Rate of Return on Equity			15.50%
Return on Equity			24.16
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.25
O & M expenses	1 Months		0.14
Receivables	1.5 Months		10.84
Total			11.23
Interest	11.25%		1.26
Annual Transmission Charges			
Depreciation			27.50
Interest on Loan			32.18
Return on Equity			24.16
Interest on Working Capital			1.26
O & M Expenses	0.50		1.64
Total			86.74
Norms for O&M Per Km	D/C		0.820

Annexure - XXXII & XXXIII			
Name of the Tr. System:	Asset-XXXII & XXXIII	URAVAKONDA-HINDUPUR 3:Q1, URAVAKONDA-HINDUPUR 3:Q2	
		COD:	23-01-2019
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	126.25	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			33198.53
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			142.68
Gross Block total			33341.21
Average Gross Block			33269.87
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	29878.68
Elapsed Life as on 31.03.2020			1
Balance useful life of the asset			24
Remaining Depreciable value			28122.03
Cumulative Depreciation			1756.65
Depreciation			1756.65
Interest on Loan			
Gross Normative Loan			23238.97
Cumulative Repayment upto Previous Year			1756.65
Net Loan-Opening			21482.32
Addition due to Additional Capitalisation			0.00
Repayment during the year			1756.65
Net Loan-Closing			19725.67
Average Loan			20604.00
Rate of Interest on Loan (%)			1.72%
Interest			354.39
Return on Equity			
Gross Notional Equity			9959.56
Opening Equity			9959.56
Average Equity			9959.56
Rate of Return on Equity			15.50%
Return on Equity			1543.73
Interest on Working Capital			
Maintenance Spares	15% of O&M		31.06
O & M expenses	1 Months		17.25
Receivables	1.5 Months		490.30
Total			538.61
Interest	11.25%		60.59
Annual Transmission Charges			
Depreciation			1756.65
Interest on Loan			354.39
Return on Equity			1543.73
Interest on Working Capital			60.59
O & M Expenses	126.25		207.05
Total			3922.41
Norms for O&M Per Km	D/C		0.820

Annexure - XXXIV & XXXV			
Name of the Tr. System:	Asset-XXXIV & XXXV	SULURPET1-NELLORE42:2 SULURPET1-NELLORE42:3	
		COD:	10-11-2014
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	68.13	Voltage, kV	220kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			5086.05
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0.00
Gross Block total			5086.05
Average Gross Block			5086.05
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	4577.44
Elapsed Life as on 31.03.2020			5
Balance useful life of the asset			20
Remaining Depreciable value			3234.73
Cumulative Depreciation			1342.72
Depreciation			268.54
Interest on Loan			
Gross Normative Loan			3560.23
Cumulative Repayment upto Previous Year			1342.72
Net Loan-Opening			2217.52
Addition due to Additional Capitalisation			0.00
Repayment during the year			268.54
Net Loan-Closing			1948.97
Average Loan			2083.25
Rate of Interest on Loan (%)			9.98%
Interest			207.91
Return on Equity			
Gross Notional Equity			1525.81
Opening Equity			1525.81
Average Equity			1525.81
Rate of Return on Equity			15.50%
Return on Equity			236.50
Interest on Working Capital			
Maintenance Spares	15% of O&M		16.76
O & M expenses	1 Months		9.31
Receivables	1.5 Months		104.94
Total			131.01
Interest	11.25%		14.74
Annual Transmission Charges			
Depreciation			268.54
Interest on Loan			207.91
Return on Equity			236.50
Interest on Working Capital			14.74
O & M Expenses	68.13		111.73
Total			839.42
Norms for O&M Per Km	D/C		0.820

Annexure - XXXVI & XXXVII			
Name of the Tr. System:	Asset-XXXVI & XXXVII	URAVAKONDA-BORAMPALLY 1:1, URAVAKONDA-BORAMPALLY 1:2	
		COD:	06-01-2017
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kV line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	33.58	Voltage, kV	220kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			3833.20
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			3833.20
Average Gross Block			3833.20
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	3449.88
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			22
Remaining Depreciable value			2842.70
Cumulative Depreciation			607.18
Depreciation			202.39
Interest on Loan			
Gross Normative Loan			2683.24
Cumulative Repayment upto Previous Year			607.18
Net Loan-Opening			2076.06
Addition due to Additional Capitalisation			0.00
Repayment during the year			202.39
Net Loan-Closing			1873.67
Average Loan			1974.86
Rate of Interest on Loan (%)			9.98%
Interest			197.09
Return on Equity			
Gross Notional Equity			1149.96
Opening Equity			1149.96
Average Equity			1149.96
Rate of Return on Equity			15.50%
Return on Equity			178.24
Interest on Working Capital			
Maintenance Spares	15% of O&M		8.26
O & M expenses	1 Months		4.59
Receivables	1.5 Months		80.41
Total			93.26
Interest	11.25%		10.49
Annual Transmission Charges			
Depreciation			202.39
Interest on Loan			197.09
Return on Equity			178.24
Interest on Working Capital			10.49
O & M Expenses	33.58		55.07
Total			643.29
Norms for O&M Per Km	D/C		0.820

Annexure - XXXVIII & XXXIX			
Name of the Tr. System:	Asset- XXXVIII & XXXIX	URAVAKONDA-BORAMPALLY 1:3, URAVAKONDA-BORAMPALLY 1:4	
		COD:	10-07-2017
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	34.73	Voltage, kV	220kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			3554.54
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0.00
Gross Block total			3554.54
Average Gross Block			3554.54
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	3199.09
Elapsed Life as on 31.03.2020			2
Balance useful life of the asset			23
Remaining Depreciable value			2823.73
Cumulative Depreciation			375.36
Depreciation			187.68
Interest on Loan			
Gross Normative Loan			2488.18
Cumulative Repayment upto Previous Year			375.36
Net Loan-Opening			2112.82
Addition due to Additional Capitalisation			0.00
Repayment during the year			187.68
Net Loan-Closing			1925.14
Average Loan			2018.98
Rate of Interest on Loan (%)			9.98%
Interest			201.49
Return on Equity			
Gross Notional Equity			1066.36
Opening Equity			1066.36
Average Equity			1066.36
Rate of Return on Equity			15.50%
Return on Equity			165.29
Interest on Working Capital			
Maintenance Spares	15% of O&M		8.54
O & M expenses	1 Months		4.75
Receivables	1.5 Months		77.71
Total			91.00
Interest	11.25%		10.24
Annual Transmission Charges			
Depreciation			187.68
Interest on Loan			201.49
Return on Equity			165.29
Interest on Working Capital			10.24
O & M Expenses	34.73		56.96
Total			621.65
Norms for O&M Per Km	D/C		0.820

Annexure - XL			
Name of the Tr. System:	Asset-XL	SUZLON W1-VAJRAKUR:1	
		COD:	12-08-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	5.20	Voltage, kV	220kV SC
Multiplication factor	---		
			FY 2020-21
Gross Block			0.00
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			22
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.64
O & M expenses	1 Months		0.36
Receivables	1.5 Months		0.55
Total			1.54
Interest	11.25%		0.17
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			0.17
O & M Expenses	5.20		4.26
Total			4.44
Norms for O&M Per Km	S/C		0.820

Annexure - XLI			
Name of the Tr. System:	Asset-XLI	MACHERLA-RENTCHNTHALA:2	
		COD:	11-07-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	14.53	Voltage, kV	132kV SC
Multiplication factor	---		
			FY 2020-21
Gross Block			200.39
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			200.39
Average Gross Block			200.39
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	180.35
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			22
Remaining Depreciable value			148.61
Cumulative Depreciation			31.74
Depreciation			10.58
Interest on Loan			
Gross Normative Loan			140.27
Cumulative Repayment upto Previous Year			31.74
Net Loan-Opening			108.53
Addition due to Additional Capitalisation			0.00
Repayment during the year			10.58
Net Loan-Closing			97.95
Average Loan			103.24
Rate of Interest on Loan (%)			9.98%
Interest			10.30
Return on Equity			
Gross Notional Equity			60.12
Opening Equity			60.12
Average Equity			60.12
Rate of Return on Equity			15.50%
Return on Equity			9.32
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.79
O & M expenses	1 Months		0.99
Receivables	1.5 Months		5.38
Total			8.16
Interest	11.25%		0.92
Annual Transmission Charges			
Depreciation			10.58
Interest on Loan			10.30
Return on Equity			9.32
Interest on Working Capital			0.92
O & M Expenses	14.53		11.91
Total			43.03
Norms for O&M Per Km	S/C		0.820

Annexure - XLII(A)			
Name of the Tr. System:	Asset-XLII (A)	VEMAGIRI 1 - SATTENAPALLI 1 (LILO Point to Sattenapalli)	
		COD:	26-10-2015
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	107.87	Voltage, kV	400kV SC
Multiplication factor	---		
			FY 2020-21
Gross Block			8872.41
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			8872.41
Average Gross Block			8872.41
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	7985.17
Elapsed Life as on 31.03.2020			4
Balance useful life of the asset			21
Remaining Depreciable value			6111.31
Cumulative Depreciation			1873.85
Depreciation			468.46
Interest on Loan			
Gross Normative Loan			6210.69
Cumulative Repayment upto Previous Year			1873.85
Net Loan-Opening			4336.83
Addition due to Additional Capitalisation			0.00
Repayment during the year			468.46
Net Loan-Closing			3868.37
Average Loan			4102.60
Rate of Interest on Loan (%)			9.98%
Interest			409.44
Return on Equity			
Gross Notional Equity			2661.72
Opening Equity			2661.72
Average Equity			2661.72
Rate of Return on Equity			15.50%
Return on Equity			412.57
Interest on Working Capital			
Maintenance Spares	15% of O&M		13.27
O & M expenses	1 Months		7.37
Receivables	1.5 Months		177.04
Total			197.68
Interest	11.25%		22.24
Annual Transmission Charges			
Depreciation			468.46
Interest on Loan			409.44
Return on Equity			412.57
Interest on Working Capital			22.24
O & M Expenses	107.87		88.45
Total			1401.16
Norms for O&M Per Km	S/C		0.820

Annexure - XLII(B)			
Name of the Tr. System:	Asset-XLII (B)	VEMAGIRI 1 - SATTENAPALLI 1 (Vemagiri to LILO Point)	
		COD:	28-12-2005
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	25
Transmission Line length in km	136.98	Voltage, kV	400kV SC
Multiplication factor	1.00		
			FY 2020-21
Gross Block			5524.40
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			5524.40
Average Gross Block			5524.40
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	4971.96
Elapsed Life as on 31.03.2020			14
Balance useful life of the asset			11
Remaining Depreciable value			1245.29
Cumulative Depreciation			3726.68
Depreciation			113.21
Interest on Loan			
Gross Normative Loan			3577.08
Cumulative Repayment upto Previous Year			3726.68
Net Loan-Opening			140.40
Addition due to Additional Capitalisation			0.00
Repayment during the year			113.21
Net Loan-Closing			27.20
Average Loan			83.80
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			8.36
Return on Equity			
Gross Notional Equity			1657.32
Opening Equity			1657.32
Average Equity			1657.32
Rate of Return on Equity			15.50%
Return on Equity			256.88
Interest on Working Capital			
Maintenance Spares	15% of O&M		16.85
O & M expenses	1 Months		9.36
Receivables	1.5 Months		62.60
Total			88.81
Interest	11.25%		9.99
Annual Transmission Charges			
Depreciation			113.21
Interest on Loan			8.36
Return on Equity			256.88
Interest on Working Capital			9.99
O & M Expenses	136.98		112.32
Total			500.77
Norms for O&M Per Km	S/C		0.820

TC

S. S.





TRANSMISSION CORPORATION OF ANDHRA PRADESH LTD.
VIDYUT SOUDHA :: VIJAYAWADA

From
Chief Engineer,
 PS, Plg & designs,
 APTRANSCO,
 Vidyut Soudha, Gunadala,
 Vijayawada – 520004.

To
The Implementing Agency,
 Power System Operation Corporation Limited,
 B-9, 1st Floor, Qutub institutional area,
 Katwara Sarai,
 New Delhi – 110016

Lr.No.CE/Plg,PS&D/SE/Plg/EE/RA/APERC/D.No. 99 /2021, dt. 10.07.2021.

Sir,

Sub: Inclusion of APTRANSCO assets i.e., intra state lines carrying interstate power for FY 2015-16, FY2016-17 and FY2020-21 in PoC mechanism – Requested - Reg.

Ref: 1. APERC order dt. 07.07.2021 issued in O.P.No. 42 of 2020 & 47 of 2020.
 2. Certification dt. 23.01.2020 issued by SRPC
 3. Certification Dt.30.04.2020 issued by SRPC.

This is in accordance with CERC Sharing of Inter-state Transmission Charges Regulations 2010 and subsequent amendments, Section 2(1)(y), “Yearly Transmission Charge (YTC) means the Annual Transmission Charges for existing and new transmission assets of the inter-state transmission licensees, deemed ISTS licensees, owners of inter-state transmission lines connecting two states and owners of **non-ISTS lines certified by Regional Power Committees for inter-state transmission of Power**, determined by the appropriate commission under Section 62 of the Act or adopted by the Appropriate commission under section 63 of the Act or as otherwise provided in these regulations

Provided that in case of non-ISTS lines, the asset wise tariff determined by the respective state commissions or approved by the central commission based on the approved Annual Revenue Requirement of STU, shall be used”

Accordingly, APTRANSCO has filed a petition OP NO.42 of 2020 before Hon’ble APERC on 18.03.2020 for approval of transmission tariff of the intra state transmission lines carrying Inter-State power for FY 2015-16 (9Nos.) and 2016-17 (14Nos.) based on SRPC certification No. SRPC/SE-I/2020/622-39, dt.23.01.2020.

Contd...

TC

S. S.

:: 02 ::

Further , APTRANSCO has also filed another petition OP NO.47 of 2020 before Hon'ble APERC on 05.10.2020 for approval of transmission tariff of 42 Nos. intra state transmission lines carrying Inter-State power for FY 2020-21 based on SRPC certification No. No. SRPC/SE-I/2020,dt.30.04.2020.

Both the petitions for intra-state lines , but are incidental to the power flow of Inter-state were processed by Hon'ble APERC and Hon'ble APERC has issued an order on 07.07.2021 in O.P No. 42 of 2020 and OP No.47 of 2020 , copy of the order is enclosed at Annexure-I, details are as below:

S.No.	Petition No.	FY	No. of lines	YTC
1.	42 of 2020	2015-16	9	Rs.14.35 Cr
2.	42 of 2020	2016-17	14	Rs.85.53 Cr.
3.	47 of 2020	2020-21	42	Rs.295.32 Cr.

Hence, it is requested that the above lines as in the Annexure-II be immediately included in the PoC mechanism for the Q3 of FY 2021-22 so that APTRANSCO be allowed to get immediate benefit from the Q3 of FY 2021-22.

Your's faithfully,


Chief Engineer/PS, Plg & Designs
Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 004

Copy to,

1. Central Electricity Regulatory Commission, 3rd & 4th Floor, Chandra lok Building, 36-Janpath, New Delhi – 110001
2. Southern Region Power Committee (SRPC), CEA, 29, Race Course Road, Bangalore – 560009

ANNEXURE-II

The summary of the YTC determined by the Commission for the 9 Nos transmission lines for the FY 2015-16 is as given in the table below:

Sl. No.	Asset Name	Name of the Line	YTC in Lakhs
1	Asset I	CHITTOOR-RENIGUNTA:1	170.90
2	Asset II(A) & II(B)	CHITTOOR-NAGARI:2	81.97
			182.40
3	Asset III(A) & III(B)	SULURPETA-NELLORE- PG:1	44.73
			25.89
4	Asset -IV & V	KRISHNAPATNAM- NELLORE-AP:1	566.82
5		KRISHNAPATNAM- NELLORE-AP:2	
6	Asset - VI (A) & VI(B)	NELLORE-NELLORE-PG:1	12.23
			28.00
7	Asset - VII (A) & VII(B)	NELLORE-NELLORE-PG:2	12.23
			28.00
8	Asset - VIII	NELLORE-NELLORE-PG:3	65.50
9	Asset - IX (A) & IX(B)	RENIGUNTA-NAGARI:1	14.29
			182.40
YTC Total in Cr.			14.35

The summary of the YTC determined by the Commission for the 14 Nos transmission lines for the FY 2016-17 is as given in the table below:

Sl. No.	Asset Name	Name of the Line	YTC in Lakhs
1	Asset - I (A) & I (B)	SULURUPETA-NELLORE:1	46.57
			25.30
2	Asset - II	KONDAPALLI-VTPS:1	3.98
3	Asset - III	KONDAPALLI-VTPS:2	7.74
4	Asset - IV	KONDAPALLI-CHILAKALLU:1	81.84
5	Asset - V	KONDAPALLI-CHILAKALLU:2	112.31
6	Asset - VI	VTPS-CHILAKALLU:1	68.34
7	Asset - VII	VTPS-CHILAKALLU:2	221.35
8	Asset -VIII (A) & VIII (B)	VTPS-RENTACHINTALA:2	67.73
			4.11
9	Asset -IX	KURNOOL-BRAHMANKTUR:1	78.21
10	Asset - X & XI	CHITTOOR-SDSTPS:1	7674.53
11		CHITTOOR-SDSTPS:2	
12	Asset - XII	NUNNA2-VTPS-IV:1	133.52
13	Asset - XIII	GAZUWAKA1-KALAPAKKA1:1	14.83
14	Asset - XIV	GAZUWAKA1-KALAPAKKA1:2	12.63
YTC Total in Cr.			85.53

The summary of the YTC determined by the Commission for the 42 Nos transmission lines for the FY 2020-21 is as given in the table below:

Sl. No.	Asset Name	Name of the Line	YTC in Lakhs
1	A1	NUNNA2-VEMAGIRI1:T3	530.08
2	A2	GAZUWAKA2-KALPAKKA 1:T1	17.77
3	A3	GAZUWAKA2-KALPAKKA 1:T2	
4	A4	CHITTOOR42-CHITTOOR1:1	56.50
5	A5	CHITTOOR42-CHITTOOR1:2	
6	A6-A	SULURPET1-NELLORE42:1	84.81
	A6-B		19.69
7	A7	CHITTOOR1-KALIKIRI1:1	66.19
8	A8	GOOTY-PG-DHONE1:2	557.58
9	A9	GOOTY-PG-DHONE1:1	
10	A10	KONDAPALLI1-CHILLAKALLU1:1	96.15
11	A11	KONDAPALLI1-CHILLAKALLU1:2	121.85
12	A12	SRISAILAMRB1-TALLAPALLI:1	168.69
13	A13	SRISAILAMRB1-TALLAPALLI:2	
14	A14	SRISAILAMRB1-MYDUKUR:1	141.84
15	A15	SRISAILAMRB1-SOMYZULPALLI:1	90.47
16	A16-A	SRISAILAMRB1-BELKALAGUDUR:1	60.36
	A16-B		18.19
17	A17	VTS1-CHILLAKALLU1:1	83.65
18	A18-A	VTS1-CHILLAKALLU1:2	76.4
	A18-B	VTS1-CHILLAKALLU1:2	4.65
19	A19-A	VTS1-RENTACHINTHALA1:2	93.96
	A19-B		3.64
20	A20	KURNOOL1-BRAHMANKUR:1	72.47
21	A21	MACHERLA-RENTCHINTHALA:1	51.30
22	A22	CHITTOOR2-SDSTPS:Q2	8750.41
23	A23	CHITTOOR2-SDSTPS:Q1	
24	A24	KURNOOL2-JAMALAMADUGU1:Q1	2586.73
25	A25	KURNOOL2-JAMALAMADUGU1:Q2	
26	A26	HINDUJA-KVKOTA1:T2	6839.04
27	A27	HINDUJA-KVKOTA1:T1	
28	A28	JAMMALAMADUGU - URAVAKONDA	2908.98
29	A29	DC Line (Part-1)	
30	A30	TALARICHERUVU TO LILO POINT OF	86.74
31	A31	JAMMALAMADUGU - URAVAKONDA DC LINE (Part-2)	
32	A32	URVAKONDA-HINDUPUR3:Q1	3922.41
33	A33	URVAKONDA-HINDUPUR3:Q2	
34	A34	SULURPET1-NELLORE42:2	839.42
35	A35	SULURPET1-NELLORE42:3	
36	A36	URAVAKONDA-BORAMPALLI:2	643.29
37	A37	URAVAKONDA-BORAMPALLI:1	
38	A38	URAVAKONDA-BORAMPALLI:4	621.65
39	A39	URAVAKONDA-BORAMPALLI:3	
40	A40	SUZLON-W1-VAJRAKUR:1	4.44
41	A41	MACHERLA-RENTACHINTHALA:2	43.03
42	A42-A	VEMAGIRI1-SATTENAPALLI:T1	1401.46
	A42-B		500.77
YTC total in Cr. for FY2020-21			296.32

Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 004

पावर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड
(भारत सरकार का उपक्रम)
POWER SYSTEM OPERATION CORPORATION LIMITED
(A Government of India Enterprise)



पंजीकृत एवं केंद्रीय कार्यालय: बी-9, कुतुब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली-110016 (CIN No: U40105DL2009GOI188682)
Registered & Corporate Office: B – 9, 1st Floor, Qutab Institutional Area, Katwaria Sarai, New Delhi - 110013
Website: www.posoco.in, Tel: 011 – 26536832, 26524522, Fax: 011 – 26524525, 26536901

पोसोको/पारेषण मूल्य निर्धारण/

दिनांक: 15.07.2021

सेवा में,

Chief Engineer
PS, Plg & designs
APTRANSCO, Vidyut Soudha,
Gunadala, Vijayawada – 520004

विषय: Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses), Regulations, 2020 – Request from APTRANSCO for inclusion of intra-state lines carrying inter-state power for FY 2015 - 16, FY2016 - 17 and FY2020-21 in PoC mechanism regarding.

संदर्भ: Lr. No.CE/Plg,PS&D/SE/Plg/EE/RA/APERC/D.No. 99 /2021 dated 10.07.2021

Sir,

With reference to the above mentioned letter It is to inform that Hon'ble CERC had notified (Sharing of Inter-State Transmission Charges & Losses) Regulations 2020 vide notification dated 04th May 2020 which came into force w.e.f. 01st Nov, 2020. Relevant part of the regulations is quoted below:

Quote

"(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."

Unquote

As per SoR published by CERC for Sharing Regulations, 2020 dated 10.08.2020, tariff of any Intra-state transmission asset carrying ISTS power is to be approved by CERC. Relevant part of the SoR is quoted below:

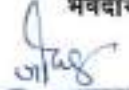
Quote

"39.3.2 Approval of tariff for intra-State system is done by SERCs. However, in circumstances where an Intra-State system is used for inter-State flow of power, its tariff is required to be approved by CERC, if such system is to be considered for recovery of transmission charges under the 2020 Sharing Regulations."

Unquote

In view of the above provisions of the Sharing Regulations, 2020, it is informed that in absence of the tariff approved by CERC, the Intra-state transmission assets as provided vide your letter dated 10.07.2021 shall not be considered for recovery of transmission charges under the Sharing Regulations, 2020.

सादर शन्यवाद

भवदीय

15.7.2021

(जी. चक्रवर्ती)

मुख्य महाप्रबंधक / रा. शा. प्रे. के.

TC

S. S.





TRANSMISSION CORPORATION OF ANDHRA PRADESH LTD.
VIDYUT SOUDHA :: VIJAYAWADA

From
Chief Engineer,
 PS, Plg & designs,
 APTRANSCO,
 Vidyut Soudha, Gunadala,
 Vijayawada – 520004.

To
The Implementing Agency,
 Power System Operation Corporation Limited,
 B-9, 1st Floor, Qutub institutional area,
 Katwara Sarai,
 New Delhi – 110016

Lr.No.CE/Plg,PS&D/SE/Plg/EE/RA/APERC/D.No. 115/2021, dt. 26.07.2021.

Sir,

Sub: Inclusion of APTRANSCO assets i.e., intra state lines carrying interstate power for FY 2015-16, FY2016-17 and FY2020-21 in PoC mechanism – Requested - Reg.

Ref: 1. Lr.No.CE/Plg,PS&D/SE/Plg/EE/RA/APERC/D.No.99/2021, dt.10.07.2021.
 2. M/s POSOCO letter dated 15.07.2021 received through e-mail.

Referring to the above correspondence, it is to bring to your notice, an order dated 14.02.2021 passed by the Hon'ble CERC in exercise of their powers under Regulation 28 of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 ('Sharing Regulations 2020'). The said order clarifies that all bills in the calendar year 2020 will be as per the 2010 Sharing Regulation and those in the calendar year 2021 will be as per the 2020 Sharing Regulations.

The relevant extracts of the said order are reproduced herein below:

"9. Thus, the bills raised in the month of November 2020 and December 2020 shall be based on the notified PoC rates for October 2020 and November 2020 respectively, determined in accordance with the 2010 Sharing Regulations.

10. Accordingly, we direct that bills in the month of November 2020 and in the month of December 2020 would be raised as per the 2010 Sharing Regulations and thereafter, from January 2021 onwards as per the 2020 Sharing Regulations, as clarified in paragraph 8 and 9 above.

11. Thus, it can be seen that there will be 12 monthly bills raised for the 12 months in the calendar year 2020, implying thereby that only one bill (first bill) is raised for each month. Similarly, in the calendar year 2021 also, 12 monthly bills will be raised for the 12 months (i.e. in the billing month of January 2021, bill for the billing period of

TC

Copy to

:: 02 ::

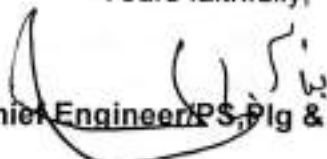
November 2020 will be raised and in the billing month of February 2021, bill for the billing period of December 2020 will be raised and so on). Thus, the DICs will be required to pay for only 12 monthly bills, one for each month in the calendar year 2020 as well as in 2021. All bills in the calendar year 2020 will be as per the 2010 Sharing Regulation and those in the calendar year 2021 will be as per the 2020 Sharing Regulations."

The aforesaid order entitles APTRANSCO to claim transmission charges in accordance with the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 ('Sharing Regulations 2010') for all bills in the calendar year until December 2020. It is clear that the claim of PoC charges sought by APTRANSCO vide letter dated 10.07.2021, is based on the order dated 07.07.2021 passed by the Ld. APERC. Such PoC charges pertain to FY 2015-17 and FY 2020-2021 prior to December 2020. Thus, as per the order dated 14.02.2021 passed by the Hon'ble CERC, the PoC charges will be determined as per the Sharing Regulation 2010.

You are requested to kindly re-consider your decision and are called upon to comply with the said order of Hon'ble CERC dated 14.02.2021.

Hence, it is once again requested to consider for immediate inclusion of assets as communicated vide reference 1st cited in the PoC mechanism for the Q3 of FY 2021-22 so that APTRANSCO be allowed to get immediate benefit from the Q3 of FY 2021-22.

Yours faithfully,


Chief Engineer, PS, Plg & Designs

Copy to:

1. Hon'ble CERC, 3rd & 4th Floor, Chandralok Building, 36-Janpath, New Delhi – 01
2. Southern Region Power Committee (SRPC), CEA, 29, Race Course Road, Bangalore – 560009

TC

S. S.



ANNEXURE P/7
CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

175

Petition No. 25/MP/2022

Coram:

Shri Jishnu Barua, Chairperson
Shri Arun Goyal, Member
Shri P. K. Singh, Member

Date of Order: 17.05.2024

In the matter of:

Petition under Section 79 of the Electricity Act, 2003 read with Regulation 111 and 113 of the CERC (conduct of business) Regulations 1999, seeking issuance of appropriate directions to the respondent to include the Yearly Transmission Charges as determined by LD. APERC vide order dated 07.07.2021 in the POC Transmission Charges for the billing period of FY 2015-16, 2016-17 and 2020-2021, as per the CERC (Sharing of inter-state transmission charges and losses) Regulations, 2010.

And

In the matter of:

Transmission Corporation of Andhra Pradesh Limited, .
Eluru Rd, Vijayawada,
Andhra Pradesh 520004

.....Petitioner

Versus

1. Power System Operation Corporation Ltd (POSOCO),
1st Floor, Qutub Institutional Area,
Katwara Sarai, New Delhi -110016
2. Central Transmission Utility of India Limited (CTUIL),
First Floor, Saudamini, Plot No.2, Sector29,
Near IFFCO Chowk Metro Station, Gurgaon-122001, Haryana.
3. Southern Regional Power Committee (SRPC),
Central Electricity Authority,
No. 29 Race Course Cross Road, Bengaluru- 560009
4. Southern Regional Load Despatch Centre (SRLDC),
29, Race Course Cross Road, Bengaluru – 560009, Karnataka Respondents



Parties Present:

Shri Sidant Kumar, Advocate, APTRANSCO
 Ms. Manyaa Chandok, Advocate, APTRANSCO
 Ms. Ekssha Kashyap, Advocate, APTRANSCO
 Ms. P. Jyostna Rani, APTRANSCO
 Shri Gajendra Singh, NLDC
 Shri Debajyoti Majumdar, NLDC
 Shri Siddharth Sharma, CTUIL
 Shri Venkatesh Gurli, CTUIL
 Shri Akshayvat Kislay, CTUIL
 Shri M. Venkateshan, SRLDC

ORDER

Transmission Corporation of Andhra Pradesh Ltd has filed the instant Petition under Sections 79 of the Electricity Act, 2003 read with Regulation 111 and 113 of the CERC (Conduct of Business) Regulations 1999, seeking to include the Yearly Transmission Charges (YTC) as determined by the Andhra Pradesh Electricity Regulatory Commission (APERC) vide Order dated 07.07.2021 of non-ISTS lines carrying inter-state power in the PoC transmission charges for the billing period of FY 2015-16, FY 2016-17 and FY 2020-2021, in accordance with the CERC (Sharing of inter-state transmission charges and losses) Regulations, 2010.

2. The Petitioner has made the following prayers:

- i. *Direct the Respondent to include the YTC charges as determined by Ld. APERC vide order dated 07.07.2021 for non-ISTS lines carrying inter-state power in the PoC transmission charges for the billing period of FY 2015-16 FY 2016-17 and FY 2020-21, in accordance with the Sharing Regulations 2010.*
- ii. *Pass any other or further order(s) as this Hon'ble Commission may deem fit and proper in the interest of justice*

The Respondent referred to in Prayer (i) is Power System Operation Corporation Ltd (POSOCO), which became Respondent No.1 on the subsequent impleadment of other Respondents. The name of Respondent No.1 has changed from POSOCO to Grid Controller of India Limited (GRID-INDIA) during the pendency of the Petition. The Respondent No.1 title in the instant Order has not been changed for the sake of consistency of records.

3. Petitioner has made the following submissions:
- a) The Petitioner is the State Transmission Utility (STU) of Andhra Pradesh. The Petitioner owns and controls various non-ISTS lines in the State of Andhra Pradesh. These non-ISTS lines are frequently used for the transmission of inter-state power, which is utilised outside Andhra Pradesh. The charges for such inter-state transmission using non-ISTS lines have been duly recovered by the Petitioner under the relevant regulations as notified by this Commission from time to time.
 - b) The procedure for recovering inter-state transmission charges for non-ISTS lines under the CERC (Sharing of inter-state transmission charges and losses) Regulations, 2010 (hereinafter referred to as "Sharing Regulations 2010") is broadly as follows:
 - i. Certification of non-ISTS lines as Natural/ Deemed Inter-State Transmission Systems by the appropriate Regional Power Committee (RPC).
 - ii. Determination of YTC charges/ tariff by the appropriate State Commission for such non-ISTS lines.
 - iii. Inclusion of such determined YTC charges/ tariff in the PoC mechanism formulated by the Implementing Agency, *i.e.* the Respondent.
 - iv. Recovery of YTC charges by the transmission licensee.
 - c) Following the procedure under the then prevailing Sharing Regulations 2010, the Petitioner sought to recover the YTC charges for the periods 2015-16, 2016-17, and 2020-2021 by availing necessary certification from SRPC and consequent tariff determination/ approval of YTC charges from the Ld. APERC.
 - d) By letter dated 23.01.2020, SRPC certified 9 non-ISTS lines owned by the Petitioner for the period 2015-2016 and 14 non-ISTS lines for the period 2016-2017, carrying inter-state power in excess of the 50% benchmark required under the Sharing Regulations 2010. Based on such certification, a Petition bearing O.P. No. 42/2020 was filed before the APERC on 13.03.2020 seeking determination of YTC under the Sharing Regulations 2010 and by letter dated 30.04.2020, SRPC certified 42 non-ISTS lines owned by the Petitioner for the period 2020-21, carrying inter-state power in excess of the 50% benchmark required under the Sharing Regulations 2010. Based on such certification, a Petition bearing O.P. No. 47/2020 was filed before the APERC on 05.10.2020 seeking a determination of YTC under the Sharing Regulations 2010.

- e) While the adjudication of the aforesaid Petitions was pending before the APERC, the CERC (Sharing of inter-state transmission charges and losses) Regulations, 2020 (hereinafter referred to as "Sharing Regulations 2020") came into effect on 01.11.2020. Regulation 22 of the Sharing Regulation 2020 provides that during the transition period between the former of 2010 and the new Sharing Regulations, the bills raised for the first two billing periods after 01.11.2020, i.e., till 31.12.2020, shall be as per the Sharing Regulations 2010. This has been further clarified by this Commission vide Removal of Difficulties Order dated 14.02.2021 passed under Regulation 28 of the Sharing Regulations 2020. Therefore, it is clear that for the period from 01.11.2020 till 31.12.2020, the claim for transmission charges shall be governed by the Sharing Regulations 2010.
- f) By a common order 07.07.2021 in the Tariff Petitions, the APERC has determined the YTC charges for FY 2015-16, 2016-17, and 2020-2021 to the tune of Rs. 295.32 Crores. APERC also directed such charges to be included in the PoC mechanism formulated by the Respondent in accordance with the Sharing Regulations 2010. These YTC charges undisputedly pertain to billing periods prior to January 2021. Therefore, as per Regulation 22 of the Sharing Regulations 2020, recovery of such YTC charges is required to be in accordance with the Sharing Regulations 2010.
- g) The Petitioner, by letter dated 10.07.2021, intimated to the Respondent that the YTC charges for the period 2015-16, 2016-17, and 2020-2021 were duly determined by APERC, on the basis of certification provided by SRPC. Further, the Petitioner sought the inclusion of such YTC charges in the PoC transmission charges as computed by the Respondent under the Sharing Regulations 2010.
- h) By a response letter dated 15.07.2021, the Respondent has out-rightly refused to include YTC charges in the PoC mechanism. The Respondent has refused the inclusion of PoC charges on the erroneous and faulty assumption that such YTC charges are claimed under the Sharing Regulations 2020. In the said response letter, the Respondent has stated that in the absence of the mandatory approval of YTC charges by this Commission, the Petitioner is not entitled to recover such YTC charges under the Sharing Regulations, 2020.
- i) The Petitioner's claim of recovering transmission charges pertains to two periods (i) the period prior to 01.11.2021, i.e., the date of Sharing Regulations 2020; (ii) the period after 01.11.2020 until 31.12.2020. Therefore, at the outset, it is ex-facie clear and undisputed that the claim for the period prior to 01.11.2020 shall be governed by the Sharing Regulations, 2010. Understanding is further fortified by the Removal



of Difficulties Order dated 14.02.2021 issued by this Commission wherein it clearly stated that YTC relatable until November and December 2020 shall be governed by the Sharing Regulations 2010.

- j) Such refusal by the Respondent has resulted in a situation where the Petitioner is being saddled with the liability of incurring the transmission cost for power utilized by the State Utilities outside of Andhra Pradesh. Hence, the Petitioner has been constrained to move this Commission, seeking appropriate directions against the Respondent POSOCO.
- k) This position is also borne from the Statement of Reasons dated 10.08.2020 in respect of the Sharing Regulations 2020, which provide that tariff approval of this Commission for YTC charges is required for recovery of transmission charges. For all other cases where recovery of transmission charges is not sought under the Sharing Regulations 2020, the approval of tariff shall continue to be regulated by the respective State Commissions. The relevant Para 39.3.2 of the Statement of Reasons dated 10.08.2020 for the Sharing Regulations, 2020 is reproduced herein below:

"39.3.2. Approval of tariff for intra-State system is done by SERCs. However, in circumstances where an intra-State system is used for inter-State flow of power, its tariff is required to be approved by CERC, if such system is to be considered for recovery of transmission charges under the 2020 Sharing Regulations"

Hearing on 15.07.2022

- 4. The Commission admitted the instant Petition on 15.07.2022

Hearing on 15.05.2023

- 5. The Commission vide RoP of hearing dated 15.05.2023 has directed the Petitioner to implead CTUIL and to submit the following information:
 - a) The reasons for approaching NLDC for the period 2015-17 in 2021.
 - b) The location of ISTS interface meters in the transmission lines claimed as ISTS.

Submission of Petitioner

- 6. Petitioner on 22.05.2023 filed "Revised Memo of Parties," impleading Central Transmission Utility of India Limited (CTUIL) as a party to the petition.
- 7. Petitioner vide affidavit dated 05.06.2023 has submitted as below:



- a) By letter dated 09.12.2016, the Petitioner requested the Southern Regional Power Committee (SRPC) to identify and certify the non-ISTS/ intra-state lines carrying inter-state power, for the purpose of inclusion in the PoC mechanism. This request was reiterated by the Petitioner by letters dated 16.12.2016, 09.01.2017 and 03.02.2017.
- b) After approval of the Methodology to identify non-ISTS lines having more than 50% utilization for carrying inter-state power transmission for issuing certifications by SRPC on 25.02.2017, SRPC furnished the appropriate certification for the non-ISTS lines of the Petitioner on 19.06.2017. However, this was granted only for FY 2017-18. Since the certification issued by SRPC on 19.06.2017 was limited to the FY 2017-18, on 25.04.2019, the Petitioner requested SRPC to identify and certify the non-ISTS lines having more than 50% utilization for carrying inter-state power transmission for the previous year's, i.e., FY 2014-17.
- c) The certificate for FY 2014-17 came to be issued by SRPC on 23.01.2020, after a delay of more than 9 months. By this certificate, the subject Non-ISTS Lines were certified by SRPC to be deemed ISTS, utilized for carrying inter-state power. That the aforesaid delay is also admitted by SRPC vide its letter dated 29.05.2023.
- d) On 12.03.2020, the Petitioner filed the Petition bearing O.P. No. 42/2020 before the State Commission for determination of the YTC charges in respect of these Subject Non-ISTS Lines for the FY 2015-17. The State Commission, by Order dated 07.07.2021, determined the YTC charges for these subject Non-ISTS Lines and permitted recovery of such charges from the PoC pool. On 10.07.2021, the Petitioner requested the Respondent POSOCO to include these YTC charges in the PoC pool.
- e) The reason for approaching the Respondent in 2021 in respect of FY 2015-17 is on account of factors beyond the control of the Petitioner. The Petitioner has been requesting SRPC to identify and certify the non-ISTS carrying inter-state power to avail the benefit of the Sharing Regulations 2010. Despite repeated requests and reminders from the Petitioner, there was a substantial delay in finalizing the methodology for identifying such non-ISTS lines carrying inter-state power. This led to a consequential delay in the issuance of the requisite certification by SRPC. The delay is also on account of the pendency of the Petition seeking the determination of YTC charges for more than 15 months before the State Commission.
- f) The details of the location of Energy meters in the transmission lines claimed as ISTS are as under:

SN	Asset	Voltage (kV)	Meter Location	Remarks
1	CHITTOOR-RENIGUNTA:1	220	400kVSS Chittoor-220kVSS Renigunta	Boundary Meters are available at both ends of the line for energy accounting & losses purpose and are owned by Petitioner.
2	RENIGUNTA-NAGARI:1	220	220kVSS Renigunta-220kVSS Nagari	
3	CHITTOOR-NAGARI:2	220	400kVSS Chittoor-220kVSS Nagari	
4	SULURPETA-NELLORE-PG:1	220	220kVSS Sullurpeta-400kVSS Manubolu(Nellore)	
5	NELLORE-NELLORE-PG:1	220	220kVSS Nellore-400kVSS Manubolu(Nellore)	
6	NELLORE-NELLORE-PG:2	220	220kVSS Nellore-400kVSS Manubolu(Nellore)	
7	NELLORE-NELLORE-PG:3	220	220kVSS Nellore-400kVSS Manubolu(Nellore)	Interface Meters are available at both ends of the line for energy accounting and losses purpose. Meter at one end belongs to Petitioner and other end to APGenco/APPDCL.
8	KRISHNAPATNAM-NELLORE-AP:1	400	Main Control Room of SDSTPS (APPDCL) Switch yard-400kVSS Manubolu(Nellore) of petitioner.	
9	KRISHNAPATNAM-NELLORE-AP:2	400	Main Control Room of SDSTPS (APPDCL) Switch yard-400kVSS Manubolu(Nellore) of petitioner.	

KOTA

2016-17

S N	Asset	Voltage (kV)	Meter Location	Remarks
1	KONDAPALLI-CHILAKALLU:1	220	220kVSS Kondapally-220kVSS Chillakallu	Boundary Meters are available at both ends of the line for energy accounting & losses purpose and are owned by Petitioner.
2	KONDAPALLI-CHILAKALLU:2	220	220kVSS Kondapally-220kVSS Chillakallu	
3	KURNOOL-BRAHMANKOTKUR:1	220	220kVSS Kurnool-220kVSS Brahmankotkur	
4	SULURUPETA-NELLORE42:1	220	220kVSS Sullurpeta-400kVSS Manubolu (Nellore)	
5	KONDAPALLI-VTPS:1	220	220kVSS Kondapally- Main Control Room of VTPS Switchyard (AP Genco)	Interface Meters are available at both ends of the line for energy accounting and losses purpose. Meter at one end belongs to Petitioner and other end to APGenco.
6	KONDAPALLI-VTPS:2	220	220kVSS Kondapally- Main Control Room of VTPS Switchyard (AP Genco)	
7	VTPS-CHILAKALLU:1	220	Main Control Room of VTPS Switchyard (AP Genco)- 220kVSS Chillakallu	
8	VTPS-CHILAKALLU:2	220	Main Control Room of VTPS Switchyard (AP Genco)- 220kVSS Chillakallu	
9	VTPS-RENTACHINTALA:2	220	Main Control Room of VTPS Switchyard (AP Genco)- 220kVSS Rentachintala	
10	CHITTOOR-SDSTPS:1	400	400kVSS Chittoor- Main Control Room of SDSTPS Switchyard (APPDCL)	
11	CHITTOOR-SDSTPS:2	400	400kVSS Chittoor- Main Control Room of SDSTPS Switchyard (APPDCL)	Interface Meters are available at both ends of the line for energy accounting and losses purpose. Meter at one end belongs to APGenco and other end belongs to PGCIL.
12	NUNNA2-VTPS-IV:1	400	400kVSS Nunna (PGCIL)-Main Control Room of Switch yard of VTPS (APGenco)	
13	GAZUWAKA1-KALAPAKA1:1	400	400kVSS Gajuwaka (PGCIL)-400kVSS Kalapaka	Interface Meters are available at both ends of the line for energy accounting and losses purpose. Meter at one end belongs to Petitioner and other end belongs to PGCIL.
14	GAZUWAKA1-KALAPAKA1:2	400	400kVSS Gajuwaka (PGCIL)-400kVSS Kalapaka	

Chief General Manager/Commercial & Legal



Sl No	Asset	Voltage (kV)	Meter Location	Remarks
1	KURNOOL2-JAMALAMADUGU1:Q1	400	400kVSS Kurnool-400kVSS Jammalamadugu	Boundary Meters are available at both ends of the line for energy accounting & losses purpose and are owned by Petitioner.
2	KURNOOL2-JAMALAMADUGU1:Q2	400	400kVSS Kurnool-400kVSS Jammalamadugu	
3	VEGIRI1-SATTENAPALLI:T1	400	400kVSS Vemagiri-400kVSS Sattenapalli	
4	JAMALAMADUGU1-TALARICHER1:Q2	400	400kVSS Jammalamadugu-400kVSS Talaricheruvu	
5	JAMALAMADUGU1-TALARICHER1:Q1	400	400kVSS Jammalamadugu-400kVSS Talaricheruvu	
6	URAVAKONDA-HINDUPUR3:Q1	400	400kVSS Uravakonda-400kVSS Hindupur	
7	URAVAKONDA-HINDUPUR3:Q2	400	400kVSS Uravakonda-400kVSS Hindupur	
8	URAVAKONDA-TALARICHER1:Q1	400	400kVSS Uravakonda-400kVSS Talaricheruvu	
9	URAVAKONDA-TALARICHER1:Q2	400	400kVSS Uravakonda-400kVSS Talaricheruvu	
10	CHITTOOR42-CHITTOOR1:1	220	400kVSS Chittoor-220kVSS Chittoor	
11	CHITTOOR42-CHITTOOR1:2	220	400kVSS Chittoor-220kVSS Chittoor	
12	CHITTOOR1-KALIKIRI1:1	220	220kVSS Chittoor-220kVSS Kalikiri	
13	GOOTY-PG-DHONE1:2	220	220kVSwitching Station Gooty-220kV Switching Station Dhone	
14	GOOTY-PG-DHONE1:1	220	220kVSwitching Station Gooty-220kV Switching Station Dhone	
15	KONDAPALLI1-CHILLAKALLU1:1	220	220kVSS Kondapally-220kVSS Chillakallu	
16	KONDAPALLI1-CHILLAKALLU1:2	220	220kVSS Kondapally-220kVSS Chillakallu	
17	KURNOOL1-BRAHMANKTKUR:1	220	220kVSS Kurnool-220kVSS Brahmanakotkur	
18	URAVAKONDA-BORAMPALLI:2	220	400kVSS Uravakonda-220kVSS Borampalli	
19	URAVAKONDA-BORAMPALLI:1	220	400kVSS Uravakonda-220kVSS Borampalli	
20	URAVAKONDA-BORAMPALLI:4	220	400kVSS Uravakonda-220kVSS Borampalli	
21	URAVAKONDA-BORAMPALLI:3	220	400kVSS Uravakonda-220kVSS Borampalli	
22	MACHERLA-RENTCHINTHALA:1	132	132kVSS Macharla-220kVSS Rentachintala	
23	MACHERLA-RENTCHINTHALA:2	132	132kVSS Macharla-220kVSS Rentachintala	
24	SULURPET1-NELLORE42:1	220	220kVSS Sullurpeta-400kVSS Manubolu (Nellore)	
25	SULURPET1-NELLORE42:3	220	220kVSS Sullurpeta-400kVSS Manubolu (Nellore)	
26	SULURPET1-NELLORE42:2	220	220kVSS Sullurpeta-400kVSS Manubolu (Nellore)	
27	CHITTOOR2-SDSTPS:Q2	400	400kVSS Chittoor- Main Control Room of SDSTPS Switchyard (APPDCL)	Interface Meters are available at both ends of
28	CHITTOOR2-SDSTPS:Q1	400	400kVSS Chittoor- Main Control Room of SDSTPS Switchyard (APPDCL)	
29	SRISAILAMRB1-TALLAPALLI:1	220	Main Control Room of Srisailem Switchyard (AP Genco)-220kVSS Tallapalli	
30	SRISAILAMRB1-TALLAPALLI:2	220	Main Control Room of Srisailem Switchyard (AP Genco)-220kVSS Tallapalli	

Chief General Manager/Commercial

31	SRISAILAMRB1-MYDOKUR:1	220	Main Control Room of Srisailem Switchyard (AP Genco)-220kVSS Mydukur	the line for energy accounting and line losses purpose. Meter at one end belongs to Petitioner and other end to APGenco/APPDCL.
32	VTS1-CHILLAKALLU1:1	220	Main Control Room of VTPS Switchyard (AP Genco)-220kVSS Chillakallu	
33	VTS1-CHILLAKALLU1:2	220	Main Control Room of VTPS Switchyard (AP Genco)-220kVSS Chillakallu	
34	VTS1-RENTACHINTHALA:1,2	220	Main control room of VTPS Switchyard (AP Genco)-220kVSS Rentachintala	
35	SRISAILAMRB1-SOMYAZULPALLI:1	220	Main Control Room of Srisailem Switch yard (AP Genco)-220kVSS Somayazulpalli	
36	SRISAILAMRB1-BELKALAGUDUR:1	220	Main Control Room of Srisailem Switch yard (AP Genco)-220kVSS Belakalagudur	
37	HINDUJA-KVKOTA1:T2	400	Hinduja Switch yard-400kVSS Kamevarapukota	Interface Meters are available at both ends of the line for energy accounting and line losses purpose. Meter at one end belongs to Petitioner and other end to M/s HINDUJA (Private Generator).
38	HINDUJA-KVKOTA1:T1	400	Hinduja Switch yard-400kVSS Kamevarapukota	
39	NUNNA2-VEGIRI1:T3	400	400kVSS Nunna (PGCIL)-400kVSS Vemagiri	Interface Meters are available at both ends of the line for energy accounting and losses purpose. Meter at one end belongs to Petitioner and other end belongs to PGCIL.
40	GAZUWAKA2-KALPAKKA 1:T2	400	400kVSS Gajuwaka (PGCIL)-400kVSS Kalapaka	
41	GAZUWAKA2-KALPAKKA 1:T1	400	400kVSS Gajuwaka (PGCIL)-400kVSS Kalapaka	
42	SUZLON-W1-VAJRAKUR:1	220	Suzlon Pooling Station-220kVSS Vajrakur	Interface Meters are available at both ends of the line for energy accounting and losses purpose. Meter at one end belongs to Petitioner and other end belongs to M/s Suzlon (Private Developer)

8. Respondent No.1, POSOCO, vide Affidavit dated 21.06.2022, has submitted as under:
- a) SRPC vide letter dated 23.01.2020 certified 9 non-ISTS lines owned by the Petitioner for the period 2015-2016 and 14 non-ISTS lines for the period 2016-2017, and vide letter dated 30.04.2020 certified 42 non-ISTS lines owned by the Petitioner for the period 2020-21, carrying inter-state power in excess of the 50% benchmark required the Sharing Regulations 2010. By a common order dated 07.07.2021, the APERC has determined the YTC charges for FY 2015-16, 2016-17, and 2020-2021 to the tune of Rs. 295.32 Crores in accordance with Sharing Regulations 2010. However, the Sharing Regulation 2010 was repealed on 1st Nov 2020. It is hereby pertinent to mention that for the period of 2017-18, 2018-19 & 2019-20, no such requests were made.
- b) Consequent to the said order, vide letter dated 10.7.2021, the Petitioner had requested the Respondent to include YTC charges determined by the APERC for the period from 2015-16, 2016-17, and 2020-21 in the PoC mechanism as per the Sharing Regulations, 2010. In reply vide letter dated 15.07.2021, NLDC had intimated to the petitioner that CERC had notified (Sharing of inter-State Transmission Charges & Losses) Regulations 2020 vide notification dated 04.05.2020, which came into force w.e.f. 01.11.2020. In view of the provisions of the Sharing Regulations, 2020, which entail that in circumstances where an Intra-State system is used for inter-State flow of power, its tariff is required to be approved by CERC. Further, it was informed to APTRANSCO that in the absence of the tariff approved by CERC, the Intra-state transmission assets, as provided vide its letter dated 10.07.2021, shall not be considered for recovery of transmission charges under the Sharing Regulations, 2020.

Submission of Petitioner

9. Petitioner vide affidavit dated 19.07.2023 has filled a Rejoinder to the POSOCO submission dated 21.06.2022, as under:
- a) That Respondent No.1's refusal, based on alleged non-compliance with the Sharing Regulations 2020, is erroneous. This is for the reason that the Petitioner's YTC claims are governed by the Sharing Regulations 2010. The Sharing Regulations 2020 was enforced on 01.11.2020, with prospective effect. Clearly, these Regulations shall govern claims for the period after its enforcement. Therefore, the



Petitioner's YTC claims for the period prior to 01.11.2020, i.e., until 31.10.2020, are governed by the Sharing Regulations 2010. This position has been affirmed and applied by this Commission by its recent orders dated 29.04.2023 in Petition No.297/TT/2022, 06.04.2023 in Petition No.113/TT/2022 and 10.04.2023 in Petition No.37/TT/2022.

- b) Respondent No.1 contends that upon enforcement of the Sharing Regulations 2020, YTC claims as per the Sharing Regulations 2010 are not maintainable. If Respondent No.1's contention is accepted, it would result in a retrospective application of the Sharing Regulations 2020. This shall also abrogate substantive and valuable rights that accrued in favor of the Petitioner, when it commenced the application procedure for the YTC claims under the Sharing Regulations 2010. This is contrary to the settled position that no law may retrospectively deny vested rights without it being specifically applicable on a retrospective basis. Since the application procedure was completed prior to the enforcement of the Sharing Regulations 2020, there is no basis for the Respondents to refuse inclusion of the Petitioner's YTC claims in the PoC mechanism.
- c) In respect of the assertion of Respondent No.1 that the Petitioner made no requests for inclusion of YTC claims for FY 2017-18, 2018-19, and 2019-20 by letter dated 10.07.2021, it is stated that in response to the request letters dated 19.01.18 for 2017-18, dated 23.07.18 for 2018-19 and 28.11.19 for 2019-20, sent by the Petitioner, Respondent No.1 has included the YTC claims for FY 2017-18, 2018-19, and 2019-20 in the respectively monthly transmission charges. The Petitioner also received the appropriate amounts from Respondent No.2 in respect of these YTC claims. Since YTC claims for FY 2017-18, 2018-19, and 2019-20 have already been allowed and recovered from the PoC mechanism, the Petitioner did not make any request for these claims vide the letter dated 10.07.2021.

Hearing on 26.07.2023

10. The Commission directed the Petitioner to implead SRPC & SRLDC and further directed to furnish the following information:
 - i. The reason for the delay in approaching (on 25.4.2019) the SRPC for certification of non-ISTS lines carrying inter-State power for the years 2014-15, 2015-16, and 2016-17.

- ii. Clarify whether the meters owned/ installed by the Petitioner are ABT meters, as per the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, under the control area of RLDC.
11. The Commission also directed POSOCO, CTUIL, and SRPC to provide the following information:
 - i. POSOCO to provide the methodology followed by the RPCs for certification of non-ISTS lines carrying inter-State power and confirm whether the methodology adopted by the SRPC is similar to the other RPCs.
 - ii. CTUIL to submit their analysis on the use of such non-ISTS lines in transmitting inter-state power vis-a-vis the adequacy of the inter-state system.
 - iii. SRPC issued certification on 19.6.2017, which was only for the year 2017- 18 and not for the period 2014-17. SRPC is directed to clarify what has changed between February 2017 (as per the methodology approved by SRPC during the 31st SRPC meeting held on 25.2.2017) and January 2020, when SRPC did not issue the Certification of non-ISTS lines carrying inter-State power for the years 2014- 15, 2015-16, and 2016-17 in June 2017 but certified for such periods vide letter 23.1.2020, which SRPC had previously specifically denied vide letter dated 13.5.2019.

Submission of Petitioner:

12. Petitioner on 07.08.2023 has filed "Amended Memo of Parties," impleading SRPC and SRLDC as parties under the instant Petition.

Submission of POSOCO:

13. Respondent No.1 POSOCO vide affidavit dated 14.08.2023 has submitted the procedure followed by RPCs, as under:
 - a) Methodology followed by NRPC - A meeting was held for the Certification of Non-ISTS line for inclusion in PoC Charges on 08.01.16 at the NRPC Secretariat, New Delhi. The relevant extract of the minutes of this meeting is quoted below for reference:

"(ii) It was proposed that a transmission line may be construed as being used for inter-state purposes only if average utilization for inter-state purposes based on the studies for 2nd and 4th quarter comes out to be more than 50 %. This was based on the logic that if the majority of the load utilization is by the other states then only the line should be considered as an inter-state line. Also, if lines are certified for a minor fraction of ISTS

power, a large number of lines will get included in the PoC charges. Thus, on one hand a state may receive payment for usage of its lines for inter-state transmission but on the one hand it will have to pay for lines of other states. Further, if a state puts up a proposal for considering its line as ISTS and it is found that it is being utilized to a large extent by its own loads, then it would be merely an academic exercise as major part of transmission charges would be allocated to home state only. In view of the above, most of the members of the group agreed to the aforesaid proposal except that of RRVPNL. Latter had neither given any proper justification for its disagreement nor given any alternative proposal for such threshold utilization. It was also agreed that the threshold of 50% utilization may be reviewed next year, if required.

(iii) Certification of state-owned Transmission lines carrying ISTS will be valid for 01 year and claims for certification will have to be submitted by end of December every year.

(iv) The study would be carried out for network with Transmission Line of 132 kV and above. Transmission line below 132 kV level would not be certified under this procedure."

- b) Methodology followed by ERPC - Certification of non-ISTS line for inclusion in PoC Charges was discussed in the 35th ERPC meeting dated 25th February 2017. The relevant extract of the minutes of this meeting is quoted below for reference:

"128th OCC decided that ISTS power flowing through STU lines greater than 50% of the total power as per the WebNet software of the validated data for each quarter will be considered as ISTS line.

In 129th OCC, OPTCL pointed that the PoC charges for STU lines should be calculated based on the actual ISTS power flow through STU lines as per the WebNet software of the validated data for each quarter.

However, after detailed deliberation all the STUs including OPTCL agreed that STU lines carrying ISTS power greater than 50% of the total power as per the WebNet software of the validated data for each quarter will be considered as non-ISTS line carrying ISTS power."

- c) Methodology followed by WRPC - in the 31st WRPC meeting, the Certification of 400 KV Seoni-Sarni and Seoni-Bhilai STU lines were discussed. The relevant extract of the minutes of this meeting is quoted below for reference:

"(i) MS WRPC informed the agenda position. He stated that in case of 400 kV Seoni (in MP) – Bhilai (in Chhattisgarh) it being a Natural ISTS line by definition and so can be claimed under POC without certification of WRPC.

TCC agreed to this.

(ii) In case of 400kV Seoni (in MP) - Sarni(in MP) this line was recommended by TCC as deemed ISTS line, based on WRLDC studies, since 51% of the tariff of the said line is being used by other states.

(iii) TCC then discussed the possibility of the above line carrying less than 50% other states power in future. Since once a line has been declared deemed ISTS, it would be difficult to revert it to its original status as state line, as this would unnecessarily cause a lot of financial calculations and confusion.

Therefore, TCC recommended that once the state line is declared deemed ISTS based upon study, that line will retain the status of deemed ISTS for the rest of its life.

(iv) TCC recommended that for future claims for deemed ISTS status, the latest PoC study case validated by Validation Committee shall be used to decide the usage of the claimed lines by the home State and other than home State."

- d) Methodology followed by SRPC - certification of Non-ISTS line was discussed in the 33rd SR Commercial Committee Meeting held on 30.01.2018 and 31st SRPC meeting held on 25.02.2017. The relevant extract of the minutes of this meeting is quoted below for reference:

"The certification would be valid for a financial Year. The base case of each quarter submitted by DIC to validation committee for PoC Computation of the previous financial year would be examined for certification in the current Year. If in each base case the usage of state owned line is more by other state than home state then those lines would be certified as Non-ISTS lines carrying Inter State Power. The usage of lines would be obtained through WebNet Software."

- e) Methodology followed by NERPC - certification of non-ISTS line was discussed in the 17th NERPC Meeting held on 03rd October 2016. The relevant extract of the minutes of this meeting is quoted below for reference:

"Based on initial studies by MeECL the following lines have been found to cater loads of other states in addition to Meghalaya, so they may be declared as ISTS line:

1. 220kV D/C Misa - Killing
2. 132 kV S/C Agia - Nagalbibra
3. LILO of 400kV D/C Pallatana - Bongaigoan at 400/220kV Killing S/S

The matter was discussed in one of the sub-group meetings and it was suggested that NLDC/NERLDC may conduct studies by WebNet software and inform the members of load flow patterns.

During 125th OCCM, NERLDC presented the details of the study results as follows:

□ 400kV Silchar - Byrnihat	: 12.9971 %
□ 400kV Bongaigaon - Byrnihat	: 10.1268%
□ 220 kV Misa - Byrnihat I	: 26.1397%
□ 220 kV Misa - Byrnihat II	: 26.1397%

The OCC members thanked NERLDC/NLDC for conducting the study and Meghalaya may approach SERC/CERC after TCC/RPC approval. Placed for approval of TCC/NERPC

Deliberation of the TCC

Based on the study of NERLDC, TCC approved the declaration of:

1. 220kV Misa – Killing D/C Line and
2. LILO of 400kV, D/C Pallatana - Bongaigoan at 400/220kV Killing S/S as ISTS Line and recommended for approval of NERPC.

TCC recommended for approval of NERPC."

14. Respondent SRPC vide affidavit dated 14.08.2023 has submitted as under:
- a) APTRANSCO, vide letter dated 09.12.2016, requested the SRPC Secretariat to certify certain intra-state lines so that the same line can be considered for inclusion in POC charges. The methodology for SRPC certification of intra-State lines, carrying power to other states, which shall be applicable to all the Utilities, was deliberated & recommended to be put up for approval of SRPC in the 33rd Meeting of Commercial Sub Committee (CCM) of SRPC held on 31.01.2017. Subsequently, in the 31st SRPC meeting held on 25.02.2017, SRPC deliberated and approved the Methodology for certification of non –ISTS lines having more than 50 % utilization for carrying inter-state power transmission by the SRPC Secretariat.
 - b) SRPC Secretariat in consultation with SRLDC has been carrying out Certification of non-ISTS lines having more than 50% utilization for carrying inter-state power transmission on yearly basis based on the Base Case of each quarter submitted by DIC to the validation Committee for PoC computation. Certifications in consultation with SRLDC were issued by the SRPC Secretariat during the Period of 2017-2020.
 - c) APSLDC, vide letter dated 31.07.2018, requested for certification of natural ISTS lines for the years 2014-15, 2015-16 and Non-ISTS lines carrying ISTS power for the years 2014-15, 2015-16, 2016-17, and requested to take up the issue of removing 50% cutoff for certifying non-ISTS lines carrying ISTS power in the forthcoming 34th SRPC Meeting held on 11.08.2018. Based on the recommendation of the special meeting held on 11.01.2019 to review the criteria for certification of non-ISTS lines, the SRPC Secretariat in the 35th SRPC meeting held on 02.02.2019 had decided to retain the criteria of greater than 50% for certifying the non-ISTS lines as deemed ISTS lines.
 - d) APSLDC, vide letter dated 25.04.2019, requested SRPC Certification for non-ISTS lines carrying interstate power having more than 50% utilization during the financial years 2014-15, 2015-16, and 2016-17 for filing a petition before CERC/APERC. SRPC Secretariat, vide letter dated 13.05.2019 informed that the Certification could be processed only for the subsequent period from the date of adoption of procedure by SRPC, which is 25.02.2017.
 - e) The matter was discussed in the 36th meeting of SRPC held on 12.07.2019, wherein the following was deliberated:

- i. SRPC Secretariat had informed that the certification could be processed only for the subsequent period from the date of adoption of the procedure by SRPC. POC rates could not be revised.
 - ii. SRPC Secretariat was suggested to look into possibility of certifying for previous period. STUs would approach CERC and as per CERC directive, future course of action will be taken.
 - iii. POSOCO was requested to provide details to the SRPC secretariat. NLDC stated that they would examine the matter and revert.
- f) Subsequently, SRPC Secretariat vide letters dated 24.09.2019 and 29.10.2019, requested NLDC to provide the PoC-based Data Files for the years 2013-14, 2014-15, and 2015-16 to SRPC Secretariat. Using the details obtained, the Certification of non-ISTS lines carrying inter-State power having more than 50 % utilization for the years 2014-15, 2015-16 & 2016-17 had been carried out by the SRPC Secretariat and communicated to the State Utilities vide letter dated 23.01.2020.

Submission of Petitioner

15. Petitioner vide affidavit dated 11.09.2023 has submitted as follows:
- a) Petitioner has been repeatedly requesting SRPC to issue the necessary certification since December 2016. This request was reiterated by letters dated 31.07.2018 and 25.04.2019. Between 2016 and 2019, the Petitioner issued at least 6 written communications to SRPC for the issuance of the requisite certification of Subject Non-ISTS lines.
 - b) Delay in issuing the certification is on account of (i) delay of more than 22 months in finalisation of the methodology to identify non-ISTS lines having more than 50% utilization for carrying inter-state power transmission; (ii) delay by SRPC in seeking approval from Respondent No.1, NLDC and SRLDC for issuing certification retrospectively for the previous financial years and (iii) delay of more than 3 years by SRPC in processing the petitioner's request. There is no delay by the Petitioner in approaching SRPC for issuance of the requisite certification under the Sharing Regulations 2010. In any event, the delay of the Petitioner, if any, has been principally condoned by APERC vide order dated 07.07.2021 permitting the Petitioner to include YTC for FY 2015-17, and 2020-21 in the PoC mechanism.
 - c) Ownership of the ABT meters is irrelevant for the adjudication of this Petition. The necessary due diligence has already been conducted by SRPC at the time of issuing



the necessary certification for the Subject Non-ISTS Lines in consultation with POSOCO, NLDC, and SRLDC. In principle, this has also been approved by APERC while determining the YTC charges for inclusion in the PoC pool. Further, without prejudice to the foregoing submissions, the details regarding ownership and installation of the ABT meters are also submitted as follows:

- i. The energy meters are installed by the Petitioner at both ends of transmission lines for accounting and audit purposes.
- ii. There are some non-ISTS lines between the Petitioner and Power Grid Corporation of India Ltd. or National Thermal Power Corporation. These lines are under the control of the SRLDC, accordingly, ABT meters have been installed, and the data is available with SRLDC.
- iii. The list of these non-ISTS lines having ABT meters under the control of SRLDC and having non-ABT meters installed by the Petitioner for accounting and audit purposes as per the CEA Regulations for the relevant financial years is as under:

FY 2015-16			
S. No.	Asset	Voltage (kV)	Meter Information
1.	SULURPETA-NELLORE-PG:1	220	ABT Meters are available and energy details are being sent to SRLDC (under the control of RLDC).
2.	NELLORE-NELLORE-PG:1	220	
3.	NELLORE-NELLORE-PG:2	220	
4.	NELLORE-NELLORE-PG:3	220	
5.	CHITTOOR-RENIGUNTA:1	220	Non-ABT meters are available at both ends of the line and are under the control of APSLDC
6.	RENIGUNTA-NAGARI:1	220	
7.	CHITTOOR-NAGARI:2	220	
8.	KRISHNAPATNAM-NELLORE-AP:1	400	
9.	KRISHNAPATNAM-NELLORE-AP:2	400	
2016-17			
S. No.	Asset	Voltage (kV)	Meter Information
1.	SULURUPETA-NELLORE42:1	220	ABT Meters are available and energy details are being sent to SRLDC (under the control of RLDC).
2.	NUNNA2-VTPS-IV:1	400	
3.	GAZUWAKA1-KALAPAKA1:1	400	
4.	GAZUWAKA1-KALAPAKA1:2	400	
5.	KONDAPALLI-CHILAKALLU:1	220	Non-ABT meters are available at both ends of the line and are under the control of APSLDC.
6.	KONDAPALLI-CHILAKALLU:2	220	
7.	KURNOOL-BRAHMANKTKUR:1	220	
8.	KONDAPALLI-VTPS:1	220	
9.	KONDAPALLI-VTPS:2	220	
10.	VTPS-CHILAKALLU:1	220	

11	VTPS-CHILAKALLU:2	220	
12	VTPS-RENTACHINTALA:2	220	
13	CHITTOOR-SDSTPS:1	400	
14	CHITTOOR-SDSTPS:2	400	

2020-21			
S. No	Asset	Voltage (kV)	Meter Information
1.	SULURPET1-NELLORE42:1	220	ABT Meters are available and energy details are being sent to SRLDC (under the control of RLDC).
2.	SULURPET1-NELLORE42:3	220	
3.	SULURPET1-NELLORE42:2	220	
4.	NUNNA2-VEMAGIRI1:T3	400	
5.	GAZUWAKA2-KALPAKKA 1:T2	400	
6.	GAZUWAKA2-KALPAKKA 1:T1	400	
7.	KURNOOL2-JAMALAMADUGU1:Q1	400	Non-ABT meters are available at both ends of the line and are under the control of APSLDC.
8.	KURNOOL2-JAMALAMADUGU1:Q2	400	
9.	VEMAGIRI1-SATTENAPALLI:T1	400	
10.	JAMALAMADUGU1-TALARICHER1:Q2	400	
11.	JAMALAMADUGU1-TALARICHER1:Q1	400	
12.	URAVAKONDA-HINDUPUR3:Q1	400	
13.	URAVAKONDA-HINDUPUR3:Q2	400	
14.	URAVAKONDA-TALARICHER1:Q1	400	
15.	URAVAKONDA-TALARICHER1:Q2	400	
16.	CHITTOOR42-CHITTOOR1:1	220	
17.	CHITTOOR42-CHITTOOR1:2	220	
18.	CHITTOOR1-KALIKIRI1:1	220	
19.	GOOTY-PG-DHONE1:2	220	
20.	GOOTY-PG-DHONE1:1	220	
21.	KONDAPALLI1-CHILLAKALLU1:1	220	
22.	KONDAPALLI1-CHILLAKALLU1:2	220	
23.	KURNOOL1-BRAHMANKTKUR:1	220	
24.	URVAKONDA-BORAMPALLI:2	220	
25.	URVAKONDA-BORAMPALLI:1	220	
26.	URVAKONDA-BORAMPALLI:4	220	
27.	URVAKONDA-BORAMPALLI:3	220	
28.	MACHERLA-RENTCHNTHALA:1	132	
29.	MACHERLA-RENTCHNTHALA:2	132	
30.	CHITTOOR2-SDSTPS:Q2	400	
31.	CHITTOOR2-SDSTPS:Q1	400	
32.	SRISAILAMRB1-TALLAPALLI:1	220	
33.	SRISAILAMRB1-TALLAPALLI:2	220	
34.	SRISAILAMRB1-MYDUKUR:1	220	
35.	VTS1-CHILLAKALLU1:1	220	
36.	VTS1-CHILLAKALLU1:2	220	
37.	VTS1-RENTACHNTHALA1:2	220	
38.	SRISAILAMRB1-SOMYZULPALLI:1	220	
39.	SRISAILAMRB1-BELKALAGUDUR:1	220	
40.	HINDUJA-KVKOTA1:T2	400	
41.	HINDUJA-KVKOTA1:T1	400	
42.	SUZLON-W1-VAJRAKUR:1	220	

- d) The subject Non-ISTS lines in this Petition are intra-state lines owned by the Petitioner. The energy meters are installed by the Petitioner at both ends of transmission lines for accounting and audit purposes. There are some non-ISTS lines between the Petitioner and Power Grid Corporation of India Limited or National Thermal Power Corporation. These lines are under the control of the SRLDC. Accordingly, for these lines, ABT meters have been installed and the data is available with SRLDC.

Hearing on 15.12.2023

16. The Commission reserved the order in the matter on 15.12.2023.

Submission of CTUIL

17. Respondent CTUIL vide affidavit dated 08.01.2024 has submitted as under:
- a) CTUIL carries out system studies and identifies the transmission system for future time frame with certain assumptions and analysis for 9 nos. of scenarios wherein different Load Generation Balance (LGB) are considered for finalization of the transmission schemes. CTUIL then submits the same in consultation with stakeholders for approval and its implementation in consultation.
 - b) Under some of the scenarios, the Southern Region imports a large quantum of power from the NEW grid during peak demand, and under other scenarios (like Off-peak demand conditions & peak RE generation scenario) Southern Region exports surplus power to the NEW grid. In these scenarios, power flow on the ISTS line, as well as STU lines, varies significantly, so much so that on some of the transmission lines, power flow changes in the reverse direction. It is difficult to determine the quantum of ISTS power flowing on STU lines, and CTU does not have any tool for the purpose. CTU is not in a position to submit the analysis on the use of non-ISTS lines in transmitting inter-State power as sought by the Commission. GRID-INDIA would be in a better position to submit their analysis as they have the real time data for power flow on the transmission lines mentioned in the subject petition.
 - c) With regard to the adequacy of the inter-State transmission system, the ISTS network in SR is adequate for transferring of shares of the SR beneficiaries from ISGS and Open Access.

18. Petitioner vide written submission dated 08.01.2024 has reiterated the submission previously made.

Analysis and Decision

19. We have considered the submissions of the Petitioner and perused all relevant documents on record.
20. The Petitioner, vide the instant Petition, is seeking issuance of appropriate direction to the Respondent POSOCO to include the Yearly Transmission Charges ('YTC') determined by the APERC vide order dated 7.7.2021 for inter-State transmission lines owned by the Petitioner in the PoC mechanism for the period from 2015-16, 2016-17 and 2020-21 (up to 31.12.2020), as per the Sharing Regulations 2010 and Regulation 22 of the Sharing Regulations 2020. The Petitioner has submitted that the claim of recovering transmission charges pertains to two periods (i) the period prior to 01.11.2020, i.e., the date of effectiveness of the Sharing Regulations 2020; (ii) the period from 01.11.2020 until 31.12.2020. The Petitioner approached POSOCO vide letter dated 10.07.2021 for inclusion of such YTC charges in the PoC transmission charges. POSOCO, vide letter dated 15.07.2021, had refused the inclusion of such YTC in PoC charges and stated that in the absence of the mandatory approval of YTC by this Commission, the Petitioner is not entitled to recover such YTC under the Sharing Regulations 2020.
21. Respondent POSOCO has submitted that CERC had notified (Sharing of inter-State Transmission Charges & Losses) Regulations 2020, which came into force on 01.11.2020, as per which if an Intra-State system is used for an inter-State flow of power, its tariff is required to be approved by CERC. POSOCO also informed APTRANSCO that in the absence of the tariff approved by CERC, the Intra-state transmission assets, as provided vide its letter dated 10.07.2021, shall not be considered for recovery of transmission charges under the Sharing Regulations 2020.
22. CTUIL has submitted that the Southern Region imports a large quantum of power from the NEW grid during peak demand. Under other scenarios (like Off-peak demand conditions and peak RE generation scenario) the Southern Region exports surplus power to the NEW grid. In these scenarios, power flow on ISTS line as well as STU lines varies significantly, so much so that on some of the transmission lines power flow changes in the reverse direction.

23. We have considered the submission of the Petitioner, Respondents, and facts of record. The following issues arise for our consideration: 194

Issue No.1: Whether the petitioner is entitled to inclusion of transmission charges determined by the APERC for non-ISTS lines certified by SRPC to be carrying inter-state power, for the period from 2015-16, 2016-17, and 2020-21 (up to 31.10.2020) in the PoC mechanism as per the Sharing Regulations, 2010?

Issue No.2: Whether the petitioner is entitled to include transmission charges determined by the APERC for non-ISTS lines certified by SRPC to carry inter-state power for the period 01.11.2020 to 31.12.2020 in the PoC mechanism as per the Sharing Regulations, 2010?

The issues shall be dealt with in the subsequent Paragraphs.

Issue No.1: Whether the petitioner is entitled to inclusion of transmission charges determined by the APERC for non-ISTS lines certified by SRPC to be carrying inter-state power for the period from 2015-16, 2016-17 and 2020-21 (up to 31.10.2020) in the PoC mechanism as per the Sharing Regulations, 2010?

24. The relevant extract of the SRPC letter dated 23.01.2020 and letter dated 30.04.2020 vide which SRPC has certified non-ISTS lines carrying interstate power during 2015-16, 2016-17 and 2020-21:

SRPC letter dated 23.01.2020

“

Subject: Certification of Non-ISTS Line carrying interstate power for the period 2014-15, 2015-16 and 2016-17, which were having more than 50% utilization for interstate power transmission during the Years 2013-14, 2014-15 and 2015-16 respectively-reg.

Sir,

CERC Third Amendment of Sharing of Inter-State Transmission Charges and Losses Regulations 2015, Clause 2. 1. 3 of Annexure – I stipulate as below;

“Certification of non-ISTS lines carrying inter-state power, which were not approved by the RPCs on the date of notification of the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2009, shall be done on the basis of load flow studies. For this purpose, STU shall put up proposal to the respective RPC Secretariat for approval. ROC Secretariat, in consultation with RLDC, using WebNet software would examine the proposal. The results of the load flow studies and participation factor indicating flow of Inter State power on these lines



shall be used to compute the percentage of usage of these lines as inter state transmission. The software in the considered scenario will give percentage of usage of these lines by, home state and other than home state for testing the usage, tariff of similar ISTS line may be used. The tariff of the line will also be allocated by software to the home state and other than home state. Based on percentage usage of ISTS in base case, RPC will approve whether the particular state line is being used as ISTS or not."

In compliance with the regulations, the lines as listed in the respective Annexures are certified as lines carrying power, in consultation with SRLDC:

- (i) For the year 2014-15, no Non-ISTS lines have qualified for certification. The data used for the study is taken from Quarter- 1 to Quarter-4 of 2013-14, which is considered for POC computation.
- (ii) For the year 2015-16, 10 non ISTS lines, given at Annexure I hereto. The data used for the study is taken from Quarter- 1 to Quarter-4 of 2014-15, which is considered for POC computation.
- (iii) For the Year 2016-17, 17 non ISTS lines, given at Annexure II hereto. The data used for the study is taken from Quarter-1 to Quarter-4 of 2015-16, which is considered for POC computation.

Annexure-I

Non-ISTS Lines Certified for the year 2015-16

Sl. No.	Lines Certified by RPC	Voltage (kV)	State
1	CHITTOOR-RENGUNTA:1	220	AP
2	CHITTOOR-NAGARI:2	220	AP
3	SULURETA-NLR-PG:1	220	AP
4	KRPTNAM-NLR-AP:1	400	AP
5	KRPTNAM-NLR-AP:2	400	AP
6	NELLORE-NLR-PG:1	220	AP
7	NELLORE-NLR-PG:2	220	AP
8	NELLORE-NLR-PG:3	220	AP
9	RENIGUNTA-NAGARI:1	220	AP
10	PONDY42-BHAHUR2:1	220	PY

Annexure-II

Non-ISTS Lines Certified for the year 2016-17

S. No.	Lines Certified by RPC	Voltage (kV)	State
1.	SULURETA-NLR42:1	220	AP
2	KONAPLLY -VTPS:1	220	AP
3	KONAPLLY I-VTPS:2	220	AP
4	KONAPLLY-CHILAALLU:1	220	AP
5	KONAPLLY -CHILAALLU:2	220	AP
6	VTPS-CHILAALLU:1	220	AP
7	VTPS-CHILAALLU:2	220	AP
8	VTPS-RENACALA:2	220	AP



9	KURNOOL-BKOTKUR:1	220	AP
10	CHITTOOR-SDSTPS:1	400	AP
11	CHITTOOR-SDSTPS:2	400	AP
12	NUNNA2-VTPS-IV:1	400	AP
13	GAZUWAKA1-KALAPAKA1:1	400	AP
14	GAZUWAKA1-KALAPAKA1:2	400	AP
15	TANDUR2-YDMLRM2: 1	220	TS
16	ABISEK42-KAYTHAR2:I	220	TN
17	ABISEK42-VERANAM2: I	220	TN

SRPC Letter dated 30.04.2020

“

Subject: Certification of Non-ISTS Line carrying interstate power for the period 2020-21, which were having more than 50% utilization for interstate power transmission during the Year 2019-20 -Regarding.

.....

.....

In compliance with the regulations, 66 non ISTS lines as listed in the Annexure are certified as lines carrying interstate power, in consultation with SRLDC. The data used for the study is taken from Quarter -I to Quarter-IV of 2019-20, which is considered for POC computation as discussed.

Annexure

S. No	Lines Certified by RPC	Voltage (kV)	State
1.	CHITTOOR2-SDSTPS:Q2	400	AP
2.	CHITTOOR2-SDSTPS:Q1	400	AP
3.	NUNNA2-VEMAGIRI1:T3	400	AP
4.	GAZUWAKA2-KALPAKKA1:T2	400	AP
5.	GAZUWAKA2-KALPAKKA 1:T1	400	AP
6.	KURNOOL2-JAMALAMADUGU1:Q1	400	AP
7.	KURNOOL2-JAMALAMADUGU1:Q2	400	AP
8.	VEMAGIRI1-SATTENAPALLI:T1	400	AP
9.	HINDUJA-KVKOTA1:T2	400	AP
10.	HINDUJA-KVKOTA1:T1	400	AP
11.	JAMALAMADUGU1-TALARICHER1:Q2	400	AP
12.	JAMALAMADUGU1-TALARICHER1:Q1	400	AP
13.	NPKUNTA-HINDUPIJR3:Q2	400	AP
14.	NPKUNTA-HINDUPIJR3:Q1	400	AP
15.	URAVAKONDA-HINDUPUR3:Q1	400	AP
16.	URAVAKONDA-TALARICHER1:Q1	400	AP
17.	URAVAKONDA-HINDUPUR3:Q2	400	AP
18.	URAVAKONDA-TALARICHER1:Q2	400	AP
19.	KHAMMAM-ASUPAKA:I	400	TS
20.	GUMDIP2-NCTPS-I: 1	230	TN
21.	ABISEK42-SANKNR12: 1	230	TN
22.	ABISEK42-KAYTHAR2:1	230	TN
23.	ABISEK42-VERANAM2:1	230	TN
24.	ABISEK42-UDAYATR2:1	230	TN



25.	ABISEK42-VERANAM2:2	230	TN
26.	UDMLPT2-MYVADY42:1	230	TN
27.	UDMLPT2-MYVADY42:2	230	TN
28.	CHITTOOR42-CHITTOOR1:1	220	AP
29.	CHITTOOR42-CHITTOOR1:2	220	AP
30.	SULURPET1-NELLORE42:1	220	AP
31.	SULURPET1-NELLORE42:3	220	AP
32.	SULURPET1-NELLORE42:2	220	AP
33.	CHITTOOR1-KALIKIRI1:1	220	AP
34.	GOOTY-PG-DHONE1:2	220	AP
35.	GOOTY-PG-DHONE1:1	220	AP
36.	KONDAPALLI1-CHILLAKALLU1:1	220	AP
37.	KONDAPALLI1-CHILLAKALLU1:2	220	AP
38.	SRISAILAMRB1-TALLAPALLI:1	220	AP
39.	SRISAILAMRB1-MYDUKUR:1	220	AP
40.	SRISAILAMRB1-TALLAPALLI:2	220	AP
41.	SRISAILAMRB1-SOMYZULPALLI:1	220	AP
42.	SRISAILAMRB1-BELKALAGUDUR:1	220	AP
43.	VTS1-CHILLAKALLU1:1	220	AP
44.	VTS1-RENTACHNTHALA1:2	220	AP
45.	VTS1-CHILLAKALLU1:2	220	AP
46.	KURNOOL1-BRAHMANKTKUR:1	220	AP
47.	SUZLON-W1-VAJRAKUR:1	220	AP
48.	URVAKONDA-BORAMPALLI:2	220	AP
49.	URVAKONDA-BORAMPALLI:1	220	AP
50.	URVAKONDA-BORAMPALLI:4	220	AP
51.	URVAKONDA-BORAMPALLI:3	220	AP
52.	SEDAMI-RAICHURTPS:1	220	KA
53.	SEDAM I -SHAHAPUR: 1	220	KA
54.	SEDAM I -RAICHURTPS:2	220	KA
55.	RAICHURTPS-RAIHURI:1	220	KA
56.	RAICHURTPS-RAIHURI:2	220	KA
57.	CHIKKODI-BELGAUM:2	220	KA
58.	CHIKKODI-BELGAUM:1	220	KA
59.	CHIKKODJ-GATAPRABA:1	220	KA
60.	CHIKKODJ-GATAPRABA:2	220	KA
61.	MACHERLA-RENTCHNTHALA:1	132	AP
62.	MACHERLA-RENTCHNTHALA:2	132	AP
63.	WANPATHY -CHIAMOOR: 1	132	TS
64.	ALAMPUR-CHIAMOOR: 1	132	TS
65.	GNSHPHD-W.PALLI: 1	132	TS
66.	GNSHPHD-W.PALLI: 1	132	TS

.....”

25. Petitioner has submitted that SRPC, vide letter dated 23.01.2020, has certified 9 non-ISTS lines for the period 2015-2016 and 14 non-ISTS lines for the period 2016-2017 and further vide letter dated 30.04.2020 certified 42 non-ISTS lines for the period 2020-21, owned by the Petitioner. The Petitioner has submitted that subsequent to the certification of SRPC, the Petitioner filed Petitions before the



APERC on 05.10.2020 seeking a determination of YTC for FY 2015-16, 2016-17 and 2020-2021, which was disposed of vide Order 07.07.2021 by APERC. The details of line-wise YTC approved by the APERC vide a common order in O.P. Nos. 42 & 47 of 2020 for these lines are as under:

Non-ISTS Lines Certified for the Year 2015-16			
S. No.	Asset	Voltage (kV)	YTC for FY 2015-16 (Rs.in Lakhs)
1	CHITTOOR-RENGUNTA:1	220	197.16
2	CHITTOOR-NAGARI:2	220	98.76
			206.80
3	SULURETA-NLR-PG:1	220	44.73
			29.78
4	KRPTNAM-NLR-AP:1	400	670.70
5	KRPTNAM-NLR-AP:2	400	
6	NELLORE-NLR-PG:1	220	12.23
			32.31
7	NELLORE-NLR-PG:2	220	12.33
			32.31
8	NELLORE-NLR-PG:3	220	75.93
9	RENIGUNTA-NAGARI:1	220	17.22
			206.80
Non-ISTS Lines Certified for the Year 2016-17			
S. No.	Asset	Voltage (kV)	YTC for FY2016-17 (Rs. in Lakhs)
1.	SULURUETA-NLR42:1	220	46.57
			29.19
2	KONAPLLY -VTPS:1	220	3.98
3	KONAPLLY I-VTPS:2	220	10.06
4	KONAPLLY-CHILAALLU:1	220	113.67
5	KONAPLLY -CHILAALLU:2	220	146.65
6	VTPS-CHILAALLU:1	220	89.08
7	VTPS-CHILAALLU:2	220	253.46
8	VTPS-RENACALA:2	220	67.73
			4.71
9	KURNOOL-BKOTKUR:1	220	89.18
10	CHITTOOR-SDSTPS:1	400	8745.20
11	CHITTOOR-SDSTPS:2	400	
12	NUNNA2-VTPS-IV:1	400	156.28
13	GAZUWAKA1-KALAPAKA1:1	400	19.49
14	GAZUWAKA1-KALAPAKA1:2	400	16.40

Non-ISTS Lines Certified for the year 2020-21			
S. No	Asset	Voltage (kV)	YTC for FY2020-21 (Rs. in Lakhs)
1.	CHITTOOR2-SDSTPS:Q2	400	7475.13
2.	CHITTOOR2-SDSTPS:Q1	400	
3.	NUNNA2-VEMAGIRI1:T3	400	530.2
4.	GAZUWAKA2-KALPAKKA1:T2	400	17.77
5.	GAZUWAKA2-KALPAKKA 1:T1	400	
6.	KURNOOL2-JAMALAMADUGU1:Q1	400	2614.67
7.	KURNOOL2-JAMALAMADUGU1:Q2	400	
8.	VEMAGIRI1-SATTENAPALLI:T1	400	1416.34
			500.87
9.	HINDUJA-KVKOTA1:T2	400	6925.56
10.	HINDUJA-KVKOTA1:T1	400	
11.	JAMALAMADUGU1-TALARICHER1:Q2	400	2908.98
12.	JAMALAMADUGU1-TALARICHER1:Q1	400	
13.	URAVAKONDA-HINDUPUR3:Q1	400	3922.41
14.	URAVAKONDA-HINDUPUR3:Q2	400	
15.	URAVAKONDA-TALARICHER1:Q1	400	86.74
16.	URAVAKONDA-TALARICHER1:Q2	400	
17.	CHITTOOR42-CHITTOOR1:1	220	56.51
18.	CHITTOOR42-CHITTOOR1:2	220	
19.	SULURPET1-NELLORE42:1	220	64.61
			19.69
20.	SULURPET1-NELLORE42:3	220	846.18
21.	SULURPET1-NELLORE42:2	220	
22.	CHITTOOR1-KALIKIRI1:1	220	55.19
23.	GOOTY-PG-DHONE1:2	220	558.56
24.	GOOTY-PG-DHONE1:1	220	
25.	KONDAPALLI1-CHILLAKALLU1:1	220	95.15
26.	KONDAPALLI1-CHILLAKALLU1:2	220	121.65
27.	SRISAILAMRB1-TALLAPALLI:1	220	168.69
28.	SRISAILAMRB1-TALLAPALLI:2	220	
29.	SRISAILAMRB1-MYDUKUR:1	220	141.64
30.	SRISAILAMRB1-SOMYZULPALLI:1	220	90.47
31.	SRISAILAMRB1-BELKALAGUDUR:1	220	60.36
			18.22
32.	VTS1-CHILLAKALLU1:1	220	83.65
33.	VTS1-RENTACHNTHALA1:2	220	93.96
			3.85
34.	VTS1-CHILLAKALLU1:2	220	212.26
35.	KURNOOL1-BRAHMANKTKUR:1	220	72.57
36.	SUZLON-W1-VAJRAKUR:1	220	4.44
37.	URVAKONDA-BORAMPALLI:2	220	650.70
38.	URVAKONDA-BORAMPALLI:1	220	
39.	URVAKONDA-BORAMPALLI:4	220	629.23
40.	URVAKONDA-BORAMPALLI:3	220	
41.	MACHERLA-RENTCHNTHALA:1	132	51.41
42.	MACHERLA-RENTCHNTHALA:2	132	43.42

26. The Petitioner has submitted that by a letter dated 15.07.2021, the Petitioner had requested the POSOCO to include YTC charges determined by the APERC for the period from 2015-16, 2016-17, and 2020-21 (up to 31.12.2020) in the PoC mechanism as per the Sharing Regulations 2010, but POSOCO vide letter dated 15.7.2021 refused to include the YTC charges in the PoC mechanism.
27. POSOCO has submitted that when the petitioner approached POSOCO on 10.07.2021, the Sharing Regulations 2010 had been repealed, and the Sharing Regulations 2020 came into force w.e.f. 01.11.2020. The provisions of the Sharing Regulations 2020, entail that in circumstances where an Intra-State system is used for inter-State flow of power, its tariff is required to be approved by CERC.
28. In response to the Commission's query to clarify the reasons for approaching the NLDC for the period 2015-17 in 2021, Petitioner submitted that it has been requesting SRPC to identify and certify the non-ISTS carrying inter-state power to avail the benefit of the Sharing Regulations 2010, but despite repeated requests and reminders of the Petitioner, there was a substantial delay in finalizing the methodology for identifying such non-ISTS carrying inter-state power. This led to a consequential delay in the issuance of the requisite certification by SRPC, and further, the delay is also on account of the pendency of the Petition seeking the determination of YTC charges for more than 15 months before the State Commission.
29. In response to the Commission query to clarify what has changed between February 2017 and January 2020, when SRPC did not issue the Certification of non-ISTS lines carrying inter-State power for the years 2014- 15, 2015-16, and 2016-17 in June 2017 but certified for such periods vide letter 23.1.2020, which SRPC had previously specifically denied vide letter dated 13.5.2019, SRPC submitted that all the past certifications were issued subsequent to the date of adoption of the Certification Methodology. However, the issue was taken up in the 36th SRPC Meeting held on 12.07.2019 for considering the APTRANSCO request for issuance of certification for the years 2014-15, 2015-16 and 2016-17. SRPC further submitted that based on the suggestion of the TCC/SRPC forum, SRPC vide letter dated 23.01.2020 had issued certification for the years 2014-15, 2015-16, and 2016-17.
30. In response to the Commission's direction to CTUIL to submit their analysis on the use of such non-ISTS lines in transmitting inter-state power vis-a-vis the adequacy of the inter-state system, CTUIL submitted that under some of the scenarios, Southern Region imports large quantum of power from NEW grid during peak



demand and under other scenarios Southern Region exports surplus power to NE grid and such scenarios, power flow on ISTS line as well STU lines varies significantly, so much so that on some of the transmission lines power flow changes in reverse direction. CTUIL further submitted that it is difficult to determine the quantum of ISTS power flowing on STU lines, and CTU does not have any tool for the purpose.

31. We have considered the submission of Petitioner and Respondents.
32. We have perused Clause (n) of Regulation 7(1) of the Sharing Regulations, 2010 which provides as under:

“7. Process to determine Point of Connection Transmission Charges and losses allocations (10 The process to determine the allocation of transmission charges and losses shall be as under, and as per timelines set out subsequently in Chapter 7 of these regulations:

.....

(n) For the computation of transmission charges at each node as per Hybrid Methodology, cost of ISTS transmission licensees whose lines feature on the Basic Network shall be considered:

Provided that in case of STU lines which are physically inter-State lines and whose tariff is approved by the Commission, such tariff shall be considered for computation of PoC charges:

Provided further that in case of non-ISTS lines (lines owned by STUs but being used for carrying inter-State power as certified by respective RPCs), the asset-wise tariff as approved by the respective State Commission shall be considered. Where asset-wise tariff is not available, the tariff as computed by the Commission based on the ARR of the STUs (as approved by respective State Commissions) by adopting the methodology similar to the methodology used for ISTS transmission licensees shall be considered. The transmission charges received by the concerned STU on this account shall be adjusted in its approved Annual Revenue Requirement.”

As per the above, for the lines owned by STUs but being used for carrying inter-State power as certified by respective RPCs, the asset-wise tariff as approved by the respective State Commissions or the tariff as computed by the Central Commission shall be considered for computation of PoC charges. Further, the transmission charges received by the concerned STU on this account shall be adjusted in its approved Annual Revenue Requirement.

33. Further Clause 2.1.3 of Annexure-I of the Sharing Regulations, 2010, provides as under:

.....



“Certification of non-ISTS lines carrying inter-State power, which were not approved by the RPCs on the date of notification of the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2009, shall be done on the basis of load flow studies. For this purpose, STU shall put up proposal to the respective RPC Secretariat for approval. RPC Secretariat, in consultation with RLDC, using WebNet Software would examine the proposal. The results of the load flow studies and participation factor indicating flow of Inter State power on these lines shall be used to compute the percentage of usage of these lines as inter State transmission. The software in the considered scenario will give percentage of usage of these lines by home State and other than home State. For testing the usage, tariff of similar ISTS line may be used. The tariff of the line will also be allocated by software to the home State and other than home State. Based on percentage usage of ISTS in base case, RPC will approve whether the particular State line is being used as ISTS or not. Concerned STU will submit asset-wise tariff. If asset wise tariff is not available, STU will file petition before the Commission for approval of tariff of such lines. The tariff in respect of these lines shall be computed based on Approved ARR and it shall be allocated to lines of different voltage levels and configurations on the basis of methodology which is being done for ISTS lines.”

As per the above, certification of non-ISTS lines carrying inter-State power shall be carried out by the RPC Secretariat based on the proposal put up by STU. The RPC Secretariat, in consultation with RLDC and based on the load flow study using WebNet Software shall examine the percentage of usage of non-ISTS lines by home State and other than home State and, accordingly, issue Certification for non-ISTS lines carrying inter-State power.

34. We observe that SRPC has issued a certification of non-ISTS lines carrying inter-State power on 19.06.2017 for the year FY 2017-18 only and not for the year prior to 2017-18. However, the Petitioner approached SRPC for issuance of certification for non-ISTS lines carrying inter-State power for the period prior to 2017-2018, which was deliberated at the 36th meeting of SRPC held on 12.07.2019. The relevant extract of the Minutes of the 36th meeting of SRPC held on 12.07.2019 is as under:

“Request of APSLDC

APSLDC vide letter dated 25.04.2019 had requested SRPC certification for non-ISTS lines carrying interstate power having more than 50 % utilization during the financial years 2014-15, 2015-16 and 2016-17 for filing petition before Honorable CERC/APERC.

SRPC vide letter dated 13.05.2019 (Annexure-XLIX) had informed that the certification could be processed only for the subsequent period from the date of adoption of procedure by SRPC.

TCC deliberation:

- *APTRANSCO had requested for certification for previous years with that they would approach CERC*

- SRPC Secretariat had informed that the certification could be processed only for the subsequent period from the date of adoption of procedure by SRPC. POC rates could not be revised.
- SRPC Secretariat was suggested to look into possibility of certifying for previous period. STUs would approach CERC and as per CERC directive future course of action will be taken.
- POSOCO was requested to provide details to SRPC secretariat. NLDC stated that they would examine and revert back.

SRPC noted the above.”

As per the above, SRPC, vide letter dated 13.5.2019, informed that certification could be carried out only for the period subsequent to the date when the procedure for certification was adopted by SRPC and that POC rates could not be revised. However, TCC suggested that the SRPC Secretariat look into the possibility of certifying for previous periods, and POSOCO was also requested to provide details to the SRPC Secretariat.

As per the deliberation in the 36th meeting of SRPC held on 12.07.2019, SRPC on 23.01.2020 has issued certification for non-ISTS lines for the years 2015-16 & 2016-17, for which Petitioner has filed the instant Petition.

35. The relevant extract of the SRPC certification letter dated 23.01.2020 for FY 2015-16, 2016-17, and the letter dated 30.04.2020 for FY 2020-21 are as under:

Letter dated 23.01.2020

“Sub: Certification on Non-ISTS Lines carrying interstate power for the period 2014-15, 2015-16 and 2016-17, which were having more than 50% utilization for interstate power transmission during the years 2013-14, 2014-15 and 2016-17 respectively – reg.

.....
.....

In compliance with the regulations, the lines as listed in the respective Annexures are certified as lines carrying interstate power, in consultation with SRLDC:

- (i) For the year 2014-15, no non-ISTS lines have qualified for certification. The data used for the study is taken from Quarter-1 to Quarter-4 of 2013-14, which is considered for POC computation.
- (ii) For the year 2015-16, 10 non ISTS lines, given at Annexure I hereto. The data used for the study is taken from Quarter-1 to Quarter-4 of 2014-15 which is considered for POC computation.
- (iii) For the year 2016-17, 17 non ISTS lines, given at Annexure II hereto. The data used for the study is taken from Quarter-1 to Quarter- 4 of 2015-16, which is considered for POC computation.”

Letter dated 30.04.2020

“Sub: Certification on Non-ISTS Lines carrying interstate power for the period 2020-21, which were having more than 50% utilization for interstate power transmission during the year 2019-20 regarding



.....

In compliance with the regulations, 66 non-ISTS lines as listed in the Annexure are certified as lines carrying interstate power, in consultation with SRLDC. The data used for the study is taken from Quarter-I to Quarter-IV of 2019-20, which is considered for POC computation as discussed.”

As per the above, SRPC issued certification for 10 non-ISTS lines (out of which 8 lines pertain to AP) for the period 2015-16, 17 non-ISTS lines (out of which 14 lines pertain to AP) for 2016-17, and 66 non-ISTS lines (out of which 42 lines pertain to AP) for 2020-21, which were having more than 50% utilization for interstate power.

36. We observe from the POSOCO's submission that the following methodology has been followed for certification of the non-ISTS lines carrying inter-State Power, by the various RPCs:

The methodology followed for certification of Non-ISTS lines carrying Inter-State Power	
NRPC	A transmission line, 132 kV and above, may be construed as being used for inter-state purposes only if average utilization for inter-state purposes based on the studies for 2nd and 4th quarter comes out to be more than 50 %. Certification will be valid for 01 year and claims for certification will have to be submitted by end of December every year
ERPC	STU lines carrying ISTS power greater than 50% of the total power as per the WebNet software of the validated data for each quarter will be considered as non-ISTS line carrying ISTS power
WRPC	Once the state line is declared deemed ISTS based upon study, that line will retain the status of deemed ISTS for the rest of its life
SRPC	The base case of each quarter submitted by DIC to validation committee for PoC Computation of the previous financial year would be examined for certification in the current Year. If in each base case the usage of state-owned line is more by other states than the home state, then those lines would be certified as Non-ISTS lines carrying Inter State Power. The certification would be valid for a financial Year.
NERPC	Based on studies the following lines have been found to cater loads of other states in addition to the State owning the lines, so these lines have been approved by the TCC as ISTS line: 1. 220kV Misa – Killing D/C Line and 2. LILO of 400kV, D/C Pallatana - Bongaigoan at 400/220kV Killing S/S as ISTS Line and recommended for approval of NERPC.

As per the above, we observe that the methodology followed by RPCs is not similar and every RPC has its separate methodology for certification of Intra-State lines carrying Inter-State Power. Further, in the case of SRPC, SRPC was issuing certification of non-ISTS lines carrying Inter-State Power based on the power flow in all four quarters of the previous financial year, and such certification was valid for one year.

37. We have noted from the meter location submitted by the petitioner for (i) FY 2015-16 - total claimed lines are 9, out of which 7 lines are having boundary meters and remaining 2 lines are having Interface meters at both ends of the lines, (ii) FY 2016-17 - total claimed lines are 14, out of which 4 lines are having boundary meters and remaining 10 lines are having Interface meters at both ends of the lines and (iii) FY 2020-21 - total claimed lines are 42 out of which 26 lines are having boundary meters and remaining 16 lines are having Interface meters at both ends of the lines. Petitioner has submitted that for FY 2015-16, 2016-17, and 2020-21, 4, 4, and 6 claimed lines, respectively, have ABT meters, and 4, 10, and 36 claimed lines, respectively, have non-ABT meters. We observe that since there is availability of meters at both ends of the claimed lines, the Availability of the lines and their operation can be assessed.
38. We observe that 4 STU-owned lines out of 9 lines claimed for the year 2015-16, 4 lines out of 14 lines claimed for the year 2016-17, and 6 lines out of a total of 42 lines claimed for the year 2020-21 have ABT meters (sending data to SRLDC). However, the remaining lines have non-ABT meters under the control of APSLDC.
39. APERC, vide Order dated 07.07.2021 in Petition bearing O.P. No. 4212020 on 13.03.2020 and O.P. No. 4712020, directed as under:

"11. As shown in paras 8,9 and 10 above, the Commission has determined YTC of Rs.14.35 Cr, 85.53 Cr. and 295.32 Cr. for the FY 2015-16, FY 2016-17 and FY 2020-21 respectively for the APTRANSCO owned non-ISTS lines certified by the SRPC for inclusion in the PoC transmission charges.

12. On inclusion of the assets covered in the petitions in the PoC methodology by the implementing agency, in line with the sharing of inter-state transmission charges and losses regulations, 2010 and the amendments thereto and upon receiving of the transmission charges, the YTC recovered shall be adjusted against the ARR of the respective years of the petitioner."

As per the above, APERC has approved YTC of Rs.14.35 Cr, 85.53 Cr. and 295.32 Cr. for the FY 2015-16, FY 2016-17, and FY 2020-21, respectively, for the APTRANSCO-owned non-ISTS lines certified by the SRPC for inclusion of in the

PoC transmission charges. APERC has also directed that on the inclusion of such YTC in the PoC methodology by the implementing agency, the YTC recovered shall be adjusted against the ARR of the respective years of the petitioner.

40. We observe that though the above-claimed lines by the Petitioner are certified by the SRPC and carry more than 50% inter-State power at the same time, we also observe from the CTUIL submission that power flow on ISTS line as well STU lines varies significantly based on the load demand and power generation and further on some of the transmission lines, the power flow also changes in reverse direction. We also observe that the methodology followed by RPCs for certification of Intra-State lines carrying Inter-State Power is not identical; NRPC certification is based on the power flow during 2nd and 4th quarters and is valid for one year, SRPC certification is based on the power flow in all four quarters and is valid for one year and in case of WRPC once the line is certified as deemed ISTS based upon the study, it shall retain the status of deemed ISTS.
41. We are of the view that due to laws of physics and the meshed network of ISTS and STU lines, ISTS power may flow through the intra-State lines; similarly, intra-State power may also flow through the ISTS network. We also observe that there is a defined process of executing a line under ISTS under the Guidelines issued by MoP. Any line envisaged as an ISTS should be constructed as an ISTS line only, following due process. Hence, an intra-State line planned as an intra-State and executed as an intra-State should remain as an intra-State line unless it becomes inter-State due to the bifurcation of the State. However, a mechanism was included in the 2010 Sharing Regulations to include intra-state lines under the ISTS pool based on certification of respective RPC as quoted in paragraphs 32 and 33 of this Order. Such mechanism of certification has been discontinued in the 2020 Sharing Regulations, keeping in view these aspects.
42. Considering the certification carried out by SRPC under provisions of the Sharing Regulations 2010 and the determination of line-wise tariff by APERC, we are of the view that the specified lines, as per details in paragraph 24 of this Order, shall be considered under PoC under the Sharing Regulations 2010 for the period 2015-16, 2016-17 and 2020-21 (up to 30.10.2020). Accordingly, we direct the implementing agency/CTUIL to include the lines as per details in paragraph 24 under POC for the period 2015-16, 2016-17, and 2020-21 (up to 30.10.2020) and raise bills accordingly. Accordingly, the liabilities of DICs for arrears of transmission charges shall be recovered from the concerned DICs through Bills under Regulation 15(2)(b) of the 2020 Sharing Regulations. We observe that once the transmission

- charges of non-ISTS lines are included in the ISTS pool, the availability of such lines needs to be verified by the respective RPC, and recovery of tariff should be linked with its availability, for which necessary mechanisms may be put in place by RPC. We direct that YTC of such intra-State lines shall be included in the PoC Pool based on the availability of each of the lines to be certified by the SRPC in terms of the provisions under the CERC (Terms and Conditions of Tariff) Regulations, 2014 and CERC (Terms and Conditions of Tariff) Regulations, 2019, as applicable.
43. We further direct the Petitioner to approach the APERC for adjustment of such recovery against the ARR of the respective years of the Petitioners.
44. The issue is answered accordingly.

Issue No.2: Whether the petitioner is entitled to include transmission charges determined by the APERC for non-ISTS lines certified by SRPC to carry inter-state power for the period 01.11.2020 to 31.12.2020 in the PoC mechanism as per the Sharing Regulations, 2010?

45. Petitioner has claimed to include the non-ISTS lines under the PoC pool under the Sharing Regulations 2010 till 31.12.2020, citing Regulation 22 of the Sharing Regulation 2020, which provides that during the transition period between the former of 2010 and the new Sharing Regulations, the bills raised for the first two billing periods after 01.11.2020, i.e., till 31.12.2020, shall be as per the Sharing Regulations 2010. Petitioner further submitted that this has been further clarified by the Commission, vide Removal of Difficulties Order dated 14.02.2021.
46. We have considered the submission of the Petitioner and perused the facts on record.
47. Regulation 22 of the Sharing Regulations, 2020, and relevant extract of the Commission order dated 14.02.2021 vide Order No. L-1/250/2019/CERC are as under:

Regulations 22 and 26 of the Sharing Regulations, 2020

“22. Transition Period Notwithstanding anything to the contrary contained in these regulations, bills for the first two billing periods, after these regulations come into force, shall be based on the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010.”

.....

“26. Savings and Repeal.



- (1) Save as otherwise provided in these regulations, Central Electricity Regulatory Commission (Sharing of inter-state transmission charges and losses) Regulations, 2010, as amended from time to time, is hereby repealed.”

The relevant extract of the Commission order dated 14.02.2021

“

7. Regulation 9(1) of the 2020 Sharing Regulations provides for preparation of Base Case by the Implementing Agency corresponding to Peak Block for each billing period. As per Regulation 14(5)(b) of the 2020 Sharing Regulations, the Implementing Agency is required to notify transmission charges payable by DICs by 25th day of the month following the billing period. In terms of Regulation 14(5)(d) of the 2020 Sharing Regulations, the CTU is required to raise the first bill and the third bill for transmission charges on DICs in first week of the second month following the billing period. Since the 2020 Sharing Regulations became effective from 01.11.2020, the actual load and generation data for Peak Block for the month of November 2020 could be collected only in December 2020. Based on such data, NLDC would carry out calculations for transmission charges for each DIC. Consequently, bills for the billing period of November 2020 could be raised by CTU only in the billing month of January 2021. Similarly, bills for the billing period of December 2020 could be raised only in the billing month of February 2021.

8. Accordingly, under the regime of 2020 Sharing Regulations which came into effect from 1st November 2020, it was possible to raise the first monthly bill only in the month January 2021. Thus, but for the provision of the “Transition Period” provided in the 2020 Sharing Regulations, only 10 monthly bills would have been raised in the calendar year 2020. Therefore, exception has been taken in the 2020 Sharing Regulations that bill to be raised in the month of November 2020 and December 2020, where it was not possible to raise the bills on the basis of 2020 Sharing Regulations, would be on the basis of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 (hereinafter referred to as “the 2010 Sharing Regulations”). As envisaged in Regulation 22 of the 2020 Sharing Regulations, in the transition period of November 2020 and December 2020, bills would be raised as per the provisions of the 2010 Sharing Regulations.

9. Thus, the bills raised in the month of November 2020 and December 2020 shall be based on the notified PoC rates for October 2020 and November 2020 respectively, determined in accordance with the 2010 Sharing Regulations.

10. Accordingly, we direct that bills in the month of November 2020 and in the month of December 2020 would be raised as per the 2010 Sharing Regulations and thereafter, from January 2021 onwards as per the 2020 Sharing Regulations, as clarified in paragraph 8 and 9 above.

11. Thus, it can be seen that there will be 12 monthly bills raised for the 12 months in the calendar year 2020, implying thereby that only one bill (first bill) is raised for each month. Similarly, in the calendar year 2021 also, 12 monthly bills will be raised for the 12 months (i.e. in the billing month of January 2021, bill for the billing period of November 2020 will be raised and in the billing month of February 2021, bill for the billing period of December 2020 will be raised and so on). Thus, the DICs will be required to pay for only 12 monthly bills, one for each month in the calendar year 2020 as well as in 2021. All bills in the calendar year 2020 will be as per the 2010 Sharing Regulation and those in the calendar year 2021 will be as per the 2020 Sharing Regulations.”



As per the above, the Commission vide order dated 14.02.2021 vide Order No. **209** 1/250/2019/CERC has clarified that the bills raised in the months of November 2020 and December 2020 shall be based on the notified PoC rates for October 2020 and November 2020, respectively. The Commission clarified that bills raised “in the month of November 2020 and December 2020” shall be as per notified POC rates and not that Sharing Regulations 2010 was applicable for the period of November 2020 and December 2020. The Commission explained that bills for the billing period of November 2020 and December 2020 could be raised by CTU only in the billing month of January 2021 and February 2021, respectively, based on the computation carried out in December 2020 and January 2021 in terms of the Sharing Regulations 2020. Accordingly, the Commission directed that the bills raised in January 2021 onwards, which shall be for the billing period of November 2020 and onwards, shall be as per the Sharing Regulations 2020.

48. Considering the above, we don't agree with the Petitioner's claim that it is entitled to the inclusion of non-ISTS lines certified by SRPC for the period from 1.11.2020 to 31.12.2020 when the Sharing Regulations 2020 became effective. The Petitioner shall be entitled to include the non-ISTS Lines under POC for FY 2020-21 as directed in Issue No.1 for the period up to 31.10.2020. Therefore, we reject the petitioner's claim to include the YTC of the intra-State lines used for carrying ISTS-Power in the PoC Pool for the period from 01.11.2020 to 31.12.2020.
49. The issue is answered accordingly.
50. The Petition No. 25/MP/2022 is disposed of in terms of the above.

Sd/-
(P. K. Singh)
Member

Sd/-
(Arun Goyal)
Member

Sd/-
(Jishnu Barua)
Chairperson

TC



25/MP/2022

BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION,

NEW DELHI

PETITION NO. /MP/2021

IN THE MATTER OF:

PETITION UNDER SECTION 79 OF THE ELECTRICITY ACT, 2003 READ WITH REGULATION 111 AND 113 OF THE CERC (CONDUCT OF BUSINESS) REGULATIONS 1999, SEEKING ISSUANCE OF APPROPRIATE DIRECTIONS TO THE RESPONDENT TO INCLUDE THE YEARLY TRANSMISSION CHARGES AS DETERMINED BY LD. APERC *VIDE* ORDER DATED 07.07.2021 IN THE PoC TRANSMISSION CHARGES FOR THE BILLING PERIOD OF FY 2015-16, 2016-17 AND 2020-2021, AS PER THE CERC (SHARING OF INTER-STATE TRANSMISSION CHARGES AND LOSSES) REGULATIONS, 2010.

AND IN THE MATTER OF:

**Transmission Corporation of
Andhra Pradesh Ltd.**

... PETITIONER

VERSUS

Power System Operation Corporation Ltd.

.... RESPONDENT

INDEX

S.NO.	PARTICULARS	PAGE NO.
1.	Memo of Parties	1-2
2.	Petition under Section 79 Of The Electricity Act, 2003 read with Regulation 111 And 113 of the CERC (Conduct of Business) Regulations 1999, seeking issuance of appropriate directions to the Respondent to include the Yearly Transmission Charges as determined	3-17

TC

S. S.



	by Ld. APERC <i>vide</i> order dated 07.07.2021 in the PoC Transmission Charges for the Billing Period of FY 2015-16, 2016-17 and 2020-2021, as per the CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, alongwith Affidavit.	
3.	ANNEXURE A/1 True and correct copy of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010.	18-80
4.	ANNEXURE A/2 True and correct copy of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020.	81-101
5.	ANNEXURE A/3 True and correct copy of certification letter dated 23.01.2020 issued by SRPC.	102-106
6.	ANNEXURE A/4 True and correct copy of the Petition, O.P. No. 42/2020 filed by the Petitioner.	107-122
7.	ANNEXURE A/5 True and correct copy of certification letter dated 30.04.2020 issued by SRPC.	123-125
8.	ANNEXURE A/6 True and correct copy of the Petition, O.P. No. 47/2020 filed by the Petitioner before the Ld. APERC.	126-137
9.	ANNEXURE A/7 True and correct copy of Removal of Difficulties Order dated 14.02.2021 passed by this Hon'ble Commission.	138-143



	ANNEXURE A/8 True and correct copy of the order dated 21.02.2021 in No.L-1/44/2010-CERC passed by this Hon'ble Commission.	144-148
11.	ANNEXURE A/9 True and correct copy of the common order dated 07.07.2021 passed by the Ld. APERC.	149-226
12.	ANNEXURE A/10 True and correct copy of the letter dated 10.07.2021 sent by the Petitioner to the Respondent.	227-230
13.	ANNEXURE A/11 True and correct copy of the letter dated 15.07.2021 sent by the Respondent to the Petitioner.	231-232
14.	ANNEXURE A/12 True and correct copy of the letter dated 26.07.2021 sent by the Petitioner to the Respondent.	233-234
15.	Court Fees Form-I	235-237
16.	Vakalatnama with Board Resolution	238-240

THROUGH


SIDHANT KUMAR

ADVOCATE FOR THE PETITIONER

A-248, FIRST FLOOR, DEFENCE COLONY

NEW DELHI-110024

NEW DELHI

MOBILE: +919873047772

DATE OF FILING:12.10.2021

E-MAIL: sidhant@sidhantkumar.net


BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION,

NEW DELHI

PETITION NO. /MP/2021

IN THE MATTER OF:

PETITION UNDER SECTION 79 OF THE ELECTRICITY ACT, 2003 READ WITH REGULATION 111 AND 113 OF THE CERC (CONDUCT OF BUSINESS) REGULATIONS 1999, SEEKING ISSUANCE OF APPROPRIATE DIRECTIONS TO THE RESPONDENT TO INCLUDE THE YEARLY TRANSMISSION CHARGES AS DETERMINED BY LD. APERC *VIDE* ORDER DATED 07.07.2021 IN THE PoC TRANSMISSION CHARGES FOR THE BILLING PERIOD OF FY 2015-16, 2016-17 AND 2020-2021, AS PER THE CERC (SHARING OF INTER-STATE TRANSMISSION CHARGES AND LOSSES) REGULATIONS, 2010.

MEMO OF PARTIES

Transmission Corporation of Andhra Pradesh Ltd.

Through Authorised Representative
Vidyut Soudha, Gunadala,
Eluru Rd, Vijayawada,
Andhra Pradesh 520004.

... PETITIONER

VERSUS

Power System Operation Corporation Ltd.

Through Authorised Representative
1st Floor, Qutub Institutional Area,
Katwara Sarai, New Delhi – 110016.

.... RESPONDENT



THROUGH



SIDHANT KUMAR

ADVOCATE FOR THE PETITIONER
A-248, FIRST FLOOR, DEFENCE COLONY
NEW DELHI-110024

NEW DELHI
DATE OF FILING:12.10.2021

MOBILE: +919873047772
E-MAIL: sidhant@sidhantkumar.net



**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION,
NEW DELHI**

PETITION NO. /MP/2021

IN THE MATTER OF:

PETITION UNDER SECTION 79 OF THE ELECTRICITY ACT, 2003 READ WITH REGULATION 111 AND 113 OF THE CERC (CONDUCT OF BUSINESS) REGULATIONS 1999, SEEKING ISSUANCE OF APPROPRIATE DIRECTIONS TO THE RESPONDENT TO INCLUDE THE YEARLY TRANSMISSION CHARGES AS DETERMINED BY LD, APERC *VIDE* ORDER DATED 07.07.2021 IN THE PoC TRANSMISSION CHARGES FOR THE BILLING PERIOD OF FY 2015-16, 2016-17 AND 2020-2021, AS PER THE CERC (SHARING OF INTER-STATE TRANSMISSION CHARGES AND LOSSES) REGULATIONS, 2010.

AND IN THE MATTER OF:

Transmission Corporation of Andhra Pradesh Ltd.
Through Authorised Representative
Vidyut Soudha, Gunadala,
Eluru Rd, Vijayawada,
Andhra Pradesh 520004.

... PETITIONER

VERSUS

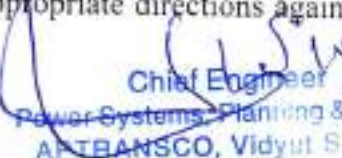
Power System Operation Corporation Ltd.
Through Authorised Representative
1st Floor, Qutub Institutional Area,
Katwara Sarai, New Delhi – 110016.

.... RESPONDENT

MOST RESPECTFULLY SHEWETH:

I. CONSPECTUS OF THE PETITION

1. That the present Petition under Section 79 of the Electricity Act, 2003 (the 'Act') read with Regulation 111 And 113 of the Central Electricity Regulatory Commission (Conduct Of Business) Regulations, 1999 ('Conduct of Business Regulations') seeks appropriate directions against


 Chief Engineer
 Power Systems Planning & Design
 APTRANSCO, Vidyut Soudha
 Vijayawada-520

the Respondent for the payment of Yearly Transmission Charges ('YTC') as determined by Ld. Andhra Pradesh Electricity Regulatory Commission ('APERC') for intra-state transmission lines ('**non-ISTS lines**') owned by the Petitioner, in the Point of Connection ('**PoC**') transmission charges. The Petitioner seeks inclusion of such YTC charges in the PoC mechanism for the period prior to January 2021, as per the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 ('**Sharing Regulations 2010**') read with Regulation 22 of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 ('**Sharing Regulations 2020**')

2. That by letter dated 10.07.2021, the Petitioner requested the Respondent to include YTC charges determined by Ld. APERC for the period 2015-16, 2016-17 and 2020-2021 in the PoC mechanism, as per the Sharing Regulations 2010. However, by letter dated 15.07.2020, the Respondent has refused to include YTC charges in the PoC mechanism. Respondent contends that the Petitioner's claim must be in accordance with the Sharing Regulations 2020 which requires tariff determination by this Hon'ble Commission.
3. That principally, the Petitioner's claim of recovering transmission charges pertain to two periods (i) period prior to 01.11.2020 *i.e.* the effective date of Sharing Regulations 2020; (ii) period after 01.11.2020 upto 31.12.2020. Therefore, at the outset, it is *ex-facie* clear and undisputed that the claim for the period prior to 01.11.2020, shall be governed by the Sharing Regulations 2010.
4. That the basis of the Respondent's refusal is erroneous and contrary to the express stipulation contained in Regulation 22 of the Sharing Regulation 2020. Regulation 22 is reproduced below:

"22. Transition Period

Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 004

Notwithstanding anything to the contrary contained in these regulations, bills for the first two billing periods, after these regulations come into force, shall be based on the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010."

5. That this understanding is further fortified by the Removal of Difficulties Order dated 14.02.2021 issued by this Hon'ble Commission wherein it is clearly stated that YTC relatable until November and December 2020 shall be governed by the Sharing Regulations 2010. Paragraph 7 of the aforesaid Order is relevant in this behalf and is reproduced below;

"7. The PoC rates in the instant Order is for the period from October 2020 to November 2020. However, we observe that CERC (Sharing of inter-state transmission charges and losses) Regulations 2020 have become effective from 1.11.2020 and accordingly the transmission charges for period from 1.11.2020 shall be in accordance with CERC (Sharing of inter-state transmission charges and losses) Regulations 2020. Regulation 22 of the CERC (Sharing of inter-state transmission charges and losses) Regulations 2020 provides that in the transition period of November 2020 and December 2020, bills would be raised as per the provisions of the 2010 Sharing Regulations. Thus, the bills raised in the month of November 2020 and December 2020 shall be based on the notified PoC rates for October 2020 and November 2020"

6. That Regulation 22 of the Sharing Regulation 2020 provides that during the transition period between the former of 2010 and the new Sharing Regulations, the bills raised for the first two billing periods after the 01.11.2020 i.e. till 31.12.2020, shall be as per the Sharing Regulations 2010. This has been further clarified by this Hon'ble Commission *vide* Removal of Difficulties Order dated 14.02.2021 passed under Regulation 28 of the Sharing Regulations 2020. Therefore, it is clear that the period from

Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 004

01.11.2020 till 31.12.2020, the claim for transmission charges shall be governed by the Sharing Regulations 2020.

7. That it is manifest from the clear wordings of Regulation 22 that any claim falling in the billing period prior to January 2021 shall be in accordance with the Sharing Regulations 2010.
8. That under the Sharing Regulations 2010 as amended *vide* CERC (Sharing of Inter State Transmission Charges and Losses) (Third Amendment) Regulations 2015, the YTC charges are to be approved by the appropriate State Commission as per Regulation 2(1)(y) read with 7(1)(n) thereof. The YTC charges sought to be recovered by the Petitioner have been duly determined and approved by the Ld. APERC *vide* order dated 07.07.2021. Therefore, refusal to include such YTC charges in the PoC mechanism by the Respondent is *ex-facie* erroneous.
9. That despite duly following the procedure prescribed under the Sharing Regulations 2010, read with Regulation 22 of the Sharing Regulations 2020, the Respondent has arbitrarily refused to include the YTC charges in the PoC mechanism. Consequently, the Petitioner has been deprived of its entitlement to recover YTC charges due to it for carrying inter-state power through the non-ISTS lines. This has gravely prejudiced the Petitioner.
10. That such refusal by the Respondent has resulted in a situation where the Petitioner is being saddled with the liability of incurring the transmission cost for power utilised by State Utilities outside of Andhra Pradesh. This is evidently contrary to the very object and purpose of the Sharing Regulations, 2020. Hence, the Petitioner has been constrained to move this Hon'ble Commission, seeking appropriate directions against the Respondent.

Chief Engineer
Power Systems Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 004

II. DESCRIPTION OF THE PARTIES

11. That the Petitioner is the State Transmission Utility ('STU') of Andhra Pradesh performing various functions under Sections 39 and 40 of the Act. By virtue of the license granted to the Petitioner by the Andhra Pradesh Electricity Regulatory Commission ('APERC'), it operates and controls the transmission of power within the State of Andhra Pradesh.
12. That the Respondent is the National Load Despatch Centre established by the Central Government under Section 26 of the Act read with the National Load Despatch Centre Rules 2005, to carry out optimum scheduling and despatch of electricity among the Regional Load Despatch Centres and such other functions. The Respondent is the Implementing Agency as defined under Regulation 2(1)(m) of the Sharing Regulations, 2020.

III. FACTUAL MATRIX

13. That this Hon'ble Commission has the authority to regulate inter-state transmission of electricity under Section 79(1) (c) of the Act and to adjudicate disputes in relation to such transmission under Section 79(1) (f) of the Act. The present Petition seeks requisite directions to the Respondent to include the YTC charges as determined by Ld. APERC for non-ISTS lines carrying inter-state power in the PoC transmission charges, as per the Sharing Regulations 2020. This inclusion in the PoC mechanism by the Respondent is a necessary pre-requisite for the Petitioner to get the benefit of its legal dues and entitlement under the Sharing Regulations 2010.
14. That the Petitioner herein owns and controls various non-ISTS lines in the State of Andhra Pradesh. These non-ISTS lines are frequently used for transmission of inter-state power, which is utilised outside Andhra Pradesh. The charges for such inter-state transmission using non-ISTS lines have

Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Vijay Soudha
Vijayawada-520 004

been duly recovered by the Petitioner under the relevant regulations as notified by this Commission from time to time.

15. That principally, the present Petition concerns inclusion of YTC charges in the PoC mechanism for two billing periods (i) period prior to 01.11.2020 i.e. the effective date of Sharing Regulations 2020; (ii) period after 01.11.2020 upto 31.12.2020.
16. That prior to notification of the Sharing Regulations 2020, the Sharing Regulations 2010 governed the sharing of transmission losses since 01.01.2011. The procedure for recovering inter-state transmission charges for non-ISTS lines under the Sharing Regulations 2010 is broadly as follows:
 - a. Certification of non-ISTS lines as Natural/ Deemed Inter-State Transmission System by the appropriate Regional Power Committee ('RPC');
 - b. Determination of YTC charges/ tariff by the appropriate State Commission for such non-ISTS lines;
 - c. Inclusion of such determined YTC charges/ tariff in the PoC mechanism formulated by the Implementing Agency i.e. the Respondent;
 - d. Recovery of YTC charges by the transmission licensee.

True and correct copy of the Sharing Regulations 2010 and the Sharing Regulations 2020 are annexed herewith as ANNEXURE A/1 and ANNEXURE A/2 respectively.

17. That following the said procedure under the then prevailing Sharing Regulations 2010, the Petitioner sought to recover the YTC charges for the period 2015-16, 2016-17 and 2020-2021 by availing necessary certification

Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Ndyut Soudha
Vijayawada-520 004



from SRPC and consequent tariff determination/ approval of YTC charges from the Ld. APERC.

18. That by letter dated 23.01.2020, SRPC certified 9 non-ISTS lines owned by the Petitioner for the period 2015-2016 and 14 non-ISTS lines for the period 2016-2017, carrying inter-state power in excess of the 50% benchmark required the Sharing Regulations 2010. Based on such certification, a Petition bearing O.P. No. 42/2020 was filed before the Ld. APERC on 13.03.2020 seeking determination of YTC under the Sharing Regulations 2010.

True and correct copy of certification letter dated 23.01.2020 issued by SRPC is annexed herewith as ANNEXURE A/3.

True and correct copy of the Petition, O.P. No. 42/2020 filed by the Petitioner before the Ld. APERC is annexed herewith as ANNEXURE A/4.

19. That similarly, by letter dated 30.04.2020, SRPC certified 42 non-ISTS lines owned by the Petitioner for the period 2020-21, carrying inter-state power in excess of the 50% benchmark required the Sharing Regulations 2010. Based on such certification, a Petition bearing O.P. No. 47/2020 was filed before the Ld. APERC on 05.10.2020 seeking determination of YTC under the Sharing Regulations 2010.

True and correct copy of certification letter dated 30.04.2020 issued by SRPC is annexed herewith as ANNEXURE A/5.

True and correct copy of the Petition, O.P. No. 47/2020 filed by the Petitioner before the Ld. APERC is annexed herewith as ANNEXURE A/6.

20. That while the adjudication of the aforesaid Petitions were pending before the Ld. APERC, the Sharing Regulations 2020 came into effect on 01.11.2020.


Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 004

21. That Regulation 2(1)(e) defines the billing period under the Sharing Regulations 2020 as the month for which bills are raised in a billing month by the Central Transmission Utility.
22. That Regulation 22 of the Sharing Regulations 2020 provides that during the transition period between the former Sharing Regulations 2010 and the new Sharing Regulations 2020, the bills raised for the first two billing periods after the 01.11.2020 *i.e.* till 31.12.2020, shall be as per the procedure under the Sharing Regulations 2010. Regulation 22 is extracted hereinbelow:

"22. Transition Period

Notwithstanding anything to the contrary contained in these regulations, bills for the first two billing periods, after these regulations come into force, shall be based on the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010."

23. That this position has been further clarified by this Hon'ble Commission *vide* Removal of Difficulties Order dated 14.02.2021 passed under Regulation 28 of the Sharing Regulations 2020 and *vide* order dated 21.02.2021 in No.L-1/44/2010-CERC. Therefore, even for the period from 01.11.2020 till 31.12.2020, the claim for transmission charges shall be governed by the Sharing Regulations 2020.

True and correct copy of Removal of Difficulties Order dated 14.02.2021 passed by this Hon'ble Commission is annexed herewith as ANNEXURE A/7

True and correct copy of the order dated 21.02.2021 in No.L-1/44/2010-CERC passed by this Hon'ble Commission is annexed herewith as ANNEXURE A/8.

Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 004

24. That on a meaningful reading of Regulation 22, it becomes clear that any claim falling in the billing period prior to January 2021 shall squarely fall within the scope of the Sharing Regulations 2010.

25. That by a common order 07.07.2021 in the aforesaid Tariff Petitions, the Ld. APERC has determined the YTC charges for FY 2015-16, 2016-17 and 2020-2021 to the tune of Rs. 295.32 Crores in accordance with Sharing Regulations 2010. The Ld. APERC also directed such charges to be included the PoC mechanism formulated by the Respondent, in accordance with the Sharing Regulations 2010.

True and correct copy of the common order dated 07.07.2021 passed by the Ld. APERC is annexed herewith as ANNEXURE A/9.

26. That these YTC charges undisputedly pertain to billing periods prior to January 2021. Therefore, as per Regulation 22 of the Sharing Regulations 2020, recovery of such YTC charges is required to be in accordance with Sharing Regulations 2010.

27. That accordingly, the Petitioner by letter dated 10.07.2021 intimated the Respondent that the YTC charges for the period 2015-16, 2016-17 and 2020-2021 were duly determined Ld. APERC, on the basis on certification provided by SRPC. Further, the Petitioner sought inclusion of such YTC charges in the PoC transmission charges as computed by the Respondent, under the Sharing Regulations 2010.

True and correct copy of the letter dated 10.07.2021 sent by the Petitioner to the Respondent is annexed herewith as ANNEXURE A/10

28. That by a response letter dated 15.07.2020, the Respondent has out-rightly refused to include YTC charges in the PoC mechanism. The Respondent has refused the inclusion of PoC charges, on the erroneous and faulty assumption that such YTC charges are claimed under the Sharing

Chief Engineer,
Power Systems, Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 004

Regulations 2020. In the said response letter, the Respondent has stated that in absence of the mandatory approval of YTC charges by this Hon'ble Commission, the Petitioner is not entitled to recover such YTC charges under the Sharing Regulations 2020.

True and correct copy of the letter dated 15.07.2021 sent by the Respondent to the Petitioner is annexed herewith as ANNEXURE A/11.

29. That such refusal is entirely contrary to Sharing Regulations, 2020 particularly Regulation 22 thereof, as well as the Removal of Difficulties Order dated 14.02.2021. The Respondent has erred in placing reliance upon the Sharing Regulations 2020 and the procedure prescribed therein to refuse the recovery of the Petitioner's YTC charges. The Respondent has failed to appreciate that (i) the billing period for the said YTC charges relates to the period prior to January 2021, and (ii) the YTC charges are to be included in the PoC transmission charges computed by the Respondent, as per the Sharing Regulations 2010.
30. That the Respondent has erred in refusing the inclusion of the Petitioner's YTC charges on the basis that the same were not approved by this Hon'ble Commission. Notably, approval of YTC charges/tariff by this Hon'ble Commission is a mandatory requirement under the Sharing Regulations 2020 not under the applicable Sharing Regulations 2010. Accordingly, refusal of the Respondent on this basis is misconceived and flawed.
31. That this position is also borne from the Statement of Reasons dated 10.08.2020 in respect of the Sharing Regulations, 2020. The Statement of Reasons provide that tariff approval of this Hon'ble Commission for YTC charges is only required is recovery of transmission charges is sought under the Sharing Regulations 2020. For all other cases, where recovery of transmission charges is not sought under the Sharing Regulations 2020, the approval of tariff shall continue to be regulated by the respective State

Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 004

Commissions. The relevant Para 39.3.2 of the Statement of Reasons dated 10.08.2020 for the Sharing Regulations, 2020 is reproduced herein below:

“39.3.2. Approval of tariff for intra-State system is done by SERCs. However, in circumstances where an intra-State system is used for inter-State flow of power, its tariff is required to be approved by CERC, if such system is to be considered for recovery of transmission charges under the 2020 Sharing Regulations.”

32. That despite quoting the aforesaid extract from the Statement of Reasons in its response letter, the Respondent has failed to appreciate that approval of this Hon'ble Commission is only required for YTC charges sought to be recovered under Sharing Regulations 2020.

33. That by letter dated 26.07.2021, the Respondent was made aware of the Removal of Difficulties order dated 14.02.2021 passed by this Hon'ble Commission by exercising power under Regulation 28 of the Sharing Regulations, 2020. By the said letter, the Petitioner requested the Respondent to reconsider its refusal in light of the Removal of Difficulties order. However, the Petitioner has not received any response to the said letter till date.

True and correct copy of the letter dated 26.07.2021 sent by the Petitioner to the Respondent is annexed herewith as ANNEXURE A/12.

34. That the Petitioner duly complied with the procedure under for recovering YTC charges under the Sharing Regulations 2010 including the necessary certification from SPRC, as well as approval of YTC charges/ tariff by the Ld. APERC. However, despite the same, the Respondent has arbitrarily refused to include the YTC charges in the PoC mechanism. Consequently, the Petitioner has been deprived of its entitlement to recover YTC charges due to it for carrying inter-state power through the non-ISTS lines. This has gravely prejudiced the Petitioner.

Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 011

35. That if appropriate directions as sought in the present Petition are not passed against the Respondent herein, the intent behind providing a recovery mechanism for transmission charges under the Sharing Regulations 2010 as well as 2020 will be defeated. Furthermore, if the Respondent is allowed to refuse inclusion of the *bonafide* YTC charges under the Sharing regulations 2010, the intent behind the transition period under Regulation 22 and the Removal of Difficulties order dated 14.02.2021, will stand defeated, thereby rendering them otiose.

IV. JURISDICTION

36. It is submitted that this Hon'ble Commission has jurisdiction and power under Section 79(1)(c) read with Section 79(1)(f) to regulate inter-state transmission of electricity and adjudicate upon disputes arising therefrom. Furthermore, this Hon'ble Commission has power under Regulation 111 And 113 of the Conduct of Business Regulations, to pass directions and orders to meet the ends of justice and to deal with matters for which no Regulations have been framed.
37. It is submitted that court fee of Rs. 3,00,000/- has been duly paid by the Petitioner as per Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012.
38. It is submitted that the present Petition is *bonafide* and in the interest of justice.

PRAYER

In light of the aforementioned facts and circumstances, it is most humbly prayed that this Hon'ble Commission may be pleased to:

Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 004

- a) Direct the Respondent to include the YTC charges as determined by Ld. APERC vide order dated 07.07.2021 for non-ISTS lines carrying inter-state power in the PoC transmission charges for the billing period of FY 2015-16 FY 2016-17, and FY 2020-21, in accordance with the Sharing Regulations 2010;
- b) Pass any other or further order(s) as this Hon'ble Commission may deem fit and proper in the interest of justice.

THROUGH


PETITIONER:
Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 004



SIDHANT KUMAR

ADVOCATE FOR THE PETITIONER
A-248, FIRST FLOOR, DEFENCE COLONY
NEW DELHI-110024

MOBILE: +919873047772

E-MAIL: sidhant@sidhantkumar.net

NEW DELHI

DATE OF FILING:12.10.2021



**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION,
NEW DELHI
PETITION NO. /MP/2021**

IN THE MATTER OF:

Transmission Corporation of Andhra Pradesh Ltd. ... PETITIONER

VERSUS

Power System Operation Corporation Ltd. RESPONDENT

AFFIDAVIT

I, Sri. Podium Suryachandram, S/o Chellayya, aged about 54 years, presently working as Chief Engineer/ Power Systems, Planning & Designs with the Petitioner, APTRANSCO having office at Vidyut Soudha, Gunadala, Vijayawada, Andhra Pradesh, do hereby solemnly affirm and declare as under:

1. That I am the authorized representative on behalf of the Petitioner, in the captioned matter and as such I am fully conversant with the facts and circumstances of the captioned matter, hence competent to swear the present affidavit.
2. That I have read and understood the contents of the captioned Petition and say that the facts stated therein are true and correct to the best of my knowledge based on the records maintained by the Petitioner during the course of its official activities and as per the documents available in public domain. Legal submissions are true as per counsel's advice.



3. That annexures filed along with the present Petition are the true copies of their respective originals.

[Signature]
DEPONENT
 Chief Engineer
 Power Systems, Planning & Design
 APTRANSCO, Vidyut Soudha
 Vijayawada-520 004

VERIFICATION

I, the deponent above named do hereby verify on this the 8th day of October, 2021 that the contents of this affidavit are true and correct to my personal knowledge. No part of this affidavit is false and nothing material has been concealed therefrom.



[Signature]
 08/10/2021
Alla Ratneswara Rao
 B.Com., LL.B.
 ADVOCATE-NOTARY
 Appointed by Central Govt.
 VIJAYAWADA, Krishna Dt. A.P.

[Signature]
DEPONENT
 Chief Engineer
 Power Systems, Planning & Design
 APTRANSCO, Vidyut Soudha
 Vijayawada-520 004

[Signature]

ANNEXURE A/1

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

No.L-1/44/2010-CERC

Dated: 15th June 2010

NOTIFICATION

In exercise of the powers conferred under section 178 read with Part V of the Electricity Act, 2003 (36 of 2003), and all other powers enabling it in this behalf, and after previous publication, the Central Electricity Regulatory Commission hereby makes the following regulations:

CHAPTER 1: PRELIMINARY

1. Short title, extent and commencement.

- (1) These regulations may be called the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010.
- (2) These regulations shall apply to all Designated ISTS Customers, Inter State Transmission Licensees, NLDC, RLDC, SLDCs, and RPCs.
- (3) These regulations shall come into force from 1.1.2011, and unless reviewed earlier or extended by the Commission, shall remain in force for a period of 5 years from the date of commencement specified above.

2. Definitions.

- (1) In these Regulations, unless the context otherwise requires,:-
 - (a) **Act** means the Electricity Act, 2003 (36 of 2003);
 - (b) **Application Period** means the period of application of the charges determined as per these regulations and shall ordinarily be 12 (twelve) months coinciding with the Financial Year, which shall be further divided into multiple blocks of months representing the seasonal conditions and peak and other than peak conditions;



- (c) **Approved Injection** means the injection in MW vetted by Implementing Agency (IA) for the Designated ISTS Customer for each representative block of months, peak and other than peak scenarios at the ex-bus of the generator or any other injection point of the Designated ISTS Customer into the ISTS, and determined based on the generation data submitted by the Designated ISTS Customers incorporating total injection into the grid, considering the long term and medium term contracts;
- (d) **Approved Additional Medium Term Injection** means the additional injection, as per the Medium Term Open Access approved by CTU after submission of data to NLDC by the Designated ISTS Customer over and above the Approved Injection for the Designated ISTS Customer for each representative block of months, peak and off-peak scenarios at the ex-bus of the generator or any other injection point of the Designated ISTS Customer into the ISTS;
- (e) **Approved Short Term Injection** means the injection, as per the Short Term Open Access approved by RLDC / NLDC such injection including all injections cleared on the power exchange;
- (f) **Approved Withdrawal** means the simultaneous withdrawal in MW vetted by Implementing Agency for any Designated ISTS Customer in a control area aggregated from all nodes of ISTS to which Designated ISTS Customer is connected for each representative block of months, peak and other than peak scenarios at the interface point with ISTS, and where the Approved Withdrawal shall be determined based on the demand data submitted by the Designated ISTS Customers incorporating long term and medium term transactions;
- (g) **Approved Additional Medium Term Withdrawal** means additional withdrawal, as per the Medium Term Open Access approved by CTU after submission of data to NLDC by the Designated ISTS Customer over and above Approved Withdrawal for Designated ISTS Customer s aggregated from all nodes of ISTS for each representative block of months, peak and other than peak scenarios at the interface point with the ISTS;
- (h) **Approved Short Term Withdrawal** means withdrawal, as per the Short Term Open Access approved by RLDC/NLDC and where such Withdrawal includes all withdrawals cleared on the power exchange;



- (i) **Basic Network** shall mean the power system of the country at voltage levels 132 kV and above and 110 kV where generators are connected, HVDC transmission network and all Generator and loads connected to it;
- (j) **Bulk Power Transmission Agreement (BPTA)** means the agreements between the ISTS licensees and the Designated ISTS Customers of the ISTS under the pre-existing arrangements for ISTS development and operations;
- (k) **Deemed Inter State Transmission System (Deemed ISTS)** means such transmission system which has regulatory approval of the Commission as being used for interstate transmission of power and qualified as ISTS for the purpose of these Regulations unless otherwise specified;
- (l) **Designated ISTS Customers** ('DIC's) means the users of any segments/elements of the ISTS and shall include all generators, state transmission utilities, SEBs or load serving entities directly connected to the ISTS including Bulk Consumer and any other entity/person;
- (m) **Hybrid Methodology** shall mean the hybrid of the Marginal Participation Method and the Average Participation method detailed in Chapter-3 of these regulations and in Annexure - I hereto.
- (n) **Implementing Agency (IA)** shall mean the agency designated by the Commission to undertake the estimation of allocation of transmission charges and transmission losses at various nodes/zones for the Application Period along with other functions as per [Chapter-4, Chapter-5, Chapter-6, Chapter-7 and Chapter-8] of these regulations;
- (o) **Loss Allocation Factor** of a bus measures the losses attributed to that node and shall be computed as explained in the Annexure - I of these regulations.
- (p) **Monthly Transmission Charge** means the transmission charges (inclusive of incentives) payable for each calendar month as given in the Terms and Conditions of Tariff Regulations in force;
- (q) **Node** shall mean a sub-station or a switchyard of a generator;
- (r) **Point of Connection (PoC) Charging Method** shall mean the methodology of computation of sharing of ISTS charges and losses amongst Designated ISTS Customers, which depends on the location of the node in the grid and is calculated in accordance with Regulation 7(1(q)) and 7(1(s)) of chapter 4 of these regulations;
- (s) **Point of Connection (PoC) transmission charges** are the nodal / zonal charges determined using the Point of Connection charging method.



- (t) **Participation Factor** of a node in any transmission line means the percentage usage of that line by a node, whether a generator node or a demand node as explained in Annexure - I of these regulations.
- (u) **Transmission Service Agreement (TSA)** shall mean the agreement to be entered into between the Designated ISTS Customer(s) and ISTS Licensee(s) in terms of Chapter 6;
- (v) **Uniform Charge** means the charge determined by dividing the Yearly Transmission Charge of the ISTS Licensees by the sum of the Approved Injection and Approved Withdrawal from the grid alternatively referred to as the postage stamp charge.
- (w) **Uniform Charge Sharing Mechanism** means the mechanism for determination of Uniform Charges;
- (x) **Uniform Loss** means the energy loss and shall be accounted for by providing a differential between schedules at the points of supply, inter-utility transfer and drawal of electricity and shall be computed as the percentage of energy lost in the grid.

Explanation - Uniform shall mean that such percentage loss is applied uniformly to all Designated ISTS Customers in a region irrespective of their location in the grid.

- (y) **Yearly Transmission Charge (YTC)** means the Annual Transmission Charges for existing lines determined by the Commission in accordance with the Terms and Conditions of Tariff Regulations or adopted in the case of tariff based competitive bidding in accordance with the Transmission License Regulations as specified by the Commission and as in force from time to time and for new lines based on benchmarked capital costs.
- (2) Words and expressions used in these Regulations and not defined herein but defined in the Act or regulations made by the Commission, shall have the meanings assigned to them respectively in the Act, and regulations made by the Commission from time to time.



CHAPTER 2: SCOPE OF THE REGULATIONS

3. Yearly Transmission Charges, revenue requirement on account of foreign exchange rate variation, changes in interest rates etc. as approved by the Commission and Losses shall be shared amongst the following categories of Designated ISTS Customers who use the ISTS:-
 - (a) Power Stations / Generating Stations that are regional entities as defined in the Indian Electricity Grid Code (IEGC);
 - (b) State Electricity Boards / State Transmission Utilities connected with ISTS (on behalf of distribution companies, generators and other bulk customers connected to the transmission system owned by the SEB/STU/intrastate transmission licensee) ;
 - (c) Any bulk consumer directly connected with the ISTS, and
 - (d) Any designated entity representing a physically connected entity as per clauses (a), (b) and (c) above.

CHAPTER 3: PRINCIPLES AND MECHANISM FOR SHARING OF ISTS CHARGES AND LOSSES

4. **Principles for sharing ISTS charges and losses.**
 - (1) Based on the Yearly Transmission Charges of ISTS Transmission Licensees and transmission losses in the ISTS network, the Implementing Agency shall compute the Point of Connection charges and Loss Allocation Factors for all DICs:-
 - (a) Using load-flow based methods; and
 - (b) based on the Point of Connection Charging method.
 - (2) A detailed explanation of the Hybrid methodology to be applied for sharing the ISTS charges and losses amongst the Designated ISTS Customers is set out in Annexure - I to these regulations, which may be reviewed by the Commission from time to time either upon an application by any interested party or otherwise .
5. **Mechanism to share ISTS transmission charges.**
 - (1) The sharing of ISTS transmission charges between Designated ISTS Customers shall be computed for an Application Period and shall be determined in advance and shall be subject to periodic true-up as specified subsequently in these regulations;



- (2) The sharing of ISTS transmission charges shall be based on the technical and commercial information provided by various Designated ISTS Customers, ISTS Transmission Licensees, and any other relevant entity, including the NLDC, RLDCs and SLDCs to the Implementing Agency.

Provided that in the event of such information not being available within the stipulated timeframe or to the level of detail required, the Commission may authorise the Implementing Agency to obtain such information from alternative sources as per the procedure as may be approved by the Commission in this behalf.

- (3) The mechanism for sharing of ISTS charges shall ensure that:-
- (a) The Yearly Transmission Charge of the ISTS Licensees are fully and exactly recovered; and
 - (b) Any adjustment towards Yearly Transmission Charge on account of change in commissioning schedule of elements of the power system and change in factors constituting the transmission charge, approved by the Commission, e.g., FERV, Changes in interest rates shall be fully and exactly recovered etc., as specified subsequently in these regulations.
- (4) The Point of Connection transmission charges shall be computed in terms of Rupees per MegaWatt per month. The amount to be recovered from any Designated ISTS Customer towards ISTS charges shall be computed on a monthly basis as per these regulations. The Point of Connection transmission charges for short term open access transactions shall be in terms of Rupees per MegaWatt per hour and shall be applicable for the duration of short term open access approved by the RLDC/NLDC.
- (5) The Implementing Agency may, after seeking approval of the Commission, conduct studies from time to time to refine the mechanism for sharing of transmission charges and losses as detailed in Annexure – I to these Regulations.

6. Mechanism of sharing of ISTS losses.

- (1) The schedule of electricity of Designated ISTS Customers shall be adjusted to account for energy losses in the transmission system as estimated by the Regional Load Despatch Centre and the State Load Despatch Centre concerned. These shall be applied in accordance with the detailed procedure to be prepared by NLDC within 30 days of the notification of these regulations. The losses shall be apportioned based on the loss allocation factors determined using the Hybrid methodology.



- (2) The sharing of ISTS losses shall be computed based on the information provided by various Designated ISTS Customers, ISTS Licensees, and any other relevant entity, including the NLDC, RLDCs and SLDCs and submitted to the Implementing Agency.

Provided that in the event of such information not being available within the stipulated timeframe or to the level of detail required, the Commission may authorise the Implementing Agency to obtain such information from alternate sources as may be approved for use by the Commission.

- (3) The applicable transmission losses for the ISTS shall be declared in advance and shall not be revised retrospectively.
- (4) The Implementing Agency may, after seeking approval of the Commission, conduct studies from time to time to refine the ISTS loss allocation methods.

CHAPTER 4: PROCESSES FOR SHARING OF TRANSMISSION CHARGES AND LOSSES

7. Process to determine Point of Connection Transmission Charges and Losses allocations.

- (1) The process to determine the allocation of transmission charges and losses shall be as under, and as per timelines set out subsequently in Chapter 7 of these regulations:
- (a) The Implementing Agency shall collect the Basic Network data pertaining to the network elements and the generation and load at the various network nodes from all concerned entities including Designated ISTS Customers, transmission licensees, NLDC, RLDCs, SLDCs, RPCs;
 - (b) The Basic Network shall not contain any electricity system, electrical plant or line below 132 kV except where generators are connected to the grid at 110 kV. Power flow into a lower voltage system from the voltage levels indicated in the definition of the Basic Network shall be considered as load at that sub-station. Power flow from a lower voltage system into the electricity systems at the voltage levels shall be considered as generation at that sub-station;
 - (c) The dedicated transmission lines constructed, owned and operated by the ISTS Licensees shall be considered to be a part of the Basic Network. Dedicated lines constructed, owned and operated by the generator shall not be considered



as a part of the Basic Network. In the latter case, the generator will be deemed to be connected directly to the ISTS;

- (d) Nodal generation information shall be based on the forecast provided by Designated ISTS Customers. Such forecasts shall incorporate estimates of total injection into the grid, considering the long term and medium term contracts under representative block of months and peak and other than peak conditions. The forecast submitted shall be vetted by Implementing Agency based on historical generation levels obtained from the NLDC/RLDCs/SLDCs under such peak and other than peak conditions identified in advance by the NLDC. Any changes in the forecast generation shall be communicated to the appropriate Designated ISTS Customer by the Implementing Agency;
- (e) Forecast demand data shall be submitted by the Designated ISTS Customers for each node or a group of nodes in a zone, identified by Implementing Agency under these regulations. The forecast demand data shall incorporate estimates of medium term and long term demand under representative block of months and peak and other than peak conditions. The forecast submitted shall be vetted by Implementing Agency based on historical demand of each Designated ISTS Customer for all the months during specific peak and other than peak conditions identified by the NLDC. Any changes in the forecast demand shall be communicated to the appropriate Designated ISTS Customer by the Implementing Agency;
- (f) Implementing Agency shall prepare detailed procedures and formats for collection of the generation and demand data from each Designated ISTS Customer and the data pertaining to the Basic Network within 30 days of the notification of these regulations;
- (g) In the event of any conflict between the Designated ISTS Customer and the Implementing Agency in the revised generation and demand so obtained, a validation committee appointed by the Commission in this behalf shall take the final decision after hearing the Designated ISTS Customer and Implementing Agency. Such a committee shall comprise of two officials each from the Implementing Agency, NLDC, RPCs, CTU, CEA and the Commission. The validation committee shall be chaired by a nominee of the Commission.
- (h) The Implementing Agency shall run AC load flows using the Basic Network, nodal generation and nodal demand. To ensure Load Generation balance,



adjustment may be required to be made on the vetted generation and demand data.

- (i) Basic Network along with the converged load flow results for various grid conditions shall be validated by the validation committee. The Basic Network, nodal generation, nodal demand and the load flow results for the subsequent financial year for each grid condition shall be validated by this Committee and presented for approval to the Commission not later than 15th day of December in each financial year. The approved Basic Network, nodal generation, nodal demand along with the load flow results shall be made available on the websites of the Commission and NLDC immediately after its approval by the validation committee.
- (j) Approved Basic Network, nodal generation and nodal demand data shall form the base for computation of Marginal Participation factors and loss allocation factors.
- (k) Consequent to the development of the base load flows on the Basic Network, the network shall be truncated/ reduced suitably by the Implementing Agency to certain level(s) of voltages, as explained in Annexure – I to these Regulations. The Hybrid method shall be applied by the Implementing Agency on the truncated /reduced system to determine the transmission charges based on the Hybrid Method and loss allocation factors attributable to each node in the truncated /reduced power system;

In future, if Implementing Agency arrives at a better method of network reduction, then the same may be adopted after approval of Commission.

- (l) Overall charges to be shared among nodes shall be computed based on the Yearly Transmission Charge apportioned to each of the lines of the ISTS Licensees. The Yearly Transmission Charge, computed for assets at each voltage level in accordance with the provisions of these regulations shall be provided by the respective ISTS transmission licensee. The Yearly Transmission Charge of the sub-stations shall be apportioned to the lines emanating from each sub-station. Average Yearly Transmission Charge per circuit kilometre (for each voltage level and line configuration viz., 400 KV D/C twin Moose, 400 kV Quad Moose, 400 kV Quad Bersimis etc., 765 kV system charged at 400 kV shall be considered as high capacity 400 kV line (Quad) lines.) shall be used for the computation of nodal charges;
- (m) Allocation of the Yearly Transmission Charge of sub-stations to transmission lines shall be based on the following principles:



- (i) Yearly Transmission Charge for substations shall be apportioned to the associated transmission lines based on the length of the lines in circuit kilometres;
- (ii) Yearly Transmission Charge of the sub-station shall be apportioned in a manner such that the Yearly Transmission Charge of the sub-station attributed to the lower voltage lines connected to it is 50% of the Yearly Transmission Charge of the substation attributed to the higher voltage lines connected to it.
- (n) The computation of transmission charges at each node as per the Hybrid methodology requires costs to be adopted for ISTS transmission licensees whose lines feature on the reduced network.
- (o) The participation factors, and hence the Point of Connection nodal and zonal charges thus determined, shall be computed for each season for peak and other than peak conditions. Ordinarily this shall be undertaken for blocks of months for various seasons, and such blocks shall be (i) April to June, (ii) July to September, (iii) October to November (iv) December to February and (v) March. Peak hours shall be considered for a period of eight hours and all the other hours shall be taken as other than peak hours. However for the ex-ante computations, the Implementing Agency may specify peak and other than peak hours and months if so warranted by load conditions in consultation with the NLDC. This shall be done under intimation to the Commission giving the reasons thereof;
- (p) In order to give proper signals towards transmission charges based on distance and direction, the transmission charge per circuit kilometre shall have to be made uniform for each voltage level and conductor configuration. For this purpose, total transmission charges to be recovered for all lines of a given voltage level and conductor configuration shall be divided by the total circuit kilometre for that voltage level and line configuration in order to arrive at the average transmission charge per circuit kilometre for that voltage level and conductor configuration. Such charges shall then be attributed to peak and other than peak periods of each season based on the hours constituting these periods. The total transmission charge for each line shall be recovered in proportion to the participation factors as detailed in Annexure - I to these Regulations. The process shall thereby ensure that the total charges for the lines are fully recovered;
- (q) As a part of the transition to the new Point of Connection based transmission pricing methodology, the recovery of the Yearly Transmission Charge of the



ISTS network shall be based on both the Hybrid Method and the Uniform Charge Sharing Mechanism (postage stamp method) by giving appropriate weightage to both. The Commission shall decide the weightage based on the impact of such transition on various Designated ISTS Customers. For the first two years, the zonal charges obtained using the Point of Connection method shall be adjusted such that 50% of the Yearly Transmission Charge of the ISTS Licensees is recovered through Hybrid methodology and the balance 50% of the Yearly Transmission Charge of the ISTS Licensees is recovered based on Uniform Charge Sharing Mechanism. After a period of two years from the implementation of these arrangements, the Commission may review the weightages accorded to the Hybrid methodology and the Uniform Charge Sharing Mechanism.

- (r) The loss allocation factors shall be computed for each season using the Hybrid method as explained in Annexure - I to these regulations. The loss allocation factors shall be applied to the total losses, computed as per the procedures developed by the NLDC under these regulations, to attribute losses to each Designated ISTS Customer .
- (s) The losses shall be attributed to the Designated ISTS Customers by suitably adjusting their scheduled MWs. The extent of adjustment shall be based on the losses attributed to each Designated ISTS Customer based on the Hybrid Method and the Uniform Loss Allocation Mechanism. As in the case of transmission charges, for application to various demand Designated ISTS Customers, the weightage on the two mechanisms – the Hybrid Method and the Uniform Loss Allocation Mechanism shall be decided by the Commission. For the first two years, the loss allocation factors computed using the Hybrid method shall be used to allocate 50% of the losses to the Designated ISTS Customers. The balance 50% losses shall be applied to the Designated ISTS Customers based on the uniform loss allocation mechanism. After a period of two years from the implementation of these arrangements, the Commission may review the weightages accorded to the Hybrid method and the Uniform Loss Allocation Mechanism. The Loss Allocation Factors shall be computed for all peak and other than peak network conditions for each block of months. However for attribution of losses to each generation and demand zone for any block of months, a single set of loss allocation factors based on the weighted average of peak and other than peak conditions shall be used. The detailed procedure for application of losses to various Designated ISTS Customers



shall be prepared by NLDC within 30 days of the notification of these regulations.

- (t) The Implementing Agency shall aggregate the charges for geographically and electrically contiguous nodes on the ISTS to create zones, in order to arrive at uniform zonal charge in Rs / MW / month. Implementing Agency shall create zones for generation and demand. Such zoning shall be governed by the following considerations:

(i) Zones shall contain relevant nodes whose costs (as determined from the output from the Hybrid method) are within the same range.

(ii) The nodes within zones shall be combined in a manner such that they are geographically and electrically proximate. The demand zones shall normally be the state control areas except in the case of North Eastern States, which are considered as a single demand zone. Generation zones are formed by combining the generators connected to the ISTS.

(iii) The same zone can act as a generation zone as well as a demand zone for the purpose of calculation of Generation and demand zonal charges respectively. Even as it is preferable to have similar zones for generation and demand, this shall be pursued only when practical, and other conditions for zoning are met

(iv) Transmission charges for thermal power generators either directly connected with ISTS or through pooling stations that are designed to handle generation capacity of more than 1500 MW for inter-state transfer shall be determined as charges at these specific nodes (such nodes would be considered as separate generation zones) and not clubbed with other generator nodes in the area.

(v) Transmission charges for hydro power generators either directly connected with ISTS or through pooling stations that are designed to handle generation capacity of more than 500 MW for inter-state transfer shall be determined as charges at these specific nodes (such nodes would be considered as separate generation zones) and not clubbed with other generator nodes in the area.

(vi) Typically the zones shall remain fixed in a given financial year unless significant changes in the power system during a year require re-zoning. Any such re-zoning shall be approved by the Commission before implementation by the Implementing Agency.



- (vii) Owing to the reduction of the Basic Network, certain generating stations connected at 220 kV and below to the ISTS network may not explicitly feature on the final reduced network. Such generating stations shall be charged at the zonal charges determined for the regions where such generators are physically located. Long term beneficiaries of ISGS connected to STU network shall continue to pay the transmission charges for the STU network as per the existing mechanisms.
- (u) No transmission charges for the use of ISTS network shall be charged to solar based generation. This shall be applicable for the useful life of the projects commissioned in next three years.
- (v) No transmission losses for the use of ISTS network shall be attributed to solar based generation. This shall be applicable for the useful life of the projects commissioned in next three years.
- (2) Detailed methodological aspects are set out in Annexure - I to these regulations. The Commission may modify or update the above processes from time to time based on the emergent needs for determining the Point of Connection transmission charges and allocation of losses.
- 8. Determination of specific transmission charges applicable for a Designated ISTS Customer.**
- (1) Based on the Yearly Transmission Charges determined by the Commission, the Implementing Agency shall determine the charges applicable to each Designated ISTS Customer for use of the ISTS to the extent of the Approved Withdrawal or Approved Injection in the ISTS. Each Designated ISTS Customer shall ensure that the forecast data of demand and injection for each season is furnished to the Implementing Agency as per the timelines described in these regulations for both peak and other than peak conditions as specified in Chapter 7 of these regulations;
- (2) In the event of a Designated ISTS Customer failing to provide its requisition for demand or injection for an Application Period, the last demand or injection forecast supplied by the Designated ISTS Customer and as adjusted by the Implementing Agency for Load Flow Analysis shall be deemed to be Approved Withdrawal or Approved Injection, as the case may be, for the Application Period;
- (3) The transmission charges for any month shall be determined as per Regulation 11 of these Regulations;



- (4) In case the metered MWs (ex-bus) of a power station or the aggregate demand of a Designated ISTS Customer exceeds, in any time block,
- (a) *In case of generators:* The Approved Injection + Approved Additional Medium Term Injection + Approved Short Term Injection or;
 - (b) *In case of demand customers:* The Approved Withdrawal + Approved Additional Medium Term Withdrawal + Approved Short Term Demand,

Then for first 20% deviation in any time block, the Designated ISTS Customer shall be required to pay transmission charges for excess generation or demand at the same rate and beyond this limit, the Designated ISTS Customer shall be required to pay additional transmission charges which shall be 25% above the zonal Point of Connection charges determined for zone where the Designated ISTS Customer is physically located. Such additional charges shall not be charged to the generators in case of rescheduling of the planned maintenance program which is beyond the control of the generator and certified to be so by the appropriate RPC. Further, any payment on account of additional charges for deviation by the generator shall not be charged to its long term customer and shall be payable by the generator;

- (5) In the case of the Approved Withdrawal or Approved Injection not materialising either partly or fully for any reason whatsoever, the Designated ISTS Customer shall be obliged to pay the transmission charges allocated.
- (6) For Long Term customers availing supplies from inter-state generating stations, the charges payable by such generators for such Long Term supply shall be billed directly to the respective Long Term customers based on their share of capacity in such generating stations. Such mechanism shall be effective only after “commercial operation” of the generator. Till then, it shall be the responsibility of generator to pay these charges.

9. **Differentiation among various categories of transmission Designated ISTS Customers.**

- (1) There shall be no differentiation in Point of Connection charges between the long term, medium term and short term Designated ISTS Customers of the transmission system.



CHAPTER 5: ACCOUNTING, BILLING AND COLLECTION OF CHARGES

10. Accounting of charges.

- (1) Monthly Transmission Accounts applicable for various Designated ISTS Customers in each region shall be prepared by the respective RPC on the basis of:

(a) Approved Withdrawal / Injection (MW) for peak and other than peak hours to be received from Implementing Agency,

(b) Zonal Point of Connection charge (Rs / MW / month) to be received from Implementing Agency

(c) Approved Additional Medium Term Withdrawal / Injection (MW) to be received from RLDC / NLDC,

(d) Processed meter reading from all SEMs for computation of deviations from the sum of the Approved Withdrawal / Injection, Approved Additional Medium Term Withdrawal / Injection and Approved Short Term Withdrawal / Injection (MW) and time blocks for which such deviation is recorded. This data shall be received from RLDCs,

RPC shall, based on Regulation 11.1(a), 11.1(b) and 11.1(c), issue Regional Transmission Accounts on the 1st working day of the month for the previous month, to all Designated ISTS Customers, CTU and other ISTS Transmission Licensees and display the same on its web site.

RPC shall, based on Regulation 11.1(d), issue Regional Transmission Deviation Accounts by 15th of every month for the previous month to all Designated ISTS Customers, CTU and other ISTS Transmission Licensees and display the same on the website of the respective RPCs.

11. Billing.

- (1) The CTU shall be responsible for raising the transmission bills, collection and disbursement of transmission charges to ISTS transmission licensees. Any expenses incurred by CTU on account of this function shall be reimbursed as part of YEARLY TRANSMISSION CHARGE;
- (2) The bill for the use of the ISTS shall be raised by the CTU on the concerned Designated ISTS Customers. The SEB/STU may recover the transmission charges for the use of the ISTS from the distribution companies, generators and bulk customers

connected to the transmission system owned by the SEB/STU/intrastate transmission licensee in a manner approved by the Appropriate Commission.

- (3) The billing for ISTS charges for all Designated ISTS Customers shall be on the basis of Rs./MW/Month, and shall be raised by the CTU in three parts.
- (4) The first part of the bill shall recover charges for use of the transmission assets of the ISTS Licensees based on the Point of Connection methodology. This part of the bill shall be computed as:

For Generators:

$$\begin{aligned} & \left[\text{PoC Transmission Charge of generation zone in Rs / MW / month for peak hours} \right] \times \\ & \left[(\text{Approved Injection for peak hours}) \right] + \\ & \left[\text{PoC Transmission Charge of generation zone in Rs / MW / month for other than} \right. \\ & \left. \text{peak hours} \right] \times \\ & \left[(\text{Approved Injection for other than peak hours}) \right] \end{aligned}$$

For Demand:

$$\begin{aligned} & \left[\text{PoC Transmission Charge for demand zone in Rs / MW / month for peak hours} \right] \times \\ & \left[(\text{Approved Withdrawal for peak hours}) \right] + \\ & \left[\text{PoC Transmission Charge for demand zone in Rs / MW / month for other than} \right. \\ & \left. \text{peak hours} \right] \times \\ & \left[(\text{Approved Withdrawal for other than peak hours}) \right] \end{aligned}$$

This first part of the bill shall be raised based on the Point of Connection charges, Approved Withdrawal and Approved Injection for each Designated ISTS Customer, provided by the Implementing Agency not later than the first working day of each month for the previous month and determined prior to the commencement of the application period. This bill shall be independent of the Regional Transmission Accounts prepared by the RPCs. Further, the details of Monthly Transmission Charges for each of the ISTS licensees shall be provided by the Implementing Agency.

- (5) The second part of the bill shall recover charges for Additional Approved Medium Term Open Access and shall be computed as follows:

For Generators:

$$\begin{aligned} & [\text{PoC Transmission Charge of generation zone in Rs / MW / month for peak hours}] \times \\ & [(\text{Approved Additional Medium Term Injection for peak hours})] + \\ & \left[\begin{array}{l} \text{PoC Transmission Charge of generation zone in Rs / MW / month for other than} \\ \text{peak hours} \end{array} \right] \times \\ & [(\text{Approved Additional Medium Term Injection for other than peak hours})] \end{aligned}$$

For Demand:

$$\begin{aligned} & [\text{PoC Transmission Charge for demand zone in Rs / MW / month for peak hours}] \times \\ & [(\text{Approved Additional Medium Term Withdrawal for peak hours})] + \\ & \left[\begin{array}{l} \text{PoC Transmission Charge for demand zone in Rs / MW / month for other than} \\ \text{peak hours} \end{array} \right] \times \\ & [(\text{Approved Additional Medium Term Withdrawal for other than peak hours})] \end{aligned}$$

The second part of the bill shall be raised on the Designated ISTS Customer s along with the first part of the bill.

- (6) The third part of the bill shall be used to adjust any variations in interest rates, FERV, rescheduling of commissioning of transmission assets, etc. as allowed by the Commission for any ISTS Transmission Licensee. Total amount to be recovered / reimbursed because of such under recovery / over recovery shall be billed by CTU to each Designated ISTS Customer in proportion of its average Approved Injection / Approved Withdrawal over previous six months on a biannual basis. This part of the bill shall be raised on first working day of September and first working day of March for the previous six months.
- (7) Deviations shall be billed separately by the CTU. This bill shall charge the Designated ISTS Customer s for deviations from the sum of the Approved Withdrawal, Approved Additional Medium Term Withdrawal and Approved Short Term Withdrawal (MW) or Approved Injection, Approved Additional Medium Term Injection and Approved Short Term Injection (MW). This part of the bill shall be computed as:

For Generators:

In case Average MW injected during time block of positive deviation is greater the sum of Approved Injection, Approved Additional Medium Term Injection and Approved Short Term Injection, then for the first 20% deviation, transmission charges shall be at the zonal Point of Connection charges for the generation zone.

For deviation beyond 20%, the additional transmission charges shall be 1.25 times the zonal Point of Connection charges for the generation zone.

In case a generator instead of injecting, withdraws from the grid, the additional transmission charges shall be computed as

$$\left[1.25 \times \text{PoC Transmission Charge for the demand zone in Rs/MW / time block}\right] \times \left[\text{Average MW Withdrawal during time blocks of such negative deviation}\right]$$

For Demand:

In case Average MW withdrawal during time block of positive deviation is greater the sum of Approved Withdrawal, Approved Additional Medium Term Withdrawal and Approved Short Term Withdrawal, then for the first 20% deviation, transmission charges shall be at the zonal Point of Connection charges for the demand zone.

For deviation beyond 20%, the additional transmission charges shall be 1.25 times the zonal Point of Connection charges for the demand zone.

In case a withdrawing DIC becomes a net injector the additional transmission charges shall be computed as

$$\left[1.25 \times \text{PoC Transmission Charge for the generation zone in Rs/MW / time block}\right] \times \left[\text{Average MW Injected during time blocks of such negative deviation}\right]$$

This bill shall be raised by the CTU within 3 working days of the issuance of the Regional Transmission Deviation Account by the RPCs.

- (8) Revenue from Approved Additional Medium term open access that was not considered in the Approved Injection / Approved Withdrawal shall be used for truing up the YEARLY TRANSMISSION CHARGE for the next financial year.
- (9) The governance of the Short Term Open Access Transactions shall be as per the Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008 and as amended by the Commission from time to time with the exception that the Transmission Charges for Short Term Open Access Transactions shall be the Zonal Point of Connection charges as determined by these regulations.

12. Collection.

- (1) The CTU shall collect charges on account of the first part of the bill as computed in accordance with Regulation 11(4) of these Regulations on behalf of the ISTS service providers and thereafter redistribute the same to Transmission Licensees in the ISTS in proportion to their respective Monthly Transmission Charges;

- (2) The CTU shall collect charges on account of the second part of the bill as computed in accordance with Regulation 11(5) of these Regulations and thereafter distribute the same to Transmission Licensees in the ISTS in proportion to their respective Monthly Transmission Charges. This amount along with the interest thereon shall be adjusted in the Yearly Transmission Charge (to be used for the computation of Point of Connection charges) of the respective transmission licensee for the next financial year;
- (3) The CTU shall collect charges on account of the third part of the bill as computed in accordance with Regulation 11(6) of the section on Billing of these Regulations and thereafter transfer the same to respective ISTS Transmission Licensees for whom this adjustment bill is required;
- (4) The CTU shall collect charges on account of the fourth part of the bill as computed in accordance with Regulation 11(7) of these Regulations and thereafter distribute the same to Transmission Licensees in the ISTS in proportion to their respective Monthly Transmission Charges. This amount along with the interest thereon shall be adjusted in the Yearly Transmission Charge (to be used for the computation of Point of Connection charges) of the respective transmission licensee for the next financial year;
- (5) The payment by various Designated ISTS Customer s and disbursement to various ISTS Licensees and the owners of Deemed Inter State Transmission System shall be executed through RTGS.
- (6) Every Designated ISTS Customer shall ensure that the charges payable by them are fully discharged within the time-frame specified in the Transmission Service Agreement or the amended Bulk Power Transmission Agreements. Disputes, if any shall be resolved as per the provisions of the Transmission Service Agreement or the amended Bulk Power Transmission Agreement s as specified in Chapter 6 of these regulations.
- (7) Delayed payment in a month by any Designated ISTS Customer shall result is pro-rata reduction in the payouts to all the ISTS Licensees and other non-ISTS Licensees whose assets have been certified as being used for interstate transmission by the RPCs.
- (8) Designated ISTS Customers shall provide payment security as determined through detailed procedures developed by the CTU. The level of such payment security shall be related to the Approved Withdrawal or Approved Injection.



- (9) CTU shall prepare a detailed procedure for Billing, Collection and Disbursement and present the same to the Commission for approval within 30 days of the notification of these regulations.

CHAPTER 6: COMMERCIAL AGREEMENTS

13. Transmission Service Agreement (TSA).

- (1) The Designated ISTS Customers and the CTU shall enter into new transmission services agreement or modify the existing Bulk Power Transmission Agreements to incorporate the new tariff and related conditions. Such agreement shall govern the provision of transmission services and charging for the same and shall be called the Transmission Service Agreement (TSA) and shall, inter-alia, provide for:-
- (a) Detailed commercial and administrative provisions relating to sharing of ISTS charges and losses based on principles derived from these regulations;
 - (b) Provisions on metering, accounting, billing and recovery of charges for the ISTS from the constituents;
 - (c) Procedures for declaration and approval of contracted capacity at each node or an aggregation of nodes in the ISTS for each Designated ISTS Customer;
 - (d) Detailed procedures and provisions for connection by the Designated ISTS Customer s at the inter-connection points, including the processes for requisitioning new inter-connection capacity on the ISTS;
 - (e) Procedures and provisions for treatment of over or under injections by the Designated ISTS Customers;
 - (f) Procedures and provisions for treatment of the delay in injection / withdrawal by Designated ISTS Customers;
 - (g) Treatment of the delay in commissioning of transmission lines;
 - (h) Payment security mechanisms;
 - (i) Default and its consequences;
 - (j) Dispute resolution mechanisms;
 - (k) Term of the agreement and the termination provisions;
 - (l) Force Majeure Conditions; and
 - (m) Any other matter that is relevant for the Point of Connection transmission charge and loss allocation mechanism.



- (2) Within 30 days of notification of these regulations, the CTU shall publish the draft Model Transmission Service Agreement on its website and invite public comments on the same.
 - (3) The CTU shall, after duly considering the public comments, submit the draft Model Transmission Service Agreement to the Commission for its approval within 60 days of the notification of these regulations.
 - (4) The final version of the Model Transmission Service Agreement, as approved by the Commission, shall be notified and used as the base transmission service agreement by the ISTS Licensees.
 - (5) The notified Model Transmission Service Agreement shall be the default transmission agreement and shall mandatorily apply to all Designated ISTS Customers.
 - (6) The Transmission Service Agreement may have separate provisions for long term, medium term and short term access to the ISTS.
 - (7) Signing of the Transmission Service agreement shall not be a pre-condition for construction of new network elements by the CTU and Transmission Licensees, provided that such network construction is undertaken after due approval of the Commission.
 - (8) The Transmission Service Agreement may have aspects that are amended from time to time by the signatories without the entire agreement being replaced or being rendered infructuous. Such aspects may include the contracted capacity, commercial terms, and reliability requirements, if any. Change of such terms shall be guided by the technical configuration and capabilities of the power system.
 - (9) The CTU shall enter into a separate Revenue sharing agreement with other ISTS transmission licensees to disburse monthly transmission charges among various transmission licensees. The impact of any delayed payment / non-payment by any Designated ISTS Customer shall be shared pro-rata in proportion of their Yearly Transmission Charge by all the transmission licensees including the CTU. The CTU shall submit the Revenue Sharing Agreement within 30 days of the notification of these regulations for approval by the Commission.
14. **Amendment of existing contracts.**
- (1) All existing users of the ISTS and the Transmission Licensees shall ensure that their existing contracts are realigned to these regulations within a period of 60 days from the date of notification of the Transmission Service Agreement insofar as the elements related to determination of Point of Connection transmission charges,



allocation of losses, billing and collection, provision of information, and any other matter that requires amendment or realignment consequent to these regulations.

15. Transition Period/Mechanism.

- (1) The Commission shall notify detailed procedures as proposed by the Implementing Agency, NLDC and the CTU to be followed under these regulations, along with corresponding timelines, as far as possible within 3 (three) months from the notification of these regulations. Such Procedures shall include:-
 - (a) Procedures for provision of information by Designated ISTS Customers and other constituents as prepared by Implementing Agency and approved by the Commission;
 - (b) Procedures to be followed by the Implementing Agency for computation of charges as prepared by Implementing Agency and approved by the Commission;
 - (c) Procedures for sharing of losses according to the methodology set out in these Regulations as prepared by NLDC and approved by the Commission;
 - (d) Procedures for Billing and collection of charges by the CTU on behalf of the Transmission Licensees and redistribution of the same (including amounts over or under collected) as prepared by the CTU and approved by the Commission; and
 - (e) Payment and payment security related procedures as prepared by the CTU and approved by the Commission.
- (2) The Implementing Agency shall ensure smooth transition to the new mechanism and shall take necessary steps to disseminate information and build capacity among the Designated ISTS Customers and the ISTS Licensees.

CHAPTER 7: INFORMATION PROCEDURES

16. Provision of information by Designated ISTS Customers and other constituents.

- (1) On or before the end of the fourth week of November in each Financial Year, each Designated ISTS Customer whose network forms a part of the Basic Network, ISTS licensee and owners of Deemed Inter State transmission systems whose charges are to be recovered from Designated ISTS Customers, shall supply the Implementing Agency with Basic Network details, Yearly Transmission Charge computations, and any other information required by the Implementing Agency to compute the



transmission charges for allocation and apportionment as detailed in the Procedures for provision of information by Designated ISTS Customers and other constituents prepared by NLDC consequent to these Regulations.

- (2) On or before the end of the fourth week of November in each Financial Year, each Designated ISTS Customer shall supply the Implementing Agency with its demand or injection forecast for each season of the following Financial Year to enable the Implementing Agency to use such demand and injection forecast as the basis for calculation of the transmission charge and loss allocators for the period.

Provided that, if necessary, the information may be sought by the Implementing Agency at times other than those indicated in regulation 16 (1) and 16 (2).

- (3) Data to be submitted by CTU, owners of Deemed Inter State transmission systems and Designated ISTS Customer s whose assets are used in the Basic Network:
 - (a) **In the first year of implementation:** the entire network data including that used for load flow analysis in the formats prescribed by the Implementing Agency , line-wise / network element-wise Yearly Transmission Charge ;
 - (b) **In the subsequent years:** data and dates of commissioning of any new transmission asset in the next financial year and their Yearly Transmission Charge approved by the Commission / provisional Yearly Transmission Charge , based on Commission norms in case such Yearly Transmission Charge is not approved by the Commission.
- (4) Data to be submitted by Designated ISTS Customers connected to ISTS:
 - (a) MW and MVA_r Data for injection or drawal at various nodes or a group of nodes. This data shall be submitted for peak and other than peak conditions for January 15 (for the block of months from December to February), March 15 (for the month of March), May 15 (for the block of months from April to June), August 31 (for the block of months from July to September), and October 30 (for the block of months from October and November), such that any of these days is not a Weekend/Public Holiday. Such data shall include the power tied in long term contracts and approved medium term open access agreements;
 - (b) In case any of the above fall on a Weekend/Public Holiday, the data shall be submitted for working days immediately after the dates indicated.
- (5) In the first year of the implementation of these regulations, the Designated ISTS Customers and Transmission Licensees shall submit the Injection / Demand data,



network data and Yearly Transmission Charge data to the implementing agency not later than 60 days of the notification of these regulations in formats provided by Implementing Agency ;

- (6) In case, large changes in the Point of Connection charges are foreseen on account of the network or its usage undergoing substantial change, the Implementing Agency may file a petition before the Commission, and undertake the revised computations only upon issuance of the Commission's orders in this regard;

17. Information to be published by the Implementing Agency.

- (1) The information to be provided by the Implementing Agency consequent to the computations undertaken shall include:
 - (a) Approved Basic Network Data and Assumptions, if any
 - (b) Zonal or nodal transmission charges for the next financial year differentiated by block of months;
 - (c) Zonal or nodal transmission losses data;
 - (d) Schedule of charges payable by each constituent for the future Application Period, after undertaking necessary true-up of costs as per these regulations and detailed procedures.
- (2) Such information shall be made public by Implementing Agency after undertaking the computations for the Application Period, and upon being approved by the Commission.
- (3) To ensure maximum information disclosure, the Implementing Agency shall ensure that the underlying network information and base load flows used are available on its website.

CHAPTER 8: IMPLEMENTATION ARRANGEMENTS

18. Implementing Agency.

- (1) Based on the Yearly Transmission Charge, the allocation of the ISTS Charges and Losses shall be allocated by an entity authorised by the Commission for the purpose and shall be designated as the Implementing Agency.

Provided that for the first two years of the notification of these regulations the NLDC shall be the Implementing Agency.



- (2) The Implementing Agency shall submit, for approval of the Commission, a detailed procedure along with the data formats for obtaining data from Designated ISTS Customers, ISTS Licensees and non-ISTS Licensees whose assets have been certified by RPCs as being used for inter-state transmission, within 30 days of notification of these regulations for the Implementation of the Point of Connection method, guidelines for which have been detailed in the Annexure - I to these regulations.
- (3) The Implementing Agency shall determine the allocation and sharing of transmission charges and losses for each financial year, which may be differentiated on a seasonal basis.
- (4) The Implementing Agency shall be reimbursed the expenses incurred for the computation of transmission charges (for the purpose of allocation and apportionment thereof) as per Yearly Transmission Charges approved by the Commission. The software for the implementation of transmission tariffs shall be audited by the Commission before it is commissioned, and thereafter before any changes are made to the software or implementation methodology. The Software shall be made available to Implementing Agency by the Commission;

CHAPTER 9: MISCELLANEOUS

19. Savings and Repeal.

- (1) Save as otherwise provided in these regulations, Regulation 33 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, Regulation 16(1) and 16(2) of the Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008 are hereby repealed.
- (2) Notwithstanding such repeal, anything done or any action taken or purported to have been done or taken under the repealed regulations shall be deemed to have been done or taken under these regulations.

20. Power to Relax.

- (1) The Commission may, for reasons to be recorded in writing, relax any of the provisions of these regulations on its own motion or on an application made before it by an interested person.



21. **Power to Remove Difficulties**

- (1) If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission, may by general or special order, direct the Implementing Agency, NLDC, CTU, RLDC, RPC, ISTS Licensees and Designated ISTS Customers, to take suitable action, not being inconsistent with the provisions of the Act, which appears to the Commission to be necessary or expedient for the purpose of removing the difficulties.
- (2) The Implementing Agency, NLDC, CTU, RLDC, RPC, ISTS Licensees and Designated ISTS Customers may make an application to the Commission and seek suitable orders to remove any difficulties that may arise in implementation of these Regulations.
- (3) Notwithstanding Sub-Regulations (1) and (2), if any difficulty arises in giving effect to the provisions of these Regulations, the Commission may, by general or specific order, make such provisions not inconsistent with the provisions of the Act, as may appear to be necessary for removing the difficulty.

Sd/-
(Alok Kumar)
Secretary



ANNEXURE

I. PHILOSOPHY OF POINT OF CONNECTION BASED TRANSMISSION PRICING MECHANISM AND SELECTION OF THE HYBRID METHOD

Efficient pricing of a commodity or service needs to reflect the marginal cost of utilization of the underlying resources that are used in the provision of that commodity or service. The 'operational' term here is 'utilization'. The pricing mechanism must therefore be able to capture the utilization, and charge for the resources being utilized.

Utilization of the network is generally determined in terms of either average utilization or marginal utilization of the transmission assets. Pricing of transmission services based on average or marginal utilization of the network branches is known as Average Participation or Marginal Participation method respectively. These two methods have been compared and contrasted in detail in the literature. These methods are discussed in detail below.

1.1 MARGINAL PARTICIPATION METHOD

Any usage based methodology tries to identify how much of the power that flows through each of the lines in the system is due to the existence of a certain network user, in order to charge it according to the adopted measure of utilization. To do so, the marginal participation method analyzes how the flows in the grid are modified when minor changes are introduced in the production or consumption of agent i . For each of the considered scenarios (for each season) the procedure can be considered as follows:

- a. Marginal Participation sensitivities A_{ij} are obtained that represent how the flow in line j changes when the injection in bus i is increased by 1 MW. The increase in 1 MW has to be compensated by a corresponding increase in load or generation at some other bus or buses – called the slack bus(es).
- b. Total participations for each agent are calculated as a product of its net injection by its marginal participation. If net injection is considered positive for generators and negative for demands, the total participation of any agent i in line j is $A_{ij}(\text{generation}_i - \text{demand}_i)$.
- c. The cost of each line is allocated pro-rata to the different agents according to their total participation in the corresponding line.

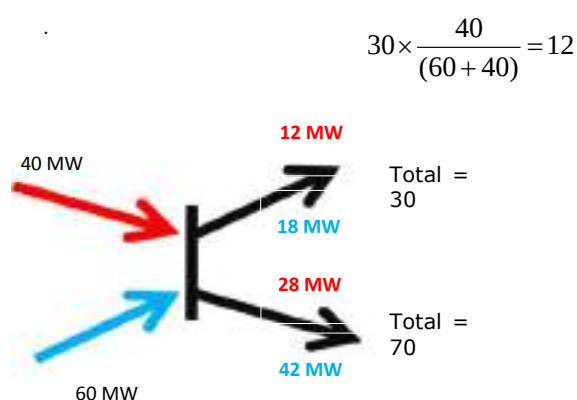
1.2 AVERAGE PARTICIPATION METHOD

The method of average participation works as follows:

1. For every individual generator i , a number of physical paths are constructed, starting at the node where the producer injects the power into the grid, following through the lines as the power moves through the network, and finally reaching several of the loads in the system.
2. Similar calculations are also performed for the demands, tracing upstream the energy consumed by a certain user, from the demand bus until some generators are reached. One such physical path is constructed for every producer and for every demand.

3. In order to create such physical paths, a basic criterion is adopted: A rule allocates responsibility for the costs of actual flows on various lines from sources to sinks according to a simple allocation rule, in which inflows are distributed proportionally between the outflows. The main attractions of tracing are that the rule has some theoretical backing based and does not require the choice of a slack node. The drawbacks of tracing are first that aggregation of users can lead to counterintuitive results: if generation and load or different nodes are aggregated, then they are exposed to different tariffs. Second, the choice of the allocation rule is decisive but apparently arbitrary. An illustrative example of the proportional allocation mechanism is demonstrated in Fig.3 below.

Fig. 3: Average Participation Method



The average participation method calculates the participation of agent i by tracking the influence in the network of a transit between node i and several ending nodes that result from the rules that conform the algorithm. In the example above, based on flow in the outgoing lines, the injection of 40MW (through the red line) is allocated to the outgoing lines in the proportion of the transfers from the two outgoing lines. Thus the outgoing line that transfers 30 MW (i.e, 30% of the total transfer out of the bus) is allocated 30% of the 40 MW injection from the red line, i.e., 12 MW. Similar allocations are made for the other flows as well.

1.3 REASONS FOR ADOPTION OF THE HYBRID METHOD

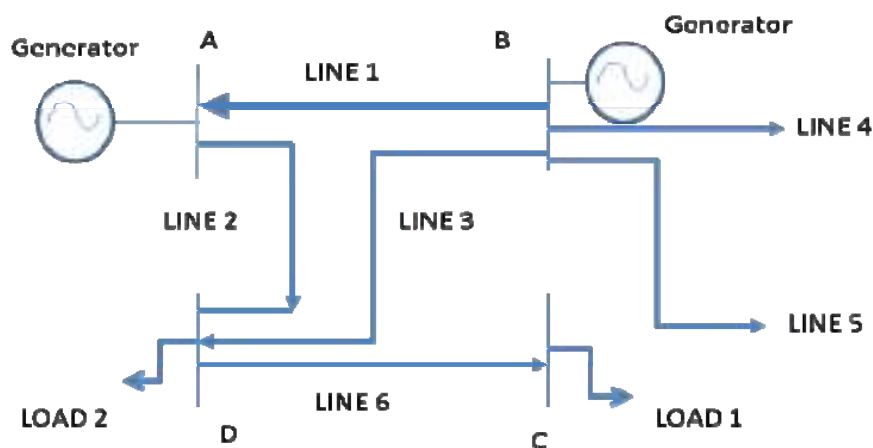
The Marginal Participation method (with slight modifications to the above generic framework) has been implemented in various countries including United Kingdom, Norway (for transmission losses), Brazil, Columbia etc. There is however little international experience in the use of the Average Participation Method. Further in the Indian context the Hybrid Method – where the slack buses are selected by using the Average Participation Method and the burden of transmission charges or losses on each node is computed using the Marginal Participation Method was found appropriate because:

- The nodal transmission access charges in the AP method have a higher variance. A compared to the range of transmission access charges in the Hybrid method (Rs 2.98

– 17.75 lakh / MW), the range in the AP method (Rs. 2.79 – 53.61 lakh / MW) is much higher.

- Further, since Hybrid method takes into account all the incidental flows – which is the reality of interconnected transmission networks – the Hybrid Method captures network utilization much better than the AP method, which simply traces the path of power from the origin to the sink(s) or vice-versa. Because of the ability of the Hybrid method to consider incidental flows, the method captures network ‘utilization’ better than AP method – which is one of the objectives of the NEP.

To illustrate the above point further, consider the following network and the flows indicated therein:



Under Average Participation Method, tracing from generator at Node-A would lead to the consideration of utilization of Line 2 for load 2 and Line 2 and Line 6 for load 1. However, it can be seen from the above network diagram, that keeping the generation at Node B constant, an increase in generation at Node A is expected to lead to an increase in flow in Line 4, Line 5 and Line 3 (Flow in Line 1 will be from Node B to Node A, as in the base case, but with an increase in generation at Node A, the magnitude of flow will reduce). While the AP Method captures utilization of Line 2 and Line 6, it fails to consider the impact of generation at Node A on Line 4, Line 5 and Line 3. Application of the AP method, in this case, would lead to very low nodal charges at Node A and high Nodal Charges at Node B and hence an inaccurate estimation of line utilization. Application of the MP method, on the other hand, would capture utilization better by attributing some percentage of utilization of Line 3, Line 4 and Line 5 to Node A.

Hybrid Method – a combination of the Average Participation and the Marginal Participation Method, while considering the absorption of power generated at Node A by Load 1 and Load 2 only (as determined using AP method), considers the utilization of Line 3, Line 4 and Line 5 also, as opposed to the consideration of only Line 2 and Line 6, as in the pure AP method.

- The criticism of the MP method that the results are dependent on the choice of the slack bus is obviated because of the revised method of selection of slack buses which is based on the AP method.

2. PRICING MECHANISM UNDER SELECTED FRAMEWORK

As discussed in the previous sections, based on the review of the international experience, the literature and the Indian system, the Hybrid method – a hybrid of the Marginal and Average Participation Methods has been found to be most appropriate. The details of the hybrid method are discussed in sections below. Following steps shall be followed in the implementation of the Hybrid Methodology:

1. Data Acquisition
2. Computation of Load Flows on the Basic Network
3. Network Reduction
4. Identification of Slack Node(s)
5. Hybrid Methodology for the determination of transmission charges
6. Hybrid Methodology for the determination of transmission losses
7. Determination of Sharing of YTC and Losses
8. Creation of Zones

2.1 DATA ACQUISITION: INPUTS TO THE MODEL

The transmission pricing model requires a set of inputs representative of peak and other than peak conditions in each of the blocks of months as required by the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 on the transmission system:

- Nodal generation information
- Nodal demand information
- Transmission circuits between these nodes and their electrical characteristics required for load flow analysis, the associated lengths of these transmission lines and its capacity, Yearly Transmission Charges (YTC) of each line
- Identification of a reference node (s)

2.1.1 NODAL GENERATION / DEMAND INFORMATION

Data Required for Annual process of determination of transmission charges based on Hybrid Methodology

The Designated ISTS Customers (DICs) will provide forecast injection / withdrawal information (MW and MVar (or an assumption about the power factor to be used)) at all the nodes or a group of nodes in a zone (identified a-priori by the Implementing Agency (IA) in the Network. “Typical” injection / withdrawal data for peak and other than peak periods for the peak and other than peak periods as defined in these regulations shall be provided to the Implementing Agency by the DICs for the following blocks of months:

- April to June
- July to September
- October to November
- December to February and
- March

The data provided by the DICs shall be as per the formats prepared by the IA and duly approved by the Commission under the relevant provisions of the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010. The 'typical' dates for which the forecasts will be required by the IA shall be notified by it.

Information provided by the DICs shall be validated by the IA as per the provisions of the Regulations and detailed process notified by IA.

2.1.2 NETWORK DATA

CTU, owners of deemed ISTS transmission systems and the DICs whose assets are being considered in the Basic Network shall supply the Network Data for the existing network, in the format desired by the IA. The network data of the proposed network shall be supplied by the CTU. The requirement below has been given in the illustrative PTI format. The data shall inter-alia include:

(a) Bus Data

I - Bus number

- 1 - Load bus
- 2 - Generator or plant bus
- 3 - Swing bus
- 4 - Isolated bus

GL - Shunt conductance, MW at 1.0 per unit voltage

BL - Shunt susceptance, MVAR at 1.0 per unit voltage. (- = reactor)

IA - Area number

VM - Voltage magnitude, per unit

BASKV - Base voltage, KV

ZONE - Zone

(b) Generator data

I - Bus number

ID - Machine identifier



PG - MW output
 QG - MVAR output
 QT - Max MVAR
 QB - Min MVAR
 VS - Voltage setpoint
 IREG - Remote controlled bus index (must be type 1), zero to control own voltage, and must be zero for gen at swing bus
 MBASE - Total MVA base of this machine (or machines)
 ZR, ZX - Machine impedance, pu on MBASE
 RT, XT - Step up transformer impedance, p.u. on MBASE
 GTAP - Step up transformer off nominal turns ratio
 STAT - Machine status, 1 in service, 0 out of service
 RMPCT - Percent of total VARS required to hold voltage at bus IREG to come from bus I - for remote buses controlled by several generators
 PT - Max MW
 PB - Min MW

(c) Branch Data

I - From bus number
 J - To bus number
 CKT - Circuit identifier (two character)
 R - Resistance, per unit
 X - Reactance, per unit
 B - Total line charging, per unit
 RATEA - MVA rating A
 RATEB, RATEC - Higher MVA ratings
 RATIO - Transformer off nominal turns ratio
 ANGLE - Transformer phase shift angle
 GI, BI - Line shunt complex admittance for shunt at from end (I) bus, pu.
 GJ, BJ - Line shunt complex admittance for shunt at to end (J) bus, pu.
 ST - Initial branch status, 1 - in service, 0 - out of service

(d) Transformer Adjustment Data

I - From bus number
 J - To bus number



CKT - Circuit number

ICONT - Number of bus to control. If different from I or J, sign of ICONT determines control. Positive sign, close to impedance (untapped) bus of transformer. Negative sign, opposite.

RMA - Upper limit of turns ratio or phase shift

RMI - Lower limit of turns ratio or phase shift

VMA - Upper limit of controlled volts, MW or MVAR

VMI - Lower limit of controlled volts, MW or MVAR

STEP - Turns ratio step increment

TABLE - Zero, or number of a transformer impedance correction table 1-5

(e) Area Interchange Data

I - Area number (1-100)

ISW - Area interchange slack bus number

PDES - Desired net interchange, MW + = out.

PTOL - Area interchange tolerance, MW

ARNAM - Area name, 8 characters, enclosed in single quotes.

(f) DC Line Data

Each DC line has three consecutive records

I,MDC,RDC,SETVL,VSCHD,VCMOD,RCOMP,DELTI,METER

IPR,NBR,ALFMAX,ALFMN,RCR,XCR,EBASR,TRR,TAPR,TPMXR,TPMNR,TSTPR

IPI,NBI,GAMMX,GAMMN,RCI,XCI,EBASI,TRI,TAPI,TPMXI,TPMNI,TSTPI

I - DC Line number

MDC - Control mode 0 - blocked 1 - power 2 - current

RDC - Resistance, ohms

SETVL - Current or power demand

VSCHD - Scheduled compounded DC voltage, KV

VCMOD - Mode switch DC voltage, KV, switch to current control mode below this

RCOMP - Compounding resistance, ohms

DELTI - Current margin, per unit of desired current

METER - Metered end code, R - rectifier I - Inverter

IPR - Rectifier converter bus number

NBR - Number of bridges in series rectifier
 ALFMAX - Maximum rectifier firing angle, degrees
 ALFMN - Minimum rectifier firing angle, degrees
 RCR - Rectifier commutating transformer resistance, per bridge, ohms
 XCR - Rectifier commutating transformer reactance, per bridge, ohms
 EBASR - Rectifier primary base AC volts, KV
 TRR - Rectifier transformer ratio
 TAPR - Rectifier tap setting
 TPMXR - Maximum rectifier tap setting
 TPMNR - Minimum rectifier tap setting
 TSTPR - Rectifier tap step

Third record contains inverter quantities corresponding to rectifier quantities above.

(g) Switch Shunt Data

I - Bus number
 MODSW - Mode 0 - fixed 1 - discrete 2 - continuous
 VSWHI - Desired voltage upper limit, per unit
 VSWLO - Desired voltage lower limit, per unit
 SWREM - Number of remote bus to control. 0 to control own bus.
 VDES - Desired voltage setpoint, per unit
 BINIT - Initial switched shunt admittance, MVAR at 1.0 per unit volts
 N1 - Number of steps for block 1, first 0 is end of blocks
 B1 - Admittance increment of block 1 in MVAR at 1.0 per unit volts.
 N2, B2, etc, as N1, B1

The line-wise YTC of the entire network shall be provided by the Transmission Licensees. In case a line is likely to be commissioned during a financial year, the data of the same, along with the earliest COD will be provided to the Implementing Agency by the CTU.

For the determination of the transmission charges based on Hybrid Methodology applicable in the next financial year, all the above data shall be provided to the IA as per the timelines specified by IA.

Overall charges to be allocated among nodes shall be computed by adopting the YTC of each of the lines of the ISTS licensees, and any other non-ISTS line that has been certified by the respective RPCs as being used for interstate transmission. The YTC for such lines shall be based on the YTC of the transmission licensee / SEB as approved by the Appropriate Commission. The YTC of the sub-stations shall be apportioned to the lines emanating from each sub-station as per the provisions of these Regulations. The YTC of the transmission

assets expected to be commissioned in the Application Period would be incorporated by the IA on the basis of provisional approvals or benchmarked capital cost and operating costs as determined using the regulations of the Commission.

2.2 COMPUTATION OF LOAD FLOWS ON THE BASIC NETWORK

The IA shall run AC load flow on the Basic Network using the technical data obtained from the DICs, RLDCs and NLDC. The real power generation at the generator nodes in the Basic Network shall be based on the long term / medium contracts of the generators connected directly to the ISTS or the injection submitted by the DICs, where such nodes are embedded in the networks of the DIC. The demand at the load nodes shall be based on the long term / medium term contracts of the DICs. In the case of an STU / SEB, the total injection at all the generator nodes owned by the STU/SEB shall be equal to the aggregate of all the long term / medium term contracts of the entities connected in the state network. Similarly, the withdrawal at all the nodes owned by the SEB/STU shall be equal to the total long term / medium term contracts of all the entities connected in the SEB / STU network.

In the process of convergence of the Load Flow on the Basic Network, the IA may require to make certain adjustments in the load / generation at various buses to ensure load generation balance. Such load flow analysis shall be performed for all the network conditions as required by the Regulations in force. The entire process of formation of the Basic Network and convergence to load flows shall be validated by the validation committee. The network shall then be reduced as per the guidelines in the following section.

2.3 COMPUTATION: REDUCTION OF THE INDIAN GRID

The determination of transmission charges based on Hybrid Methodology is required to be limited to the network owned, operated and maintained by the ISTS Licensees and those transmission licensees / SEBs whose assets have been certified by RPC as being used for interstate transmission. "Neat" truncation of the grid at the interface of the state and the central sector boundaries is not possible because all the assets of PGCIL are not interconnected by their own assets. Preparation of a cogent network therefore requires consideration of state owned lines also. One of the methods of network reduction, viz., network truncation is explained below. However IA may adopt alternative network reduction tools that find smaller but equivalent representations of large networks after due approval of the Commission.

Most of the assets of PGCIL are operated at 400 kV. For the year 2008-09, PGCIL had Rupees 221 Crores (excluding NER) to be recovered from 220 kV assets of the total YTC of Rupees 4959.43 Crores. Most of the 220 kV assets in India are owned by the state utilities. It was, therefore, deemed appropriate by the CEA that the network be truncated at 400 kV level because it would involve minimal use of the state owned lines. The voltage level for the purposes of network truncation may be revised in the subsequent years by the IA after approval by the Commission.

The complete Network shall be truncated at 400 kV level by the Implementing Agency following the following guidelines:

1. The IA shall run AC Load Flow on the two grids – NEW Grid and SR Grid separately till these grids are synchronously integrated.

2. Based on the load flow analysis on the Basic Network, for each 400 kV node (and 132 kV in the NER grid) in the NEW grid (except NER, where the network shall be truncated at 132 kV) and SR grid, the IA shall determine the net power flowing out of each node and power flowing into each node from the power system at lower voltage levels connected to this node, to compute the total injection and / or total withdrawal at each node from the lower voltage power system.
 - a. All injection from the lower voltage system into 400 kV (in the case of NEW grid except NER and SR grid) and 132 kV in the case of NER grid shall be treated as a generator and vice-versa in the case of net withdrawal, the system below each node shall be replaced by a net demand.
3. The network thus modified will have assets at 400 kV (and upto 132 kV assets in NER) and higher voltages with revised generation and load buses.
4. A truncated network for each grid condition for each season shall be obtained based on the above guidelines.
5. The Implementing Agency shall execute AC load flow on the truncated network and the truncation shall be accepted only when the (1) Slack bus generation, (2) Voltage angles at generation and demand buses closely match with the AC load flow on the full network.
6. The network considered for NER region will however have all the assets from 765 kV to 132 kV.

The truncated network so obtained shall be used for the implementation of the Marginal Participation methodology of transmission pricing.

2.4 IDENTIFICATION OF THE SLACK NODES: USING AVERAGE PARTICIPATION METHOD

Rationale for Hybridization of the Marginal Participation and the Average Participation Methods

Due to the Kirchoff's laws, any 1 MW increase in generation (or load) at node i has to be compensated by a corresponding increase in load (or generation) at some other node or nodes. Thus the calculation of how much an injection (or withdrawal) at a certain bus affects the flows in the network depends on the choice of the node (s) that responds.

Different choices are possible for this 'slack bus' (the responding node in power systems terminology). In cases of countries like Argentina or Chile, the 'slack node' is near the major load centre. For larger networks, distributed slack nodes can be considered – where the demand (generation) at all / pre-selected nodes responds pro-rata to 1 MW increment in generation (load). For the purposes of the computations in the Indian context distributed slack nodes have been considered. The selection of slack buses influences the final results prominently and therefore is a decision which must not be made arbitrarily.

The method considered here is a hybrid of the marginal and the average participation methods, and is sympathetic with the concerns of those who, in the defense of the interests of their states argue that demand in each state must first be met by the generation within the state and that the mismatches between the state generation and demand will result in export or import flows.

Truncation at the 400 kV level also allows relation of local generation and local demand and obtains a source (or a sink) for the net imports (or exports). In other words, state generators

below 400 kV are primarily linked with state demand and only net imports or exports are linked with external nodes. The external slack bus (es) for each node shall be found as follows:

- a. For every node in a particular scenario, Average Participation method will be applied to each generation / load located in the state under consideration. Tracing from load to generator (or from generator to load), a set of generators (or loads) (including those outside the state) and their contribution to the load (generator) is determined for each load (generator) bus.
- b. Using the above choice of slack buses for each generator and load bus, marginal participation of each generator and load in each transmission line is computed.

2.5 COMPUTATION: HYBRID METHOD FOR THE DETERMINATION OF TRANSMISSION CHARGES

Any usage based methodology attempts to identify how much of power that flows through each of the lines in the system is due to the existence of a certain network user, in order to charge it according to the adopted measure of utilization. To do so, the Hybrid Method analyzes how the flows in the grid are modified when minor changes are introduced in the production (or consumption) of agent i , and it assumes that the relationship of the flow through line j with the behaviour of the agent i can be considered to be linear. For each of the considered blocks of months and peak and other than peak condition, the procedure can be described as follows:

1. Marginal participation sensitivities are obtained that represents how much the flow through each network branch j increases when the injection/ withdrawal in a bus is increased by 1 MW. Flow variation in each network branch j incurred by 1 MW injection / withdrawal at each bus is computed for each scenario, e .
2. Due to the Kirchoff's laws, any 1 MW increase in generation (or load) at node i has to be compensated by a corresponding increase in load (or generation) at some other node or nodes (after adjusting for incremental system losses). Thus the calculation of how much an injection (or withdrawal) at a certain bus affects the flows in the network depends on the decision of which is the node that responds, and the answer that is demanded from the method is heavily conditioned by an assumption that it needs as an input. The methodology used for the selection of the distributed slack buses is explained above.
3. Once the flow variation in each line incurred by each agent and for every scenario is obtained, it is possible to compute a seasonal usage index for each network user. This index is computed according to equation given below. It can be seen that only positive increments in the direction of the power flow in the base case are considered. This implies that increments which reduce burden on lines are neither given any credit nor charged for use of the system. This is essentially because of practical reasons where it could be difficult to pay grid connected entities for being connected to the grid. Further, there could be times (with strictly positive chance) when these entities need to use certain network branches along the direction of the main flow, though such times may not be the times which coincide with typical seasonal system peak and

other than peak periods considered in the load flow studies. This is also a standard international practice followed in countries where such pricing mechanisms are used.

The seasonal index (for each block of months) is computed as:

$$U_{e,i,l} = \left(|F_{le}^i| - |F_{le}| \right) \cdot P_{ie} \cdot \begin{cases} 1 & \text{if } |F_{le}^i| - |F_{le}| > 0, \text{ Sign}(F_{le}^i) \text{ is same as Sign}(F_{le}) \\ 0 & \text{otherwise} \end{cases}$$

Where,

U_{eil} is the seasonal usage index in line l due to injection / withdrawal at node i

F_{le} is the flow in line l under scenario e under base case

F_{le}^i is the flow in line l under scenario e due to injection / withdrawal of 1 MW at node

P_{ie} is power dispatch / demand at bus i under scenario e under base case

4. The revenue requirement of each line is allocated pro-rata to the different agents according to their total participation in the corresponding line.

$$\text{Cost Allocated}_{eil} = \frac{U_{eil}}{\sum_i U_{eil}} \times C_l$$

Where,

C_l is the Transmission Charge of the line – computed by attributing the Yearly Transmission Charge for the ISTS licensee to each line owned by it and to the block of month under consideration

$$\frac{U_{eil}}{\sum_i U_{eil}} \text{ is the marginal participation factor}$$

The above mechanism is also commonly referred to as the “Point tariff” and has been considered by the CERC in the past as a potential alternative to the regional postage stamp method.

2.6 COMPUTATION: HYBRID METHOD FOR THE SHARING OF TRANSMISSION LOSSES

1. In the application of the Marginal Participation Method for the allocation of transmission losses to various nodes in the system, the change in losses in the system (above the base case) because of a incremental injection / withdrawal at each node are computed. The change in overall system losses per unit of injection / withdrawal at each node is termed as the Marginal Loss Factor for that node. The marginal loss factor shall be based on the following formula:

$$\text{Marginal Loss Factor}_i = \frac{\partial \text{System Losses}}{\partial \text{Power generation / load at Node } i} = K_i$$

2. The selection of the slack buses for absorption (supply) of the incremental injection (withdrawal) is done as per the methodology discussed above.

3. The marginal loss factors are multiplied by the generation / demand at these nodes under base case, i.e.

$$K_i \times P_i^g \quad \text{for generation nodes}$$

$$K_j \times P_j^d \quad \text{for demand nodes}$$

Where, P_i^g is base case generation at node i
 P_j^d is base case demand at node j

4. Loss Allocation Factor for generation and demand nodes are computed by:

$$\frac{K_i \times P_i^g}{\sum_i K_i \times P_i^g + \sum_j K_j \times P_j^d} \quad \text{for generation node } i \text{ and}$$

$$\frac{K_j \times P_j^d}{\sum_i K_i \times P_i^g + \sum_j K_j \times P_j^d} \quad \text{for demand node } j$$

5. The Loss Allocators computed above are multiplied by the total system losses to allocate losses to each node in the system.

2.7 COMPUTATION: DETERMINATION OF SHARING OF YTC AND TRANSMISSION LOSSES

The simulations will be carried out by the IA by using a software duly approved by the CERC.

The following steps shall be followed:

1. Converged AC Load Flow data for the NEW Grid and the SR grid for the truncated network shall be used directly for the implementation of the Hybrid method.
2. Treatment of HVDC lines: Flow on the HVDC line is regulated by power order and hence it remains constant for marginal change in load or generation. Hence, marginal participation of a HVDC line is zero. Thus, MP-method cannot directly recover cost of a HVDC line. Therefore, to evaluate utility of HVDC line for a load or a generator, the following methodology shall be applied:
 - a. Step 1: Evaluate the Transmission System charges (of AC network) for all loads and generators corresponding to base case which has all HVDC lines in service.
 - b. Step 2: Disconnect the HVDC line and again compute the new flows on the AC system. Hence, evaluate the new transmission system charges (of AC network) for all the loads and generators.
 - c. Step 3: Compute the difference between the Nodal Charges (unit – Rs) with and without HVDC line and identify nodes which benefit from the presence of the HVDC lines. Benefit is new (with disconnection) usage cost minus old (with HVDC) cost. If benefit is negative, it is set to zero.

Step 4: The cost of the HVDC line is then allocated to the nodes in proportion of the benefits they derive from its presence as computed above. In the case of SR Grid, which is not synchronously connected with the NEW grid, the 'benefits' shall be computed at nodes which were indicated to have higher transmission usage costs attributed to them 'without' the HVDC line (Talcher- Kolar). When Talcher Kolar link is disconnected, the loads in the SR are reduced proportionately such that net reduction is equal to the power received from the Talchar-Kolar link. Then, new usage costs are worked out. Benefit herein is defined as old cost (base case with injection from Talchar Kolar) minus new usage cost i.e. with link disconnected. If any

HVDC line can be modeled as a load with MW equal to P-order at the sending end and a generator with corresponding MW at the receiving end. A 'without' scenario for a HVDC line, corresponds to disconnecting the corresponding load-generation pair. Sensitivities for these fictitious loads and generators are not computed as they are not to be priced.

3. Using AC load flow, marginal participation factors shall be computed for determination of transmission system utilization due to marginal injection / withdrawal at each generator / demand node.
4. YTC for each line shall be based on the line-wise YTC provided by the Transmission Licensees. Average per km YTC for each voltage level (and line configuration viz., 400 KV D/C twin Moose, 400 kV Quad Moose, 400 kV Quad Bersimis etc.) of the transmission licensee lines shall be applied to the 765 kV, 400 kV, 220 kV and 132 kV lines considered in the network.
5. Hybrid Method shall be applied to system conditions as required by the IA and approved by the CERC. Typically, these conditions will correspond with:
 - April to June
 - July to September
 - October to November
 - December to February and
 - March

Peak and Other than peak conditions to be used for computations shall be approved by the CERC and notified by the IA for submission of the required data.

6. Annual Average YTC of each line will then be attributed to peak and other than peak periods of each season.
7. The annual average YTC (of each period in each season) of each line is attributed to the total change in flow in each line. Therefore the YTC is allocated to each agent in proportion of the change in the flow in network branch affected by that agent.
8. Transmission charges based on Hybrid Methodology in Rs/MW/Month and Rs/MW/hr at each node in each block of months will be computed.
9. Loss Allocators shall also be computed along with the above simulations and as discussed above.
10. Total losses shall be computed, as per the present methodology, viz.,

The total net drawal by each utility is subtracted from the sum of net injection of Inter-State Generating Stations (ISGS) and the inter-regional injections to arrive at the losses in MWh.

All loss computations are on a weekly basis from the Special Energy Meters (SEMs) installed at all inter-utility exchange points in the region. A week for the purpose of accounting is from 0000 hours of Monday to 2400 hours of the following Sunday.

11. Using the loss allocators, the losses shall be allocated to each node, as per the detailed procedure to be developed by NLDC under these Regulations.

2.8 CREATION OF ZONES AND DETERMINATION OF ZONAL CHARGES AND LOSSES

The proposed mechanism is based on a locational point charge (Rs/MW/month) of (Rs/MW/hr) for each grid connected entity, which entitles it to access the entire network. In practice it is indeed cumbersome from an implementation perspective in view of the large size of the Indian power system. In some instances it may be inappropriate to apply the pricing at each node in the network since certain local peculiarities could distort pricing signals. Hence a logical basis for aggregating the charges in a region into zones is necessary.

The principles of zoning of such charges are articulated in the Regulations.

2.8.1 DETERMINATION OF LOCATIONAL CHARGES IN GENERATION ZONES

The transmission access charges shall be determined for each generation zone by computing the weighted average of nodal access charges at each generation node in this zone.

In case of a generation node, where a generator is physically connected, the transmission access charges for such generators can be recovered from the demand customers who have been allocated capacity of such generators.

As discussed above, truncation of the network at 400 kV level, may in certain instances lead to net injection at nodes which may not have a generator directly connected. Transmission access charges for such generators shall be charged to the states where these nodes are located.

The weighted average transmission access charge for nodes in a zone is the zonal transmission access charge based on Hybrid Methodology for generation, e.g. in a Zone - ZZ, the following three nodes were considered in one zone: PP, AA and KK.

ZZ zone for Summer Peak Condition

	Power Injection (MW)	Transmission Charge (Rs –Lakh)	Zonal Transmission Charge (Rs Lakh/MW)
PP	24.08	163.98	6.99
AA	107.69	825.03	
KK	160.02	1053.05	
ZZ – ZONE	291.79	2042.06	

In the above table, the transmission charges based on Hybrid Methodology (in Rs Lakh / MW) to be charged to ZZ zone during the financial year are computed by dividing Rs Lakh (2042.06) by Power Injection (291.79 MW). The per unit weighted average annual access charge is therefore, Rs. 2042.06 divided by 291.79 MW is Rs 6.99 lakh per MW.

These will be updated by the Implementing Agency based on the Network and Load in the Application Period.

2.8.2 DETERMINATION OF LOCATIONAL CHARGES IN DEMAND ZONES

While multiple generation zones shall be considered in a state, for each state there shall be a single demand zone. This is essentially because, the interface of the CTU network with the State is usually at either 400 kV or 220 kV nodes which are generally owned by the state transmission utilities. The transmission bills by the CTU are generally raised on the STU or the SEBs where state utilities have not been unbundled. While the nodal charges for access by demand customers will be made available to the State Utilities, the manner of application within the state would be left to the state utilities. This may change when the states implement a 'Point of Connection' based transmission pricing mechanism.

Transmission access charges for demand zones are computed in a manner similar to the transmission access charges for generation zones.

2.8.3 DETERMINATION OF LOSSES IN GENERATION ZONES

The loss allocators, computed at the nodal level are indicative of the percentage of losses to be allocated to each node. The total system losses shall be computed as per the existing methodology.

The detailed procedure for determination of losses using the loss allocation factors shall be prepared by the NLDC within 30 days of the notification of these Regulations.

2.8.4 DETERMINATION OF LOSSES IN DEMAND ZONES

The loss allocators, computed at the nodal level are indicative of the percentage of losses to be allocated to each node. The total system losses shall be computed as per the existing methodology. The detailed procedure for allocation of losses shall be prepared by NLDC within 30 days of the notification of these regulations.



**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Dated: 1st of April, 2015

NOTIFICATION

No.L-1/44/2010-CERC: In exercise of the powers conferred under section 178 read with Part V of the Electricity Act, 2003 (36 of 2003), and all other powers enabling it in this behalf, and after previous publication, the Central Electricity Regulatory Commission makes the following regulations to amend Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges & Losses) Regulations, 2010 as amended from time to time (hereinafter referred to as "The Principal Regulations"):

1. Short title, extent and commencement

(1) These regulations may be called the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) (Third Amendment) Regulations, 2015.

(2) These regulations shall come into force with effect from 1st of May, 2015.

2. Amendment to Regulation 2 of the Principal Regulations:

(1) Sub-clause (b) of clause (1) of Regulation 2 of the Principal Regulations shall be substituted as under:

“(b) **Application Period** means the period of application of the charges determined as per these regulations and shall be of 3 (three) months duration i.e. April to June, July to September, October to December, and January to March in a financial year:

Provided that in exceptional circumstances, the Commission may extend or curtail the duration of the application period for the reasons to be recorded in writing.”

(2) Sub-clause (c) of clause (1) of Regulation 2 of the Principal Regulations shall be substituted as under:

“(c) **‘Approved Injection’** means the injection in MW computed by the Implementing Agency for each Application Period on the basis of maximum injection made during the corresponding Application Periods of last three (3) years and validated by the Validation Committee for the DICs at the ex-bus of the generators or any other injection point of the DICs into the ISTS, and taking into account the generation data submitted by the DICs incorporating total injection into the grid:



Provided that the overload capability of a generating unit shall not be used for calculating the approved injection:

Provided further that where long term access (LTA) has been granted by the CTU, the LTA quantum, and where long term access has not been granted by the CTU, the installed capacity of the generating unit excluding the auxiliary power consumption, shall be considered for the purpose of computation of approved injection."

(3) In sub-clause (d) of clause (1) of Regulation 2 of the Principal Regulations, the words "peak and off-peak scenarios" shall be deleted.

(4) Sub-clause (f) of clause (1) of Regulation 2 of the Principal Regulations shall be substituted as under:

"(f) '**Approved Withdrawal**' means the withdrawal in MW computed by the Implementing Agency for each application period on the basis of the actual peak met during the corresponding application periods of last three (3) years and validated by the Validation Committee for any DIC in a control area after taking into account the aggregated withdrawal from all nodes to which DIC is connected and which affect the flow in the ISTS, and the anticipated maximum demand to be met as submitted by the DIC:

Provided that the overload capability of a generating unit in which the DIC has an allocation or with which the DIC has signed an agreement, shall not be used for calculating the approved withdrawal under long term access (LTA)."

(5) Sub-clause (g) of clause (1) of Regulation 2 of the Principal Regulations shall be substituted as under:

"(g) **Approved Additional Medium Term Withdrawal** means the additional withdrawal by a DIC as per the Medium Term Open Access approved by CTU after submission of data to the Implementing Agency by the concerned DIC."

(6) Sub-clause (l) of clause (1) of Regulation 2 of the Principal Regulations (except the provisos) shall be substituted as under:

"(l) **Designated ISTS Customer or DIC** means the user of any segment(s) or element(s) of the ISTS and shall include generator, State Transmission Utility, State Electricity Board or load serving entity including Bulk Consumer and any other entity or person directly connected to the ISTS and shall further include any intra-State entity who has obtained Medium Term Open Access or Long Term Access to ISTS."

(7) The following sub-clauses shall be inserted after Sub-clause (l) of clause (l) of Regulation 2 of Principal Regulations:

“(l-i) **‘HVDC Charge’** means the transmission charges shared for use of HVDC transmission systems as provided under Regulation 11 of these regulations.

(8) The following sub-clause shall be inserted after sub-clause (o) of clause (1) of Regulation 2 of Principal Regulations:

(o-ii) **‘Merchant Power Plant’** means a generating station or unit thereof whose tariff either for the whole capacity or for the part capacity is not determined under section 62 or section 63 of the Act and which sells electricity in the open market corresponding to such capacity and the term ‘merchant capacity’ shall be construed accordingly.”

(9) The following sub-clauses shall be inserted after sub-clause (t) of clause (1) of Regulation 2 of the Principal Regulations and the existing sub-clause (ti) shall be re-numbered as (t-iii):

“(t-i) **‘Reliability Support Charge’** means the Charge for reliability benefits which accrue to the DICs by virtue of operating in an integrated grid.

(t-ii) **‘Reliability Support Charges Sharing Methodology’** means the mechanism for determination and sharing of Reliability Support Charges as specified in sub-clause (q) of clause (1) of Regulation 7 of these Regulations and para 2.8.1.b. of Annexure-I.”

(10) The following sub-clause shall be inserted after sub-clause (u) of clause 1 of Regulation 2 of the Principal Regulations:

“(u-i) **‘Validation Committee’** means the committee appointed by the Commission comprising officers from the Commission, the Implementing Agency, each of the RPCs, CTU, CEA, STUs for the purpose of discharging various functions vested under these regulations, and the meetings of the committee shall be chaired by a nominee of the Commission.”

(11) Sub-clauses (v), (w) and (x) of clause (1) of Regulation 2 of the Principal Regulations shall be deleted.

(12) The following provisos shall be inserted under sub-clause (y) of clause (1) of Regulation 2 of the Principal Regulations:

“Provided that in case of non-ISTS lines, the asset-wise tariff determined by the respective State Commissions or approved by the Central Commission based on the approved Annual Revenue Requirement of STU, shall be used:



Provided further that transmission charges received by the STU under these regulations shall be adjusted in the Annual Revenue Requirement of the concerned STU approved by the respective State Commission."

3. Amendment to Regulation 3 of the Principal Regulations:

Sub clause (a) of Regulation 3 of the Principal Regulations shall be substituted as under:

"(a) Generating Stations (i) which are regional entities as defined in the Indian Electricity Grid Code (IEGC) or (ii) are having LTA or MTOA to ISTS and are connected either to STU or ISTS or both."

4. Amendments to Regulation 5 of the Principal Regulations:

In clause (4) of Regulation 5 of the Principal Regulations, the words "Rupees per Mega Watt per hour" shall be substituted with the words "Paisa/unit".

5. Amendments to Regulation 7 of the Principal Regulations:

(1) Sub-clause (d) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"(d) Nodal generation information shall be based on the forecast data provided by the DICs. Such forecast data shall incorporate estimate of total maximum injection into the grid, considering the injection under long term access, medium term open access and short term open access during an Application Period. The forecast data submitted by the DICs shall be vetted by the Implementing Agency based on historical maximum generation levels obtained from the NLDC/RLDCs/SLDCs. Any variation in the forecast generation shall be communicated to the concerned DIC by the Implementing Agency.

The forecast generation in respect of each DIC shall be normalized with respect to forecast All India Peak Demand met to create base case for load generation balance to arrive at the approved injection.

Approved injection figures so arrived shall be validated by the Validation Committee based on the injection data submitted by the DICs. In case data submitted by any DIC is different from the data computed on the basis of last three years' actual data, requisite justification by the concerned DIC shall be submitted for considering its data.

The generating station for which three years' data are not available, forecast shall be prepared based on available data and the data submitted by the concerned generating station. In case no data is submitted by the generating station, estimated injection as prepared by the Implementing Agency shall be considered as approved injection.



In case of DICs which are injecting into the grid for the first time, approved injection based on norms formulated by the Validation Committee for generation based on different types of stations shall be considered.

All withdrawal DICs shall also submit estimated maximum generation from their own generating stations during the Application Period to the Implementing Agency to prepare the Base Case for load generation balance. The data as validated by the Validation Committee shall be final.

Mis-declaration by a DIC beyond $\pm 20\%$ for two consecutive quarters shall be treated as gaming. Unless reasonably explained by the concerned DIC, the Implementing Agency shall report the matter to the Commission for appropriate directions."

(2) Sub-clause (e) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"(e) Forecast demand data shall be submitted by the DICs for each node or a group of nodes in a zone, identified by the Implementing Agency under these regulations. The forecast demand data shall incorporate estimate of maximum withdrawal. The forecast demand data submitted by DICs shall be vetted by the Implementing Agency based on historical demand met of each DIC during the periods corresponding to the Application Period. Any variation in the forecast demand shall be communicated by the Implementing Agency to the concerned DIC.

In case data submitted by a DIC is different from the data forecast on the basis of last three years actual data, requisite justification shall be submitted by the concerned DIC for considering its data. The data as validated by the Validation Committee shall be final.

Mis-declaration by a DIC beyond $\pm 20\%$ for two consecutive quarters shall be treated as gaming. Unless reasonably explained by the concerned DIC, the Implementing Agency shall report the matter to the Commission for appropriate directions."

(3) Sub-clause (g) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"(g) In the event of difference of opinion between any DIC and the Implementing Agency with regard to the revised generation and demand data so obtained, the Validation Committee shall take final decision after considering the point of view of the concerned DIC and the Implementing Agency."

(4) Sub-clause (i) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:



“(i) Basic Network along with the converged load flow results for the injection and withdrawal data as per sub-clauses (d) and (e) of clause (1) of this Regulation shall be validated by the Validation Committee. The Basic Network, nodal generation, nodal demand and the load flow results for each Application Period shall be validated by the Validation Committee not later than 15 days prior to the commencement of each Application Period. The approved Basic Network, nodal generation, nodal demand along with the load flow results shall be made available on the websites of the Commission and the Implementing Agency immediately after its approval by the Validation Committee.

Provided that non-submission of data in time for computation of transmission charges shall be treated as non-compliance of the regulations and action as considered appropriate shall be taken by the Commission after giving an opportunity of hearing to the defaulting DIC.”

(5) Sub-clause (k) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

“(k) Consequent to development of load flows on the Basic Network, the Hybrid Methodology shall be applied by the Implementing Agency on the Basic Network to determine the transmission charges and loss allocation factors attributable to each node in the power system.”

(6) The last Proviso under sub-clause (l) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

“Provided further that there shall be nine slab rates for PoC charges. The slab rates shall be computed by the Implementing Agency based on the methodology given in **Annexure-I** to these regulations. The slab rates shall be approved by the Commission for each Application Period. The number of slabs shall be reviewed by the Commission after two years.”

(7) Sub-clause (n) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

“(n) For the computation of transmission charges at each node as per Hybrid Methodology, cost of ISTS transmission licensees whose lines feature on the Basic Network shall be considered:

Provided that in case of STU lines which are physically inter-State lines and whose tariff is approved by the Commission, such tariff shall be considered for computation of PoC charges:

Provided further that in case of non-ISTS lines (lines owned by STUs but being used for carrying inter-State power as certified by respective RPCs), the asset-wise tariff as approved by the respective State Commission shall be considered. Where asset-wise tariff is not available, the tariff as computed by the Commission based on the ARR of the STUs (as

approved by respective State Commissions) by adopting the methodology similar to the methodology used for ISTS transmission licensees shall be considered. The transmission charges received by the concerned STU on this account shall be adjusted in its approved Annual Revenue Requirement."

(8) Sub-clause (o) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"(o) The participation factors, and the Point of Connection nodal and zonal rates thus determined, shall be computed for each Application Period. Detailed methodology for preparing the Base Case shall be in accordance with the methodology given in **Annexure-I** to these regulations.

Provided that the load flow studies shall be carried out by the Implementing Agency for each Application Period."

(9) In sub-clause (p) of clause (1) of Regulation 7 of the Principal Regulations, the sentence "Such charges shall then be attributed to peak and other than peak periods of each season based on the hours constituting these periods." shall be deleted.

(10) Sub-clause (q) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"(q) The recovery of the Yearly Transmission Charges (YTC) of the ISTS network shall be based on the Hybrid Methodology (PoC charge), Reliability Support Charge and HVDC Charge. Ten percent (10%) of the Yearly Transmission Charges shall be recovered through Reliability Support Charge Sharing methodology. The Commission may review the weightage accorded to Reliability Support Charge whenever deemed necessary. The Reliability support charge rates shall be determined separately and shall not be mixed with zonal PoC rates. The Reliability Support Charge shall be payable by the DICs in proportion to their Approved Withdrawal. In case of Injection DIC shaving Long Term Access to target region, Reliability Support Charges shall also be payable in proportion to their Approved Injection."

(11) Sub-clause (s) of clause (1) of Regulation 7 of the Principal Regulations (including the proviso) shall be substituted as under:

"(s) The losses shall be apportioned to the DICs by suitably adjusting their scheduled MWs. The extent of adjustment shall be on the basis of losses apportioned to each DIC based on the Hybrid Methodology. The Detailed Procedure for application of losses to various DICs shall be modified by NLDC with the approval of the Commission.

Provided that there shall be nine slabs for calculation of transmission losses which shall be expressed in terms of percentage. There shall be 4

steps above the average loss and 4 steps below the average loss with a slab size of 0.25% subject to minimum loss of Zero percent. The slabs may be reviewed by the Commission after two years."

(12) Para (iv) including the proviso under sub-clause (t) of clause (1) of Regulation 7 of Principal Regulations shall be substituted as under:

"(iv) Any inter-State Generating Station connected to the 400 kV inter-State Transmission System (including those connected to both 400 kV ISTS and STU) shall be treated as a separate zone and shall not be clubbed with other generator nodes in the area, for the purpose of calculation of PoC injection rate:

Provided that in case of a merchant power plant in a State connected to 400 kV inter-State Transmission System, with zero LTA or part LTA, injection considered in the Base Case or LTA, whichever is higher, shall be considered to arrive at the PoC injection rate."

(13) Para (vii) under sub-clause (t) of clause (1) of Regulation 7 of the Principal Regulations shall be substituted as under:

"(vii) In case an ISGS is connected only to STU network and the shares of the beneficiaries of the said station are being delivered through the STU network, such a line of the STU network shall be considered as an ISTS for the purpose of these regulations."

(14) The following proviso shall be added under sub-clause (u) of Clause (1) of Regulation 7 of the Principal Regulations:

"Provided that the above provision shall also be applicable for the useful life of the projects commissioned during the period 1.7.2014 to 30.6.2017."

(15) The following proviso shall be added under sub-clause (v) of Clause (1) of Regulation 7 of the Principal Regulations:

"Provided that the above provision shall also be applicable for the useful life of the projects commissioned during the period 1.7.2014 to 30.6.2017."

6. Amendment to Regulation 8 of the Principal Regulations:

(1) In clause (1) of Regulation 8 of the Principal Regulations, the words "for both peak and other than peak conditions" shall be deleted.

(2) Clause (5) of Regulation 8 of the Principal Regulations shall be substituted as under:-

"(5) Where the Approved Withdrawal or Approved Injection in case of a DIC is not materializing either partly or fully for any reason whatsoever,

the concerned DIC shall be obliged to pay the transmission charges allocated under these regulations:

Provided that in case the commissioning of a generating station or unit thereof is delayed, the generator shall be liable to pay Withdrawal Charges corresponding to its Long term Access from the date the Long Term Access granted by CTU becomes effective. The Withdrawal Charges shall be at the average withdrawal rate of the target region:

Provided further that where the operationalization of LTA is contingent upon commissioning of several transmission lines or elements and only some of the transmission lines or elements have been declared commercial, the generator shall pay the transmission charges for LTA operationalised corresponding to the transmission system commissioned:

Provided also that where the construction of dedicated transmission line has been taken up by the CTU or the transmission licensee, the transmission charges for such dedicated transmission line shall be payable by the generator as provided in the Regulation 8 (8) of the Connectivity Regulations:

Provided also that during the period when a generating station draws start-up power or injects infirm power before commencement of LTA, withdrawal or injection charges corresponding to the actual injection or withdrawal shall be payable by the generating station and such amount shall be adjusted in the next quarter, from the ISTS transmission charges to be recovered through PoC mechanism from all DICs:

Provided also that CTU shall maintain a separate account for the above amount received in a quarter and deduct the same from the transmission charges of ISTS considered in PoC calculation for the next application period."

(3) Clause (6) of the Regulation (8) of the Principal Regulations shall be substituted as under:-

"(6) For Long Term Transmission Customers availing power supply from inter-State generating stations, the charges attributable to such generation for long term supply shall be calculated directly at drawal nodes as per methodology given in the Annexure-I. Such mechanism shall be effective only after commercial operation of the generator. Till then it shall be the responsibility of the generator to pay transmission charges."

7. Amendment to Regulation 10 of the Principal Regulations:

In sub-clause (a) of clause (1) of Regulation (10) of the Principal Regulations, the words "for peak and other than peak hours" shall be deleted.

8. Amendment to Regulation 11 of the Principal Regulations

(1) Clause (4) of Regulation 11 of the Principal Regulations shall be substituted as under:

“(4) The first part of the bill shall recover charges for use of the transmission assets of the ISTS Licensees based on the Point of Connection methodology. This part of the bill shall be computed in three sub-parts as under:

1. Point of Connection transmission charge towards LTA/MTOA

For Generators having LTA to target region:

$$\left[\text{PoC transmission rate of generation zone in Rs / MW / month} \right] \times \left[(\text{Approved Injection}) \right]$$

For Demand:

$$\left[\text{PoC transmission rate for demand zone in Rs / MW / month} \right] \times \left[(\text{Approved Withdrawal}) \right]$$

2. Reliability Support Charge

For Generators having LTA to target region:

$$\left[\text{Reliability Support Rate in Rs / MW / month} \right] \times \left[(\text{Approved Injection}) \right]$$

For Demand:

$$\left[\text{Reliability support rate in Rs / MW / month} \right] \times \left[(\text{Approved Withdrawal}) \right]$$

3. HVDC charge

(i) 10% of Monthly Transmission Charges (MTC) of HVDC transmission system shall form part of Reliability Support Charges and the balance shall be billed as detailed below:

Transmission charges for HVDC system created to supply power to specific regions shall be borne by DICs of such regions. The HVDC Charge shall be payable by DICs of the Region in proportion to their Approved Withdrawal. In case of Injection DICs having Long Term Access to target region, it shall also be payable in proportion to their Approved Injection.



For Generators having LTA to target region:

$$\frac{[\text{HVDC Charge for Region in Rs/month}] \times [\text{Approved Injection}]}{[\text{Total Approved Withdrawal of the Withdrawal DIC and Approved Injection of the Generator having LTA to target Region}]}$$

For Demand:

$$\frac{[\text{HVDC Charge for Region in Rs/month}] \times [\text{Approved Withdrawal}]}{[\text{Total Approved Withdrawal of the Withdrawal DIC and Approved Injection of the Generator having LTA to target Region}]}$$

(ii) HVDC Charge shall also be applicable for additional MTOA. Over/under recovery of HVDC charges shall be adjusted in the third part of bill in a manner as provided in Regulation 11(6) of these Regulations.

(iii) Where transmission charges for any HVDC system are to be partly borne by a DIC (injecting DIC or withdrawal DIC, as the case may be) under a PPA or any other arrangement, transmission charges in proportion to the share of capacity in accordance with the PPA or other arrangement shall be borne by such DIC and the charges for balance capacity shall be borne by the remaining DICs by scaling up of MTC of the AC system included in the PoC. Such HVDC shall not be considered under (i) above.

This first part of the bill shall be raised based on the Point of Connection rates, Reliability Support rate, HVDC Charge, Approved Withdrawal and Approved Injection for each DIC, provided by the Implementing Agency on the next working day of uploading of the Regional Transmission Accounts by the respective Regional Power Committees on their websites in each month for the previous month and determined prior to the commencement of the application period:

Provided that the list of transmission assets along with the approved transmission charges for which billing has been done shall be enclosed with the first part of the bill:

Provided further that the charges for the DICs having long term access without beneficiaries shall comprise the Injection POC Charges, Reliability Support Charges and HVDC Charges."

(2) Clause (5) of Regulation 11 of the Principal Regulations shall be substituted as under:



"(5) The second part of the bill shall be raised to recover charges for Additional Approved Medium Term Open Access which shall be computed as follows:

For Demand:

$$\left[\text{PoC Transmission rates for demand zone in Rs / MW / month} \right] \times \\ \left[(\text{Approved Additional Medium Term Withdrawal}) \right]$$

The second part of the bill shall be raised on the DICs alongwith the first part of the bill:

Provided that the revenue collected from the approved additional Medium-term injection, which has not been considered in the Approved Injection/Approved Withdrawal, shall be reimbursed to the DICs having Long-term Access in the following month, in proportion to the monthly billing of the respective month:

Provided further that the Withdrawal PoC charges for Medium-term Open Access to any region shall be adjusted against Injection PoC charges for the Long-term Access to the target region without identified beneficiaries:

Provided also that a generator who has been granted Long-term Access to a target region shall be required to pay PoC injection charge for the remaining quantum after offsetting the quantum of Medium-term Open Access:

Provided also that where a generator is liable to pay withdrawal charges for the specified quantum as per the terms of any MTOA contract, then injection charges for same quantum of power shall be offset against LTA granted."

(3) The provisos under Clause (9) of Regulation 11 of the Principal Regulations shall be substituted as under:

"Provided that the DICs which were granted LTA to a target region and are paying injection charges for Long Term Access, the injection PoC Charges and Demand PoC Charges paid for Short Term Open Access to any region shall be adjusted in the following month against the monthly injection PoC Charges for Approved injection:

Provided further that a generator, who has been granted Long-term Access to a target region, shall be required to pay PoC injection charge for the Approved injection for the remaining quantum after offsetting the charges for Medium-term Open Access, and Short-term open access:

Provided also that the injection PoC charge/Withdrawal PoC charges for Short-term open access given to a DIC shall be offset against the corresponding injection PoC charges or Withdrawal PoC charges to be

paid by the DICs for Approved injection/Approved withdrawal corresponding to Net withdrawal (load minus own injection) considered in base case:

Provided also that for withdrawal DIC, this adjustment is given only for STOA transaction by DIC and not applicable to other intra-State entity embedded in State and engaged in STOA:

Provided also that this adjustment shall also be allowed for collective transactions. Generators who are granted LTA to a target region shall be given adjustment corresponding to injection charges and withdrawal DICs shall be given adjustment corresponding to withdrawal charges:

Provided also that this adjustment shall not be allowed for collective transactions and bilateral transactions carried out by any trading licensee, who has a portfolio of generators in a State for which LTA was obtained to a target region.

9. Amendment to Regulation 16 of the Principal Regulations:

(1) In clauses (1) and (2) of Regulation 16 of the Principal Regulations, the words "the end of the fourth week of November in each Financial Year" shall be replaced with the figure and words "At least 45 days prior to the beginning of the application period".

(2) In sub-clause (b) of Clause (3) of Regulation 16 of the Principal Regulations, the words "next financial year" shall be replaced with the words "next Application Period".

(3) Sub-clause (a) of Clause (4) of Regulation 16 of the Principal Regulations shall be substituted as under:

"(a) MW and MVAR Data for injection or drawal at various nodes or a group of nodes shall be submitted for maximum injection/maximum withdrawal for each application period. Such data shall include the power tied in long term contracts and approved medium term open access agreements."

(4) Sub-clause (b) of Clause (4) of Regulation 16 of the Principal Regulations shall be deleted.

10. Amendment to Regulation 17 of the Principal Regulations:

Regulation 17 of the Principal Regulation shall be substituted as under:

"17. Information to be published by the Implementing Agency

(1) The information to be provided by the Implementing Agency consequent to the computations undertaken shall include:

- (a) Approved Basic Network Data and Assumptions, if any;
- (b) Zonal and nodal transmission charges for the ensuing Application Period;
- (c) Zonal and nodal transmission losses data for the ensuing Application Period;
- (d) Schedule of charges payable by each constituent for the ensuing Application Period;
- (e) YTC detail (Information submitted by the transmission licensees covered under these Regulation and computation by Implementing Agency);
- (f) Zone wise details of PoC Charges to enable each DIC to see details of transmission lines it is using and whose transmission charges it is sharing;
- (g) LTA /MTOA and their commencement schedule.”

11. Amendment to Annexure-I of the Principal Regulations:

(1) In Para 2.1 of the Annexure-I of the Principal Regulations, the words" peak and other than peak conditions" appearing in the first sentence shall be substituted with the words "maximum injection/maximum withdrawal".

(2) Para 2.1.1 of the Annexure-I of the Principal Regulations shall be substituted as under:

“2.1.1 NODAL GENERATION AND DEMAND INFORMATION

Data Required for Annual process of determination of transmission charges based on Hybrid Methodology:

The DICs will provide forecast injection/withdrawal information {MW and MVAR (or an assumption about the power factor to be used)} at all the nodes or a group of nodes in a zone (identified a-priori by the Implementing Agency (IA) in the Network. “Typical” injection/withdrawal data based on maximum injection/withdrawal as defined in these regulations shall be provided to the Implementing Agency by the DICs for each of the application period.

DICs shall also provide injection and withdrawal data for the corresponding quarter of last three years. The data provided by the DICs shall be as per the formats prepared by the IA and duly approved by the Commission under the relevant provisions of these Regulations.



Information provided by the DICs shall be vetted by the Implementing Agency as per the provisions of the Regulations and Detailed procedure notified by Implementing Agency.

Methodology for calculation of forecasted maximum generation/withdrawal of DICs for vetting by Implementing Agency

For Demand data:

The projected maximum withdrawal figures provided by DICs will be vetted by Implementing Agency based on the following:

- a. Monthly peak demand met for each State/UT in the last 3 years for the period corresponding to the Application Period shall be considered.
- b. The average of monthly peak demand met for each State/UT in each of the last 3 years for the period corresponding to the Application Period shall be calculated.
- c. The average peak demand met for each State/UT for the Application Period shall be projected based on last 3 year's average of monthly peak demand met figures.
- d. Similarly All India peak demand met in last 3 years shall be averaged for the period corresponding to the Application Period. This shall be projected for the ensuing Application Period. The projected peak demand of each State/UT thus arrived shall be normalized with the projected All-India peak demand met of the Application Period under consideration for the current year.

For Generation Data:

- a. The projected maximum injection figures provided by DICs shall be vetted by the Implementing Agency based on average of monthly maximum injection in the last 3 years (based on actual metered data available from RLDCs) for the period corresponding to Application Period projected for the ensuing Application Period. Similarly maximum injection data (for last 3 years as well as projected for the ensuing quarter) for generators embedded within the State system shall be provided by respective SLDC. In case data is not provided by SLDC to the Implementing Agency, the maximum injection of the concerned State shall be taken as the difference between peak met and withdrawal from ISTS based on actual metered data (for the time block corresponding to the block in which peak met occurred).



- b. If sum of projected generation in the grid is more than sum of projected demand, the generation may be proportionately reduced to match sum of withdrawal data. If sum of projected generation in the grid is less than sum of projected demand, the demand may be proportionately reduced to match sum of generation.
- c. The peak demand met figures in respect of each State/UT and All India peak met shall be taken from the final/revised monthly power supply position published by CEA.
- d. The Implementing Agency shall finalize the data duly maintaining Load Generation balance.
- e. If the Validation Committee encounters any difficulty for validation of Approved Injection or Approved Withdrawal or any other data on account of non availability or partial availability of any information from the DICs, the Validation Committee may adopt such method as may be considered necessary consistent with the objectives of these regulations.
- f. The data as validated/adopted by the Validation Committee shall be final."

(3) Sub-paras under Para 2.1.3 of the Annexure-I to the Principal Regulations shall be substituted as under:

"The line-wise YTC of the entire network shall be provided by the Transmission Licensees. In case a line is likely to be commissioned during the Application Period, the data in respect of the same, along with the anticipated COD will be provided by the CTU/ Transmission Licensee to the Implementing Agency.

For the determination of the transmission charges based on Hybrid Methodology applicable in the next Application Period, all the above data shall be provided to the Implementing Agency as per the timelines specified by the Implementing Agency.

Overall charges to be allocated among nodes shall be computed by adopting the YTC of transmission assets of the ISTS licensees, deemed ISTS licensees and owners of the non-ISTS lines which have been certified by the respective Regional Power Committee (RPC) for carrying inter-State power. The Yearly Transmission Charge, computed for assets at each voltage level and conductor configuration in accordance with the provisions of these regulations shall be calculated for each ISTS transmission licensee based on indicative cost provided by the Central Transmission Utility for different voltage levels and conductor



configuration. The YTC for the RPC certified non-ISTS lines which carry inter-State power shall be approved by the Appropriate Commission.

In case line-wise tariff for the RPC certified non-ISTS lines has not been specified by the Appropriate Commission, the tariff as computed for the relevant voltage level and conductor configuration shall be used. The methodology for computation of tariff of individual asset shall be similar to the methodology adopted for the ISTS transmission licensees and shall be based on ARR of the STU as approved by the respective State Commission.

Certification of non-ISTS lines carrying inter-State power, which were not approved by the RPCs on the date of notification of the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2009, shall be done on the basis of load flow studies. For this purpose, STU shall put up proposal to the respective RPC Secretariat for approval. RPC Secretariat, in consultation with RLDC, using WebNet Software would examine the proposal. The results of the load flow studies and participation factor indicating flow of Inter State power on these lines shall be used to compute the percentage of usage of these lines as inter State transmission. The software in the considered scenario will give percentage of usage of these lines by home State and other than home State. For testing the usage, tariff of similar ISTS line may be used. The tariff of the line will also be allocated by software to the home State and other than home State. Based on percentage usage of ISTS in base case, RPC will approve whether the particular State line is being used as ISTS or not. Concerned STU will submit asset-wise tariff. If asset wise tariff is not available, STU will file petition before the Commission for approval of tariff of such lines. The tariff in respect of these lines shall be computed based on Approved ARR and it shall be allocated to lines of different voltage levels and configurations on the basis of methodology which is being done for ISTS lines."

- (4) Para 2.2 of the Annexure-I of the Principal Regulations shall be substituted as under:

"2.2 COMPUTATION OF LOAD FLOWS ON THE BASIC NETWORK

The Implementing Agency shall run AC load flow on the Basic Network using the technical data obtained from the DICs, SLDCs, RLDCs and NLDC. The real power generation at the generator nodes in the Basic Network shall be based on maximum injection of the generators connected directly to the ISTS or the injection submitted by the DICs, where such nodes are embedded in the networks of the DIC. The demand at the load nodes shall be based on the maximum demand met of the DICs. In the case of an STU / SEB, the total injection at all the generator nodes owned by the STU/SEB shall be equal to the aggregate of injection of the entities connected in the state network. Similarly, the withdrawal at



all the nodes owned by the SEB/STU shall be equal to withdrawal of all the entities connected in the SEB / STU network.

In the process of convergence of the Load Flow on the Basic Network, the IA may require to make certain adjustments in the load/generation at various buses to ensure load generation balance. Such load flow analysis shall be performed for all the network conditions as required by the Regulations in force. The entire process of formation of the Basic Network and convergence to load flows shall be validated by the Validation Committee.

- (5) Para 2.3 of Annexure-I of the Principal Regulations shall be deleted.
- (6) In third sentence of para 2.5 of Annexure-I of the Principal Regulations, the words "peak and other than peak conditions" shall be deleted.
- (7) In first sentence of sub-para (3) of para 2.5 of the Annexure-I of the Principal Regulations, the words "and for every scenario" shall be deleted.
- (8) In sixth sentence of sub-para (3) of para 2.5 of Annexure-I of the Principal Regulations, the words "typical seasonal system peak and other than peak periods" shall be substituted with the words "maximum injection/ maximum withdrawal".
- (9) In first and fifth sentences of sub-para (3) of para 2.5 of the Annexure-I of the Principal Regulations, the word "seasonal" shall be deleted.
- (10) Sub-paras 1, 2, 5, 6 and 12 under Para 2.7 of the Annexure-I of the Principal Regulations shall be substituted as under:

"1. Converged AC Load Flow data for the all India Grid shall be used directly for the implementation of the Hybrid Methodology."

"2. Treatment of HVDC: Flow on HVDC systems is regulated by power order and remains constant for marginal change in load or generation. Hence, marginal participation (MP) of HVDC systems is zero. Since the HVDC systems were specifically set up for transfer of bulk power to specific Region, the DICs of the Region shall share the cost of HVDC systems. HVDC system also helps in controlling voltages and power flow in inter-regional lines and some benefits accrue to all DICs by virtue of HVDC system. Accordingly, 10 % of the MTC of these systems be recovered through Reliability Support Charges. The balance amount shall be payable by Withdrawal DICs of the Region in proportion to their Approved Withdrawal. In case of Injection DICs having Long Term Access to target region, it shall be payable in proportion to their Approved Injection.

Where transmission charges for any HVDC system line are to be partly borne by a DIC (injecting DIC or withdrawal DIC, as the case may be)



under a PPA or any other arrangement, transmission charges in proportion to the share of capacity in accordance with PPA or other arrangement shall be borne by such DIC and the charges for balance capacity shall be borne by the remaining DICs by scaling up of YTC of the AC system included in the PoC.”

“5. Hybrid Methodology shall be applied to Application Period.”

“6. Annual Average YTC of each line will then be attributed to maximum injection/maximum withdrawal.”

“12. There shall be slabs for the percentage transmission losses in the All India grid till such period the Commission may consider appropriate.”

(11) In first sentence of para 2.8 of the Annexure-I of the Principal Regulations, the word "(Rs/MW/hr)" shall be substituted with the words "(Paisa/unit)".

(12) Para 2.8.1 of Annexure-I of the Principal Regulations shall be substituted as under:

“The transmission access rates shall be determined for each generation zone by computing the weighted average of nodal access charges at each generation node in this zone.

The weighted average transmission access rate for nodes in a zone is the zonal transmission access [rate] based on Hybrid Methodology for generation, e.g. in a Zone - ZZ, the following three nodes were considered in one zone: PP, AA and KK.

ZZ - zone computation in a particular scenario:

Node	Transmission Charges	Approved Injection/ Withdrawal*	Zonal Transmission Rate
	(`/Month)	(MW)	(`/MW/Month)
PP	45,00,000	250	70,000
AA	50,00,000		
KK	80,00,000		
ZZ - Zone	1,75,00,000	250	

*Approved Injection/ Approved withdrawal (MW) shall be the Long-term Access plus Medium Term Open Access i.e. Zonal PoC Charge computed considering maximum injection /maximum withdrawal shall be divided by LTA +MTOA to arrive at PoC Rate. The PoC rates shall be further grouped under slabs in accordance with sub-clause (I) of clause (1) of Regulation 7.”

(13) After para 2.8.1 of the Annexure-I of the Principal Regulations, the following paras shall be added:

“2.8.1.a. Methodology for calculation of PoC rates and billing of POC charges

- (i) PoC rates for billing towards LTA/MTOA shall be calculated only on Withdrawal nodes (as Withdrawal charges) and for generators who have Long Term Access to target region (as injection charges) corresponding to untied power. PoC rates shall not be calculated for ISGS with identified long term customers/beneficiaries with whom PPA have been signed.

Example for billing a Generator who have LTA to target region:

Suppose a Generator "A" has LTA of 900 MW to target region (WR-500 MW, NR-400 MW). He ties up 150 MW of power with U.P through PPA. "A" shall be billed for $500+250=750$ MW as its LTA to target region.

- (ii) If any generator has contractual liability to pay the Withdrawal Charges of drawee entity, then drawee DIC shall inform CTU and bill shall be raised by the CTU to generator directly. In such a case, only withdrawal charges shall be payable by generator for corresponding quantum of power.
- (iii) For balance injection i.e. difference between Approved Injection and Quantum of withdrawal, generator shall pay Injection Charges only.
- (iv) For the purpose of STOA, collective transactions and computation of transmission deviation charges, POC injection rate / withdrawal rate for all DICs shall be determined separately and shall be declared in paise/kWh
- (v) The injection and withdrawal rates in paise/kWh as at (iv) above shall be computed before transferring injection charges of ISGS having long term customers on withdrawal DICs.

2.8.1.b. Methodology for calculation of Slab Rates

- (i) The PoC rates shall be arrived at by dividing the quantum of charges allocated to each zone by its LTA+MTOA.
- (ii) The PoC rates so arrived shall be adjusted based on average rate and one sigma deviation on either side. The difference between maximum rate and minimum rate so arrived shall be divided by eight to determine width of each slab. The POC rates



for all entities shall be placed in appropriate slab, minimizing the distance from slab rate as per its adjusted rate calculated after accounting for standard deviation. The rates may be scaled up/down as required.

- (iii) For the purpose of STOA, collective transactions and computation of transmission deviation charges, there shall be separate slabs for injection and withdrawal rates.

2.8.1.c. Methodology for calculation of Reliability Support Charge Rate and billing of Reliability Support Charges

- (i) Reliability Support Charges shall be 10% of the Monthly Transmission Charges.

The Reliability Support Charge Rate, in `/MW/month shall be as under:

[10% of the Monthly Transmission Charges of ISTS]/
[Total Approved Withdrawal of the Withdrawal DICs and Approved Injection of the Generators having LTA to target region]

Reliability Support Charge for Withdrawal DIC shall be obtained by multiplying the above rate (in `/MW/month) by Approved Withdrawal. For Generator with Long term Access to target region shall be obtained by multiplying these charges by Approved Injection.

The above rate shall also apply for additional MTOA.

- (ii) Over/under recovery shall be adjusted in the transmission charges of ISTS in the third part of bill in a manner as provided in Regulation 11(6) of these Regulations.
- (iii) These charges shall also be applicable to STOA/collective transactions. The offset shall also be given in the manner as provided in Regulation 11 (9) of these Regulations.

sd/-
(Shubha Sarma)
Secretary

Note: The Principal Regulations were published on 16th June 2010 in the Gazette of India Extraordinary Part III-Section 4 at Serial No. 162. The first amendment was issued on 25th November 2011 in the Gazette of India Extraordinary Part III, Section 4 at Serial No. 229, the second amendment was issued on 28th March 2012 in the Gazette of India Extraordinary Part III, Section 4 at Serial No. 76.



**The
Central Electricity Regulatory Commission
(Sharing of Inter-State Transmission Charges and
Losses) Regulations, 2020¹
(CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations,
2020)**

[4th May, 2020]

In exercise of the powers conferred under Section 178 read with Part V of the Electricity Act, 2003 (36 of 2003), and all other powers enabling it in this behalf, and after previous publication, the Central Electricity Regulatory Commission hereby makes the following regulations:

CHAPTER 1
PRELIMINARY

1. Short title, extent and commencement.—(1) These regulations may be called the **Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020**.

(2) These regulations shall apply to all Designated ISTS Customers (DICs), Inter-State Transmission Licensees, National Load Despatch Centre (NLDC), Regional Load Despatch Centres (RLDCs), State Load Despatch Centres (SLDCs) and Regional Power Committees (RPCs).

(3) These regulations shall come into force from the date to be separately notified by the Commission.

2. Definitions.—(1) In these Regulations, unless the context otherwise requires:—

- a) **'Act'** means the Electricity Act, 2003 (36 of 2003);
- b) **'Associated Transmission System' or 'ATS'** means the transmission system identified for a generating station by the Central Transmission Utility in the Long Term Access grant;
- c) **'Basic Network'** means the power system at voltage levels of 110 kV and above containing all the power system elements including generating station and transmission systems;
- d) **'Billing month'** means the month in which bills for transmission charges are raised by the Central Transmission Utility in accordance with these regulations;
- e) **'Billing period'** means the month for which bills are raised in a billing month by the Central Transmission Utility;
- f) **'buyer'** shall have the same meaning as defined in Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulation, 2014 and any subsequent amendments or re-enactments thereof;
- g) **'COD of the Associated Transmission System'** shall mean COD of the last transmission element of the Associated Transmission System;
- h) **'Connectivity Regulations, 2009'** means the Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009 and any subsequent amendments or re-enactments thereof;



- i) **'Date of Commercial Operation' or 'COD'** shall have the same meaning as defined in the Grid Code;
- j) **'Designated ISTS Customer' or 'DIC'** means the user of any transmission element(s) of the Inter-State Transmission System (ISTS) and shall include generating station, State Transmission Utility (STU), distribution licensee including State Electricity Board or its successor company, Electricity Department of State and any other entity directly connected to the ISTS and shall include an intra-State entity or a trading licensee that has obtained Medium Term Open Access or Long Term Access to ISTS;
- k) **'Grid Code'** means the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 and any subsequent amendments or re-enactments thereof;
- l) **'Hybrid Methodology'** means hybrid of the Marginal Participation Method and the Average Participation Method as detailed in Annexure-I of these regulations;
- m) **'Implementing Agency' or 'IA'** means NLDC or such other agency designated by the Commission to undertake various functions under these regulations and such other functions as may be assigned by the Commission from time to time;
- n) **'Monthly Transmission Charges' or 'MTC'** in a billing month means the transmission charges derived from the Yearly Transmission Charges for the corresponding billing period or part thereof;
- o) **'node'** means a sub-station of a transmission system or a switchyard of a generating station and shall include injection node, drawal node and regional node;
- p) **'Open Access Regulations, 2008'** means the Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008 and any subsequent amendments or re-enactments thereof;
- q) **'Participation Factor'** of a node in any transmission line means the percentage usage of that line by the node, as explained in Annexure-I of these regulations;
- r) **'Peak block'** means the block in which sum of net ISTS drawals by all States is maximum during the month;
- s) **'Power Supply Regulations, 2010'** means the Central Electricity Regulatory Commission (Regulation of Power Supply) Regulations, 2010 as amended from time to time and any re-enactment thereof;
- t) **'regional node'** means an injection node or a drawal node which is under the control area jurisdiction of a Regional Load Despatch Centre;
- u) **'Regional Transmission Account'** means the monthly account of transmission charges issued by the Secretariat of respective Regional Power Committee on the basis of which the Central Transmission Utility shall raise the first bill in the billing month under these regulations;
- v) **'Regional Transmission Deviation Account'** means the monthly account of Transmission Deviation charges issued by the Secretariat of respective Regional Power Committee on the basis of which the Central Transmission Utility shall raise the third bill in the billing month under these regulations;
- w) **'seller'** shall have the same meaning as defined in the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulation, 2014 and any subsequent amendments or re-enactments made thereof;
- x) **'Surge Impedance Loading' or 'SIL'** means loading on transmission line for



various configurations as per Annexure-II to these regulations;

- y) **'Target Region'** means the region to which Long Term Access is granted to a DIC, without identified beneficiaries in the said region;
- z) **'Tariff Regulations, 2014'** means the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, as amended from time to time;
- aa) **'Tariff Regulations, 2019'** means the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, as amended from time to time;
- bb) **'Transmission Deviation'** means the deviation as specified in and computed under Regulation 12 of these regulations;
- cc) **'Transmission Deviation Rate'** means the rate calculated in accordance with Regulation 12 of these regulations;
- dd) **'Untied LTA'** means the quantum of Long Term Access granted to a DIC less the quantum for which buyers have been identified under Long Term Access or Medium Term Open Access or both;
- ee) **'Yearly Transmission Charges' or 'YTC'** means the annual transmission charges as determined or adopted by the Commission for the transmission elements of ISTS which have achieved COD upto the last day of a billing period, and for intra-State transmission lines used for inter-State transmission of electricity as approved by the Commission;

(2) Words and expressions used in these Regulations and not defined herein but defined in the Act or the regulations of the Commission, shall have the meanings assigned to them respectively in the Act and the regulations of the Commission.

3. Principles of sharing transmission charges.—(1) The transmission charges shall be shared amongst the DICs on monthly basis based on the Yearly Transmission Charges such that:—

- (a) The Yearly Transmission Charges are fully recovered; and
- (b) Any adjustment on account of revision of the Yearly Transmission Charges are recovered.

(2) Yearly Transmission Charges for transmission system shall be shared on monthly basis by DICs in accordance with Regulations 5 to 8 of these regulations subject to the exceptions provided in Clauses (3), (6), (9) and (12) of Regulation 13 of these regulations.

(3) Long Term Access or Medium Term Open Access for projects covered under Clause (1) of Regulation 13

shall not be considered for apportionment of Yearly Transmission Charges under Regulations 5 to 8 of these regulations.

(4) Sharing of transmission charges for DICs shall be based on the technical and commercial information provided by the DICs, inter-State transmission licensees, NLDC, RLDCs, SLDCs and CTU to the Implementing Agency.

CHAPTER 2

COMPONENTS AND SHARING OF ISTS CHARGES AND LOSSES

4. Components of Transmission Charges.—Transmission charges for DICs shall have the following components:

- a. National Component (NC);
- b. Regional Component (RC);
- c. Transformer Component (TC); and
- d. AC System Component (ACC).

5. Components and sharing of National Component (NC).—(1) National

Component shall be sum of the following components:

- (a) National Component-Renewable Energy (NC-RE); and
- (b) National Component-HVDC (NC-HVDC).
- (2) National Component-Renewable Energy shall comprise of the Yearly Transmission Charges for transmission systems developed for renewable energy projects as identified by the Central Transmission Utility.
- (3) National Component-HVDC shall comprise of the following:
 - (a) 100% of Yearly Transmission Charges for "back-to-back HVDC" transmission system;
 - (b) 100% of Yearly Transmission Charges for Biswanath-Chariali/Alipurduar to Agra HVDC transmission system;
 - (c) Yearly Transmission Charges of Mundra-Mohindergarh 2500 MW HVDC transmission system corresponding to 1005 MW capacity:
Provided that Yearly Transmission Charges corresponding to 1495 MW for the said transmission system shall be borne by M/s Adani Power (Mundra) Limited or its successor company; and
 - (d) 30% of Yearly Transmission Charges for all other HVDC transmission systems except those covered under sub-clauses (a), (b) and (c) of this clause of this Regulation.
- (4) The Yearly Transmission Charges for the National Component shall be shared by all drawee DICs and injecting DICs with untied LTA in proportion to their quantum of Long Term Access plus Medium Term Open Access and untied LTA respectively.

6. Components and sharing of Regional Component (RC).—(1) Regional Component shall be sum of the following components:

- (a) Regional Component of HVDC (RC-HVDC) comprising of 70% of Yearly Transmission Charges of HVDC transmission systems planned to supply power to the concerned region, except HVDC transmission systems covered under sub clauses (a), (b) and (c) of Clause (3) of Regulation 5; and
- (b) Yearly Transmission Charges for static compensators (STATCOMs), static VAR compensators (SVCs), bus reactors, spare transformers, spare reactors and any other transmission element(s) located in the concerned region and identified by the Central Transmission Utility as being critical for providing stability, reliability and resilience in the grid.

Provided that where separate Yearly Transmission Charges are not available in respect of specific transmission elements, the Yearly Transmission Charges for such transmission elements shall be worked out and provided by the Central Transmission Utility, apportioning Yearly Transmission Charges approved by the Commission for the integrated project, based on indicative capital cost.

(2) Yearly Transmission Charges covered under sub-clause (a) of Clause (1) of this Regulation shall be shared by drawee DICs of the receiving region and injecting DICs with untied LTA in the receiving region, in proportion to their quantum of Long Term Access plus Medium Term Open Access and untied LTA, respectively.

(3) Yearly Transmission Charges covered under sub-clause (b) of Clause (1) of this Regulation shall be shared by drawee DICs of the region and injecting DICs (with untied LTA) of the same region, in proportion to their quantum of Long Term Access plus Medium Term Open Access and untied LTA, respectively.

7. Components and sharing of Transformer Component (TC).—(1) Transformer Component for a State shall comprise of Yearly Transmission Charges for inter-connecting transformers (ICTs) planned for drawal of power by the concerned State. A list of such transformers for each State shall be provided by the Central Transmission Utility to the Implementing Agency.



Provided that where the Yearly Transmission Charges of ICTs for a State are not available, the Yearly Transmission Charges for such transformers shall be worked out and provided by the Central Transmission Utility, apportioning Yearly Transmission Charges approved by the Commission for the integrated project, based on indicative capital cost. For transformers used for drawl requirement of more than one State, Yearly Transmission Charges shall be apportioned to such States in the ratio of number of feeders from such transformers for each State.

(2) Transformer Component for a State shall be borne and shared by the drawee DICs located in the concerned State in proportion to their Long Term Access plus Medium Term Open Access.

8. Components and sharing of AC System Component (ACC).—(1) AC System Component shall comprise of the Yearly Transmission Charges, excluding the Yearly Transmission Charges covered under Regulations 5 to 7 of these regulations.

(2) AC System Component shall have following components:

- (i) Usage Based Component (AC-UBC); and
- (ii) Balance Component (AC-BC).

(3) The Yearly Transmission Charges of AC-UBC shall be shared by drawee DICs and injecting DICs with untied LTA corresponding to their respective usage of the transmission lines, in accordance with Regulation 9 of these regulations.

(4) The Yearly Transmission Charges under AC-BC shall be the balance Yearly Transmission Charges for AC System Component after apportioning the charges for AC-UBC.

(5) Transmission charges under AC-BC shall be shared by all drawee DICs and injecting DICs with untied LTA in proportion to their quantum of Long Term Access plus Medium Term Open Access and untied LTA respectively.

9. Computation of share of transmission charges under AC-UBC

(1) Base Case shall be prepared by the Implementing Agency corresponding to the peak block for each billing period comprising of:

- (a) Basic Network for the power system corresponding to the peak block of the billing period; and
- (b) Actual generation and actual demand, in MW, at each node of the Basic Network corresponding to the peak block.

(2) DICs, inter-State transmission licensees, NLDC, RLDCs, SLDCs and STUs shall provide data for sub-clauses (a) and (b) of Clause (1) of this Regulation and the Yearly Transmission Charges to the Implementing Agency in the stipulated formats as per the timelines specified in Regulation 24 of these regulations.

(3) MTC covered under AC-UBC shall be apportioned on transmission lines of the Basic Network, whose charges have been included in the Yearly Transmission Charges. Such apportionment shall be made on per circuit kilometer basis for each conductor configuration at each voltage level as per the methodology specified in Annexure-I of these regulations, for obtaining transmission line-wise transmission charges for each conductor configuration at each voltage level.

(4) The Implementing Agency shall run AC load flow studies on the Base Case as prepared in accordance with Clause (1) of this Regulation to determine power flow on each transmission line:

Provided that while carrying out AC load flow studies, the Implementing Agency may make minor adjustment in generation and demand data, if required, to ensure load-generation balance.

(5) Percentage usage of each transmission line shall be computed by dividing the power flow on each transmission line obtained in accordance with Clause (4) of this Regulation by Surge Impedance Loading of the transmission line as per Annexure-II of

these regulations:

Provided that in case power flow on any transmission line is more than Surge Impedance Loading, the percentage usage shall be capped at 100%.

(6) Percentage usage of each transmission line obtained in accordance with Clause (5) of this Regulation shall be multiplied by transmission line-wise transmission charge obtained in accordance with Clause (3) of this

Regulation to obtain transmission line-wise usage-based transmission charges for each conductor configuration at each voltage level.

(7) Transmission charges at each drawal node and each injection node with untied LTA shall be calculated as per Hybrid Methodology, using transmission line-wise usage-based transmission charges obtained in accordance with Clause (6) of this Regulation.

(8) The Implementing Agency shall aggregate the transmission charges as obtained in accordance with Clause (7) of this Regulation at drawal nodes within the geographical boundary of the State to determine the transmission charges for the State under AC-UBC:

Provided that drawee DICs other than the distribution licensees of the State, who have taken Long Term Access or Medium Term Open Access shall be apportioned the transmission charges under AC-UBC as per the transmission charges obtained at their drawal node(s) in accordance with Clause (7) of this Regulation and such transmission charges shall not be included in the aggregate transmission charges of the State.

(9) Injecting DICs with untied LTA shall be apportioned transmission charges under AC-UBC as per the transmission charges obtained at their injection node in accordance with Clause (7) of this Regulation.

10. Sharing of Transmission Losses.—(1) Transmission losses for ISTS shall be calculated on all India average basis by the Implementing Agency for each week, from Monday to Sunday, as under:

$$[(In-Dr)/(Ir)] \times 100$$

Where:

'In' denotes sum of injection into the ISTS at regional nodes for the week;

'Dr' denotes sum of drawal from the ISTS at regional nodes for the week;

'Ir' denotes sum of injection into the ISTS at regional nodes less injection from projects covered under Clause (1) of Regulation 13 of these regulations for the week.

(2) Drawal schedule of DICs shall be prepared as per provisions of the Grid Code taking into account the transmission losses of the week preceding the last week as calculated in accordance with Clause (1) of this Regulation:

Provided that while preparing drawal schedule of DICs in respect of projects covered under Clause (1) of Regulation 13, transmission losses shall be considered as zero.

(3) Transmission losses for ISTS shall be considered as zero while preparing injection schedule of DICs including that for Collective Transactions in the Power Exchanges.

11. Transmission charges for Short Term Open Access.—(1) Short Term Open Access Rate (in paise/kWh) shall be published for each billing month by the Implementing Agency which shall be calculated State-wise as under:

Transmission charges of the State for the billing month (in rupees)/(7200 X the quantum, in MW, of Long Term Access plus Medium Term Open Access of the State for the corresponding billing period)

(2) Transmission charges for Short Term Open Access shall be payable by generating stations and embedded entities located in the State, as per the last

published Short Term Open Access Rate for the State, along with other charges or fees as per Open Access Regulations, 2008 and the Transmission Deviation charges, if any, as per these regulations.

(3) Transmission charges for Short Term Open Access paid by an embedded intra-State entity during a month shall be reimbursed in the following billing month to the State in which such entity is located.

(4) Transmission charges for Short Term Open Access, paid by a DIC with untied LTA shall be offset against the transmission charges payable by the said DIC for untied LTA in the following billing month.

(5) No transmission charges for Short Term Open Access for inter-State transmission system, shall be payable by a distribution licensee which has Long Term Access or Medium Term Open Access or both, or by a trading licensee acting on behalf of such distribution licensee:

Provided that other charges or fees as per Open Access Regulations, 2008 and the Transmission Deviation charges, if any, as per these regulations shall be payable.

(6) Transmission charges for Short Term Open Access collected in a billing month, after adjustment as per Clauses (3) and (4) of this Regulation, shall be reimbursed to the DICs in proportion to their share in the first bill in the following billing month.

12. Transmission Deviation.—(1) Transmission Deviation, in MW, shall be computed as under:

(a) For a generating station, net metered ex-bus injection, in a time block in excess of the sum of Long Term Access, Medium Term Open Access and Short Term Open Access:

Provided that for a hydro-generating station, overload capacity of 10% during peak season shall be taken into account.

(b) For a State net metered ex-bus injection or net metered drawal, in a time block, in excess of the sum of Long Term Access and Medium Term Open Access.

(c) For any drawee DIC, which is a regional entity other than distribution licensees, net metered drawal in a time block in excess of the sum of Long Term Access, Medium Term Open Access and Short Term Open Access.

(2) Transmission Deviation Rate in Rs./MW, for a State or any other DIC located in the State, for a time block during a billing month shall be computed as under:

1.05X (transmission charges of the State for the billing month in Rs.)/(quantum in MW of Long Term Access plus Medium Term Open Access of the State for the corresponding billing period X 2880)

(3) The Transmission Deviation charges shall be recovered through the third bill and shall be reimbursed to the DICs in proportion to their share in the first bill in the following billing month.

CHAPTER 3 SPECIFIC CASES

13. Treatment of transmission charges and losses in specific cases.—(1) No transmission charges and losses for the use of ISTS shall be payable for:

(a) generation based on solar power resource for the useful life of the projects commissioned during the period from 1.7.2011 to 30.6.2017.

(b) generation based on solar or wind power resources for a period of 25 years from the date of commercial operation, fulfilling the following conditions:

(i) Such generation capacity has been awarded through competitive bidding; and

**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION
AT NEW DELHI
PETITION NO. ___/TT/2024**

IN THE MATTER OF:

TRANSMISSION CORPORATION OF
ANDHRA PRADESH LIMITED.

...PETITIONER

VERSUS

TRANSMISSION CORPORATION
OF TELANGANA LTD. & ORS.

...RESPONDENTS

INDEX VOL.2

S NO.	PARTICULARS	PAGE NO.
10.	ANNEXURE P/8 (Cont.) TRUE AND CORRECT COPY OF THE MISCELLANEOUS PETITION ALONG WITH ADDITIONAL AFFIDAVITS FILED BY THE PETITIONER IN 25 MP 2022	300-599



COUNSEL FOR PETITIONER

 **UNUM LAW**

C-485, GROUND FLOOR
DEFENCE COLONY, NEW DELHI -110024

MOBILE: +91 9899675905

EMAIL: skumar@unumlaw.in

mchandok@unumlaw.in

ssareen@unumlaw.in

NEW DELHI

DATE: 20.08.2024

- (ii) Such generation capacity has been declared under commercial operation during the period from 1.7.2017 to 12.2.2018 for solar based resources or during the period from 30.9.2016 to 12.2.2018 for wind based resources; and
 - (iii) Power Purchase Agreement(s) have been executed for sale of power from such generation capacity to the Distribution Companies for compliance of their renewable purchase obligation.
- (c) generation based on solar or wind power resources, for a period of 25 years from the date of commercial operation, fulfilling the following conditions:
- (i) Such generation capacity has been awarded through competitive bidding process in accordance with the guidelines issued by the Central Government; and
 - (ii) Such generation capacity has been declared under commercial operation during the period from 13.2.2018 to 31.12.2022; and
 - (iii) Power Purchase Agreement(s) have been executed for sale of such generation capacity to all entities including Distribution Companies for compliance of their renewable purchase obligations.
- (2) Where a generating station or any other seller has been granted Long Term Access or Medium Term Open Access and has entered into Power Purchase Agreement (s) for supply of power under such Long Term Access or Medium Term Open Access, the transmission charges towards such Long Term Access or Medium Term Open Access for components identified under Regulations 5 to 8 of these regulations shall be determined at the drawal nodes, and billed to the buyer(s) after COD of generating station or unit(s) thereof:
- Provided that where the generating station or any other seller is responsible to pay the transmission charges in terms of the Power Purchase Agreements, bills for transmission charges shall be raised on the buyer in terms of this clause notwithstanding the provision in the PPA and settlement of the transmission charges *inter se* between the buyer and the generating station or the seller shall be made in terms of the PPA or as may be mutually agreed.
- (3) Where COD of a generating station or unit(s) thereof is delayed and the Associated Transmission System has achieved COD, which is not earlier than its SCOD, the generating station shall pay Yearly Transmission Charges for the Associated Transmission System corresponding to Long Term Access granted for the generating station or unit(s) thereof, which have not achieved COD:
- Provided that Yearly Transmission Charges in respect of Associated Transmission System shall be included for determination of transmission charges of DICs in accordance with Regulations 5 to 8 of these regulations upon the generating station or unit(s) thereof achieving COD.
- (4) Where only some of the transmission elements of the Associated Transmission System have achieved COD before the COD of the Associated Transmission System and the generating station seeks part operationalisation of Long Term Access, the Central Transmission Utility shall part operationalize Long Term Access, subject to availability of transmission system and Yearly Transmission Charges in respect of such transmission elements of the Associated Transmission System shall be included for determination of transmission charges of DICs in accordance with Regulations 5 to 8 of these regulations.
- (5) Where only some of the transmission elements of the Associated Transmission System have achieved COD before the COD of the Associated Transmission System and if such transmission elements are certified by the respective Regional Power Committee(s) as required for improving the performance, safety and security of the



grid, the Yearly Transmission Charges for such transmission elements of the Associated Transmission System shall be included for determination of transmission charges of DICs in accordance with Regulations 5 to 8 of these regulations.

(6) If any transmission element(s) of the Associated Transmission System is required by the generating station prior to COD of the Associated Transmission System, the Yearly Transmission Charges for such transmission element(s) shall be payable by the generating station from the COD of the said transmission element(s) of the Associated Transmission System till the generating station achieves COD.

(7) Where Long Term Access is granted to a generating station on existing margins and COD of the generating station or unit(s) thereof is delayed, the generating station shall, corresponding to the capacity that is delayed, pay transmission charges at the rate of 10% of transmission charge per MW for the State where such generating station is located:

Provided that the amount so received in a billing month, shall be reimbursed to the DICs in proportion to their share in the first bill in the following billing month.

(8) In case a generating station or unit(s) thereof has achieved COD and the Associated Transmission System is delayed, the concerned inter-State transmission licensee(s) shall make alternate arrangement at its own cost for despatch of power of the generating station or unit(s) thereof in consultation with the Central Transmission Utility:

Provided that till such alternate arrangement is made, the inter-State transmission licensee(s) shall pay to the generating station, the Yearly Transmission Charge corresponding to the quantum of Long Term Access for the period for which the transmission system has got delayed.

(9) Where a dedicated transmission line has already been constructed or is under construction by an inter-State transmission licensee under coordinated transmission planning of the Central Transmission Utility, the Yearly Transmission Charges for such dedicated transmission line shall be payable by the concerned generating station to the inter-State transmission licensee (including deemed inter-State transmission licensee) from the COD of the dedicated transmission line till operationalization of Long Term Access of the generating station. After operationalization of Long Term Access, Yearly Transmission Charge for the dedicated transmission line proportionate to the quantum of Long Term Access operationalized qua the quantum of Connectivity for the dedicated transmission line shall be considered in accordance with Regulations 5 to 8 of these regulations and the balance transmission charges shall continue to be paid by the generating station.

(10) Generating stations drawing start-up power from ISTS shall pay transmission charges at the rate of Transmission Deviation Rate for the State in which they are located:

(9) Provided that the amount so received in a billing month, shall be reimbursed to the DICs in proportion to their share in the first bill in the following billing month.

(11) Where a generating station is connected to both ISTS and intra-State transmission system, only ISTS charges and losses shall be applicable on the quantum of Long Term Access and Medium Term Open Access corresponding to capacity connected to ISTS.

(12) In case of a transmission system where COD has been approved in terms of proviso (ii) of Clause (3) of Regulation 4 of the Tariff Regulations, 2014 or Clause (2) of Regulation 5 of the Tariff Regulations, 2019 or where deemed COD has been declared in terms of Transmission Service Agreement under Tariff based Competitive Bidding, the Yearly Transmission Charges for the transmission system shall be:

(a) paid by the inter-State transmission licensee whose transmission system is delayed till its transmission system achieves COD, or



- (b) paid by the generating company whose generating station or unit(s) thereof is delayed, till the generating station or unit thereof, achieves COD, or
 - (c) shared in the manner as decided by the Commission on case to case basis, where more than one inter-State transmission licensee is involved or both transmission system and generating station are delayed.
- (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.

CHAPTER 4

ACCOUNTING, BILLING AND COLLECTION OF TRANSMISSION CHARGES

14. Accounting.—(1) The Implementing Agency shall publish transmission charges payable by drawee DICs and injecting DICs with untied LTA for the billing month in Rupee terms.

(2) Regional Transmission Accounts and Regional Transmission Deviation Accounts for the billing month for the DICs shall be prepared by the Secretariat of the respective Regional Power Committee on the basis of:

- (a) DIC-wise transmission charges for the billing month, as furnished by the Implementing Agency; and
- (b) Meter readings of all Special Energy Meters for computation of Transmission Deviations for every time block of the corresponding billing period, as furnished by respective RLDCs.

(3) Regional Transmission Accounts and Regional Transmission Deviation Accounts shall be issued by the Secretariat of respective Regional Power Committee to DICs, the Central Transmission Utility and inter-State transmission licensees and also be displayed on the website of respective Regional Power Committees.

(4) Where the transmission charges were being billed to a distribution licensee or any designated agency in the State before coming into force of these regulations, the distribution licensee or the designated agency, as the case may be, shall be treated as DIC in that State for the purpose of preparation of Regional Transmission Account by Regional Power Committees and for the purpose of billing and collection of transmission charges by the Central Transmission Utility:

Provided that after coming into force of these regulations, the States may designate any agency as DIC for the above purpose.

(5) Timelines for preparation of Base Case, notification of transmission charges of DICs, issue of Regional Transmission Accounts and Regional Transmission Deviation Accounts and raising of bills shall be as under:

- (a) Base Case for the billing period shall be prepared by the Implementing Agency by 15th day of the month following the billing period.
- (b) Transmission charges payable by DICs shall be notified by the Implementing Agency by 25th day of the month following the billing period.
- (c) Secretariat of the respective Regional Power Committee shall issue Regional Transmission Accounts and Regional Transmission Deviation Accounts by the end of the month following the billing period.
- (d) The Central Transmission Utility shall raise the first bill and the third bill for transmission charges on DICs in first week of the second month following the billing period.

Provided that in case of delay in issuance of Regional Transmission Account for a billing month, the Central Transmission Utility may raise provisional bills based on last available Regional Transmission Account and subsequently raise adjustment bills when Secretariat of respective Regional Power Committee

issues Regional Transmission Account for the said billing month.

15. Billing.—(1) The Central Transmission Utility shall, raise the bills for transmission charges, as per the timelines specified in sub-clause (d) of Clause (5) of Regulation 14 of these regulations.

(2) The bills for transmission charges for the DICs shall be raised by the Central Transmission Utility under the following three categories:

(a) The first bill of each billing month shall contain the transmission charges for the billing period in accordance with Regulations 5 to 8 of these Regulations.

(b) The second bill shall be raised in the months of April, July, October and January every year for the quarter ending on 31st March, 30th June, 30th September and 31st December respectively to adjust variations on account of any revision in transmission charges allowed by the Commission, including incentives as applicable:

Provided that under-recovery or over-recovery of any amount on account of such revision in transmission charges in respect of a billing period shall be billed by the Central Transmission Utility to DICs in proportion to their first bill in the relevant billing month.

(c) The third bill shall be raised in each billing month for Transmission Deviation charges, along with the first bill.

(3) The Central Transmission Utility shall raise separate bills, as per the timelines for the first bill, for transmission systems covered under Clauses (3), (6), (8), (9) and (12) of Regulation 13 and not covered under Regulations 5 to 8 of these regulations.

(4) All bills raised by the Central Transmission Utility shall also be posted on its website.

16. Due Date.—Notwithstanding any provision to the contrary in the applicable Tariff Regulations or Transmission Service Agreement under tariff based competitive bidding, due date in relation to any bill raised by the Central Transmission Utility under these regulations shall mean the forty fifth (45th) day from the date of presentation of such bill.

17. Rebate.—Notwithstanding any provision to the contrary in the applicable Tariff Regulations or Transmission Service Agreement under tariff based competitive bidding, rebate on payment of bills shall be governed as under:

(a) A rebate of 1.50% shall be allowed for payment of bills within a period of 5 days of presentation of bills.

Explanation: In case of computation of '5 days', the number of days shall be counted consecutively without considering any holiday. However, in case the last day or 5th day is an official holiday, the 5th day for the purpose of rebate shall be construed as the immediate succeeding working day.

(b) A rebate of 1% shall be allowed where payments are made on any day after 5 days and within a period of 30 days of presentation of bills.

18. Late Payment Surcharge

Notwithstanding any provision to the contrary in the applicable Tariff Regulations or Transmission Service Agreement under tariff based competitive bidding, in case the payment of any bill for charges payable under these regulations is delayed by a DIC, beyond the due date, a late payment surcharge at the rate of 1.50% per month shall be payable by the concerned DIC.

19. Letter of Credit and other instruments of Payment Security Mechanism

(1) The Central Transmission Utility shall, at least 3 (three) months prior to the date of operationalization of Long Term Access or Medium Term Open Access, in respect of a DIC, give a notice to such DIC, indicating the date of operationalization of such Long Term Access or Medium Term Open Access and requiring the DIC to furnish

an irrevocable, unconditional and revolving Letter of Credit through a scheduled bank or any other acceptable instrument of payment security mechanism in favour of the Central Transmission Utility. Not later than 1 (one) month prior to the date of operationalization of Long Term Access or Medium Term Open Access, the DIC shall open such Letter of Credit or provide such acceptable instrument of payment security mechanism that shall be operative from a date prior to the Due Date of its first bill.

(2) In case tripartite agreement for securitization on account of arrears against the transmission charges with the Government of India exists, the Letter of Credit or the acceptable instrument of payment security mechanism shall have a term of 12 (twelve) months and shall be for an amount equal to 1.05 (one point zero five) times the average amount of the first bill of a year:

Provided that where such tripartite agreement does not exist, the DIC shall open the Letter of Credit or provide an acceptable instrument of payment security mechanism for an amount equal to 2.10 (two point one times) the average amount of the first bill of a year.

(3) If at any time, the amount for which Letter of Credit or the acceptable instrument of payment security mechanism is provided, falls short of the amount specified in Clause (2) of this Regulation, the DIC shall replenish such shortfall within 7 (seven) days of intimation by the Central Transmission Utility.

(4) If a DIC fails to pay any bill or part thereof by the Due Date, the Central Transmission Utility may encash the Letter of Credit or recover through such other instrument of payment security mechanism provided by the DIC, the amount of the bill or part thereof that is overdue plus Late Payment Surcharge, if applicable.

(5) In case of such encashment of the Letter of Credit or recovery through such other instrument of payment security mechanism provided by the DIC, in full or in part, by the Central Transmission Utility in accordance with these regulations, the DIC shall replenish the amount through the Letter of Credit or such other instrument of payment security mechanism, as the case may be, within 7 (seven) days of intimation of such encashment or recovery by the Central Transmission Utility.

(6) The DICs shall renew the Letter of Credit or such other instrument of payment security mechanism, 30 (thirty) days prior to the date of expiry.

(7) In case of failure on the part of any DIC to maintain the Letter of Credit or such other instrument of payment security mechanism for the required amount in accordance with Clause (2) of this Regulation or replenish the Letter of Credit or such other instrument of payment security mechanism in accordance with Clauses (3) and Clause (5) of this Regulation and renew the Letter of Credit or such other instrument of payment security mechanism in accordance with Clause (6) of this Regulation, CTU may regulate the power injection of or supply to the concerned DIC, as the case may be in accordance with the Power Supply Regulations, 2010.

20. Collection and Disbursement.—(1) The Central Transmission Utility shall collect transmission charges on account of the first bill for transmission system covered under Regulations 5 to 8 of these regulations and disburse the amount so collected to inter-State transmission licensees and intra-State transmission licensees in proportion to their Yearly Transmission Charges:

Provided that in case of shortfall in collection of transmission charges, the amount to be disbursed to interState transmission licensees and intra-State transmission licensees shall be reduced pro-rata from their share of Yearly Transmission Charges.

(2) Transmission charges collected by the Central Transmission Utility for transmission systems covered under Clauses (3), (6), (8), (9) and (12) of Regulation 13 and not covered under Regulations 5 to 8 of these regulations shall be disbursed directly to the concerned inter-State transmission licensee or the generating company,



as the case may be.

(3) The Central Transmission Utility shall collect transmission charges under the second bill and disburse the same to the respective inter-State transmission licensees.

(4) The Central Transmission Utility shall collect Transmission Deviation charges under the third bill and reimburse the same to the DICs, in proportion to their first bill in the following billing month.

(5) All payments and disbursements under provisions of this regulation shall be executed through National Electronic Funds Transfer (NEFT) or Real Time Gross Settlement (RTGS) or any other means of electronic transfer approved by the Reserve Bank of India.

(6) The charges collected shall be first adjusted towards late payment surcharge on the outstanding transmission charges and thereafter towards outstanding transmission charges, starting from the longest overdue bill.

21. Consequences of non-payment of dues by a DIC.—Failure on the part of a DIC to make payment, in full, against the bills by the due date under these regulations shall make such DIC liable for action for any or combination of the following, by the Central Transmission Utility, on behalf of inter-State transmission licensee(s):

(a) regulation of power supply in accordance with the Power Supply Regulations 2010;

(b) denial of Short term Open Access by RLDC or NLDC in accordance with the Open Access Regulations, 2008;

(a) (c) suspension or termination of Long Term Access or Medium Term Open Access in accordance with Connectivity Regulations, 2009.

22. Transition Period.—Notwithstanding anything to the contrary contained in these regulations, bills for the first two billing periods, after these regulations come into force, shall be based on the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010.

CHAPTER 5

INFORMATION AND PROCEDURES

23. Procedures to be framed under these Regulations.—(1) The Implementing Agency shall, within 90 (ninety) days of the notification of these regulations, publish the detailed procedures and formats for collection of data and information from various agencies and entities for implementation of the provisions of these regulations after stakeholder consultation.

(2) The Implementing Agency shall be responsible for development and maintenance of the software for implementation of these regulations and shall get the same audited before it is put to use.

(3) The Central Transmission Utility, in discharge of its functions under these regulations, may make such procedure as may be necessary, which is not inconsistent with these regulations or any other regulations of the Commission.

24. Timeline for furnishing the information.—(1) On or before the end of the billing period, all entities whose transmission elements have declared COD during the billing period shall submit to the Implementing Agency, network data, date(s) of commercial operation of the new transmission element and Yearly Transmission Charge of such transmission element in the format stipulated by the Implementing Agency.

(2) The Implementing Agency shall publish, on its website, the peak block for the billing period on the first day of the month following the billing period.

(3) Within 7 (seven) days after end of the billing period, the Central Transmission Utility shall submit indicative cost for transmission lines for each conductor

configuration at each voltage level to the Implementing Agency.

(4) Within 7 (seven) days after end of a billing period, DICs shall submit the following to the Implementing Agency for the billing period:

- (a) MW and MVAR data for actual injection or actual drawal at various nodes or a group of nodes for peak block.
- (b) Quantum for which buyers have been identified under Long Term Access or Medium Term Open Access or both along with details of such buyers;
- (c) Any other information as required by the Implementing Agency

(5) In the event of such information required by the Implementing Agency is not available within the stipulated timeframe or to the level of details required, the Implementing Agency shall compute transmission charges based on such information from the available sources.

25. Information to be published by the Implementing Agency.—(1) The information to be made available, on its website, by the Implementing Agency shall include:

- (a) The Basic Network, generation at nodes and drawal at nodes considered for the Base Case and the load flow results, for each billing period;
- (b) Assumptions made in the Base Case, if any;
- (c) Details of transformers, list of transmission elements and corresponding transmission charges considered under Regional Component for the billing period;
- (d) Transmission System covered under National Component;
- (e) New transmission systems added during the billing period;
- (f) Yearly Transmission Charges for the transmission elements considered in the billing period, as submitted by the inter-State transmission licensees and intra-State transmission licensees;
- (g) Details of Long Term Access and Medium Term Open Access in respect of each DIC for the billing period;
- (h) Detailed calculations of indicative cost for arriving at the average cost in respect of each transmission line; and
- (i) Transmission charges payable by each constituent for the billing month along with component-wise breakup.

(2) All information in accordance with Clause (1) of this regulation shall be made available on the website of the Implementing Agency in editable "Microsoft Excel" format.

(3) Interactive "query" may be designed to give results including (i) a given generator is meeting which loads and in what proportion, (ii) a given load(s) is met by which generators and in what proportion, (iii) a given DIC is using which transmission lines and in what proportion, and (iv) a given transmission is serving which DICs and in what proportion.

(4) Any data considered sensitive by the Implementing Agency, may be provided to concerned DICs with access control.

CHAPTER 6 MISCELLANEOUS

26. Savings and Repeal.—(1) Save as otherwise provided in these regulations, Central Electricity Regulatory Commission (Sharing of inter-state transmission charges and losses) Regulations, 2010, as amended from time to time, is hereby repealed.

(2) Notwithstanding such repeal, anything done or any action taken or purported to have been done or taken under the repealed regulations shall be deemed to have been done or taken under these regulations.



27. Power to Relax.—The Commission may, for reasons to be recorded in writing, relax any of the provisions of these regulations on its own motion or on an application made before it by an interested person.

28. Power to Remove Difficulties.—If any difficulty arises in giving effect to any of the provisions of these regulations, the Commission may, by general or specific order, make such provisions not inconsistent with the provisions of the Act, as may appear to be necessary for removing the difficulty.

SANOJ KUMAR JHA, Secy. [ADVT.—III/4/Exty./100/2020-21]

ANNEXURE-1

THE HYBRID METHODOLOGY FOR USAGE BASED TRANSMISSION CHARGES

1. Utilization of the network is generally determined in terms of either average utilization or marginal utilization of the transmission assets. Pricing of transmission services based on average or marginal utilization of the network branches is known as Average Participation or Marginal Participation method respectively. A usage-based methodology determines the power that flows through each of the lines in the system due to the existence of a certain network user.

2. Marginal Participation Method

2.1 The marginal participation method analyzes how the flows in the grid are modified when minor changes are introduced in the generation or load of agent i . The procedure shall be as follows:

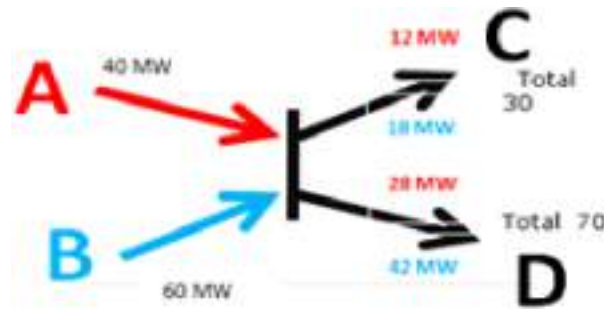
- (a) Marginal Participation sensitivities A_{ij} are obtained which represent how the flow in line j changes when the generation or load at bus i is increased by 1 MW. The increase in 1 MW has to be compensated by a corresponding increase in load or generation at some other bus(es), called the slack bus(es).
- (b) Total participations for each agent are calculated as a product of its net injection by its marginal participation. If net injection is considered positive for generating stations and negative for loads, the total participation of any agent i in line j is A_{ij} (*generation-i-demand_j*).
- (c) The cost of each line is apportioned pro-rata to the different agents according to their total participation in the corresponding line.

3. Average Participation Method

3.1 The procedure for average participation shall be as follows:

- (a) For every individual generating station i , a number of physical paths are constructed, starting at the node where the generator injects power into the grid, following through the lines as the power moves through the network, and finally reaching several of the loads in the system.
- (b) Similar calculations are also performed for the demands, tracing upstream the energy consumed by a certain user, from the demand bus until some generating stations are reached. One such physical path is constructed for every generator and for every demand.
- (c) In order to create such physical paths, a basic criterion is adopted wherein responsibility for the actual flows on various lines from sources to sinks is assigned according to an allocation rule, in which inflows are distributed proportionally between the outflows. An illustrative example of the proportional allocation mechanism is demonstrated in figure below.

Fig.: Average Participation Method



$$\text{Portion of A at C} = 30 \times \frac{40}{(60+40)} = 12$$

$$\text{Portion of B at C} = 30 \times \frac{60}{(60+40)} = 18$$

$$\text{Portion of A at D} = 70 \times \frac{40}{(60+40)} = 28$$

$$\text{Portion of B at D} = 70 \times \frac{60}{(60+40)} = 42$$

(d) The average participation method calculates the participation of agent i by tracking the influence in the network of a transit between node i and several ending nodes that result from the rules that conform the algorithm. In the example above, based on flow in the outgoing lines, the injection of 40-MW (through the red line) is allocated to the outgoing lines in the proportion of the transfers from the two outgoing lines. Thus, the outgoing line that transfers 30 MW (i.e. 30% of the total transfer out of the bus) is allocated 30% of the 40 MW injection from the red line, i.e. 12 MW. Similar allocations are made for the other flows as well.

4. Hybrid Methodology

Under the Hybrid Methodology, the slack buses shall be selected by using the Average Participation Method, and the transmission charges on each node shall be computed using the Marginal Participation Method.

5. Steps to be followed under Hybrid Methodology

5.1 Following steps are involved in the Hybrid Methodology

- (A) Data acquisition;
- (B) Computation of load flows on the Basic Network;
- (C) Identification of slack node(s);
- (D) Determination of transmission charges; and
- (E) Determination of sharing of transmission charges

(A) DATA ACQUISITION: INPUTS TO THE MODEL

5.2 The transmission pricing model requires a set of inputs for peak block of the month as follows:

- Generation information at nodes;
- Demand information at nodes;
- Transmission circuits between these nodes and their electrical characteristics required for load flow analysis, the associated lengths of these transmission lines and their capacity and Yearly Transmission Charges (YTC) of each transmission line; and

- Identification of reference node(s).

5.3 The DICs will provide actual generation and actual drawal {MW and MVAR at each node in the Basic Network. The data provided by the DICs shall be as per the formats stipulated by the Implementing Agency. All drawee DICs shall also submit generation from their own generating stations for the peak block during the billing period to the Implementing Agency to prepare the Base Case for load-generation balance.

5.4 Information provided by the DICs shall be verified by the Implementing Agency as per the detailed procedure stipulated by the Implementing Agency.

5.5 Inter-State transmission licensees, intra-State transmission licensees whose transmission system are included in Yearly Transmission Charges, and the DICs shall supply network data for the existing network, in the format stipulated by the Implementing Agency.

5.6 The Basic Network shall contain all the power system elements including generating station and transmission line at 110 kV and above. Power flow into a lower voltage system from the voltage levels indicated in the definition of the Basic Network shall be considered as load at that sub-station. Power flow from a lower voltage system into the electricity systems at the voltage levels shall be considered as generation at that sub-station.

5.7 The transmission system declared under commercial operation on or before the last day of the billing period shall be considered for computation of transmission charge for a billing month. However, Basic Network shall be considered as in the peak block of the billing period.

5.8 Dedicated transmission lines constructed, owned and operated by the inter-State transmission licensees shall be considered to be a part of the Basic Network. However, dedicated transmission lines constructed, owned and operated by generating stations shall not be considered as a part of the Basic Network and the generating station shall be deemed to be connected directly to the ISTS at the pooling point for the purpose of modelling Basic Network. Actual injection of such generating stations at the pooling station shall be taken as actual injection at the pooling point.

5.9 The transmission charge per circuit kilometer for a transmission line for each conductor configuration at each voltage level shall be made uniform. The methodology followed shall be as follows:

5.9.1 The Central Transmission Utility shall provide indicative cost per circuit kilometer for a transmission line for each conductor configuration at each voltage level.

5.9.2 Total circuit kilometer for transmission lines for each conductor configuration at each voltage level shall be allocated uniform charges as in following illustration:

Type	Cost (Rs Lakh)	Cost (RsLakh)/Circuit	Actual ckt-km Type Wise	Equivalent ckt km	Indicative Cost Type Wise per ckt-km
				w.r.t 400 kV D/C Quad Moose	(Rs Lakh/ckt-km)
765 kV-D/C—HEXA	a_1	$b_1=a_1/2$	T_1	$K_1=T_1 \times (b_1/b_3)$	$I_1=T_1 C_m \times (K_1/K)/T_1$
765 kV-S/C—HEXA	a_2	$b_2=a_2$	T_2	$K_2=T_2 \times (b_2/b_3)$	$I_2=T_2 C_m \times (K_2/K)/T_2$
400 kV-D/C -Quad Moose	a_3	$b_3=a_3/2$	T_3	$K_3=T_3 \times (b_3/b_3)$	$I_3=T_3 C_m \times (K_3/K)/T_3$
400 kV-D/C	a_4	$b_4=a_4/2$	T_4	$K_4=T_4 \times$	$I_4=T_4 C_m \times$

-Twin Moose				(b ₄ /b ₃)	(K ₄ /K)/T ₄
400 kV-S/C -Twin Moose	a ₅	b ₅ =a ₅	T ₅	K ₅ =T ₅ × (b ₅ /b ₃)	I ₅ = ^T C _M × (K ₅ /K)/T ₅
220 kV-D/C —	a ₆	b ₆ =a ₆ /2	T ₆	K ₆ =T ₆ × (b ₆ /b ₃)	I ₆ = ^T C _M × (K ₆ /K)/T ₆
220 kV-S/C —	a ₇	b ₇ =a ₇	T ₇	K ₇ =T ₇ × (b ₇ /b ₃)	I ₇ = ^T C _M × (K ₇ /K)/T ₇
132 kV-D/C —	a ₈	b ₈ =a ₈ /2	T ₈	K ₈ =T ₈ × (b ₈ /b ₃)	I ₈ = ^T C _M × (K ₈ /K)/T ₈
132 kV-S/C —	a ₉	b ₉ =a ₉	T ₉	K ₉ =T ₉ × (b ₉ /b ₃)	I ₉ = ^T C _M × (K ₉ /K)/T ₉
400 kV-D/C -Triple Snowbird	a ₁₀	b ₁₀ =a ₁₀ /2	T ₁₀	K ₁₀ =T ₁₀ × (b ₁₀ /b ₃)	I ₁₀ = ^T C _M × (K ₁₀ /K)/T ₁₀
400 kV-D/C -Twin HTLS	a ₁₁	b ₁₁ =a ₁₁ /2	T ₁₁	K ₁₁ =T ₁₁ × (b ₁₁ /b ₃)	I ₁₁ = ^T C _M × (K ₁₁ /K)/T ₁₁
		Sum	T	K	

^T C_M = **Monthly T ransmission Charge w.r.t. AC System Component**

5.10 While carrying out the calculations under Clause 5.9 above and while computing the transmission line-wise transmission charges and transmission line-wise usage-based transmission charges in accordance with Clauses (3) and (6) of Regulation 9 of these regulations, the provisions as under shall be followed:

5.10.1 The transmission lines covered under Clause (2) of Regulation 5 shall be considered with "zero circuit kms".

5.10.2 Where entire Yearly transmission charge is to be billed to a generating station under Clauses (3), (6) and (9) of Regulation 13, such transmission lines shall be considered at "zero circuit kms".

5.10.3 Where Yearly Transmission Charges are to be partly included for computation of transmission charges in accordance with Regulations 5 to 8 of these Regulations and partly to be billed to the generating station or any other entity under provisions of Regulation 13 of these regulations, the circuit kilometers of such transmission lines shall be reduced pro rata corresponding to the Yearly Transmission Charges to be included for computation of transmission charges in accordance with Regulations 5 to 8 of these regulations.

Illustration:

Suppose Kudgi-Narendara transmission line has 500 circuit km and 50% of its Yearly Transmission Charges are to be billed to a generating station 'A' and 50% is to be included for computation of transmission charges in accordance with Regulations 5 to 8 of these regulations. For calculation of AC-UBC, circuit km for this transmission line shall be taken as 250 circuit km.

(B) COMPUTATION OF LOAD FLOWS ON THE BASIC NETWORK

5.11 The Implementing Agency shall run AC load flow on the Basic Network. In case of a STU or SEB, total injection at all injection nodes owned by the STU or SEB shall be equal to the aggregate of injection of all the entities connected in the STU or SEB network. Similarly, total drawal at all the drawal nodes owned by a SEB or STU shall be equal to aggregate of drawal of all the entities connected in the SEB or STU network.

5.12 In the process of convergence of AC load flow on the Basic Network, the Implementing Agency may make certain minor adjustments in load or generation at various buses to ensure load-generation balance.

(C) IDENTIFICATION OF THE SLACK NODES: USING AVERAGE PARTICIPATION METHOD

5.13 According to the Kirchoff's laws, any 1 MW increase in generation (or load) at node i has to be compensated by a corresponding increase in load (or generation) at some other node(s). Thus, the calculation of quantum of injection (or drawal) at a certain bus affecting the power flow in the Basic Network depends on the choice of the node(s) that responds.

5.14 The external slack bus(es) for each node shall be found as follows:

5.14.1 For every node in a particular scenario, Average Participation Method shall be applied to each generation and each load located in the State under consideration. Tracing from load to generating station (or from generating station to load), a set of generating stations (or loads), including those outside the State and their contribution to the load (or generating station) is determined for each load (or generating station) bus.

5.14.2 Using the above choice of slack buses for each generating station and load, marginal participation of each generating station and load in each transmission line is computed.

(D) DETERMINATION OF TRANSMISSION CHARGES

5.15 Hybrid Methodology analyzes the modifications in power flows in the grid when minor changes are introduced in the production (or consumption) of agent i , and it assumes that the relationship of the flow through line j with the behaviour of the agent i can be considered to be linear. The procedure is as under:

5.15.1 Marginal participation sensitivities are obtained that represent the increase in power flow through each network branch j when the injection or drawal in a bus is increased by 1 MW. Flow variation in each network branch j incurred by 1 MW injection or drawal at each bus is computed for each scenario, e .

5.15.2 As already stated at Clause 5.14 of this Annexure, due to the Kirchoff's laws, any 1 MW increase in generation (or load) at node i has to be compensated by a corresponding increase in load (or generation) at some other node(s) (after adjusting for incremental system losses). Thus, the calculation of quantum of injection (or drawal) at a certain bus affecting the power flows in the Basic Network depends on the choice of the node(s) that responds. The methodology used to identify such node shall be distributed slack buses as explained above at Clause 5(C).

5.15.3 Once the power flow variation in each transmission line incurred by each agent is obtained, it is possible to compute a usage index for each network user. This index is computed according to equation given below. Only positive increments in the direction of the power flow in the base case are considered while increments which reduce burden on transmission lines are neither given any credit nor charged for use of the system.

5.15.4 The index (for each block of months) is computed as:

$$U_{e,i,l} = \left(|F_{ie}^l| - |F_{ie}^b| \right) \cdot P_{ie}^b$$

$|F_{ie}^l| - |F_{ie}^b| > 0, \text{Sign}(P_{ie}^b) \text{ is same as } \text{Sign}(F_{ie}^b)$

Where,

$U_{e,i,l}$ is the monthly usage index in line l due to injection or drawal at node i

F_{ie}^b is the flow in line l under scenario e under base case

F_{ie}^l is the flow in line l under scenario e due to injection or drawal of 1 MW at node

P_{ie}^b is power dispatch or demand at bus i under scenario e under base case

5.15.5 The line-wise usage-based transmission charge of each transmission line is allocated pro-rata to the different agents according to their total participation in the corresponding transmission line.

$$\text{Cost Allocated}_{el} = \frac{U_{el}}{\sum_i U_{el}} \times C_i$$

Where,

C_i is the transmission line-wise usage-based transmission charge obtained in accordance with Clause (6) of Regulation 9 of these regulations.

$$\frac{U_{el}}{\sum_i U_{el}}$$

is the marginal participation factor

(E) DETERMINATION OF SHARING OF TRANSMISSION CHARGES

5.16 The following steps shall be followed:

5.16.1 Using AC load flow, Marginal Participation Factors (MPF) shall be computed for determination of transmission system utilization due to marginal injection or drawal at each node.

5.16.2 For each transmission line, transmission line-wise usage-based transmission charge will be attributed to dinjection or drawal for the peak block. This transmission line-wise usage-based transmission charge is allocated to each agent in proportion of the change in the power flow in network branch affected by that agent.

5.16.3 The following steps shall be followed for calculation of AC-UBC charges:

(a) Following shall be taken:

- i. Transmission line-wise usage-based transmission charges for the billing month; and
- ii. Base Case

(b) Import Base Case in software

(c) Run AC load flow and obtain Marginal Flow (MF) file.

(d) Modify the Marginal Flow file obtained at clause (c) above as follows (illustration is at Clause 5.16.4 of this Annexure):

- For generating stations or sellers having no untied LTA and having identified buyers for full capacity of the generating station, reduce values of Marginal Participation Factors to zero.
- For generating stations or sellers having no identified buyers but having untied LTA, retain values of Marginal Participation Factor as obtained at sub-clause (c) of Clause 5.16.3 above.
- For generating stations or sellers having part untied LTA and part capacity with identified buyers:
 - Retain values of Marginal Participation Factor as obtained at sub-clause (c) of clause 5.16.3 above for capacity corresponding to untied LTA; and
 - Reduce values of Marginal Participation Factor to zero for capacity corresponding to identified buyers.

(e) Reduce negative Marginal Participation Factors to zero.

(f) Reduce Marginal Participation Factors of less than 0.0001 to zero.

(g) Normalize Marginal Flow file so as to make sum of all Marginal Participation Factors as '1'.

(h) Multiply normalized values of Marginal Participation Factor as obtained at sub-clause (g) above for every transmission line with transmission line-wise usage-based transmission charges for that transmission line.

(i) Node-wise transmission charges are allocated.

5.16.4 Following illustration is for sub-clause (d) of Clause (5.16.3) above of this Annexure:

(1) Suppose a generating station "A" (with installed capacity of 1000 MW) is located in Western Region and it has taken Long Term Access to Northern Region as target region for 300 MW and Western Region as target region for 400 MW. Untied LTA for "A", therefore, shall be 700 MW i.e. 300 MW in Northern Region and 400 MW in Western Region. Suppose, later on, "A" enters into Power Purchase Agreement with a buyer in Northern Region, say, distribution licensees of Haryana for 250 MW. Consequent upon entering into Power Purchase Agreement with Haryana, untied LTA of "A" would become 450 MW i.e. 50 MW (= 300 MW – 250 MW) in Northern Region and 400 MW in Western Region.

(2) If "A" has actual injection of 900 MW for the peak block of the billing period, this injection has to be segregated into injection corresponding to untied LTA and injection corresponding to Power Purchase Agreement with Haryana. This shall be done as follows:

(i) Injection corresponding to untied LTA of 450 MW = $450 \times 900 / 700 = 578.6$ MW; and

(ii) Injection corresponding to identified buyer = $250 \times 900 / 700 = 321.4$ MW

(3) For the capacity under 2(i) above i.e. 450 MW, Marginal Participation Factor of "A" shall be retained as obtained at sub-clause (c) of Clause 5.16.3 of this Annexure.

(4) For the capacity under 2(ii) above i.e. 250 MW, Marginal Participation Factor of "A" shall be considered zero.

5.16.5 Transmission charges based on Hybrid Methodology (in Rs.) for DICs for each billing month will be computed.

5.17 Transmission charges as allocated to each demand node shall be grouped together within geographical boundary of a State subject to Clause 8 of Regulation 9 of these Regulations.

Annexure-II

Surge Impedance Loading to be considered for determination of utilization of transmission line under these Regulations

Voltage (KV)	S.I.L (MW)
765	2250
765 Op at 400	614
400	515
400 Op at 220	155
220	132
132	50

SIL for Transmission line built with HTLS conductor or Quad conductor shall be considered, as twice the above said values for respective voltage, for the purpose of these Regulations.

¹: Vide Notification No.L-1/250/2019/CERC, dated 4-5-2020, published in the Gazette of India, Extra., Part III, Section 4, No. 243, dated 1-7-2020.

Disclaimer: While every effort is made to avoid any mistake or omission, this casenote/ headnote/ judgment/ act/ rule/ regulation/ circular/ notification is being circulated on the condition and understanding that the publisher would not be liable in any manner by reason of any mistake or omission or for any action taken or omitted to be taken or advice rendered or accepted on the basis of this casenote/ headnote/ judgment/ act/ rule/ regulation/ circular/ notification. All disputes will be subject exclusively to jurisdiction of courts, tribunals and forums at Lucknow only. The authenticity of this text must be verified from the original source.

ANNEXURE A/3

FAX/SPEED POST



भारत सरकार
केन्द्रीय विद्युत अधिकार
दक्षिण क्षेत्रीय विद्युत समिति
25, रैम कोर्ट हाउस रोड
बैंगलूर - 560 009



Government of India
Central Electricity Authority
Southern Regional Power Committee
25, Ram Court Court Road
BENGALURU - 560009

Phone: 080-22282616, FAX: 080-22282643, e-mail: central@powermin.nic.in, se@powermin.nic.in

No. SRPC/SE-1/2020/622-39

दिनांक/ Dated: 23rd January, 2020

सेवा में/ To:

वितरण सूची के अनुसार /As per Distribution List

Subject: Certification of Non-ISTS Lines carrying interstate power for the period 2014-15, 2015-16 and 2016-17, which were having more than 50% utilization for interstate power transmission during the Years 2013-14, 2014-15 and 2015-16 respectively- reg.

Sir,

CERC Third Amendment of Sharing of Inter-State Transmission Charges and Losses Regulations 2015, Clause 2.1.3 of Annexure - 1 stipulates as below:

"Certification of non-ISTS lines carrying inter-State power, which were not approved by the RPCs on the date of notification of the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2009, shall be done on the basis of load flow studies. For this purpose, STU shall put up proposal in the respective RPC Secretariat for approval. RPC Secretariat, in consultation with RLDC, using WebNet Software would examine the proposal. The results of the load flow studies and participation factor indicating flow of Inter State power on these lines shall be used to compute the percentage of usage of these lines as inter State transmission. The software in the considered scenario will give percentage of usage of these lines by, home State and other than home State. For testing the usage, tariff of similar ISTS line may be used. The tariff of the line will also be allocated by software to the home State and other than home State. Based on percentage usage of ISTS in base case, RPC will approve whether the particular State line is being used as ISTS or not..."

In compliance with the regulations, the lines as listed in the respective Annexures are certified as lines carrying interstate power, in consultation with SRLDC:

- (1) For the year 2014-15, no Non-ISTS Lines have qualified for certification. The data used for the study is taken from Quarter- 1 to Quarter-4 of 2013-14, which is considered for POC computation.

Chief Engineer
Planning, Power Systems & Commercial
APTRANSCO, Vijayawada
Vijayawada-520 004

Zub S. Srinivasulu
Chief Engineer
Planning, Power Systems & Commercial
APTRANSCO, Vijayawada
Vijayawada-520 004

- (ii) For the year 2015-16, 19 non ISTS lines, given at Annexure I hereto. The data used for the study is taken from Quarter-1 to Quarter-4 of 2014-15, which is considered for POC computation.
- (iii) For the year 2016-17, 17 non ISTS lines, given at Annexure II hereto. The data used for the study is taken from Quarter-1 to Quarter-4 of 2015-16, which is considered for POC computation.

Yours faithfully,

मेका रामकृष्ण 23/11/2016

(मेका रामकृष्ण/MEKA RAMKRISHNA)
अधीक्षण अभियन्ता(सी)/Superintending Engineer (C)

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vikat Boudha,
Vijayawada-520004

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vikat Boudha,
Vijayawada-520004.

21-
[Signature]

Annexure-I

Non-ISTS Lines Certified for the year 2015-16

SL.No.	Lines Certified by RPC	Voltage (kV)	State
1.	CHITTIGOR-RENGUNTA:1	220	AP
2.	CHITTIGOR-NAGARI:2	220	AP
3.	SULURETA-NLR-PG:1	220	AP
4.	KRPTNAM-NLR-AP:1	400	AP
5.	KRPTNAM-NLR-AP:2	400	AP
6.	NELLORE-NLR-PG:1	220	AP
7.	NELLORE-NLR-PG:2	220	AP
8.	NELLORE-NLR-PG:3	220	AP
9.	RENGUNTA-NAGARI:1	220	AP
10.	PONDY42-BHAHUR:1	220	PY

2015-16
 Chief Engineer
 Transmission & Distribution
 Tamil Nadu Electricity Board
 600002-Chennai
 2015-16
 Chief Engineer
 Transmission & Distribution
 Tamil Nadu Electricity Board
 600002-Chennai

निदेशी सूची (Mailing List / Correspondence / Sub-Committee)

1. मुख्य अभियंता (वाणिज्य), एसीपीसीसी, हैदराबाद / CE (Comm), APSCO, Hyderabad. *Vijayawada*
2. श्री सी.बी. श्रीवास्तव (आईपीसी) एसीपीसीसीएल, सिविल/Asst. V. Ravi, GM (PS), APSPDC, Tirunelveli
3. सेवा अभियंता, एसएलसीसी-टीबीसी-केवीटीसीएल/CA, SLDC-TRC, KPTCL, Bangalore
4. सेवा अभियंता (विद्युत), एसएलसीसी, एसीपीसीसीएल, बंगलूरु/SLDC, KPTCL, Bangalore
5. ज्योतिषाध्यक्ष (विद्युत), एसीपीसीसी, बंगलूरु/Dy. GM (Finance), KPTCL, Bangalore
6. अपर निदेशक (वाणिज्य), एसीपीसीसी, बंगलूरु / Assistant Director (Prof), PMS, Bangalore
7. निदेशक (वाणिज्य), एसीपीसीसी, बंगलूरु / Director (Prof), PMS, Bangalore
8. कार्यकारी अभियंता (विद्युत), एसीपीसीसी, बंगलूरु / Executive Engineer (Electrical), PMS, Bangalore
9. अवीर अभियंता (एलडी & सी) बंगलूरु, चेन्नै / AS (LD & CO), TANTRANSCO, Chennai
10. कार्यकारी अभियंता (विद्युत), बंगलूरु, चेन्नै / AS (Genl), TANTRANSCO, Chennai
11. मुख्य अभियंता (निर्वाहक सेवा), बंगलूरु, चेन्नै / CE (Regulatory Cell), TANTRANSCO, Chennai
12. मुख्य अभियंता (वाणिज्य), एसीपीसीसी, हैदराबाद / CE (Comm), TSPCC, Hyderabad
13. सुमेध (वाणिज्य), एसीपीसीसी, बंगलूरु / COM (Comm), TSNPDC, Warangal
14. कार्यकारी अभियंता / एससीसी, विद्युत विभाग, पुणेरी / EE (S.C.C.), Electricity Department, Pune
15. महाप्रबंधक (वाणिज्य), सीपी, एनटीपीसी, नई दिल्ली / GM (Comm), CC, NTPC, New Delhi
16. महाप्रबंधक (वाणिज्य), एसआर - एचओ, एनटीपीसी, सिविल/Asst. V. Ravi, GM (Comm), SR-HQ, NTPC, Secunderabad
17. महाप्रबंधक (वाणिज्य), निगम मुख्यालय, एनएनसी, नैवेली / GM (Comm), Corporate Office, NLEI, Neyveli
18. मंड निदेशक, एमएसीएस, कलकत्ता / Station Director, MAPS, Kalkatta
19. मंड निदेशक, के.वी.एस, कैलाश / Station Director, KVS, Kailash
20. मंड निदेशक, के.एनपीसी, कुडकुलम / Station Director, KNPPI, Kudukulam
21. सह-महाप्रबंधक (वाणिज्य), एनटीपीसी, बंगलूरु एनटीपीसी/AGM (Comm), NTPCL, Valur STPS
22. उप महाप्रबंधक, एनटीपीसी, बंगलूरु / Dy. GM, NTPCL, Thiruvananthapuram
23. अतिरिक्त अध्यक्ष (व्यापार विकास), एसीपीसीसी, बंगलूरु/Sr. VP (Business Development), UPCL, Bangalore
24. उप महाप्रबंधक, जेएसएलएलएल, बंगलूरु / Deputy General Manager, JSWEL, Bangalore
25. श्री अशोक मोहम्मद, कोस्टल एनर्जी प्राइवेट लिमिटेड, चेन्नै / Mr. Asan Mohammed, CSEPL, Chennai
26. पीएस - पावर सेल, भाद्र एल & एस एनटीपीसी, चेन्नै / GM - Power Sale, IL&PS TNPL, Chennai
27. उपाध्यक्ष (वाणिज्य), हिमडुगा नेशनल पावर कॉर्पोरेशन लिमिटेड, पुणे / VP (Comm), HNPCL, Mumbai
28. सीएम, शेल्फोर्ड एनर्जी इंडिया लिमिटेड, सेल्बोर्ग/CM, Sembcorp Energy India Limited, SPSS, Nellore
29. निदेशक (वाणिज्य), एसीपीसीसी इंडिया लिमिटेड, नई दिल्ली/Director (Comm), PTC India Limited, New Delhi
30. मुख्यमहाप्रबंधक, एनटीपीसी, नई दिल्ली/CGM, NVVNL, New Delhi
31. महाप्रबंधक (वाणिज्य), बने-1, पावर लिमिटेड, सिविल/Asst. V. Ravi, GM (Comm), SRTS-1, PGCIL, Secunderabad
32. महाप्रबंधक (वाणिज्य), बने-1, पावर लिमिटेड, बंगलूरु/Asst. V. Ravi, GM (Comm), SRTS-1, PGCIL, Bangalore
33. वित्त प्रमुख, एसआरएलसीसी, सीपीसी, बंगलूरु/Head of Finance, SRLDC, POSOCO, Bangalore
34. वित्त प्रमुख, एसआरएलसीसी, सीपीसी, बंगलूरु/Head of MO, SRLDC, POSOCO, Bangalore
35. निदेशक, एसीपीसीसी प्रभाग, चेन्नै, नई दिल्ली/Director, GM & NPC Division, CEA, New Delhi

2001

2005. Sub...
 Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vijayawada,
 Vijayawada-520004.

ANNEXURE A/4

Petition for Determination of Tariff for Intra-State Lines of APTRANSCO for FY 2016-16 & FY 2016-17

**BEFORE THE ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION
HYDERABAD**

OP No.42 of 2020

FILING NO. ____/2020

CASE NO. ____/2020

In the matter of:

Petition for Determination of Tariff for intra-State transmission lines of APTRANSCO carrying interstate power for the FY 2015-16 and FY 2016-17 to include the same in the PoC Mechanism.

PETITION FILED UNDER SECTION 62 OF EA 2003. CERC (SHARING OF INTER STATE TRANSMISSION CHARGES AND LOSSES) (THIRD AMENDMENT) REGULATIONS, 2015 AND AS PER CERC (TERMS AND CONDITIONS OF TARIFF) REGULATIONS, 2014.

In the matter of:

TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

... Applicant

AFFIDAVIT OF APPLICANT VERIFYING THE APPLICATION ACCOMPANYING FILING OF PETITION FOR DETERMINATION OF TARIFF FOR INTRA-STATE TRANSMISSION LINES OF APTRANSCO CARRYING INTERSTATE POWER FOR THE FY 2015-16 and FY 2016-17.

I, Sri. CH. V.S. Subba Rao, S/o Sesha Sai, 58 years, officiating as Chief Engineer/Planning, Power Systems & Commercial, APTRANSCO, Vidyut Soudha, Gunadala, Vijayawada – 520004 do solemnly affirm and say as follows:

Ch. V.S. Subba Rao
Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidyut Soudha, ..
Vijayawada-520004.

Petition for Determination of Tariff for Intra-State Lines of APTRANSCO for FY 2015-16 & FY 2016-17.

1. I am the Chief Engineer/Planning, Power Systems & Commercial, APTRANSCO, the licensee company operating and controlling the Transmission Business & SLDC Activity of electricity in Andhra Pradesh pursuant to the license granted by the Hon'ble Commission. I am competent and duly authorized by APTRANSCO to affirm, swear, execute and file this affidavit in the present proceedings.
2. I have read and understood the contents of the accompanying petition for determination of tariff for newly Identified Intra-State Lines of APTRANSCO carrying interstate power for FY 2015-16 and FY 2016-17. The statements made in the paragraphs of the accompanying application now shown to me are true to my knowledge derived from the official records made available to me and are based on information and advice received which I believe to be true and correct.

Zeev S. Subbarao
DEPONENT

VERIFICATION:

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520004.

I, the above named Deponent solemnly affirm on this 12th day of March 2020 that the contents of the above affidavit are true to my knowledge, no part of it is false and nothing material has been concealed there from.

Zeev S. Subbarao
DEPONENT

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520004.

Zeev S. Subbarao
Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520004.

[Signature]

Petition for Determination of Tariff for Intra-State Lines of APTRANSCO for FY 2015-16 & FY 2016-17

**BEFORE THE ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION
HYDERABAD**

FILING NO. _____/2020

OP No.42 of 2020

CASE NO. _____/2020

In the matter of:

1. Petition for determination of tariff for intra-State transmission lines of APTRANSCO carrying inter-state power for the FY 2015-16 and FY 2016-17 to include the same in the PoC Mechanism.

PETITION FILED UNDER SECTION 62 OF EA 2003, CERC (SHARING OF INTER STATE TRANSMISSION CHARGES AND LOSSES) (THIRD AMENDMENT) REGULATIONS, 2015 AND AS PER CERC (TERMS AND CONDITIONS OF TARIFF) REGULATIONS, 2014.

In the matter of:

TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

... Applicant

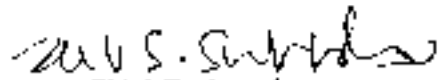
The Applicant respectfully submits as under: -

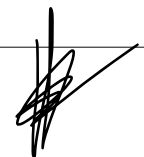
2. Pursuant to the applicable provisions of the Andhra Pradesh Electricity Reform Act, 1998, the Government of Andhra Pradesh undertook the reforms and restructuring of the erstwhile Andhra Pradesh State Electricity Board (APSEB). APTRANSCO was formed as a successor entity of the erstwhile APSEB through the First statutory transfer scheme notified in the official gazette on February 1, 1999 to manage the Transmission and Distribution business of erstwhile APSEB. Subsequently, the State Government notified the Second Transfer Scheme on March 31, 2000 (the Second Transfer Scheme) wherein APTRANSCO retained the Transmission, SLDC and Bulk Supply business of the state with itself, while

[Signature]
Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada 520004

transferring the Distribution and Retail supply of the state to the four Distribution Companies formed. Pursuant to obtaining independent licensees by the DISCOMs in December 2000, APTRANSCO has relinquished its Distribution & Retail Supply License. Subsequently on June 7, 2005, the State Government notified the Third Transfer Scheme in its official gazette wherein the Bulk Supply business that was being dealt by APTRANSCO is vested to the DISCOMs with effect from June 9, 2005. As a result, APTRANSCO is presently carrying out solely the Transmission business as the State Transmission Utility (STU) in the State.

3. The erstwhile Andhra Pradesh state is reorganized into the Andhra Pradesh state and Telangana state on 2nd June, 2014. As per A.P. Reorganization Act and by the effect of the bifurcation of erstwhile Andhra Pradesh, it is resulted in to number of Inter-State lines between the divided Andhra Pradesh and Telangana state. This has resulted in 37 lines which are remained as partly/wholly owned by AP (As per section 2(36) (i) of the Act). Further there were 3 lines connecting with Tamilnadu, Karnataka and Pondicherry.
4. There are a number of transmission lines which are intra-state, but are incidental to the power flow of Inter-state power. As per the CERC (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010, these intra-state transmission lines also can be included in the PoC Mechanism subject to if individual YTC for lines are available.
5. The National Electricity Policy (NEP) issued by the Government of India, mandates transmission prices to be the distance and direction sensitive and must capture the utilization of the network by each network user. In line with the said mandate the Central Electricity Regulatory Commission (CERC), has issued Sharing of Interstate Transmission Charges and Losses, 2010 and it came into force with effect from 01.7.2011. Six amendments to the said Sharing Regulations were notified on 25.11.2011, 29.03.2012, 01.05.2015, 03.07.2015, 14.12.2017 and 27.03.2019.


 Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vidut Soudha,
 Vijayawada-520004.



6. The extract of sub clause(y) of Clause 1 of Regulation 2 of principal Regulations and its amendments is as below

"(y) Yearly Transmission Charge (YTC) means the Annual Transmission Charges for the existing and new transmission assets of the inter-State transmission licensees, deemed ISTS Licensees, owners of inter-State transmission lines connecting two states and owners of non-ISTS lines certified by Regional Power Committees for inter-State transmission of power, determined by the Appropriate Commission under Section 62 of the Act or adopted by the Appropriate Commission under Section 63 of the Act or as otherwise provided in these Regulations.

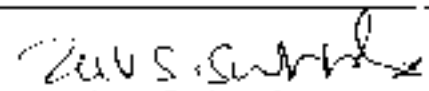
"Provided that in case of non-ISTS lines, the asset-wise tariff determined by the respective State Commissions or approved by the Central Commission based on the approved Annual Revenue Requirement of STU, shall be used:

Provided further that transmission charges received by the STU under these regulations shall be adjusted in the Annual Revenue Requirement of the concerned STU approved by the respective State Commission."

The copy of the CERC Regulation 2010 is attached as **Annexure-A**.

APTRANSCO has filed a petition before Hon'ble CERC for determination of tariff of transmission lines which are inter-state in nature of connecting two states, for the years 2016-17, 2017-18 and 2018-19. Similarly for determination of tariff of the non ISTS lines carrying interstate power were obtained from SRPC and filed petition in APERC for the years 2017-18 and 2018-19 duly following the procedures in vogue. Based on the Commission orders the assets were included in the PoC Mechanism by the Implementing Agency i.e. POSOCO.

7. Now, SRPC has issued certification of Non-ISTS Lines carrying inter-state power for the period 2015-16 and 2016-17 which were having more than 50% utilization during the year 2014-15 and 2015-16 vide letter No. SRPC/SE-I/2020/622-39,


 Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vidul Soudha,
 Vijayawada-520 014



dt.23.01.2020 for 9 and 14 lines respectively. The copy of the SRPC certification is attached as **Annexure-B**.

8. a) The 9Nos. Intrastate lines of Andhra Pradesh carrying Interstate power in the year 2015-16 are as given below.

Sl. No.	Asset	Voltage (Kv)	Configuration	Length in KM	COD	Sl. No. as per SRPC certification	Asset Name
1	CHITTOOR-RENIGUNTA:1	220	S/C	71.86	16-02-2006	1	Asset I
2	CHITTOOR-NAGARI:2	220	S/C	54.49	13-02-2003	2	Asset II(A) & II(B)
		220	S/C	41	15-10-2012		
3	SULURPETA-NELLORE-PG:1	220	S/C	75.701	28-04-1982	3	Asset III(A) & III(B)
		220	S/C	10.1	26-12-2006		
4	KRISHNAPATNAM-NELLORE-AP:1	400	D/C	36.5	23-11-2012	4	Asset -IV & V
5	KRISHNAPATNAM-NELLORE-AP:2	400				5	
6	NELLORE-NELLORE-PG:1	220	S/C	20.7	05-09-1981	6	Asset - VI (A) & VI(B)
		220	S/C	10.1	26-06-2007		
7	NELLORE-NELLORE-PG:2	220	S/C	20.7	05-09-1981	7	Asset - VII (A) & VII(B)
		220	S/C	10.1	26-06-2007		
8	NELLORE-NELLORE-PG:3	220	S/C	28.54	17-04-2005	8	Asset - VIII
9	RENIGUNTA-NAGARI:1	220	S/C	9.5	13-02-2003	9	Asset - IX (A) & IX(B)
		220	S/C	41	15-10-2012		

- b) The 14 Nos. Intrastate lines of Andhra Pradesh carrying interstate power in the year 2016-17 are as given below:

Sl. No.	Asset	Voltage (Kv)	Configuration	Length in KM	COD	Sl. No. as per SRPC certification	Asset Name
1	SULURPETA-NELLORE:1	220	S/C	75.701	28-04-1982	1	Asset - I (A) & I (B)
		220	S/C	10.1	26-12-2006		
2	KONDAPALLI-VTPS:1	220	S/C	6.469	11-11-1989	2	Asset - II
3	KONDAPALLI-VTPS:2	220	S/C	6.469	23-03-1998	3	Asset - III

[Signature]
 Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vidut Boudha,
 Vijayawada-520004.

4	KONDAPALLI-CHILAKALLU:1	220	S/C	59.705	12-03-1997	4	Asset - IV
5	KONDAPALLI-CHILAKALLU:2	220	S/C	59.705	19-08-2000	5	Asset - V
6	VTPS-CHILAKALLU:1	220	S/C	67.801	28-08-1999	6	Asset - VI
7	VTPS-CHILAKALLU:2	220	S/C	67.801	01-10-2010	7	Asset - VII
8	VTPS-RENTACHINTALA:2	220	S/C	110.09	30-06-1984	8	Asset -VIII (A) & VIII (B)
		220	S/C	1.4	24-11-2008		
9	KURNOOL-BRAHMANKTUR:1	220	S/C	23.18	29-10-2010	9	Asset -IX
10	CHITTOOR-SDSTPS:1	400	D/C	192	17-07-2015	10	Asset - X & XI
11	CHITTOOR-SDSTPS:2	400			22-07-2015	11	
12	NUNNA2-VTPS-IV:1	400	S/C	18.66	26.07.2009	12	Asset - XII
13	GAZUWAKA1-KALAPAKKA1:1	400	S/C	3.393	10.12.2000	13	Asset - XIII
14	GAZUWAKA1-KALAPAKKA1:2	400	S/C	3.393	27.01.2002	14	Asset - XIV

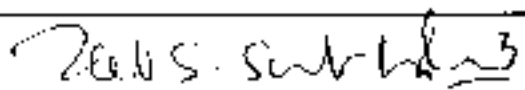
In case of lines which are commissioned before 01.04.2014, the YTC is calculated as per the methodology followed in the petition no.44/TT/2019 filed before APERC. For the lines which are commissioned after 01.04.2014 (Asset X & XI for the year 2016-17), Individual Audited capital cost is taken for calculation of YTC. The methodology indicated in Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 is adopted and computed the tariff.

The methodology used to compute the tariff is in line with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

9. Capital Cost

i. For the Assets I to IX (2015-16) & Assets I to IX& XII to XIV (2016-17)

The individual audited capital cost of the above 9 Nos & 12 No lines are not available and hence the capital cost is considered in line with the Hon'ble


**Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vidut Soudha,
 Vijayawada-520004.**

CERC's methodology. The benchmark cost taken is the same as in order dated 21.06.2018 for petition 237/TT/2016 used for tariff calculation of interstate lines for the year 2015-16 & 2016-17.

The methodology in order dated 21.06.2018 for petition 237/TT/2016 (14) is quoted as below:

"PGCIL's Annual Report data has been used as the reference data; based on which, year wise benchmark cost has been derived.

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 transmission lines' length 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 & 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 TL taken together makes it around 8.3 % of the total line length owned by PGCIL. Further, 132 kV TLs 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 TL 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.

Zee S. Subramanian^B

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Boudha,
Vijayanagara-520004.



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		Rs 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

Therefore, for arriving at the costs of transmission lines of other voltage levels and circuit configurations, the average TL 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 States' transmission lines."

The Capital cost for the 9No assets for the FY 2015-16 are indicated below:

Sl. No.	Asset name	DoC	Rationalized cost of 400 kV line in Rs. Lakh per km	Line length in km	Multiplication factor	Gross block in Rs Lakhs (Capital cost)
1	Asset I	16-02-2006	40.33	71.86	0.36	1043.32
2	Asset II(A)	13-02-2003	34.00	54.49	0.36	666.96
	Asset II(B)	15-10-2012	65.67	41.00	0.36	969.29
3	Asset III(A)	28-04-1982	0.00	75.701	0.36	0.00
	Asset III(B)	26-12-2006	42.53	10.10	0.36	154.64
4	Asset -IV & V	23-11-2012	65.67	36.50	1.39	3331.77
5	Asset - VI (A)	05-09-1981	0.00	20.70	0.36	0.00
	Asset - VI(B)	26-06-2007	47.04	10.10	0.36	171.037
6	Asset - VII (A)	05-09-1981	0.00	20.70	0.36	0.00
	Asset -VII(B)	26-06-2007	47.04	10.10	0.36	171.037
7	Asset - VIII	17-04-2005	40.33	28.54	0.36	414.367

2015-16-17
 Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vijay Soudha,
 Vijayawada-520004.

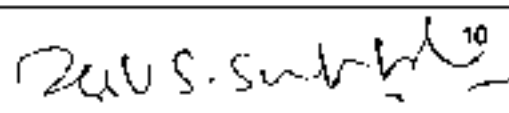
B	Asset - XI (A)	13-02-2003	34.00	9.50	0.36	116.28
	Asset - XII(B)	15-10-2012	65.67	41.00	0.36	969.29

The Capital cost for the 12No assets for the FY 2016-17 are indicated below:

Sl. No.	Asset name	DoC	Rationalized cost of 400 kV line in Rs. Lakh per km	Line length in km	Multiplication factor	Gross block in Rs Lakhs (Capital cost)
1	Asset - I (A)	28-04-1982	0.00	75.701	0.36	0.00
	Asset - I (B)	26-12-2006	42.53	10.10	0.36	154.64
2	Asset - II	11-11-1989	0.00	6.469	0.36	0.00
3	Asset - III	23-03-1998	27.87	6.469	0.36	64.90
4	Asset - IV	12-03-1997	38.20	59.705	0.36	821.06
5	Asset - V	19-08-2000	54.57	59.705	0.36	1172.92
6	Asset - VI	28-08-1999	20.71	67.801	0.36	505.50
7	Asset - VII	01-10-2010	52.26	67.801	0.36	1275.58
8	Asset - VIII(A)	30-06-1984	0.00	110.09	0.36	0.00
	Asset - VIII(B)	24-11-2008	47.74	1.40	0.36	24.061
9	Asset - IX	29-10-2010	52.26	23.18	0.36	436.09
12	Asset - XII	26.07.2009	48.44	18.66	1.00	903.89
13	Asset - XIII	10.12.2000	54.57	3.393	1.00	185.16
14	Asset - XIV	27.01.2002	44.28	3.393	1.00	150.11

I. For the Assets X and XI (2016-17)

These lines are commissioned after 01.04.2014, hence the Audited capital cost has been taken for calculation of YTC. These 2 lines were executed as 2 stretches (i.e. Krishnapatnam – Bonampally and Bonampally - Chittoor). Hence the YTC for these two assets was arrived jointly.


Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520 017

For the Assets X and XI, the Gross Block is as given below.

Asset	Gross block in Rs Lakhs (Capital cost)	Audited certificate enclosed at
Asset X & XI	43505.98	Annexure - XXVII

2. Debt- Equity Ratio for all the assets

The debt- Equity ratio is considered to be the normative debt-equity ratio of 70:30.

3. Depreciation for all the assets

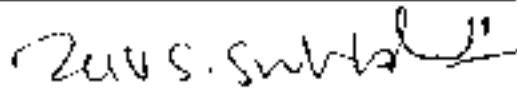
In line with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 asset is depreciated up to 90% of the capital cost, remaining 10% being the salvage value of the asset. For the assets commissioned before 2014 for which the audited capital costs are not available, the rate of depreciation is taken as 5.28% till 12 years and 2.05% beyond that till 25 years as per the methodology adopted by CERC while issuing the orders in Petition No. 237/TT/2016 filed by APTRANSCO. For the assets commissioned after 2014, the rate of depreciation is taken as 5.28%. Further, normative loan repayment during a year shall be deemed to be equal to the depreciation allowed for that year.

4. Interest on Loan

i. For the Assets I to IX (2015-16) & Asset I to IX & XII to XIV (2016-17).

The rate of interest on loan for the assets 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 rate of interest for FY 2015-16 & FY 2016-17 have been considered as the weighted average rate of loan of FY 2015-16 & FY 2016-17.

Year	FY 2015-16	FY 2016-17
Rate of Interest on Loan	10.60	10.75


**Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vaidi Boudha,
 Vijayawada-520004.**



II. For the Assets X and XI (2016-17)

The rate of interest on loan for the assets X and XI for FY 2016-17 is as given below.

Asset	Loan Funded by	Rate of Interest on Loan (%) for FY 2016-2017
Asset X and XI	REC	10.75

5. Return on Equity

Clause (1) and (2) of Regulations 24 and Clause (2) of Regulation 25 of the Central Electricity Regulatory Commission(Terms and Conditions of Tariff) Regulations,2014 specify as under:-

***24. Return on Equity:** (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 18.

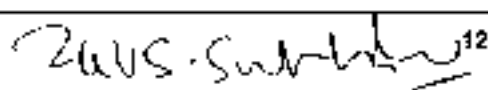
(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system...."

***25. Tax on Return on Equity:**

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

Rate of pre-tax return on equity = Base rate / (1-t)

Where "t" is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the


 Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vitol Boudha,
 Vijayawada-520004.



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."

In line with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, the ROE considered is as follows:

APTRANSCO is a profit-making entity, the total tax rate (including surcharge and Education cess) for the FY 2015-16 & FY 2016-17 is as below

	2015-16	2016-17
Base Rate	30%	30%
Surcharge	12%	12%
Education Cess	3%	3%
Total Tax	34.6080%	34.6080%

Return on Equity	2015-16	2016-17
Return on Equity (Base Rate) (%)	15.50%	15.50%
Tax Rate for respective year (%)	34.61%	34.61%
Rate of Return on Equity (%)	23.70%	23.70%

6. O & M Expenses

The year wise O&M norms approved by Hon'ble APERC in Transmission Tariff Order FY 2014-15 to FY 2018-19 were considered for arriving O&M expenses of respective years.

Year wise O & M Norms approved

	2015-16	2016-17
LL Norm (Rs./ckt.km)	56024	58377

Sub. S. Subh 13
**Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vidut Boudha,
 Vijayawada-520004.**

7. Interest on Working Capital

In accordance with the Clause 1(c) of Regulation 28 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, the rate of interest on working capital is considered to be 13.5% based on SBI base rate of 10% as on 1.4.2014. In accordance with the Clause 1(c) of Regulation 28 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 the working capital is taken as the sum of Maintenance Spares (@15% of the yearly O&M Expenses), O&M Expenses for 1 month and Receivables (equivalent to 2 months of fixed cost).

8. A) The detailed calculations of the Assets I to IX is enclosed at Annexures III to XV.

The transmission charges for the 9 No transmission assets for the FY 2015-16 are summarized as below:

(Rs.in Lakhs)

Sl. No.	Asset	Asset Name	YTC for FY 2015-16
1	Asset I	CHITTOOR-RENIGUNTA:1	197.16
2	Asset II(A) & II(B)	CHITTOOR-NAGARI:2	98.76
			206.80
3	Asset III(A) & III(B)	SULURPETA-NELLORE-PG:1	44.73
			29.78
4	Asset - IV & V	KRISHNAPATNAM-NELLORE-AP:1	670.70
		KRISHNAPATNAM-NELLORE-AP:2	
5	Asset - VI (A) & VI(B)	NELLORE-NELLORE-PG:1	12.23
			32.31
6	Asset - VII (A) & VII(B)	NELLORE-NELLORE-PG:2	12.23
			32.31
7	Asset - VIII	NELLORE-NELLORE-PG:3	75.93
8	Asset - IX (A) & IX (B)	RENIGUNTA-NAGARI:1	17.22
			206.80
Total YTC (in Lakhs)			1636.96
Total YTC (In Crores)			16.36

2015.5.2016

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidyal Goudha,
Vijayawada-520004.

[Signature]

B) The detailed calculations of the Assets I to XIV is enclosed at Annexures XVI to XXX. The transmission charges for the 14 No transmission assets for the FY 2016-17 are summarized as below:

(Rs. in Lakhs)

Sl. No.	Asset	Asset Name	YTC for FY 2016-17
1	Asset - I (A) & I (B)	SULURUPETA-NELLORE42:1	46.57
			29.19
2	Asset - II	KONDAPALLI-VTPS:1	3.98
3	Asset - III	KONDAPALLI-VTPS:2	10.06
4	Asset - IV	KONDAPALLI-CHILAKALLU:1	113.67
5	Asset - V	KONDAPALLI-CHILAKALLU:2	146.65
6	Asset - VI	VTPS-CHILAKALLU:1	89.08
7	Asset - VII	VTPS-CHILAKALLU:2	253.46
8	Asset -VIII (A) & VIII (B)	VTPS-RENTACHINTALA:2	67.73
			4.71
9	Asset -IX	KURNOOL-BRAHMANKTKUR:1	89.18
10	Asset - X&XI	CHITTOOR-SDSTPS:1	8745.20
11		CHITTOOR-SDSTPS:2	
12	Asset - XII	NUNNAZ-VTPS-IV:1	156.28
13	Asset - XIII	GAZUWAKA1-KALAPAKKA1:1	19.49
14	Asset - XIV	GAZUWAKA1-KALAPAKKA1:2	16.40
Total YTC (in Lakhs)			9791.65
Total YTC (in Crores)			97.91

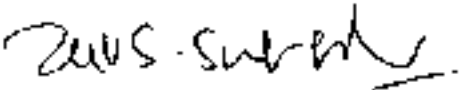
Zub S. Subhakar

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520004

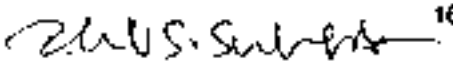
PRAYER

9. In the above circumstances, the petitioner respectfully prays the Hon'ble Commission

- i. to approve the annual fixed charges for the assets covered under this Petition;
- ii. to determine the tariff of the Intra-State transmission lines of APTRANSCO carrying interstate power for FY 2015-16 & FY 2016-17 and
- iii. 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.


PETITIONER

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520004.

¹⁶
Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520004.



E-MAIL

भारत सरकार
केन्द्रीय विद्युत प्राधिकरण
दक्षिण क्षेत्रीय विद्युत समिति
29, रॉस कोर्स क्रॉस रोड
बेंगलूर - 560 009



Government of India
Central Electricity Authority
Southern Regional Power Committee
29, Rance Course Cross Road
BENGALURU - 560 009

Phone : 080-2228 2516 , FAX : 080-2275 9343; e-mail: secommmlargo-ke@nic.in ; web site: www.srpc,ke.nic.in

No. SRPC/SE-1/2020/

दिनांक/ Dated: 30th April, 2020

सेवा में / To

वितरण सूची के अनुसार
As per Distribution List

Sub-Certification of non-ISTS Lines carrying interstate power for the period 2020-21, which were having more than 50% utilization for interstate power transmission during the year 2019-20-Regarding

महोदय /Sir,

CERC Third Amendment of Sharing of inter-State Transmission Charges and Losses regulations, 2015, Clause 2.1.3 of Annexure-1 stipulates as below:

"Certification of non-ISTS lines carrying inter-State power, which were not approved by the RPCs on the date of notification of the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2009, shall be done on the basis of load flow studies. For this purpose, STU shall put up proposal to the respective RPC Secretariat for approval. RPC Secretariat, in consultation with RLDC, using WebNet Software would examine the proposal. The results of the load flow studies and participation factor indicating flow of Inter State power on these lines shall be used to compute the percentage of usage of these lines as inter State transmission. The software in the considered scenario will give percentage of usage of these lines by home State and other than home State. For testing the usage, tariff of similar ISTS line may be used. The tariff of the line will also be allocated by software to the home State and other than home State. Based on percentage usage of ISTS in base case, RPC will approve whether the particular State line is being used as ISTS or not..."

In compliance with the regulations, 66 non ISTS lines as listed in the Annexure are certified as lines carrying interstate power, in consultation with SRLDC. The data used for the study is taken from Quarter -I to Quarter-IV of 2019-20, which is considered for POC computation as discussed.

Yours faithfully,

संलग्नक: यथोपरि/ Encl: as above

मेका रामकृष्ण

30/4/2020

Chief Engineer
Planning, Power Systems & Commercial
ARTNANSCO, Muttu Soudha,
Majawada-520004.

(मेका रामकृष्ण/ MEKA RAMAKRISHNA)
अधीक्षक अभियन्ता (व्य)/Superintending Engineer (C)

ANNEXURE (1/2)

SL.No	Lines certified by RPC	Voltage (kV)	State
1	CHITTOOR2-SDSTPS:Q2	400	AP
2	CHITTOOR2-SDSTPS:Q1	400	AP
3	NUNNA2-VEEMAGIRI:1:T1	400	AP
4	GAZIWAKA2-KALPAKKA1:T2	400	AP
5	GAZIWAKA2-KALPAKKA1:T1	400	AP
6	KURNOOL2-JAMALAMADUGU1:Q1	400	AP
7	KURNOOL2-JAMALAMADUGU1:Q2	400	AP
8	VEEMAGIRI1-SATTENAPALI:1:T1	400	AP
9	HINDUJA-KVKOTA1:T2	400	AP
10	HINDUJA-KVKOTA1:T1	400	AP
11	JAMALAMADUGU1-TALARICHERI:Q2	400	AP
12	JAMALAMADUGU1-TALARICHERI:Q1	400	AP
13	NPKLINTA-HINDUPUR3:Q2	400	AP
14	NPKLINTA-HINDUPUR3:Q1	400	AP
15	URAVAKONDA-HINDUPUR3:Q1	400	AP
16	URAVAKONDA-TALARICHERI:Q1	400	AP
17	URAVAKONDA-HINDUPUR3:Q2	400	AP
18	URAVAKONDA-TALARICHERI:Q2	400	AP
19	KHAMMAM-ASUPAKA1:T1	400	TS
20	GUMDIP2-NCTPS-I-I	230	TN
21	ABISEK42-SANKNRJ2:1	230	TN
22	ABISEK42-KAYTHAR2:1	230	TN
23	ABISEK42-VERANAM2:1	230	TN
24	ABISEK42-UDAYATR2:1	230	TN
25	ABISEK42-VERANAM2:2	230	TN
26	UDMLPT2-MYVADY42:1	230	TN
27	UDMLPT2-MYVADY42:2	230	TN
28	CHITTOOR42-CHITTOOR1:1	220	AP
29	CHITTOOR42-CHITTOOR1:2	220	AP
30	SULURPET1-NELLORE42:1	220	AP
31	SULURPET1-NELLORE42:3	220	AP
32	SULURPET1-NELLORE42:2	220	AP
33	CHITTOOR1-KALIKIRI:1	220	AP
34	GOOTY-PG-DHONE1:2	220	AP
35	GOOTY-PG-DHONE1:1	220	AP
36	KONDAPALLI1-CHILLAKALLU1:1	220	AP
37	KONDAPALLI1-CHILLAKALLU1:2	220	AP
38	SRISAILAMRBI-TALLAPALLI:1	220	AP
39	SRISAILAMRBI-MYDUKUR:1	220	AP
40	SRISAILAMRBI-TALLAPALLI:2	220	AP

ANNEXURE (2/2)

SL.No	Lines certified by RPC	Voltage (kV)	State
41	SRTSAILAMRBI-SOMYZULPALLI:1	220	AP
42	SRTSAILAMRBI-BELKALAGUDUR:1	220	AP
43	VTSI-CHILLAKALLI:1	220	AP
44	VTSI-RENTCHINTHALA:2	220	AP
45	VTSI-CHILLAKALLI:2	220	AP
46	KURNOOLI-BRAHMANKUR:1	220	AP
47	SUZION-WI-VAIRAKUR:1	220	AP
48	URVAKONDA-BORAMPALLI:2	220	AP
49	URVAKONDA-BORAMPALLI:1	220	AP
50	URVAKONDA-BORAMPALLI:4	220	AP
51	URVAKONDA-BORAMPALLI:3	220	AP
52	SEDAMI-RAICHURTPS:1	220	KA
53	SEDAMI-SHAHAPUR:1	220	KA
54	SEDAMI-RAICHURTPS:2	220	KA
55	RAICHURTPS-RAICHUR:1	220	KA
56	RAICHURTPS-RAICHUR:2	220	KA
57	CHIKKODI-BELGAUM:2	220	KA
58	CHIKKODI-BELGAUM:1	220	KA
59	CHIKKODI-GATAPRABA:1	220	KA
60	CHIKKODI-GATAPRABA:2	220	KA
61	MACHERLA-RENTCHINTHALA:2	132	AP
62	MACHERLA-RENTCHINTHALA:1	132	AP
63	WANPATHY-CHIAMOR:1	132	TS
64	ALAMPUR-CHIAMOR:1	132	TS
65	QNSHPHD-W.PALLI:1	132	TS
66	QNSHPHD-W.PALLI:2	132	TS

Chief Engineer,
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520024

Petition for Determination of Tariff for Intra-State Lines of APTRANSCO for FY 2020-21

**BEFORE THE ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION
HYDERABAD**

FILING NO. _____/2020

CASE NO. _____/2020

In the matter of:

1. Petition for determination of tariff for intra-State transmission lines of APTRANSCO carrying Inter-state power for the FY 2020-21 to include the same in the PoC Mechanism.

PETITION FILED UNDER SECTION 62 OF EA 2003, CERC (SHARING OF INTER STATE TRANSMISSION CHARGES AND LOSSES) (THIRD AMENDMENT) REGULATIONS, 2015 AND AS PER CERC (TERMS AND CONDITIONS OF TARIFF) REGULATIONS, 2019.

In the matter of:

TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

... Applicant

The Applicant respectfully submits as under: -

2. Pursuant to the applicable provisions of the Andhra Pradesh Electricity Reform Act, 1998, the Government of Andhra Pradesh undertook the reforms and restructuring of the erstwhile Andhra Pradesh State Electricity Board ('APSEB'). APTRANSCO was formed as a successor entity of the erstwhile APSEB through the First statutory transfer scheme notified in the official gazette on February 1, 1999 to manage the Transmission and Distribution business of erstwhile APSEB. Subsequently, the State Government notified the Second Transfer Scheme on March 31, 2000 ('the Second Transfer Scheme') wherein APTRANSCO retained the Transmission, SLDC and Bulk Supply business of the state with itself, while transferring the Distribution and Retail supply of the state to the four Distribution

3

APTRANSCO
Commercial
APTRANSCO

Companies formed. As a result, APTRANSCO is presently carrying out solely the Transmission business as the State Transmission Utility (STU) in the State.

3. The National Electricity Policy (NEP) Issued by the Government of India, mandates transmission prices to be the distance and direction sensitive and must capture the utilization of the network by each network user. In line with the said mandate the Central Electricity Regulatory Commission (CERC), has issued Sharing of Interstate Transmission Charges and Losses, 2010 and it came into force with effect from 01.7.2011. Six amendments to the said Sharing Regulations were notified on 25.11.2011, 29.03.2012, 01.05.2015, 03.07.2015, 14.12.2017 and 27.03.2019.
4. The extract of sub clause(y) of Clause 1 of Regulation 2 of principal Regulations and its amendments is as below

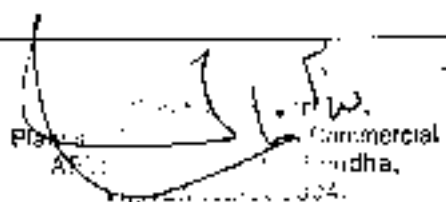
"(y) Yearly Transmission Charge (YTC) means the Annual Transmission Charges for the existing and new transmission assets of the Inter-State transmission licensees, deemed ISTS Licensees, owners of Inter-State transmission lines connecting two states and owners of non-ISTS lines certified by Regional Power Committees for inter-State transmission of power, determined by the Appropriate Commission under Section 62 of the Act or adopted by the Appropriate Commission under Section 63 of the Act or as otherwise provided in these Regulations.]

"Provided that in case of non-ISTS lines, the asset-wise tariff determined by the respective State Commissions or approved by the Central Commission based on the approved Annual Revenue Requirement of STU, shall be used:

Provided further that transmission charges received by the STU under these regulations shall be adjusted in the Annual Revenue Requirement of the concerned STU approved by the respective State Commission."

The copy of the CERC Regulation 2010 is attached as **Annexure-I**.

4



 Commercial Officer, Andhra Pradesh,

 10.04.2024.



5. As per A.P. Reorganization Act-2014, the erstwhile Andhra Pradesh state is reorganized into the Andhra Pradesh state and Telangana state on 2nd June, 2014. This resulted in to number of Inter-State lines between the Andhra Pradesh and Telangana state. Since then APTRANSCO filing petitions before Hon'ble CERC for determination of tariff of the interstate lines and before Hon'ble APERC for determination of tariff of the eligible intrastate lines duly following the procedures laid in the tariff regulations. The approved tariff for these lines will be subsequently included in the PoC Mechanism by POSOCO.
6. The SRPC has issued certification of Non-ISTS Lines carrying inter-state power for the period 2020-21 which were having more than 50% utilization during the year 2019-20 vide letter No. SRPC/SE-I/2020, dt.30.04.2020 for 44 lines. The copy of the SRPC certification is attached as **Annexure-II**.
7. The 44 Nos. intrastate lines of Andhra Pradesh carrying interstate power as given below.

Sl. No.	Asset	Voltage (kv)	Configuration DC/SC	Length (KM)	COD	Sl. No SRPC	Asset Name
1	NUNNA2-VEMAGIRI1:T3	400	SC	145	30.12.2005	3	Asset 1
2	GAZUWAKA2-KALPAKKA 1:T1	400	SC	3.39	10.12.2000	4	Asset 2
3	GAZUWAKA2-KALPAKKA 1:T2	400	SC	3.39	27.01.2002	5	Asset 3
4	CHITTOOR42-CHITTOOR1:1	220	DC	17.1	14.02.2006	28	Asset 4
5	CHITTOOR42-CHITTOOR1:2	220		17.1		29	Asset 5
6	SULLURPET1-NELLORE42:1	220	SC	75.7	28.04.1982	30	Asset 6-A
			SC	10.1	26.12.2006		Asset 6-B
7	CHITTOOR1-KALIKIRI1:1	220	SC	64.66	21.06.1970	33	Asset 7
8	GOOTY-PG-DHONE1:2	220	DC	90.16	24.08.2011	34	Asset 8
9	GOOTY-PG-DHONE1:1	220		90.16		35	Asset 9
10	KONDAPALLI1-CHILLAKALLU1:1	220	SC	59.7	12.03.1997	36	Asset 10
11	KONDAPALLI1-CHILLAKALLU1:2	220	SC	59.7	19.08.2000	37	Asset 11
12	SRISAILAMRB1-TALLAPALLI:1	220	DC	98.82	01.01.1985	38	Asset 12
13	SRISAILAMRB1-TALLAPALLI:2	220		98.82	01.01.1985	40	Asset 13
14	SRISAILAMRB1-MYDUKUR:1	220	SC	165.96	27.11.1969	39	Asset 14
15	SRISAILAMRB1-SOMYULPALLI:1	220	SC	106	01.01.1985	41	Asset 15
16	SRISAILAMRB1-BELKALAGUDUR:1	220	SC	70.72	24.03.1980	42	Asset 16-A

Principle
APTH
Commercial
Adha,
2020

Petition for Determination of Tariff for Intra-State Lines of APTRANSCO for FY 2020-21

				4.94	10.08.2011		Asset 16-B
17	VTS1-CHILLAKALLU1:1	220	SC	67.8	28.08.1999	43	Asset 17
18	VTS1-CHILLAKALLU1:2	220	SC	67.8	03.10.2010	45	Asset 18
19	VTS1-RENTACHINTHALA1:2	220	SC	110.09	30.06.1984	44	Asset 19-A
			SC	1.4	24.11.2008		Asset 19-B
20	KURNOOLI-BRAHMANKUR:1	220	SC	23.18	29.10.2010	46	Asset 20
21	MACHERLA-RENTACHINTHALA:1	132	SC	15	27.03.2013	62	Asset 21
22	CHITTOOR-SDSTPS:1	400	DC	192	22.07.2015	1	Asset 22
23	CHITTOOR-SDSTPS:2	400		192		2	Asset 23
24	KURNOOLI2-JAMALAMADUGU1:Q1	400	DC	100.86	31.03.2016	6	Asset 24
25	KURNOOLI2-JAMALAMADUGU1:Q2	400		100.86		7	Asset 25
26	HINDUJA-KVKOTAL:T2	400	DC	242.98	24.07.2017	9	Asset 26
27	HINDUJA-KVKOTAL:T1	400		242.98		10	Asset 27
28	JAMALAMADUGU1-URAVAKONDA DC	400	DC	127.62	15.07.2016	11	Asset 28
29	LINE (Part-1)	400		127.62		12	Asset 29
30	TALARICHERUVU TO LILO POINT OF	400	DC	1	01.12.2018	16	Asset 30
31	JAMMALAMADUGU - URAVAKONDA	400		1		18	Asset 31
	DC LINE (Part-2)						
32	URVAKONDA-HINDUPUR3:Q1	400	DC	126.25	23.01.2019	15	Asset 32
33	URVAKONDA-HINDUPUR3:Q2	400		126.25		17	Asset 33
34	SULURPET1-NELLORE42:2	220	DC	68.13	10.11.2014	31	Asset 34
35	SULURPET1-NELLORE42:3	220		68.13		32	Asset 35
36	URAVAKONDA-BORAMPALLI:2	220	DC	33.58	06.01.2017	48	Asset 36
37	URAVAKONDA-BORAMPALLI:1	220		33.58		49	Asset 37
38	URAVAKONDA-BORAMPALLI:4	220	DC	34.73	10.07.2017	50	Asset 38
39	URAVAKONDA-BORAMPALLI:3	220		34.73		51	Asset 39
40	SUZLON-W1-VAJRAKUR:1	220	SC	5.2	12.08.2016	47	Asset 40
41	MACHERLA-RENTACHINTHALA:2	132	SC	14.53	11.07.2016	61	Asset 41
42	VEMAGIRI1-SATTENAPALLI:T1	400	SC	107.87	26.10.2015	8	Asset 42-A
				136.98	28.12.2005		Asset 42-B
43	NPKUNTA-HINDUPUR3:2	400	SC	YTC not claimed because these lines are			
44	NPKUNTA-HINDUPUR3:1	400	SC	owned by M/s PGCIL. (SI.No 13 & 14 of SRPC)			

- B. The methodology used to compute the tariff is in line with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.

9. Capital Cost

i. For the Assets I to XXI

The capital cost of these assets is considered in line with the Hon'ble CERC's methodology. The individual audited capital cost of these 21 assets are not

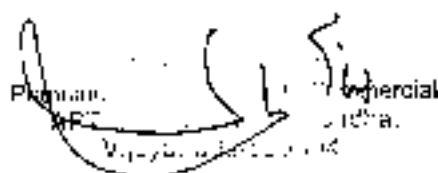
For the Assets I to XXI
APTRANSCO
Vijayawada, 14.11.2024.

available. The benchmark cost taken is the same as in order dated 05.02.2020 for petition 10/TT/2019 used for tariff calculation of interstate lines for the year 2018-19.

The methodology in order dated 05.02.2020 for petition 10/TT/2019 is quoted as below:

"PGCIL's Annual Report data has been used as the reference data; based on which, year wise benchmark cost has been derived.

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 transmission lines' length 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 & 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 TL taken together makes it around 8.3 % of the total line length owned by PGCIL. Further, 132 kV TLs 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 TL 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


 Commercial
 Officer

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		RsX 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

Therefore, for arriving at the costs of transmission lines of other voltage levels and circuit configurations, the average TL 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 States' transmission lines."

The Capital Cost for the 21 assets has been considered and evaluated as per the procedure in Hon'ble Commission order dt.12.07.2019 In O.P.No.44 of 2019 and is as mentioned below:

Sl. No.	Asset Name	Rationalised cost of 400 kV line in Rs Lakh per km	Transmission Line length, in km	Multiplication factor	Gross block in Rs Lakhs (Capital cost)
1	Asset 1	40.33	145	1	5847.85
2	Asset 2&3	44.28	3.39	1.39	208.65
4	Asset 4&5	40.33	17.1	0.57	393.10
6	Asset 6-A	0	75.7	0.36	0.00
	Asset 6-B	42.53	10.1	0.36	154.64
7	Asset 7	0	64.66	0.36	0.00
8	Asset 8&9	62.27	90.16	0.57	3200.13
9	Asset 10	38.20	59.7	0.36	820.99
10	Asset 11	54.57	59.7	0.36	1172.82
11	Asset 12&13	0	98.82	0.57	0.00
12	Asset 14	0	165.96	0.36	0.00
13	Asset 15	0	106	0.36	0.00
14	Asset 16-A	0	70.72	0.36	0.00

Petition for Determination of Tariff for Intra-State Lines of APTRANSCO for FY 2020-21

	Asset 16-B	62.27	4.94	0.36	110.74
15	Asset 17	20.71	67.8	0.36	505.49
16	Asset 18	52.26	67.8	0.36	1275.56
17	Asset 19-A	0	110.09	0.36	0.00
	Asset 19-B	47.74	1.4	0.36	24.06
18	Asset 20	52.26	23.18	0.36	436.10
19	Asset 21	65.67	14.53	0.31	295.80

* For the assets which served their life time i.e. 25 years the rationalized cost is taken as "0".

ii. For the Assets XXII to XLII

As these lines are commissioned after 31.03.2014, the Audited capital cost has been taken for calculation of YTC.

a) **For the Assets XXII to XLI**, the Gross Block is as given below.

Asset Name	Gross block in Rs Lakhs (Capital cost)	Audited certificate enclosed at
Asset 22 & 23	47856.58	Annexure - XXXVI
Asset 24 & 25	16293.24	Annexure - XXXVII
Asset 26 & 27	40597.44	Annexure- XXXIII
Asset 28 & 29	17604.40	Annexure - XXXIX
Asset 30 & 31	519.57	Annexure- XL
Asset 32 & 33	33198.53	Annexure - XLI
Asset 34 & 35	5086.05	Annexure- XLII
Asset 36 & 37	3833.20	Annexure - XLIII
Asset 38 & 39	3554.54	Annexure - XLIV
Asset 41	200.39	Annexure- XLV

b) Regarding the Assets XXVIII to XXXI, the 400 KV Jammalamadugu – Uravakonda TMDC line was commissioned on dt: 15.07.2016. This TMDC line was made double LILO to 400 KV SS Talaricheruvu on 01.12.2018. After making double LILO, the 400 KV Jammalamadugu-Uravakonda TMDC line became 400 KV Jammalamadugu – Talaricheruvu TMDC and 400 KV Uravakonda-Talaricheruvu TMDC line (Sl.Nos 11, 12, 16 & 18 of SRPC certification).

Planning & Commercial
Department
Talaricheruvu

For computing the YTC for the above four lines, the audited capital cost of 400 KV Jammalamadugu-Uravakonda TMDC line as part-1 and Talaricheruvu to LILO Point of Jammalamadugu-Uravakonda line was taken as part-2.

The Gross block (capital cost) for part – 1 is 17604.40 Lakhs and for part – 2 is 519.57 Lakhs.

c) For the Asset XL.

Suzlon - Vajrakarur line was constructed by M/s Suzlon under Depository Contribution (DC) work. Hence, O&M charges and Interest on working Capital are only taken into consideration for computation of YTC.

d) For the Asset XLII.

The 400 KV Vernagiri-Nunna TMDC line was commissioned in the year 2005. The 400 KV Vernagiri - Nunna Feeder-1 was made LILO to Sattenapalli 400kV SS which was commissioned in the year 2015. After made LILO the 400 KV Vernagiri- Nunna Feeder -1 became 400 KV Vernagiri - Sattenapalli and 400 KV Nunna - Sattenapalli feeder. The single line diagram for the above arrangement is shown in the Annexure - XLVI. 400 kV Vernagiri-Sattenapalli line has qualified for claiming YTC. The single line diagram is enclosed as **Annexure-XLVI**.

The YTC of this line is calculated in two parts as below:

a) Vernagiri to LILO point SC line (DOC:28.12.2005) Gross block is arrived from Rationalised cost for 136.98Km of 400kV Single Ckt line (Section-B) i.e Rs. **5524.40 Lakhs**.

b) LILO portion to Sattenapalli (DOC:26.10.2015): Audited Capital cost is available for 400kV DC line from Sattenapalli to LILO point. 50% of that cost is taken as Gross Block as Line under consideration is Single Ckt from Sattenapalli to LILO point (Section-A) i.e Rs. **8872.41 Lakhs**

Plan: ...
A: ...
V: ...
Commercial ...
Soudha, ...
2004.

The audited certificate for Section-A (i.e. LILO to Sattenapalli DC) is enclosed as **Annexure – XLVII**.

1. Debt- Equity Ratio for all the assets

The debt- Equity ratio is considered to be the normative debt-equity ratio of 70:30.

2. Depreciation for all the assets

In line with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, asset is depreciated up to 90% of the capital cost, remaining 10% being the salvage value of the asset. The rate of depreciation is taken as 5.28% till 12 years and 2.05% beyond that till 25 years as per the methodology adopted by CERC while issuing the orders in Petition No. 10/TT/2019 filed by APTRANSCO. Further, Normative loan repayment during a year shall be deemed to be equal to the depreciation allowed for that year.

3. Interest on Loan

i. For the Assets I to XXI

The rate of Interest on loan for the assets 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 rate of Interest for 2020-21 has been considered as the weighted average rate of interest on loan of FY 2019-20.

Year	2020-21
Weighted average Rate of Interest on Loan	10.10%

ii. For the Assets XXII to XLII

The rate of interest on loan for the assets XXII to XLII for FY 2020-21 is as given below.

Asset	Loan Funded by	Interest on Loan (%) for FY 2020-21
Asset 22 & 23	REC	10.35
Asset 24 & 25	REC	10.35

Asset 26 & 27	REC	10.35
Asset 28 & 29	REC	10.35
Asset 30 & 31	REC	10.35
Asset 32 & 33	KFW	1.72
Asset 34 & 35	NABARD	10.30
Asset 36 & 37	REC	10.35
Asset 38 & 39	REC	10.35
Asset 40	Under DC works	
Asset 41	REC	10.35
Asset 42A	REC	10.35

4. Return on Equity

Clause (1) and (2) of Regulations 30 and Clause (2) of Regulation 31 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 specify asunder:-

"30. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 18.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system...."

5. O & M Expenses

The O & M expenses have been considered in line with the APERC approved Transmission Tariff Order for 2019-20 to 2023-24.

6. Interest on Working Capital

In accordance with the Clause 7 of Regulation 3 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, Interest on Working Capital is MCLR+350 base points. one year marginal cost of lending rate (MCLR) of the State Bank of India as on 01.04.2020 is 7.75%, by adding 350 base points to it, the rate of interest on working capital works out to be 11.25%. In accordance with the Clause 1(c) of Regulation 34 of the Central Electricity

Petition for Determination of Tariff for Intra-State Lines of APTRANSCO for FY 2020-21

Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 the working capital is taken as the sum of Maintenance Spares (@15% of the yearly O&M Expenses), O&M Expenses for 1 month and Receivables (equivalent to 45 days of annual fixed cost).

7. The detailed calculations of the Assets I to XLII is enclosed at Annexures III to XXXV. The transmission charges for the 42 transmission assets for the FY 2020-21 are summarized as below:-

Sl. No.	Annexure No	Asset Name	Name of the Line	Voltage (kV)	YTC for FY 2020-21 (In Lakhs)
1	Annex-III	Asset 1	NUNNA2-VEGAGIRI1:T3	400	530.2
2	Annex-IV	Asset 2	GAZUWAKA2-KALPAKKA 1:T1	400	17.77
3		Asset 3	GAZUWAKA2-KALPAKKA 1:T2		
4	Annex-V	Asset 4	CHITTOOR42-CHITTOOR1:1	220	56.51
5		Asset 5	CHITTOOR42-CHITTOOR1:2		
6	Annex-VI	Asset 6-A	SULURPET1-NELLORE42:1	220	64.61
	Annex-VII	Asset 6-B			19.69
7	Annex-VIII	Asset 7	CHITTOOR1-KALIKIRI1:1	220	55.19
8	Annex-IX	Asset 8	GOOTY-PG-DHONE1:2	220	558.56
9		Asset 9	GOOTY-PG-DHONE1:1		
10	Annex-X	Asset 10	KONDAPALLI1-CHILLAKALLU1:1	220	95.15
11	Annex-XI	Asset 11	KONDAPALLI1-CHILLAKALLU1:2	220	121.65
12	Annex-XII	Asset 12	SRISAILAMRB1-TALLAPALLI:1	220	168.69
13		Asset 13	SRISAILAMRB1-TALLAPALLI:2		
14	Annex-XIII	Asset 14	SRISAILAMRB1-MYDUKUR:1	220	141.64
15	Annex-XIV	Asset 15	SRISAILAMRB1-SOMYDULPALLI:1	220	90.47
16	Annex-XV	Asset 16-A	SRISAILAMRB1-BELKALAGUDUR:1	220	60.36
	Annex-XVI	Asset 16-B			18.22
17	Annex-XVII	Asset 17	VTS1-CHILLAKALLU1:1	220	83.65
18	Annex-XVIII	Asset 18	VTS1-CHILLAKALLU1:2	220	212.26
19	Annex-XIX	Asset 19-A	VTS1-RENTACHINTHALA1:2	220	93.96
	Annex-XX	Asset 19-B			3.85
20	Annex-XXI	Asset 20	KURNOOL1-BRAHMANKUR:1	220	72.57
21	Annex-XXII	Asset 21	MACHERLA-RENTACHINTHALA:1	132	51.41
22	Annex-XXIII	Asset 22	CHITTOOR-SDSTPS:1	400	7475.13
23		Asset 23	CHITTOOR-SDSTPS:2		
24	Annex-XXIV	Asset 24	KURNOOL2-JAMALAMADUGU1:Q1	400	2614.67
25		Asset 25	KURNOOL2-JAMALAMADUGU1:Q2		
26	Annex-XXV	Asset 26	HINDUJA-KVKOTA1:T2	400	6925.56

Petition for Determination of Tariff for Intra-State Lines of APTRANSCO for FY 2020-21

27		Asset 27	HINDUJA-KVKOTA1:T1		
28	Annex-XXVI	Asset 28	JAMMALAMADUGU - URAVAKONDA	400	2943.02
29		Asset 29	DC Line (Part-1)		
30	Annex-XXVII	Asset 30	TALARICHERUVU TO LILO POINT OF	400	87.95
31		Asset 31	JAMMALAMADUGU - URAVAKONDA DC LINE (Part-2)		
32	Annex-XXVIII	Asset 32	URVAKONDA-HINDUPUR3:Q1	400	3922.41
33		Asset 33	URVAKONDA-HINDUPUR3:Q2		
34	Annex-XXIX	Asset 34	SULURPET1-NELLORE42:2	220	846.18
35		Asset 35	SULURPET1-NELLORE42:3		
36	Annex-XXX	Asset 36	URAVAKONDA-BORAMPALLI:2	220	650.70
37		Asset 37	URAVAKONDA-BORAMPALLI:1		
38	Annex-XXXI	Asset 38	URAVAKONDA-BORAMPALLI:4	220	629.23
39		Asset 39	URAVAKONDA-BORAMPALLI:3		
40	Annex-XXXII	Asset 40	SUZLON-W1-VAJRAKUR:1	220	4.44
41	Annex-XXXIII	Asset 41	MACHERLA-RENTACHINTHALA:2	132	43.42
42	Annex-XXXIV	Asset 42-A	VEMAGIRI1-SATTENAPALLI:T1	400	1416.34
	Annex-XXXV	Asset 42-B			500.87
Total YTC (in Lakhs)					30576.33
Total YTC (in Crores)					305.7633

PRAYER

8. In the above circumstances, the petitioner respectfully prays the Hon'ble Commission

- to approve the annual fixed charges for the assets covered under this Petition;
- to determine the tariff of the Intra-State transmission lines of APTRANSCO carrying interstate power for FY2020-21 and
- 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.

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520004.

PETITIONER
Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520004.

ANNEXURE A/7**CENTRAL ELECTRICITY REGULATORY
COMMISSION NEW DELHI**

Coram:

Shri P. K. Pujari, Chairperson

Shri I. S. Jha, Member

Shri Arun Goyal, Member

No.L-1/250/2019/CERC

Date of Order: 14th February 2021**In the matter of**

Removal of difficulties for giving effect to certain provisions of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020.

And

In the matter of

Central Transmission Utility Respondent

ORDER

The Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 (hereinafter referred to as “the 2020 Sharing Regulations”) were notified on 4th May, 2020. These Regulations have come into effect from 1.11.2020.

2. Regulation 15(1) of the 2020 Sharing Regulations provides that the Central Transmission Utility (CTU) shall raise the bills for transmission charges, as per the timelines specified in sub-clause (d) of Clause (5) of Regulation 14 of these regulations.



3. Regulation 22 of the 2020 Sharing Regulations provides for Transition Period as under:

"Transition Period

Notwithstanding anything to the contrary contained in these regulations, bills for the first two billing periods, after these regulations come into force, shall be based on the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010. "

4. The 2020 Sharing Regulations defines billing period as follows:

"Billing period" means the month for which bills are raised in a billing month by the Central Transmission Utility".

5. The CTU in its letter dated 19th January, 2021 addressed to the Implementing Agency i.e. NLDC with a copy endorsed to the Commission has raised certain difficulties which are being encountered for giving effect to the provisions of Regulation 22 of the 2020 Sharing Regulations. CTU vide the said letter has stated as under:

"As you are aware, the Bill-1 for the billing month of Jan' 21 was raised by CTU to all DICs as per RTA issued by RPCs based on the billing inputs for the billing period of Nov'20 computed as per the new Sharing Regulations, 2020 and provided by NLDC. However, some of the DICs disputed the billing citing the following reasons:

a) Some DICs stated that the Bills have not been raised as per the Transition billing provisions as per CERC Sharing Regulations' 2020 and stated that the bills for Nov'20 & Dec'20 to be raised in Dec'20 and Jan'21 respectively shall be as per CERC Sharing Regulations, 2010. (KSEB, DNH, HPSEB, TPDDL, Railways etc.)

b) Some DICs stated that two bills have been raised for the same billing period of Nov'2020 and accordingly sought clarifications or sought revised billing for the period of Dec' 20 or stated that only differential bills for Nov'20 are only required to be raised in Jan'21. Further, some DICs returned the bills. (UP, DB Power, MPPMCL, BRPL etc.)"



6. We have carefully considered the contents of letter of the CTU with regard to the difficulties being encountered by it. Our observations/directions thereon are recorded in the succeeding paragraphs.

7. Regulation 9(1) of the 2020 Sharing Regulations provides for preparation of Base Case by the Implementing Agency corresponding to Peak Block for each billing period. As per Regulation 14(5)(b) of the 2020 Sharing Regulations, the Implementing Agency is required to notify transmission charges payable by DICs by 25th day of the month following the billing period. In terms of Regulation 14(5)(d) of the 2020 Sharing Regulations, the CTU is required to raise the first bill and the third bill for transmission charges on DICs in first week of the second month following the billing period. Since the 2020 Sharing Regulations became effective from 01.11.2020, the actual load and generation data for Peak Block for the month of November 2020 could be collected only in December 2020. Based on such data, NLDC would carry out calculations for transmission charges for each DIC. Consequently, bills for the billing period of November 2020 could be raised by CTU only in the billing month of January 2021. Similarly, bills for the billing period of December 2020 could be raised only in the billing month of February 2021.

8. Accordingly, under the regime of 2020 Sharing Regulations which came into effect from 1st November 2020, it was possible to raise the first monthly bill only in the month January 2021. Thus, but for the provision of the "Transition Period" provided in



the 2020 Sharing Regulations, only 10 monthly bills would have been raised in the calendar year 2020. Therefore, exception has been taken in the 2020 Sharing Regulations that bill to be raised in the month of November 2020 and December 2020, where it was not possible to raise the bills on the basis of 2020 Sharing Regulations, would be on the basis of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 (hereinafter referred to as “the 2010 Sharing Regulations”). As envisaged in Regulation 22 of the 2020 Sharing Regulations, in the transition period of November 2020 and December 2020, bills would be raised as per the provisions of the 2010 Sharing Regulations.

9. Thus, the bills raised in the month of November 2020 and December 2020 shall be based on the notified PoC rates for October 2020 and November 2020 respectively, determined in accordance with the 2010 Sharing Regulations.

10. Accordingly, we direct that bills in the month of November 2020 and in the month of December 2020 would be raised as per the 2010 Sharing Regulations and thereafter, from January 2021 onwards as per the 2020 Sharing Regulations, as clarified in paragraph 8 and 9 above.

11. Thus, it can be seen that there will be 12 monthly bills raised for the 12 months in the calendar year 2020, implying thereby that only one bill (first bill) is raised for each month. Similarly, in the calendar year 2021 also, 12 monthly bills will be raised for the



12 months (i.e. in the billing month of January 2021, bill for the billing period of November 2020 will be raised and in the billing month of February 2021, bill for the billing period of December 2020 will be raised and so on). Thus, the DICs will be required to pay for only 12 monthly bills, one for each month in the calendar year 2020 as well as in 2021. All bills in the calendar year 2020 will be as per the 2010 Sharing Regulation and those in the calendar year 2021 will be as per the 2020 Sharing Regulations.

12. We have observed that more than 30 DICs have already paid the bills raised by the CTU in the month of January 2021 in accordance with the 2020 Sharing Regulations.

13. We also direct that there shall be no transmission deviation bill (fourth bill) under the 2010 Sharing Regulations in the month of December 2020 for the deviations in month of November 2020 and that in accordance with the provisions of the 2020 Sharing Regulations, bill for Transmission Deviation charges for the billing period of November 2020 shall be raised in the billing month of January 2021. RPCs are directed to issue Regional Transmission Deviation Accounts accordingly.

14. Regulation 28 of the 2020 Sharing Regulations vests the Commission with the power to remove difficulty under certain circumstances. Regulation 28 is extracted below:

“28. Power to Remove Difficulties

If any difficulty arises in giving effect to any of the provisions of these regulations, the Commission

Page 5 of 5



may, by general or specific order, make such provisions not inconsistent with the provisions of the Act, as may appear to be necessary for removing the difficulty.”

15. In exercise of power under Regulation 28 of the 2020 Sharing Regulations, we direct that billing in the months of November 2020, December 2020 and January 2021 shall be done by the CTU in terms of the clarifications given in this order.

sd/-
(Arun Goyal)
Member

sd/-
(I.S. Jha)
Member

sd/-
(P.K. Pujari)
Chairperson



**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

No.L-1/44/2010-CERC

Coram:

Shri P.K Pujari, Chairperson

Shri I.S. Jha, Member

Shri Arun Goyal, Member

Date of Order: 21st February 2021

In the matter of:

Determination of Point of Connection (PoC) rates for the period of October 2020 to November 2020 in accordance with Regulation 17(2) of the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 and amendments thereto.

And in the matter of:

1. National Load Despatch Centre, New Delhi
2. Central Transmission Utility, New Delhi

.....Respondents

ORDER

The Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 (hereinafter referred to as 'the 2010 Sharing Regulations') came into force with effect from 1.7.2011.

2 National Load Dispatch Centre as the Implementing Agency under the 2010 Sharing Regulations has been entrusted with the responsibility of computation of transmission charges and losses. Further, as per Regulation 17 of the 2010 Sharing Regulations, the Implementing Agency is required to submit the following information after the computation of transmission charges and losses:-



- (a) Approved Basic Network Data and Assumptions, if any;
- (b) Zonal and nodal transmission charges for the ensuing Application Period;
- (c) Zonal and nodal transmission losses data for the ensuing Application Period;
- (d) Schedule of charges payable by each constituent for the ensuing Application Period;
- (e) YTC detail (information submitted by the transmission licensees covered under these Regulation and computation by Implementing Agency);
- (f) Zone wise details of PoC Charges to enable each DIC to see details of transmission lines it is using and whose transmission charges it is sharing.

3. The Implementing Agency vide its letter dated 5.10.2020 has submitted following information in compliance with Regulation 17 of the 2010 Sharing Regulations:-

- (a) Approved Basic Network Data and Assumptions;
- (b) Zonal and nodal transmission charges for the ensuing Application Period;
- (c) Zonal and nodal transmission losses data for the ensuing Application Period;
- (d) Schedule of charges payable by each constituent for the ensuing Application Period;
- (e) Yearly Transmission Charges (YTC) details of ISTS Licensees;
- (f) PoC rates and loss percentage computation details;
- (g) LTA /MTOA and their commencement schedule.

4. We have examined the basic network data and assumptions, the results of the Load Flow Studies, the Yearly Transmission Charges of the ISTS licensees and the calculation of PoC Charges for demand zone and injection zone (for LTA to target region) submitted by the Implementing Agency. We find that the calculations submitted



by the Implementing Agency have been done as per provisions of the 2010 Sharing Regulations and amendments thereof and accordingly, we approve the Basic Network, Load Flow and the assumptions made for computation of the final PoC rates and final transmission losses, their fitment into slabs and schedule of charges payable by each DIC for the period from October 2020 to November 2020 as submitted by Implementing Agency.

5. The Implementing Agency after computation of PoC rates for each injection zone and demand zone has assigned them to different slabs. We have gone through the details furnished by the Implementing Agency and find the same in order. The total Monthly Transmission Charge (MTC) considered for the period from October 2020 to November 2020 is Rs 3328.24 crores.

6. In the light of the above, we approve the following:

(a) The applicable PoC slab rates for Long Term Access (LTA) and Medium Term Open Access (MTOA) in ₹/MW/month for each demand zone (for withdrawal DICs) and injection zone (for injection DICs having LTA to target region) as per details at Annexure-II. The slabs for POC rates for LTA / MTOA are as follows:

PoC Slab	(₹/MW/Month)
I	481067
II	428211
III	375355
IV	322499
V	269643
VI	216787
VII	163931
VIII	111075
IX	58219



(b) The Generation and Demand figures (MW) considered in base case of PoC for the period from October 2020 to November 2020 is given in Annexure-I.

(c) The Reliability Support Charges, HVDC Charges for all Regions are given in Annexure-II.

(d) We also direct the Implementing Agency to publish zonal PoC Rates and associated details which will enable a clear understanding of the calculations used for arriving at these rates, along with underlying network information and base load flows used.

7. The PoC rates in the instant Order is for the period from October 2020 to November 2020. However, we observe that CERC (Sharing of inter-state transmission charges and losses) Regulations 2020 have become effective from 1.11.2020 and accordingly the transmission charges for period from 1.11.2020 shall be in accordance with CERC (Sharing of inter-state transmission charges and losses) Regulations 2020. Regulation 22 of the CERC (Sharing of inter-state transmission charges and losses) Regulations 2020 provides that in the transition period of November 2020 and December 2020, bills would be raised as per the provisions of the 2010 Sharing Regulations. Thus, the bills raised in the month of November 2020 and December 2020 shall be based on the notified PoC rates for October 2020 and November 2020 respectively, determined in accordance with the 2010 Sharing Regulations.

8. Further, since the period of October 2020 to November 2020 is already over, Short term Open rates and transmission losses as per Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 have not been included in this Order.



9. The Implementing Agency is directed to endorse a copy of this order to all DICs and other concerned agencies. The Implementing Agency and the Central Transmission Utility shall also give wide publicity to this order through their websites.

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member

sd/-
(P.K. Pujari)
Chairperson



**ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION**

4th Floor, Singareni Bhavan, Red Hills, Hyderabad – 500 004

WEDNESDAY, THE SEVENTH DAY OF JULY, TWO THOUSAND AND TWENTY ONE

Present

Sri Justice C.V. Nagarjuna Reddy, Chairman

Sri P. Rajagopal Reddy, Member

Sri Thakur Rama Singh, Member

O.P.No.42 of 2020

&

O.P.No.47 of 2020

In the matter of

Determination of Yearly Transmission Charges (YTC) for Non-ISTS (intra-state) transmission lines of AP Transco carrying inter-state power for FY2015-16, FY2016-17 and FY 2020-21 for including the same in PoC Mechanism as per Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010 as amended from time to time.

Petitioner:

Transmission Corporation of Andhra Pradesh Ltd. (APTRANSCO).

The petitions came up for web public hearing finally on 24.03.2021 in the presence of Sri P. Shiva Rao, learned standing Counsel for the petitioner. After carefully considering the material available on record and after hearing the petitioner, Commission passed the following:

COMMON ORDER

1. The petitions have been filed by the Transmission Corporation of Andhra Pradesh Limited (hereinafter referred to as **the APTRANSCO**) seeking determination of Yearly Transmission Charges (YTC) for the APTRANSCO owned non-ISTS Lines (intra-state) which are certified by the Southern Regional Power Committee (hereinafter referred to as **the SRPC**) for FY2015-16, FY2016-17 and FY2020-21 for inclusion in PoC Transmission charges in accordance with Central Electricity Regulatory Commission (hereinafter referred to as **the CERC**) (Sharing of Inter-State Transmission Charges and Losses) (third amendment) Regulations, 2015 with the following prayer:

- i. approve the annual fixed charges for the assets covered under the Petitions;
- ii. determine the tariff of the Intra-State transmission lines of APTRANSCO carrying inter-state power for FY 2015-16, FY2016-17 & FY 2020-21, and
- iii. pass any other order or relief as the Commission may deem fit and proper in the facts and circumstances of the case.

2. The petition for FY2015-16 & FY2016-17 was filed on 18.03.2020 and taken on the file of the Commission as O.P.No 42 on 29.09.2020. A Public Notice along with a copy of the Petition O.P.No. 42 was placed on the website of the Commission on 30.09.2020 inviting views/objections/suggestions from interested persons/stakeholders. Further, it was informed in the Public Notice that the petition will be taken up for public hearing at 11.00 AM on 04.11.2020 through the web hearing and any interested person/organisation desirous of being heard in person, may appear before the Commission on the said date of the public hearing. However, despite the placing of the Public Notice on the website of the Commission, no objections have been received by the date of the



public hearing on 04.11.2020. Therefore, the Commission has provided one more opportunity to the stakeholders for submitting their objections and accordingly posted the date of the next public hearing to 06.01.2021.

3. The petition for the FY 2020-21 was filed on 05.10.2020 and taken on the file of the Commission on 20.11.2020 as O.P.No. 47 of 2020. A Public Notice along with a copy of the Petition O.P.No. 47 was placed on the website of the Commission on the same day inviting views/objections/suggestions from interested persons/stakeholders. Further, it was informed in the Public Notice dated 30.11.2020 that petition will be taken up for public hearing at 11.00 AM on 23.12.2020 through the web hearing and any interested person/organisation desirous of being heard in person, may appear before the Commission on the said date of the public hearing.

4. As both petitions are similar in nature and further based on APTRANSCO's letter, the Commission in the web hearing dated 06.01.2021 has ordered to tag on O.P. No.42 of 2020 along with O.P.No.47 of 2020 and decided to hear both the petitions finally on 24.03.2021.No objections have been received on the above Petitions.

5. The brief facts of the petitions are that the Southern Regional Power Committee (SRPC), in compliance with the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) (third amendment) Regulations, 2015 (Clause 2.13), has certified APTRANSCO Non-ISTS Lines carrying inter-state power for the FY2015-16 and FY2016-17 which were utilized more than 50% during the FY2014-15 and FY2015-16 vide letter No. SRPC/SE-I/2020/622-39, dt.23.01.2020 for 9 Nos and 14 Nos lines respectively. Subsequently, the SRPC vide its letter No. SRPC/SE-I/2020, dt.30.04.2020, has issued certification for 44 Nos Non-ISTS APTRANSCO Lines for FY2020-21.

Accordingly, APTRANSCO filed present petitions for determination of Yearly Transmission Charges (YTC) for all non-ISTS lines certified by the SRPC in respective years. APTRANSCO stated to have followed the procedure adopted by the CERC for determination of tariff for APTRANSCO inter-state lines for the



Common Order in O.P.Nos. 42 & 47 of 2020

FY2016-17 in the order dated 21.06.2018 (petition 237/TT/2016) and claimed YTC year-wise, as under:

A) The YTC for the 9 Nos transmission lines for the FY 2015-16 are as given in the table below.

Sl. No.	Asset	Asset Name	YTC for FY 2015-16 (Rs.in Lakhs)
1	Asset I	CHITTOOR-RENIGUNTA:1	197.16
2	Asset II(A) & II(B)	CHITTOOR-NAGARI:2	98.76
			206.80
3	Asset III(A) & III(B)	SULURPETA-NELLORE-PG:1	44.73
			29.78
4	Asset -IV & V	KRISHNAPATNAM-NELLORE-AP:1	670.70
		KRISHNAPATNAM-NELLORE-AP:2	
5	Asset - VI (A) & VI(B)	NELLORE-NELLORE-PG:1	12.23
			32.31
6	Asset - VII (A) & VII(B)	NELLORE-NELLORE-PG:2	12.23
			32.31
7	Asset - VIII	NELLORE-NELLORE-PG:3	75.93
8	Asset - IX (A) & IX (B)	RENIGUNTA-NAGARI:1	17.22
			206.80
Total YTC (in Lakhs)			1636.96
Total YTC (in Crores)			16.36

B) The YTC for the 14 Nos transmission lines for the FY 2016-17 are as given in the table below.

Sl. No.	Asset	Asset Name	YTC for FY2016-17 (Rs. in Lakhs)
1	Asset - I (A) & I (B)	SULURUPETA-NELLORE42:1	46.57
			29.19
2	Asset - II	KONDAPALLI-VTPS:1	3.98
3	Asset - III	KONDAPALLI-VTPS:2	10.06
4	Asset - IV	KONDAPALLI-CHILAKALLU:1	113.67
5	Asset - V	KONDAPALLI-CHILAKALLU:2	146.65
6	Asset - VI	VTPS-CHILAKALLU:1	89.08
7	Asset - VII	VTPS-CHILAKALLU:2	253.46
8	Asset -VIII (A) & VIII (B)	VTPS-RENTACHINTALA:2	67.73
			4.71
9	Asset -IX	KURNOOL-BRAHMANKTKUR:1	89.18
10	Asset - X & XI	CHITTOOR-SDSTPS:1	8745.20
11		CHITTOOR-SDSTPS:2	
12	Asset - XII	NUNNA2-VTPS-IV:1	156.28
13	Asset - XIII	GAZUWAKA1-KALAPAKKA1:1	19.49
14	Asset - XIV	GAZUWAKA1-KALAPAKKA1:2	16.40
Total YTC (in Lakhs)			9791.65
Total YTC (in Crores)			97.91



Common Order in O.P.Nos. 42 & 47 of 2020

C) The YTC for the 42 No. transmission lines for the FY 2020-21 are as given in the table below.

Sl. No.	Asset Name	Name of the Line	Voltage (kV)	YTC for FY 2020-21 (in Lakhs)
1	Asset 1	NUNNA2-VEMAGIRI1:T3	400	530.2
2	Asset 2	GAZUWAKA2-KALPAKKA 1:T1	400	17.77
3	Asset 3	GAZUWAKA2-KALPAKKA 1:T2		
4	Asset 4	CHITTOOR42-CHITTOOR1:1		
5	Asset 5	CHITTOOR42-CHITTOOR1:2	220	56.51
6	Asset 6-A	SULURPET1-NELLORE42:1	220	64.61
	Asset 6-B			19.69
7	Asset 7	CHITTOOR1-KALIKIRI1:1	220	55.19
8	Asset 8	GOOTY-PG-DHONE1:2	220	558.56
9	Asset 9	GOOTY-PG-DHONE1:1		
10	Asset 10	KONDAPALLI1-CHILLAKALLU1:1	220	95.15
11	Asset 11	KONDAPALLI1-CHILLAKALLU1:2	220	121.65
12	Asset 12	SRISAILAMRB1-TALLAPALLI:1	220	168.69
13	Asset 13	SRISAILAMRB1-TALLAPALLI:2		
14	Asset 14	SRISAILAMRB1-MYDUKUR:1	220	141.64
15	Asset 15	SRISAILAMRB1-SOMYZULPALLI:1	220	90.47
16	Asset 16-A	SRISAILAMRB1-BELKALAGUDUR:1	220	60.36
	Asset 16-B			18.22
17	Asset 17	VTS1-CHILLAKALLU1:1	220	83.65
18	Asset 18	VTS1-CHILLAKALLU1:2	220	212.26
19	Asset 19-A	VTS1-RENTACHNTHALA1:2	220	93.96
	Asset 19-B			3.85
20	Asset 20	KURNOOL1-BRAHMANKTKUR:1	220	72.57
21	Asset 21	MACHERLA-RENTCHNTHALA:1	132	51.41
22	Asset 22	CHITTOOR-SDSTPS:1	400	7475.13
23	Asset 23	CHITTOOR-SDSTPS:2		
24	Asset 24	KURNOOL2-JAMALAMADUGU1:Q1	400	2614.67
25	Asset 25	KURNOOL2-JAMALAMADUGU1:Q2		
26	Asset 26	HINDUJA-KVKOTA1:T2	400	6925.56
27	Asset 27	HINDUJA-KVKOTA1:T1		
28	Asset 28	JAMMALAMADUGU - URAVAKONDA DC Line (Part-1)	400	2943.02
29	Asset 29			
30	Asset 30	TALARICHERUVU TO LILO POINT OF JAMMALAMADUGU - URAVAKONDA DC LINE (Part-2)	400	87.95
31	Asset 31			
32	Asset 32	URVAKONDA-HINDUPUR3:Q1	400	3922.41
33	Asset 33	URVAKONDA-HINDUPUR3:Q2		
34	Asset 34	SULURPET1-NELLORE42:2	220	846.18
35	Asset 35	SULURPET1-NELLORE42:3		

Common Order in O.P.Nos. 42 & 47 of 2020

Sl. No.	Asset Name	Name of the Line	Voltage (kV)	YTC for FY 2020-21 (in Lakhs)
36	Asset 36	URAVAKONDA-BORAMPALLI:2	220	650.70
37	Asset 37	URAVAKONDA-BORAMPALLI:1		
38	Asset 38	URAVAKONDA-BORAMPALLI:4	220	629.23
39	Asset 39	URAVAKONDA-BORAMPALLI:3		
40	Asset 40	SUZLON-W1-VAJRAKUR:1	220	4.44
41	Asset 41	MACHERLA-RENTACHNTHALA:2	132	43.42
42	Asset 42-A	VEMAGIRI1-SATTENAPALLI:T1	400	1416.34
	Asset 42-B			500.87
Total YTC (in Lakhs)				30576.33
Total YTC (in Crores)				305.7633

6. As shown above, the petitioner has claimed YTC of Rs.16.37 Cr. for 9 Nos lines and Rs.97.92 Cr. for 14 Nos lines for FY2015-16 & FY2016-17 respectively. The claim of YTC for 42 Nos lines is Rs.305.76 Cr. for FY2020-21. For 2 Nos of lines certified by the SRPC viz i) NPKUNTA-HINDUPUR3:2 400 KV S/C, ii) NPKUNTA-HINDUPUR3:1 400 KV S/C, which are owned by the PGCIL, the petitioner has not claimed YTC for FY2020-21.

7. After careful examination of the submissions made by the petitioner and the material available on records, in line with its last orders dated 12.07.2019 in O.P.No.44 of 2019 in the matter of determination of tariff for non-ISTS lines certified by the SRPC for FY 2019-20 and, as per the procedure adopted by the CERC in the order dated 21.06.2018 (petition 237/TT/2016) for determination of tariff for APTRANSCO non-ISTS lines for the FY2016-17 and another order dated 05.02.2020 of CERC in petition 10/TT/2019, the Commission has determined the YTC for Non-ISTS lines of APTRANSCO as certified by the SRPC for FY 2015-16 FY2016-17 and FY 2020-21, as detailed below:

- i. For all the transmission lines which have 25 years of life or more, as on 31.03.2015, 31.03.2016 and 31.03.2020 of FY 2015-16, FY 2016-17 and FY 2020-21 respectively, only O&M expenses and interest on working capital are allowed.

[FY2015-16: Asset- III(A), Asset-VI(A), Asset-VII(A)],

[FY2016-17: Asset - I, Asset-II, Asset- III(A), Asset-VI(A), Asset-VIII(A)],

[FY2020-21: Asset-VI (A), Asset-VII, Asset-XII & XIII, Asset-XIV, Asset - XV, Asset-XVI (A), Asset-XIX (A)]

Common Order in O.P.Nos. 42 & 47 of 2020

- ii. For all the transmission lines which were constructed under deposit contributions from the developers and are being maintained by the petitioner, as there is no investment made by the petitioner, only O&M expenses and interest on working capital are allowed.

[FY2020-21: Asset-XL]

- iii. For all the transmission lines which have been commissioned before 31.03.2014, line-wise audited capital costs are not available with the petitioner for these lines, the rationalized cost as on the date of the Commissioning is arrived at for each line based on the reference cost considered for the 400 kV S/C line, multiplied by the factors as indicated in the table below for other voltage level & circuit configuration of lines by the CERC in various orders:

<i>Reference cost of 400 kV S/C TL</i>		<i>Rs X lakh/km</i>
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

wherever the reference data of 400 KV S/C line is not available for a particular year, it was derived based on the previous and successive year by computing the average.

[FY2015-16: Asset - I, Asset-II (A), Asset-II(B), Asset- III(B), Asset- IV & V, Asset-VI(B), Asset-VII(B), Asset-VIII, Asset-IX(A), Asset-IX(B)]

[FY2016-17: Asset-I (B), Asset-III, Asset- IV, Asset-V, Asset- VI, Asset- VII, Asset-VIII(B), Asset-IX, Asset - XII, Asset - XIII, Asset - XIV]

[FY2020-21: Asset - I, Asset - II & III, Asset- IV & V, Asset-VI (B), Asset-VIII & IX, Asset- X, Asset- XI, Asset-XVI (B), Asset-XVII, Asset-XVIII, Asset-XIX (B), Asset-XX, Asset-XXI, Asset-XLII (B)].

- iv. For all the transmission lines which have been commissioned after 31.03.2014, the line-wise audited capital costs are furnished by the petitioner and therefore the same are considered.

[FY2016-17: Asset-X & Asset-XI]

[FY2020-21: Asset-XVIII(B), Asset-XXII & XXIII, Asset-XXIV & XXV, Asset-XXVI & XXVII, Asset-XXVIII & XXIX, Asset-XXX& XXXI, Asset-XXXII &

XXXIII, Asset-XXXIV & XXXV, Asset-XXXVI & XXXVII, Asset-XXXVIII & XXXIX, Asset-XLI, Asset-XLII (A)]

- v. The Transmission lines which have been made Line in Line out (LILO) after their commissioning as part of the network expansion scheme, the old part of the line and new part of the line are considered separately for determination of the YTC and shown as part A & Part B of the asset. The date of the Commissioning of the original line is taken for the old line and the date of the commissioning for the LILO part is taken for the new line.
- vi. The Debt - Equity ratio: APTRANSCO adopted a normative debt-equity ratio of 70:30 as per the CERC orders and the same has been considered for FY2015-16, FY2016-17 and FY 2020-21 for each asset.
- vii. Depreciation: Asset is depreciated up to 90% of the capital cost, the remaining 10% being the salvage value of the asset. For all the assets the rate of depreciation is taken as 5.28% till 12 years and 2.05% beyond that till 25 years. Further, normative loan repayment during a year shall be deemed to be equal to the depreciation allowed for that year.
- viii. Interest on loan:
 APTRANSCO claimed the weighted average rate of the loan of FY2015-16 & FY2016-17 as the rate of interest on the loan for FY2015-16 & FY2016-17, at 10.60% and 10.75% respectively which are less than the cost of the debt considered by the Commission in its transmission tariff Order dated 09.05.2014 for the third control period. Hence, the same are adopted for FY2015-16 and FY2016-17 for the determination of tariff/YTC. For FY2020-21, the APTRANSCO claimed the weighted average of FY 2019-20 @ 10.10 % for 50 percent of assets and for balance assets @ 10.35 % as interest on the loan. APTRANSCO has not submitted any audited certificate in this regard. Hence, the rate of interest on the loan at 9.98 % has been considered for FY2020-21 for determination of tariff/YTC, as adopted by the Commission in its order dated 12.07.2019 for determining tariff for non-ISTS lines for FY2019-20.
 However, Asset no 32 and 33 of FY 2020-21 were stated to have been executed under subsidised interest rate of 1.72 % from kfw. Hence, the same has been considered by the Commission for these assets.



Common Order in O.P.Nos. 42 & 47 of 2020

- ix. Return on Equity (RoE): APTRANSCO claimed the RoE @ 23.70 % for FY2015-16 & FY2016-17 and 15.50% for FY2020-21. As per CERC orders, it has been limited to 15.50% for FY2015-16, FY2016-17 and for FY2020-21, as claimed by the petitioner, has been considered.
- x. The CERC in its tariff regulations has specified norms of O&M expenses for transmission lines, circuit configuration wise but not voltage level wise. Whereas the Commission has specified the O&M norms per ckm in its Transmission tariff orders considering the weighted averages of all voltage levels operated by the APTRANSCO. Therefore, O&M expenses of lines have been considered as per the Transmission tariffs orders of the Commission, in line with its earlier order dated 12.07.2019. Accordingly, the year-wise O&M expenses as per the Commission's Transmission's tariffs orders which are considered for determination of tariff are shown below:

FY 2015-16	FY 2016-17	FY 2020-21
Rs.56000 per ckm	Rs.58300 per ckm	Rs.82000 per ckm

- xi. Interest on Working Capital: The rate of interest on working capital is considered as 13.5% for FY2015-16 & FY2016-17 and 11.25% for FY2020-21 as per the CERC tariff regulations. The same are accepted as these are in line with CERC orders. The working capital is taken as the sum of Maintenance of Spares (@15% of the yearly O&M Expenses), O&M Expenses for one month and Receivables equivalent to 2 months of YTC for FY2015-16 and FY2016-17 as per the CERC Tariff regulations 2014 and Receivables equivalent to 1.5 month of YTC for FY2020-21 as per the CERC 2019 tariff regulations.
- xii. The yearly transmission charges (YTC) are the sum of the depreciation, interest on the loan, return on equity, interest on working capital and O&M expenses.

Based on the above decisions, the Commission has determined tariff/YTC year-wise, for all the Non-ISTS transmission lines of APTRANSCO as per the certification of the SRPC. Year-wise and asset-wise computations of YTC are shown in the annexures.

Common Order in O.P.Nos. 42 & 47 of 2020

8. The summary of the YTC determined by the Commission for the 9 Nos transmission lines for the FY 2015-16 is as given in the table below:

Sl. No.	Asset	Volta ge (kV)	Config uration	Length in KM	COD	Sl. No. as per SRPC certification	Asset Name	Annex No.	YTC in Lakhs
1	CHITTOOR-RENIGUNTA:1	220	S/C	71.86	2/16/2006	1	Asset I	I	170.90
2	CHITTOOR-NAGARI:2	220	S/C	54.49	2/13/2003	2	Asset II(A) & II(B)	II(A)	81.97
		220	S/C	41	10/15/2012			II(B)	182.40
3	SULURPETA-NELLORE-PG:1	220	S/C	75.701	4/28/1982	3	Asset III(A) & III(B)	III(A)	44.73
		220	S/C	10.1	12/26/2006			III(B)	25.89
4	KRISHNAPATNAM-NELLORE-AP:1	400	D/C	36.5	11/23/2012	4	Asset -IV &V	IV & V	586.82
5	KRISHNAPATNAM-NELLORE-AP:2	400				5			
6	NELLORE-NELLORE-PG:1	220	S/C	20.7	9/5/1981	6	Asset - VI (A) & VI(B)	VI(A)	12.23
		220	S/C	10.1	6/26/2007			VI(B)	28.00
7	NELLORE-NELLORE-PG:2	220	S/C	20.7	9/5/1981	7	Asset - VII (A) & VII(B)	VII(A)	12.23
		220	S/C	10.1	6/26/2007			VII(B)	28.00
8	NELLORE-NELLORE-PG:3	220	S/C	28.54	4/17/2005	8	Asset - VIII	VIII	65.50
9	RENIGUNTA-NAGARI:1	220	S/C	9.5	2/13/2003	9	Asset - IX (A) & IX(B)	IX(A)	14.29
		220	S/C	41	10/15/2012			IX(B)	182.40
YTC Total in Lakhs									1435.36
YTC Total in Cr.									14.35

9. The summary of the YTC determined by the Commission for the 14 Nos transmission lines for the FY 2016-17 is as given in the table below:

Common Order in O.P.Nos. 42 & 47 of 2020

Sl. No.	Asset	Voltage (kV)	Configuration	Length in KM	COD	Sl. No. as per SRPC certification	Asset Name	Annex. No.	YTC in Lakhs
1	SULURUPETA-NELLORE42:1	220	S/C	75.701	4/28/1982	1	Asset - I (A) & I (B)	I(A)	46.57
		220	S/C	10.1	12/26/2006			I(B)	25.30
2	KONDAPALLI-VTPS:1	220	S/C	6.469	11/11/1989	2	Asset - II	II	3.98
3	KONDAPALLI-VTPS:2	220	S/C	6.469	3/23/1998	3	Asset - III	III	7.74
4	KONDAPALLI-CHILAKALLU:1	220	S/C	59.705	3/12/1997	4	Asset - IV	IV	81.64
5	KONDAPALLI-CHILAKALLU:2	220	S/C	59.705	8/19/2000	5	Asset - V	V	112.31
6	VTPS-CHILAKALLU:1	220	S/C	67.801	8/28/1999	6	Asset - VI	VI	68.34
7	VTPS-CHILAKALLU:2	220	S/C	67.801	10/1/2010	7	Asset - VII	VII	221.35
8	VTPS-RENTACHINTALA:2	220	S/C	110.09	6/30/1984	8	Asset -VIII (A) & VIII (B)	VIII(A)	67.73
		220	S/C	1.4	11/24/2008			VIII(B)	4.11
9	KURNOOL-BRAHMANKTKUR:1	220	S/C	23.18	10/29/2010	9	Asset -IX	IX	78.21
10	CHITTOOR-SDSTPS:1	400	D/C	192	7/17/2015	10	Asset - X & XI	X & XI	7674.53
11	CHITTOOR-SDSTPS:2	400	D/C	192	7/22/2015	11			
12	NUNNA2-VTPS-IV:1	400	S/C	18.66	26.07.2009	12	Asset - XII	XII	133.52
13	GAZUWAKA1-KALAPAKKA1:1	400	S/C	3.393	10.12.2000	13	Asset - XIII	XIII	14.83
14	GAZUWAKA1-KALAPAKKA1:2	400	S/C	3.393	27.01.2002	14	Asset - XIV	XIV	12.63
YTC Total in Lakhs									8552.78
YTC Total in Cr.									85.53

10. The summary of the YTC determined by the Commission for the 42 Nos transmission lines for the FY 2020-21 is as given in the table below:

Sl. No.	Asset	Voltage (kV)	Configuration DC/SC	Length	COD	Sl. No SRPC	Asset Name	Annex No.	YTC in Lakhs
1	NUNNA2-VEMAGIRI1:T3	400	SC	145	30.12.2005	3	A1	I	530.08
2	GAZUWAKA2-KALPAKKA 1:T1	400	DC	3.39	27.01.2002	5	A2	II & III	17.77
3	GAZUWAKA2-KALPAKKA 1:T2	400		3.39	27.01.2002	4	A3		
4	CHITTOOR42-CHITTOOR1:1	220	DC	17.1	14.02.2006	28	A4	IV & V	56.50
5	CHITTOOR42-CHITTOOR1:2	220		17.1	14.02.2006	29	A5		
6	SULURPET1-NELLORE42:1	220	SC	75.7	28.04.1982	30	A6-A	VI(A)	64.61
			SC	10.1	26.12.2006		A6-B	VI(B)	19.69
7	CHITTOOR1-KALIKIRI1:1	220	SC	64.66	21.06.1970	33	A7	VII	55.19
8	GOOTY-PG-DHONE1:2	220	DC	90.16	24.08.2011	34	A8	VIII & IX	557.58
9	GOOTY-PG-DHONE1:1	220		90.16	24.08.2011	35	A9		

Common Order in O.P.Nos. 42 & 47 of 2020

Sl. No.	Asset	Voltage (kV)	Configuration DC/SC	Length	COD	Sl. No SRPC	Asset Name	Annex No.	YTC in Lakhs
10	KONDAPALLI1-CHILLAKALLU1:1	220	DC	59.7	12.03.1997	36	A10	X	95.15
11	KONDAPALLI1-CHILLAKALLU1:2	220		59.7	19.08.2000	37	A11	XI	121.65
12	SRISAILAMRB1-TALLAPALLI:1	220	DC	98.82	01.01.1985	38	A12	XII & XIII	168.69
13	SRISAILAMRB1-TALLAPALLI:2	220		98.82	01.01.1985	40	A13		
14	SRISAILAMRB1-MYDUKUR:1	220	SC	165.96	27.11.1969	39	A14	XIV	141.64
15	SRISAILAMRB1-SOMYZULPALLI:1	220	SC	106	01.01.1985	41	A15	XV	90.47
16	SRISAILAMRB1-BELKALAGUDUR:1	220	SC	70.72	24.03.1980	42	A16-A	XVI-A	60.36
				4.94	10.08.2011		A16-B	XVI-B	18.19
17	VTS1-CHILLAKALLU1:1	220	SC	67.8	28.08.1999	43	A17	XVII	83.65
18	VTS1-CHILLAKALLU1:2	220	SC	66.14	29-03-1999	45	A18-A	XVIII-A	76.4
	VTS1-CHILLAKALLU1:2	220	SC	1.48	03.10.2010	45	A18-B	XVIII-B	4.65
19	VTS1-RENTACHINTHALA1:2	220	SC	110.09	30.06.1984	44	A19-A	XIX-A	93.96
			SC	1.4	24.11.2008		A19-B	XIX-B	3.84
20	KURNOOL1-BRAHMANKTKUR:1	220	SC	23.18	29.10.2010	46	A20	XX	72.47
21	MACHERLA-RENTCHINTHALA:1	132	SC	15	27.03.2013	62	A21	XXI	51.30
22	CHITTOOR2-SDSTPS:Q2	400	DC	192	7/22/2015	1	A22	XXII & XXIII	6750.41
23	CHITTOOR2-SDSTPS:Q1	400		192		2	A23		
24	KURNOOL2-JAMALAMADUGU1:Q1	400	DC	100.86	3/31/2016	6	A24	XXIV & XXV	2586.73
25	KURNOOL2-JAMALAMADUGU1:Q2	400		100.86		7	A25		
26	HINDUJA-KVKOTA1:T2	400	DC	242.98	7/24/2017	9	A26	XXVI & XXVII	6839.04
27	HINDUJA-KVKOTA1:T1	400		242.98		10	A27		
28	JAMMALAMADUGU - URAVAKONDA	400	DC	127.62	7/15/2016	11 12 16 18	A28	XXVIII & XXIX	2908.98
29	DC Line (Part-1)	400		127.92			A29		
30	TALARICHERUVU TO LILO POINT OF JAMMALAMADUGU - URAVAKONDA DC LINE (Part-2)	400	DC	0.5	12/1/2018		A30	XXX & XXXI	86.74
31		400		0.5			A31		
32	URVAKONDA-HINDUPUR3:Q1	400	DC	126.25	1/23/2019	15	A32	XXXII & XXXIII	3922.41
33	URVAKONDA-HINDUPUR3:Q2	400		126.25		17	A33		
34	SULURPET1-NELLORE42:2	220	DC	68.13	11/10/2014	32	A34	XXXIV & XXXV	839.42
35	SULURPET1-NELLORE42:3	220		68.13		31	A35		
36	URAVAKONDA-BORAMPALLI:2	220	DC	33.58	6/1/2017	48	A36	XXXVI & XXXVII	643.29
37	URAVAKONDA-BORAMPALLI:1	220		33.58		49	A37		
38	URAVAKONDA-BORAMPALLI:4	220	DC	34.73	7/10/2017	50	A38	XXXVII	621.65

Common Order in O.P.Nos. 42 & 47 of 2020

Sl. No.	Asset	Voltage (kV)	Configuration DC/SC	Length	COD	Sl. No SRPC	Asset Name	Annex No.	YTC in Lakhs
39	URAVAKONDA-BORAMPALLI:3	220		34.73		51	A39	I & XXXIX	
40	SUZLON-W1-VAJRAKUR:1	220	SC	5.2	8/12/2016	47	A40	XL	4.44
41	MACHERLA-RENTACHNTHALA:2	132	SC	14.53	7/11/2016	61	A41	XLI	43.03
42	VEMAGIRI1-SATTENAPALLI:T1	400	SC	107.87	10/12/2015	8	A42-A	XLII(A)	1401.16
				136.98	12/28/2005		A42-B	XLII(B)	500.77
	YTC total in Lakhs for FY2020-21								29531.93
	YTC total in Cr. for FY2020-21								295.32

11. As shown in paras 8,9 and 10 above, the Commission has determined YTC of Rs.14.35 Cr, 85.53 Cr. and 295.32 Cr. for the FY 2015-16, FY 2016-17 and FY 2020-21 respectively for the APTRANSCO owned non-ISTS lines certified by the SRPC for inclusion in the PoC transmission charges.

12. On inclusion of the assets covered in the petitions in the PoC methodology by the implementing agency, in line with the sharing of inter-state transmission charges and losses regulations, 2010 and the amendments thereto and upon receiving of the transmission charges, the YTC recovered shall be adjusted against the ARR of the respective years of the petitioner.

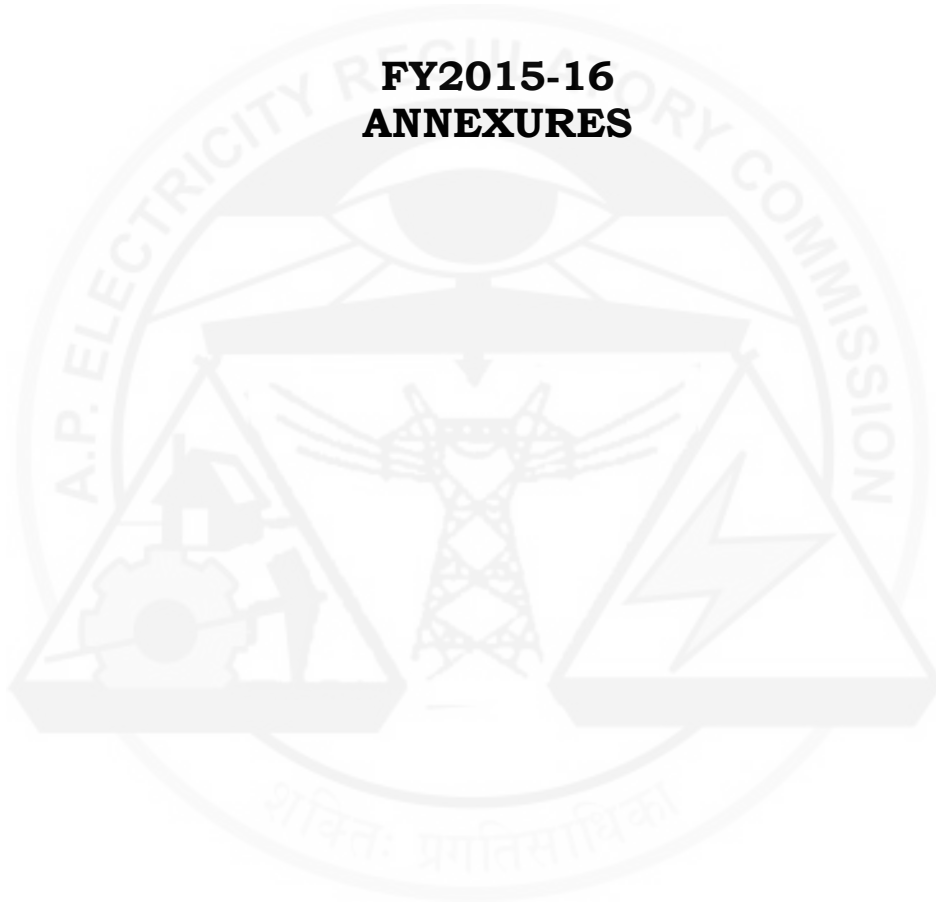
13. The petitions are ordered accordingly.

Sd/-	Sd/-	Sd/-
Thakur Rama Singh	Justice C.V. Nagarjuna Reddy	P. Rajagopal Reddy
Member	Chairman	Member



Common Order in O.P.Nos. 42 & 47 of 2020

**FY2015-16
ANNEXURES**



Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - I			
Name of the Tr. System:	Asset - I	CHITTOOR - RENIGUNTA:1	
		COD:	16-02-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	25
Transmission Line length in km	71.86	Voltage, kV	220kV, S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			1043.32
Additional Capitalisation			0.00
Gross Block total			1043.32
Average Gross Block			1043.32
Depreciation			
Rate of Depreciation (%)			5.28%
Depreciable value		0.90	938.99
Elapsed Life as on 31.03.2015			9.00
Balance useful life of the asset			16.00
Remaining Depreciable value			443.20
Cumulative Depreciation			495.79
Depreciation			55.09
Interest on Loan			
Gross Normative Loan			730.32
Cumulative Repayment upto Previous Year			495.79
Net Loan-Opening			234.54
Addition due to Additional Capitalisation			0.00
Repayment during the year			55.09
Net Loan-Closing			179.45
Average Loan			206.99
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			21.94
Return on Equity			
Gross Notional Equity			313.00
Opening Equity			313.00
Average Equity			313.00
Rate of Return on Equity			15.50%
Return on Equity			48.51
Interest on Working Capital			
Maintenance Spares	15% of O&M		6.04
O & M expenses	1 Months		3.35
Receivables	2 Months		28.48
Total			37.87
Interest	13.50%		5.11
Annual Transmission Charges			
Depreciation			55.09
Interest on Loan			21.94
Return on Equity			48.51
Interest on Working Capital			5.11
O & M Expenses	71.86 KM line		40.24
Total			170.90
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - II(A)			
Name of the Tr. System:	Asset-II (A)	CHITTOOR-NAGARI:2	
		COD:	13-02-2003
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	34.00	Life in years	25
Transmission Line length in km	54.49	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY2015-16
Gross Block			666.96
Additional Capitalisation			0.00
Gross Block total			666.96
Average Gross Block			666.96
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	600.26
Elapsed Life as on 31.03.2015			12.00
Balance useful life of the asset			13.00
Remaining Depreciable value			177.68
Cumulative Depreciation			422.58
Depreciation			13.67
Interest on Loan			
Gross Normative Loan			466.87
Cumulative Repayment upto Previous Year			422.58
Net Loan-Opening			44.29
Addition due to Additional Capitalisation			0.00
Repayment during the year			13.67
Net Loan-Closing			30.62
Average Loan			37.45
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			3.97
Return on Equity			
Gross Notional Equity			200.09
Opening Equity			200.09
Average Equity			200.09
Rate of Return on Equity			15.50%
Return on Equity			31.01
Interest on Working Capital			
Maintenance Spares	15% of O&M		4.58
O & M expenses	1 Months		2.54
Receivables	2 Months		13.66
Total			20.78
Interest	13.50%		2.81
Annual Transmission Charges			
Depreciation			13.67
Interest on Loan			3.97
Return on Equity			31.01
Interest on Working Capital			2.81
O & M Expenses	54.49KM line		30.51
Total			81.97
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - II(B)			
Name of the Tr. System:	Asset-II(B)	CHITTOOR-NAGARI:2	
		COD:	15-10-2012
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	65.67	Life in years	25
Transmission Line length in km	41.00	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			969.29
Additional Capitalisation			0.00
Gross Block total			969.29
Average Gross Block			969.29
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	872.36
Elapsed Life as on 31.03.2015			2.00
Balance useful life of the asset			23.00
Remaining Depreciable value			770.00
Cumulative Depreciation			102.36
Depreciation			51.18
Interest on Loan			
Gross Normative Loan			678.50
Cumulative Repayment upto Previous Year			102.36
Net Loan-Opening			576.15
Addition due to Additional Capitalisation			0.00
Repayment during the year			51.18
Net Loan-Closing			524.97
Average Loan			550.56
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			58.36
Return on Equity			
Gross Notional Equity			290.79
Opening Equity			290.79
Average Equity			290.79
Rate of Return on Equity			15.50%
Return on Equity			45.07
Interest on Working Capital			
Maintenance Spares	15% of O&M		3.44
O & M expenses	1 Months		1.91
Receivables	2 Months		30.40
Total			35.76
Interest	13.50%		4.83
Annual Transmission Charges			
Depreciation			51.18
Interest on Loan			58.36
Return on Equity			45.07
Interest on Working Capital			4.83
O & M Expenses	41KM line		22.96
Total			182.40
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - III(A)			
Name of the Tr. System:	Asset- III(A)	SULURPETA-NELLORE-PG:1	
		COD:	28-04-1982
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	75.70	Voltage, kV	220KV/S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			0.00
Additional Capitalisation			0
Gross Block total			
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2015			33.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		6.36
O & M expenses	1 Months		3.53
Receivables	2 Months		7.45
Total			17.34
Interest	13.50%		2.34
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			2.34
O & M Expenses	75.701 KM line		42.39
Total			44.73
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - III(B)			
Name of the Tr. System:	Asset- III(B)	SULURPETA-NELLORE-PG:1	
		COD:	26-12-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	42.53	Life in years	25
Transmission Line length in km	10.10	Voltage, kV	220KV/S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			154.64
Additional Capitalisation			0
Gross Block total			
Average Gross Block			154.64
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	139.18
Elapsed Life as on 31.03.2015			8.00
Balance useful life of the asset			17.00
Remaining Depreciable value			73.86
Cumulative Depreciation			65.32
Depreciation			8.16
Interest on Loan			
Gross Normative Loan			108.25
Cumulative Repayment upto Previous Year			65.32
Net Loan-Opening			42.93
Addition due to Additional Capitalisation			0.00
Repayment during the year			8.16
Net Loan-Closing			34.76
Average Loan			38.85
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			4.12
Return on Equity			
Gross Notional Equity			46.39
Opening Equity			46.39
Average Equity			46.39
Rate of Return on Equity			15.50%
Return on Equity			7.19
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.85
O & M expenses	1 Months		0.47
Receivables	2 Months		4.32
Total			5.64
Interest	13.50%		0.76
Annual Transmission Charges			
Depreciation			8.16
Interest on Loan			4.12
Return on Equity			7.19
Interest on Working Capital			0.76
O & M Expenses	10.10 KM line		5.66
Total			25.89
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - IV & V			
Name of the Tr. System:	Asset- IV & V	KRISHNAPATNAM-NELLORE-AP:1 & KRISHNAPATNAM-NELLORE-AP:2	
		COD:	23-11-2012
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	65.67	Life in years	25
Transmission Line length in km	36.50	Voltage, kV	400kV/D/C
Multiplication factor	1.39		
			FY 2015-16
Gross Block			3331.77
Additional Capitalisation			0.00
Gross Block total			3331.77
Average Gross Block			3331.77
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	2998.59
Elapsed Life as on 31.03.2015			2.00
Balance useful life of the asset			23.00
Remaining Depreciable value			2646.76
Cumulative Depreciation			351.83
Depreciation			175.92
Interest on Loan			
Gross Normative Loan			2332.24
Cumulative Repayment upto Previous Year			351.83
Net Loan-Opening			1980.40
Addition due to Additional Capitalisation			0.00
Repayment during the year			175.92
Net Loan-Closing			1804.49
Average Loan			1892.44
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			200.60
Return on Equity			
Gross Notional Equity			999.53
Opening Equity			999.53
Average Equity			999.53
Rate of Return on Equity			15.50%
Return on Equity			154.93
Interest on Working Capital			
Maintenance Spares	15% of O&M		6.13
O & M expenses	1 Months		3.41
Receivables	2Months		97.81
Total			107.35
Interest	13.50%		14.49
Annual Transmission Charges			
Depreciation			175.92
Interest on Loan			200.60
Return on Equity			154.93
Interest on Working Capital			14.49
O & M Expenses		73 KM line	40.88
Total			586.82
Norms for O&M Per Km	D/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VI(A)			
Name of the Tr. System:	Asset-VI(A)	NELLORE-NELLORE-PG:1	
		COD:	05-09-1981
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	20.70	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2015			34.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.74
O & M expenses	1 Months		0.97
Receivables	2Months		2.03
Total			4.73
Interest	13.50%		0.64
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			0.64
O & M Expenses	20.7KM line		11.59
Total			12.23
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VI(B)			
Name of the Tr. System:	Asset-VI(B)	NELLORE-NELLORE-PG:1	
		COD:	26-06-2007
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	47.04	Life in years	25
Transmission Line length in km	10.10	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			171.037
Additional Capitalisation			0
Gross Block total			171.037
Average Gross Block			171.037
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	153.93
Elapsed Life as on 31.03.2015			8.00
Balance useful life of the asset			17.00
Remaining Depreciable value			81.69
Cumulative Depreciation			72.25
Depreciation			9.03
Interest on Loan			
Gross Normative Loan			119.73
Cumulative Repayment upto Previous Year			72.25
Net Loan-Opening			47.48
Addition due to Additional Capitalisation			0.00
Repayment during the year			9.03
Net Loan-Closing			38.45
Average Loan			42.96
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			4.55
Return on Equity			
Gross Notional Equity			51.31
Opening Equity			51.31
Average Equity			51.31
Rate of Return on Equity			15.50%
Return on Equity			7.95
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.85
O & M expenses	1 Months		0.47
Receivables	2Months		4.67
Total			5.99
Interest	13.50%		0.81
Annual Transmission Charges			
Depreciation			9.03
Interest on Loan			4.55
Return on Equity			7.95
Interest on Working Capital			0.81
O & M Expenses	10.10KM line		5.66
Total			28.00
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VII(A)			
Name of the Tr. System:	Asset-VII(A)	NELLORE-NELLORE-PG:2	
		COD:	05-09-1981
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	20.70	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2015			34.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.74
O & M expenses	1 Months		0.97
Receivables	2 Months		2.03
Total			4.73
Interest	13.50%		0.64
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			0.64
O & M Expenses	20.70 KM line		11.59
Total			12.23
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VII(B)			
Name of the Tr. System:	Asset-VII(B)	NELLORE-NELLORE-PG:2	
		COD:	26-06-2007
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	47.04	Life in years	25
Transmission Line length in km	10.10	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			171.037
Additional Capitalisation			0
Gross Block total			171.037
Average Gross Block			171.037
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	153.93
Elapsed Life as on 31.03.2015			8.00
Balance useful life of the asset			17.00
Remaining Depreciable value			81.69
Cumulative Depreciation			72.25
Depreciation			9.03
Interest on Loan			
Gross Normative Loan			119.73
Cumulative Repayment upto Previous Year			72.25
Net Loan-Opening			47.48
Addition due to Additional Capitalisation			0.00
Repayment during the year			9.03
Net Loan-Closing			38.45
Average Loan			42.96
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			4.55
Return on Equity			
Gross Notional Equity			51.31
Opening Equity			51.31
Average Equity			51.31
Rate of Return on Equity			15.50%
Return on Equity			7.95
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.85
O & M expenses	1 Months		0.47
Receivables	2 Months		4.67
Total			5.99
Interest	13.50%		0.81
Annual Transmission Charges			
Depreciation			9.03
Interest on Loan			4.55
Return on Equity			7.95
Interest on Working Capital			0.81
O & M Expenses	10.10 KM line		5.66
Total			28.00
Norms for O&M Per Km	D/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure – VIII			
Name of the Tr. System:	Asset-VIII	NELLORE-NELLORE-PG:3	
		COD:	17-04-2005
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	25
Transmission Line length in km	28.54	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			414.367
Additional Capitalisation			0
Gross Block total			414.367
Average Gross Block			414.367
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	372.93
Elapsed Life as on 31.03.2015			10.00
Balance useful life of the asset			15.00
Remaining Depreciable value			154.14
Cumulative Depreciation			218.79
Depreciation			21.88
Interest on Loan			
Gross Normative Loan			290.06
Cumulative Repayment upto Previous Year			218.79
Net Loan-Opening			71.27
Addition due to Additional Capitalisation			0.00
Repayment during the year			21.88
Net Loan-Closing			49.39
Average Loan			60.33
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			6.40
Return on Equity			
Gross Notional Equity			124.31
Opening Equity			124.31
Average Equity			124.31
Rate of Return on Equity			15.50%
Return on Equity			19.27
Interest on Working Capital			
Maintenance Spares	15% of O&M		2.40
O & M expenses	1 Months		1.33
Receivables	2Months		10.92
Total			14.65
Interest	13.50%		1.98
Annual Transmission Charges			
Depreciation			21.88
Interest on Loan			6.40
Return on Equity			19.27
Interest on Working Capital			1.98
O & M Expenses	28.54 KM line		15.98
Total			65.50
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

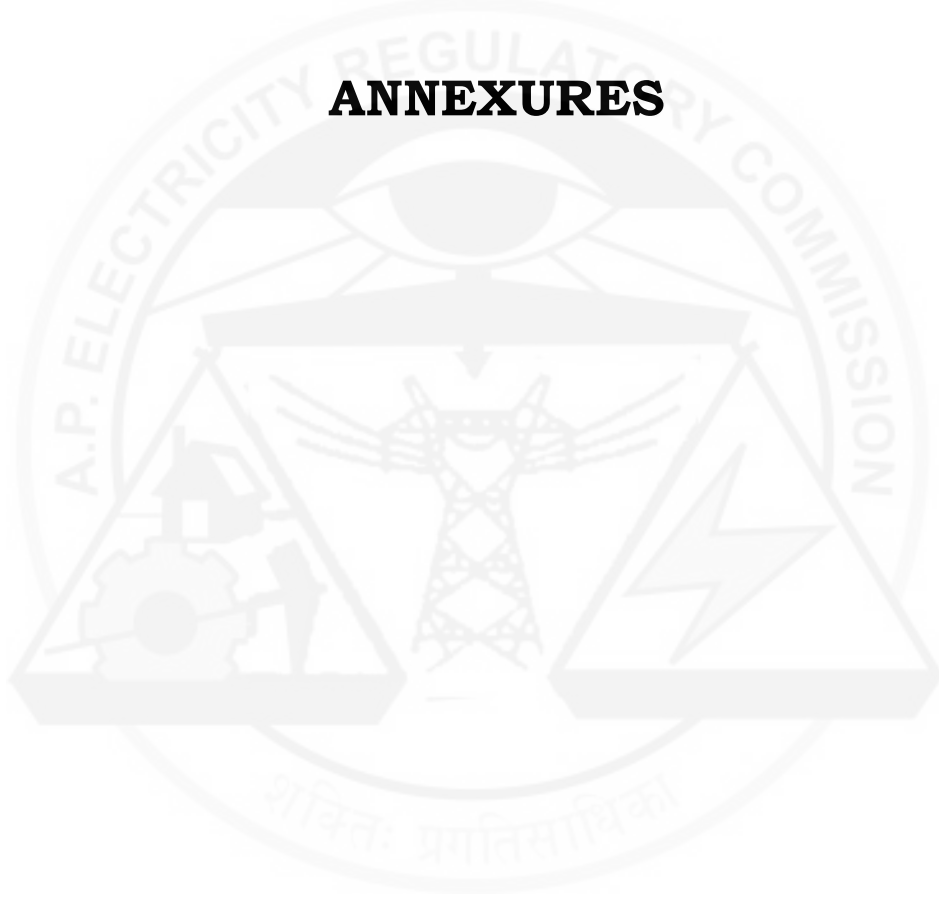
Annexure - IX(A)			
Name of the Tr. System:	Asset-IX(A)	RENIGUNTA- NAGARI:1	
		COD:	13-02-2003
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	34.00	Life in years	25
Transmission Line length in km	9.50	Voltage, kV	220 kV / S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			116.28
Additional Capitalisation			0.00
Gross Block total			116.28
Average Gross Block			116.28
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	104.65
Elapsed Life as on 31.03.2015			12.00
Balance useful life of the asset			13.00
Remaining Depreciable value			30.98
Cumulative Depreciation			73.68
Depreciation			2.38
Interest on Loan			
Gross Normative Loan			81.40
Cumulative Repayment upto Previous Year			73.68
Net Loan-Opening			7.72
Addition due to Additional Capitalisation			0.00
Repayment during the year			2.38
Net Loan-Closing			5.34
Average Loan			6.53
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			0.69
Return on Equity			
Gross Notional Equity			34.88
Opening Equity			34.88
Average Equity			34.88
Rate of Return on Equity			15.50%
Return on Equity			5.41
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.80
O & M expenses	1 Months		0.44
Receivables	2 Months		2.38
Total			3.62
Interest	13.50%		0.49
Annual Transmission Charges			
Depreciation			2.38
Interest on Loan			0.69
Return on Equity			5.41
Interest on Working Capital			0.49
O & M Expenses	9.50KM line		5.32
Total			14.29
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - IX(B)			
Name of the Tr. System:	Asset-IX(B)	RENIGUNTA- NAGARI:1	
		COD:	15-10-2012
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	65.67	Life in years	25
Transmission Line length in km	41.00	Voltage, kV	220 kV / S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			969.29
Additional Capitalisation			0.00
Gross Block total			969.29
Average Gross Block			969.29
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	872.36
Elapsed Life as on 31.03.2015			2.00
Balance useful life of the asset			23.00
Remaining Depreciable value			770.00
Cumulative Depreciation			102.36
Depreciation			51.18
Interest on Loan			
Gross Normative Loan			678.50
Cumulative Repayment upto Previous Year			102.36
Net Loan-Opening			576.15
Addition due to Additional Capitalisation			0.00
Repayment during the year			51.18
Net Loan-Closing			524.97
Average Loan			550.56
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			58.36
Return on Equity			
Gross Notional Equity			290.79
Opening Equity			290.79
Average Equity			290.79
Rate of Return on Equity			15.50%
Return on Equity			45.07
Interest on Working Capital			
Maintenance Spares	15% of O&M		3.44
O & M expenses	1 Months		1.91
Receivables	2 Months		30.40
Total			35.76
Interest	13.50%		4.83
Annual Transmission Charges			
Depreciation			51.18
Interest on Loan			58.36
Return on Equity			45.07
Interest on Working Capital			4.83
O & M Expenses	41KM line		22.96
Total			182.40
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

FY2016-17
ANNEXURES



Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - I(A)			
Name of the Tr. System:	Asset-I (A)	SULURUPETA-NELLORE42:1	
		COD:	28-04-1982
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	75.70	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2016			34.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		6.62
O & M expenses	1 Months		3.68
Receivables	2 Months		7.76
Total			18.06
Interest	13.50%		2.44
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			2.44
O & M Expenses	75.701KM line		44.13
Total			46.57
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - I(B)			
Name of the Tr. System:	Asset-I (B)	SULURUPETA-NELLORE42:1	
		COD:	26-12-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	42.53	Life in years	25
Transmission Line length in km	10.10	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			154.64
Additional Capitalisation			0.00
Gross Block total			154.64
Average Gross Block			154.64
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	139.18
Elapsed Life as on 31.03.2016			9.00
Balance useful life of the asset			16.00
Remaining Depreciable value			65.69
Cumulative Depreciation			73.48
Depreciation			8.16
Interest on Loan			
Gross Normative Loan			108.25
Cumulative Repayment upto Previous Year			73.48
Net Loan-Opening			34.76
Addition due to Additional Capitalisation			0.00
Repayment during the year			8.16
Net Loan-Closing			26.60
Average Loan			30.68
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			3.30
Return on Equity			
Gross Notional Equity			46.39
Opening Equity			46.39
Average Equity			46.39
Rate of Return on Equity			15.50%
Return on Equity			7.19
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.88
O & M expenses	1 Months		0.49
Receivables	2 Months		4.22
Total			5.59
Interest	13.50%		0.75
Annual Transmission Charges			
Depreciation			8.16
Interest on Loan			3.30
Return on Equity			7.19
Interest on Working Capital			0.75
O & M Expenses	10.10KM line		5.89
Total			25.30
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure – II			
Name of the Tr. System:	Asset-II	KONDAPALLI-VTPS:1	
		COD:	11-11-1989
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	6.47	Voltage, kV	220 KV, S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2016			26.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.57
O & M expenses	1 Months		0.31
Receivables	2 Months		0.66
Total			1.54
Interest	13.50%		0.21
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			0.21
O & M Expenses	6.469KM line		3.77
Total			3.98
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure – III			
Name of the Tr. System:	Asset-III	KONDAPALLI-VTPS:2	
		COD:	23-03-1998
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	27.87	Life in years	25
Transmission Line length in km	6.47	Voltage, kV	220 KV, S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			64.90
Additional Capitalisation			0.00
Gross Block total			64.90
Average Gross Block			64.90
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	58.41
Elapsed Life as on 31.03.2016			18.00
Balance useful life of the asset			7.00
Remaining Depreciable value			9.31
Cumulative Depreciation			49.10
Depreciation			1.33
Interest on Loan			
Gross Normative Loan			45.43
Cumulative Repayment upto Previous Year			45.43
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			19.47
Cumulative Repayment upto Previous Year			3.67
Opening Equity			15.80
Repayment during the year			1.33
Closing Equity			14.47
Average Equity			15.14
Rate of Return on Equity			15.50%
Return on Equity			2.35
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.57
O & M expenses	1 Months		0.31
Receivables	2 Months		1.29
Total			2.17
Interest	13.50%		0.29
Annual Transmission Charges			
Depreciation			1.33
Interest on Loan			0.00
Return on Equity			2.35
Interest on Working Capital			0.29
O & M Expenses	6.469KM line		3.77
Total			7.74
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure – IV			
Name of the Tr. System:	Asset- IV	KONDAPALLI-CHILAKALLU:1	
		COD:	12-03-1997
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	38.20	Life in years	25
Transmission Line length in km	59.71	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			821.06
Additional Capitalisation			0
Gross Block total			821.06
Average Gross Block			821.06
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	738.96
Elapsed Life as on 31.03.2016			19.00
Balance useful life of the asset			6.00
Remaining Depreciable value			100.95
Cumulative Depreciation			638.00
Depreciation			16.83
Interest on Loan			
Gross Normative Loan			574.74
Cumulative Repayment upto Previous Year			574.74
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			246.32
Cumulative Repayment upto Previous Year			63.26
Opening Equity			183.06
Repayment during the year			16.83
Closing Equity			166.23
Average Equity			174.65
Rate of Return on Equity			15.50%
Return on Equity			27.07
Interest on Working Capital			
Maintenance Spares	15% of O&M		5.22
O & M expenses	1 Months		2.90
Receivables	2 Months		13.61
Total			21.73
Interest	13.50%		2.93
Annual Transmission Charges			
Depreciation			16.83
Interest on Loan			0.00
Return on Equity			27.07
Interest on Working Capital			2.93
O & M Expenses	59.705KM line		34.81
Total			81.64
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure – V			
Name of the Tr. System:	Asset-V	KONDAPALLI-CHILAKALLU:2	
		COD:	19-08-2000
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	54.57	Life in years	25
Transmission Line length in km	59.71	Voltage, kV	220KV,S/C
Multiplication factor	0.36		
Gross Block			1172.92
Additional Capitalisation			0
Gross Block total			1172.92
Average Gross Block			1172.92
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	1055.62
Elapsed Life as on 31.03.2016			16.00
Balance useful life of the asset			9.00
Remaining Depreciable value			216.32
Cumulative Depreciation			839.30
Depreciation			24.04
Interest on Loan			
Gross Normative Loan			821.04
Cumulative Repayment upto Previous Year			821.04
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			351.87
Cumulative Repayment upto Previous Year			18.26
Opening Equity			333.61
Repayment during the year			24.04
Closing Equity			309.58
Average Equity			321.60
Rate of Return on Equity			15.50%
Return on Equity			49.85
Interest on Working Capital			
Maintenance Spares	15% of O&M		5.22
O & M expenses	1 Months		2.90
Receivables	2 Months		18.72
Total			26.84
Interest	13.50%		3.62
Annual Transmission Charges			
Depreciation			24.04
Interest on Loan			0.00
Return on Equity			49.85
Interest on Working Capital			3.62
O & M Expenses	59.705KM line		34.81
Total			112.31
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VI			
Name of the Tr. System:	Asset- VI	VTPS-CHILAKALLU:1	
		COD:	28-08-1999
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	20.71	Life in years	25
Transmission Line length in km	67.80	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			505.50
Additional Capitalisation			0.00
Gross Block total			505.50
Average Gross Block			505.50
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	454.95
Elapsed Life as on 31.03.2016			17.00
Balance useful life of the asset			8.00
Remaining Depreciable value			82.87
Cumulative Depreciation			372.08
Depreciation			10.36
Interest on Loan			
Gross Normative Loan			353.85
Cumulative Repayment upto Previous Year			353.85
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			151.65
Cumulative Repayment upto Previous Year			18.23
Opening Equity			133.42
Repayment during the year			10.36
Closing Equity			123.06
Average Equity			101.10
Rate of Return on Equity			15.50%
Return on Equity			15.67
Interest on Working Capital			
Maintenance Spares	15% of O&M		5.93
O & M expenses	1 Months		3.29
Receivables	2Months		11.39
Total			20.61
Interest	13.50%		2.78
Annual Transmission Charges			
Depreciation			10.36
Interest on Loan			0.00
Return on Equity			15.67
Interest on Working Capital			2.78
O & M Expenses	67.801 KM line		39.53
Total			68.34
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure – VII			
Name of the Tr. System:	Asset- VII	VTPS-CHILAKALLU:2	
		COD:	01-10-2010
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	52.26	Life in years	25
Transmission Line length in km	67.80	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			1275.58
Additional Capitalisation			0.00
Gross Block total			1275.58
Average Gross Block			1275.58
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	1148.02
Elapsed Life as on 31.03.2016			6.00
Balance useful life of the asset			19.00
Remaining Depreciable value			743.92
Cumulative Depreciation			404.10
Depreciation			67.35
Interest on Loan			
Gross Normative Loan			892.91
Cumulative Repayment upto Previous Year			404.10
Net Loan-Opening			488.80
Addition due to Additional Capitalisation			0.00
Repayment during the year			67.35
Net Loan-Closing			421.45
Average Loan			455.13
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			48.93
Return on Equity			
Gross Notional Equity			382.67
Opening Equity			382.67
Average Equity			382.67
Rate of Return on Equity			15.50%
Return on Equity			59.31
Interest on Working Capital			
Maintenance Spares	15% of O&M		5.93
O & M expenses	1 Months		3.29
Receivables	2Months		36.89
Total			46.12
Interest	13.50%		6.23
Annual Transmission Charges			
Depreciation			67.35
Interest on Loan			48.93
Return on Equity			59.31
Interest on Working Capital			6.23
O & M Expenses	67.801 KM line		39.53
Total			221.35
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VIII(A)			
Name of the Tr. System:	Asset-VIII(A)	VTPS-RENTACHINTALA:2	
		COD:	30-06-1984
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	110.09	Voltage, kV	220kV, S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2016			32.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		9.63
O & M expenses	1 Months		5.35
Receivables	2Months		11.28
Total			26.26
Interest	13.50%		3.54
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			3.54
O & M Expenses	110.09 KM line		64.18
Total			67.73
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VIII(B)			
Name of the Tr. System:	Asset-VIII(B)	VTPS-RENTACHINTALA:2	
		COD:	24-11-2008
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	47.74	Life in years	25
Transmission Line length in km	1.40	Voltage, kV	220kV S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			24.061
Addition during 2014-19 due to Projected Additional Capitalisation			0
Gross Block total			24.061
Average Gross Block			24.061
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	21.65
Elapsed Life as on 31.03.2016			7.00
Balance useful life of the asset			18.00
Remaining Depreciable value			12.76
Cumulative Depreciation			8.89
Depreciation			1.27
Interest on Loan			
Gross Normative Loan			16.84
Cumulative Repayment upto Previous Year			8.89
Net Loan-Opening			7.95
Addition due to Additional Capitalisation			0.00
Repayment during the year			1.27
Net Loan-Closing			6.68
Average Loan			7.31
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.79
Return on Equity			
Gross Notional Equity			7.22
Opening Equity			7.22
Average Equity			7.22
Rate of Return on Equity			15.50%
Return on Equity			1.12
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.12
O & M expenses	1 Months		0.07
Receivables	2Months		0.68
Total			0.88
Interest	13.50%		0.12
Annual Transmission Charges			
Depreciation			1.27
Interest on Loan			0.79
Return on Equity			1.12
Interest on Working Capital			0.12
O & M Expenses	1.40 KM line		0.82
Total			4.11
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - IX			
Name of the Tr. System:	Asset-IX	KURNOOL-BRAHMANKOTKUR:1	
		COD:	29-10-2010
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	52.26	Life in years	25
Transmission Line length in km	23.18	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			436.099
Additional Capitalisation			0
Gross Block total			436.099
Average Gross Block			436.099
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	392.49
Elapsed Life as on 31.03.2016			5.00
Balance useful life of the asset			20.00
Remaining Depreciable value			277.36
Cumulative Depreciation			115.13
Depreciation			23.03
Interest on Loan			
Gross Normative Loan			305.27
Cumulative Repayment upto Previous Year			115.13
Net Loan-Opening			190.14
Addition due to Additional Capitalisation			0.00
Repayment during the year			23.03
Net Loan-Closing			167.11
Average Loan			178.63
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			19.20
Return on Equity			
Gross Notional Equity			130.83
Opening Equity			130.83
Average Equity			130.83
Rate of Return on Equity			15.50%
Return on Equity			20.28
Interest on Working Capital			
Maintenance Spares	15% of O&M		2.03
O & M expenses	1 Months		1.13
Receivables	2Months		13.04
Total			16.19
Interest	13.50%		2.19
Annual Transmission Charges			
Depreciation			23.03
Interest on Loan			19.20
Return on Equity			20.28
Interest on Working Capital			2.19
O & M Expenses	23.18 KM line		13.51
Total			78.21
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - X & XI			
Name of the Tr. System:	Asset-X & Asset-XI	CHITTOR-SDSTPS:1&CHITTOR-SDSTPS:2	
		COD:	22-07-2015
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km		Life in years	25
Transmission Line length in km	192.00	Voltage, kV	400kV,D/C
Multiplication factor			
			FY 2016-17
Gross Block			43505.98
Additional Capitalisation			309.41
Gross Block total			43815.39
Average Gross Block			43660.69
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	39155.38
Elapsed Life as on 31.03.2016			1.00
Balance useful life of the asset			24.00
Remaining Depreciable value			36858.27
Cumulative Depreciation			2297.12
Depreciation			2297.12
Interest on Loan			
Gross Normative Loan			30670.77
Cumulative Repayment upto Previous Year			2297.12
Net Loan-Opening			28373.66
Addition due to Additional Capitalisation			0.00
Repayment during the year			2297.12
Net Loan-Closing			26076.54
Average Loan			27225.10
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			2926.70
Return on Equity			
Gross Notional Equity			13051.79
Opening Equity			13051.79
Average Equity			13051.79
Rate of Return on Equity			15.50%
Return on Equity			2023.03
Interest on Working Capital			
Maintenance Spares	15% of O&M		33.58
O & M expenses	1 Months		18.66
Receivables	2 Months		1457.53
Total			1509.77
Interest	13.50%		203.82
Annual Transmission Charges			
Depreciation			2297.12
Interest on Loan			2926.70
Return on Equity			2023.03
Interest on Working Capital			203.82
O & M Expenses	384KM line		223.87
Total			7674.53
Norms for O&M Per Km	D/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XII			
Name of the Tr. System:	Asset - XII	NUNNA2-VTPS-IV:1	
		COD:	26-07-2009
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	48.44	Life in years	25
Transmission Line length in km	18.66	Voltage, kV	400KV,S/C
Multiplication factor	1.00		
			FY 2016-17
Gross Block			903.89
Additional Capitalisation			0.00
Gross Block total			903.89
Average Gross Block			903.89
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	813.50
Elapsed Life as on 31.03.2016			7.00
Balance useful life of the asset			18.00
Remaining Depreciable value			479.42
Cumulative Depreciation			334.08
Depreciation			47.73
Interest on Loan			
Gross Normative Loan			632.72
Cumulative Repayment upto Previous Year			334.08
Net Loan-Opening			298.65
Addition due to Additional Capitalisation			0.00
Repayment during the year			47.73
Net Loan-Closing			250.92
Average Loan			274.78
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			29.54
Return on Equity			
Gross Notional Equity			271.17
Opening Equity			271.17
Average Equity			271.17
Rate of Return on Equity			15.50%
Return on Equity			42.03
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.63
O & M expenses	1 Months		0.91
Receivables	2 Months		22.26
Total			24.79
Interest	13.50%		3.35
Annual Transmission Charges			
Depreciation			47.73
Interest on Loan			29.54
Return on Equity			42.03
Interest on Working Capital			3.35
O & M Expenses	18.66 KM line		10.88
Total			133.52
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XIII			
Name of the Tr. System:	Asset - XIII	GAZUWAKA1-KALAPAKKA1:1	
		COD:	10-12-2000
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	54.57	Life in years	25
Transmission Line length in km	3.39	Voltage, kV	400kV,S/C
Multiplication factor	1.00		
			FY 2016-17
Gross Block			185.16
Additional Capitalisation			0.00
Gross Block total			185.16
Average Gross Block			185.16
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	166.64
Elapsed Life as on 31.03.2016			15.00
Balance useful life of the asset			10.00
Remaining Depreciable value			37.94
Cumulative Depreciation			128.70
Depreciation			3.79
Interest on Loan			
Gross Normative Loan			129.61
Cumulative Repayment upto Previous Year			128.70
Net Loan-Opening			0.91
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.91
Net Loan-Closing			0.00
Average Loan			0.46
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.05
Return on Equity			
Gross Notional Equity			55.55
Opening Equity			55.55
Average Equity			55.55
Rate of Return on Equity			15.50%
Return on Equity			8.61
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.30
O & M expenses	1 Months		0.16
Receivables	2 Months		2.47
Total			2.93
Interest	13.50%		0.40
Annual Transmission Charges			
Depreciation			3.79
Interest on Loan			0.05
Return on Equity			8.61
Interest on Working Capital			0.40
O & M Expenses	3.393KM line		1.98
Total			14.83
Norms for O&M Per Km	S/C		0.583

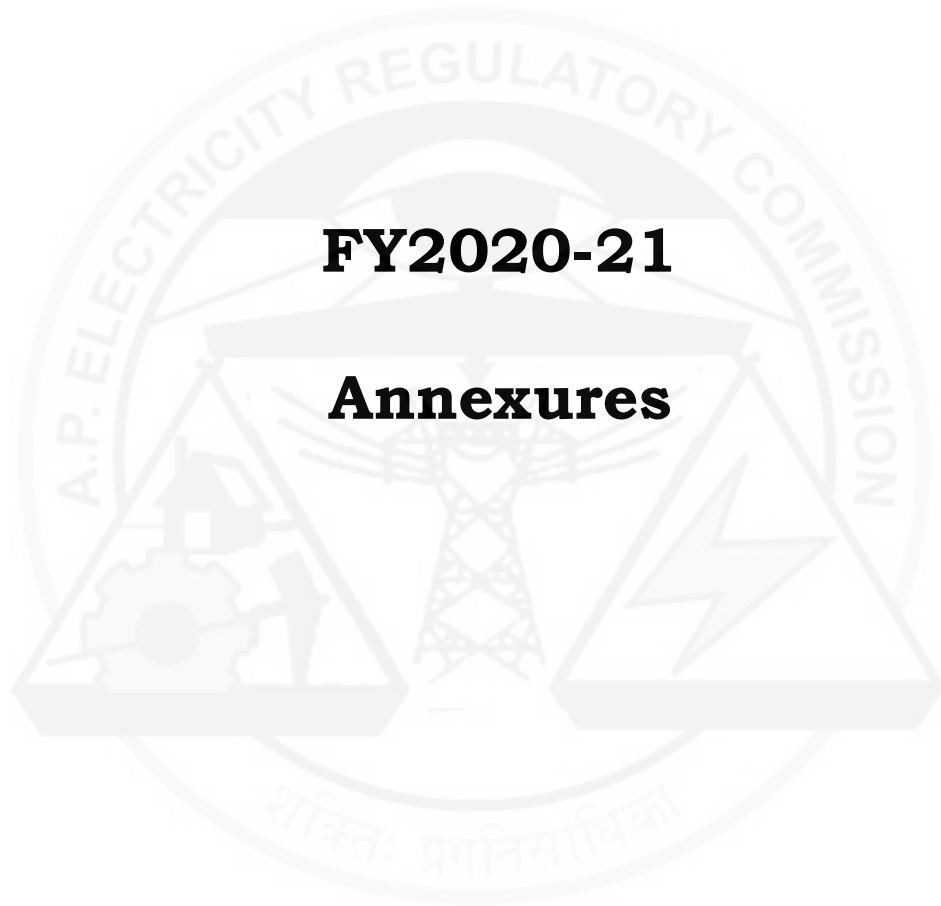
Common Order in O.P.Nos. 42 & 47 of 2020

Annexure -XIV			
Name of the Tr. System:	Asset - XIV	GAZUWAKA1-KALAPAKKA1:2	
		COD:	27-01-2002
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	44.28	Life in years	25
Transmission Line length in km	3.39	Voltage, kV	400kV,S/C
Multiplication factor	1.00		
			FY 2016-17
Gross Block			150.11
Additional Capitalisation			0.00
Gross Block total			150.11
Average Gross Block			150.11
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	135.10
Elapsed Life as on 31.03.2016			14.00
Balance useful life of the asset			11.00
Remaining Depreciable value			33.84
Cumulative Depreciation			101.26
Depreciation			3.08
Interest on Loan			
Gross Normative Loan			105.08
Cumulative Repayment upto Previous Year			101.26
Net Loan-Opening			3.82
Addition due to Additional Capitalisation			0.00
Repayment during the year			3.08
Net Loan-Closing			0.74
Average Loan			2.28
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.24
Return on Equity			
Gross Notional Equity			45.03
Opening Equity			45.03
Average Equity			45.03
Rate of Return on Equity			15.50%
Return on Equity			6.98
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.30
O & M expenses	1 Months		0.16
Receivables	2 Months		2.10
Total			2.57
Interest	13.50%		0.35
Annual Transmission Charges			
Depreciation			3.08
Interest on Loan			0.24
Return on Equity			6.98
Interest on Working Capital			0.35
O & M Expenses	3.393KM line		1.98
Total			12.63
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

FY2020-21

Annexures



Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - I			
Name of the Tr. System:	Asset - I	NUNNA2-VEMAGIRI1:T3	
		COD:	30-12-2005
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	25
Transmission Line length in km	145.00	Voltage, kV	400 kV S/C
Multiplication factor	1.00		
			FY 2020-21
Gross Block			5847.85
Additional Capitalisation			0
Gross Block total			5847.85
Average Gross Block			5847.85
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	5263.07
Elapsed Life as on 31.03.2020			14
Balance useful life of the asset			11
Remaining Depreciable value			1318.11
Cumulative Depreciation			3944.96
Depreciation			119.84
Interest on Loan			
Gross Normative Loan			4093.50
Cumulative Repayment upto Previous Year			3944.96
Net Loan-Opening			148.54
Addition due to Additional Capitalisation			0.00
Repayment during the year			119.84
Net Loan-Closing			28.70
Average Loan			88.62
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			8.84
Return on Equity			
Gross Notional Equity			1754.36
Opening Equity			1754.36
Average Equity			1754.36
Rate of Return on Equity			15.50%
Return on Equity			271.93
Interest on Working Capital			
Maintenance Spares	15% of O&M		17.84
O & M expenses	1 Months		9.91
Receivables	1.5 Months		66.26
Total			94.00
Interest	11.25%		10.58
Annual Transmission Charges			
Depreciation			119.84
Interest on Loan			8.84
Return on Equity			271.93
Interest on Working Capital			10.58
O & M Expenses for line	145.00		118.90
Total			530.08
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - II & III			
Name of the Tr. System:	Asset - II & III	GAZUWAKA2-KALPAKKA1:T1 & GAZUWAKA2-KALPAKKA1:T2	
		COD:	27-01-2002
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	44.28	Life in years	25
Transmission Line length in km	3.39	Voltage, kV	400 kV D/C
Multiplication factor	1.39		
			FY 2020-21
Gross Block			208.652
Additional Capitalisation			0
Gross Block total			208.652
Average Gross Block			208.652
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	187.79
Elapsed Life as on 31.03.2020			18
Balance useful life of the asset			7
Remaining Depreciable value			29.92
Cumulative Depreciation			157.87
Depreciation			4.28
Interest on Loan			
Gross Normative Loan			146.06
Cumulative Repayment upto Previous Year			146.06
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			62.60
Cumulative Repayment upto Previous Year			11.81
Opening Equity			50.79
Repayment during the year			4.28
Closing Equity			46.51
Average Equity			48.65
Rate of Return on Equity			15.50%
Return on Equity			7.54
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.83
O & M expenses	1 Months		0.46
Receivables	1.5 Months		2.22
Total			3.52
Interest	11.25%		0.40
Annual Transmission Charges			
Depreciation			4.28
Interest on Loan			0.00
Return on Equity			7.54
Interest on Working Capital			0.40
O & M Expenses for line	3.39		5.56
Total			17.77
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - IV & V			
Name of the Tr. System:	Asset- IV & V	CHITTOOR 42 - CHITTOOR 1:2 & CHITTOOR 42 - CHITTOOR 1:1	
		COD:	14-02-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	25
Transmission Line length in km	17.10	Voltage, kV	220 kV D/C
Multiplication factor	0.57		
			FY 2020-21
Gross Block			393.10
Additional Capitalisation			0.00
Gross Block total			393.10
Average Gross Block			393.10
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	353.79
Elapsed Life as on 31.03.2020			14
Balance useful life of the asset			11
Remaining Depreciable value			88.60
Cumulative Depreciation			265.18
Depreciation			8.06
Interest on Loan			
Gross Normative Loan			275.17
Cumulative Repayment upto Previous Year			265.18
Net Loan-Opening			9.98
Addition due to Additional Capitalisation			0.00
Repayment during the year			8.06
Net Loan-Closing			1.93
Average Loan			5.96
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.59
Return on Equity			
Gross Notional Equity			117.93
Opening Equity			117.93
Average Equity			117.93
Rate of Return on Equity			15.50%
Return on Equity			18.28
Interest on Working Capital			
Maintenance Spares	15% of O&M		4.21
O & M expenses	1 Months		2.34
Receivables	1.5 Months		7.06
Total			13.61
Interest	11.25%		1.53
Annual Transmission Charges			
Depreciation			8.06
Interest on Loan			0.59
Return on Equity			18.28
Interest on Working Capital			1.53
O & M Expenses for line	17.10		28.04
Total			56.50
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VI (A)			
Name of the Tr. System:	Asset-VI (A)	SULURUPETA-NELLORE42:1	
		COD:	28-04-1982
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kV line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	75.70	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			37
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		9.31
O & M expenses	1 Months		5.17
Receivables	1.5 Months		8.08
Total			22.56
Interest	11.25%		2.54
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			2.54
O & M Expenses for line	75.70		62.07
Total			64.61
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VI(B)			
Name of the Tr. System:	Asset-VI (B)	SULURUPETA-NELLORE42:1	
		COD:	26-12-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	42.53	Life in years	25
Transmission Line length in km	10.10	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			154.64
Additional Capitalisation			0.00
Gross Block total			1 54.64
Average Gross Block			154.64
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	139.18
Elapsed Life as on 31.03.2020			13
Balance useful life of the asset			12
Remaining Depreciable value			38.03
Cumulative Depreciation			101.15
Depreciation			3.17
Interest on Loan			
Gross Normative Loan			108.25
Cumulative Repayment upto Previous Year			101.15
Net Loan-Opening			7.10
Addition due to Additional Capitalisation			0.00
Repayment during the year			3.17
Net Loan-Closing			3.93
Average Loan			5.51
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.55
Return on Equity			
Gross Notional Equity			46.39
Opening Equity			46.39
Average Equity			46.39
Rate of Return on Equity			15.50%
Return on Equity			7.19
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.24
O & M expenses	1 Months		0.69
Receivables	1.5 Months		2.46
Total			4.39
Interest	11.25%		0.49
Annual Transmission Charges			
Depreciation			3.17
Interest on Loan			0.55
Return on Equity			7.19
Interest on Working Capital			0.49
O & M Expenses for line	10.10		8.28
Total			19.69
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VII			
Name of the Tr. System:	Asset-VII	CHITTOOR1-KALIKIRI1:1	
		COD:	21-06-1970
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	64.66	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			49
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		7.95
O & M expenses	1 Months		4.42
Receivables	1.5 Months		6.90
Total			19.27
Interest	11.25%		2.17
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			2.17
O & M Expenses for line	64.66		53.02
Total			55.19
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VIII & IX			
Name of the Tr. System:	Asset- VIII & IX	GOOTY - PG - DHONE 1:2 & GOOTY - PG - DHONE 1:1	
		COD:	24-08-2011
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	62.27	Life in years	25
Transmission Line length in km	90.16	Voltage, kV	220 kV D/C
Multiplication factor	0.57		
			FY 2020-21
Gross Block			3200.13
Additional Capitalisation			0
Gross Block total			3200.13
Average Gross Block			3200.13
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	2880.12
Elapsed Life as on 31.03.2020			8
Balance useful life of the asset			17
Remaining Depreciable value			1528.38
Cumulative Depreciation			1351.73
Depreciation			168.97
Interest on Loan			
Gross Normative Loan			2240.09
Cumulative Repayment upto Previous Year			1351.73
Net Loan-Opening			888.36
Addition due to Additional Capitalisation			0.00
Repayment during the year			168.97
Net Loan-Closing			719.39
Average Loan			803.87
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			80.23
Return on Equity			
Gross Notional Equity			960.04
Opening Equity			960.04
Average Equity			960.04
Rate of Return on Equity			15.50%
Return on Equity			148.81
Interest on Working Capital			
Maintenance Spares	15% of O&M		22.18
O & M expenses	1 Months		12.32
Receivables	1.5 Months		69.70
Total			104.20
Interest	11.25%		11.72
Annual Transmission Charges			
Depreciation			168.97
Interest on Loan			80.23
Return on Equity			148.81
Interest on Working Capital			11.72
O & M Expenses for line	90.16		147.86
Total			557.58
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - X			
Name of the Tr. System:	Asset- X	KONDAPALLI-CHILLAKALLU1:1	
		COD:	12-03-1997
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	38.20	Life in years	25
Transmission Line length in km	59.70	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2019-20
Gross Block			820.99
Additional Capitalisation			0.00
Gross Block total			820.99
Average Gross Block			820.99
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	738.89
Elapsed Life as on 31.03.2020			23
Balance useful life of the asset			0
Remaining Depreciable value			33.58
Cumulative Depreciation			705.32
Depreciation			16.82
Interest on Loan			
Gross Normative Loan			574.70
Cumulative Repayment upto Previous Year			574.70
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			246.30
Opening Equity			246.30
Repayment till previous year			130.62
Repayment in current year			16.82
Closing Equity			98.85
Average Equity			172.58
Rate of Return on Equity			15.50%
Return on Equity			26.75
Interest on Working Capital			
Maintenance Spares	15% of O&M		7.34
O & M expenses	1 Months		4.08
Receivables	1.5 Months		11.89
Total			23.32
Interest	11.25%		2.62
Annual Transmission Charges			
Depreciation			16.82
Interest on Loan			0.00
Return on Equity			26.75
Interest on Working Capital			2.62
O & M Expenses for line	59.70		48.95
Total			95.15
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XI			
Name of the Tr. System:	Asset- XI	KONDAPALLI-CHILLAKALLU1:2	
		COD:	19-08-2000
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	54.57	Life in years	25
Transmission Line length in km	59.70	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2019-20
Gross Block			1172.82
Additional Capitalisation			0.00
Gross Block total			1172.82
Average Gross Block			1172.82
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	1055.54
Elapsed Life as on 31.03.2020			19
Balance useful life of the asset			6
Remaining Depreciable value			144.14
Cumulative Depreciation			911.40
Depreciation			24.03
Interest on Loan			
Gross Normative Loan			820.97
Cumulative Repayment upto Previous Year			820.97
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			351.85
Opening Equity			351.85
Repayment till previous year			90.42
Repayment in current year			24.03
Closing Equity			237.39
Average Equity			294.62
Rate of Return on Equity			15.50%
Return on Equity			45.67
Interest on Working Capital			
Maintenance Spares	15% of O&M		7.34
O & M expenses	1 Months		4.08
Receivables	1.5 Months		15.21
Total			26.63
Interest	11.25%		3.00
Annual Transmission Charges			
Depreciation			24.03
Interest on Loan			0.00
Return on Equity			45.67
Interest on Working Capital			3.00
O & M Expenses for line	59.70		48.95
Total			121.65
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XII & XIII			
Name of the Tr. System:	Asset-XII & XIII	SRISAILAMRB1-TALIAPLLI:1 & SRISAILAMRB1-TALIAPLLI:2	
		COD:	01-01-1985
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	98.82	Voltage, kV	220 kV D/C
Multiplication factor	0.57		
			FY 2020-21
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			35
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		24.31
O & M expenses	1 Months		13.51
Receivables	1.5 Months		21.09
Total			58.90
Interest	11.25%		6.63
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			6.63
O & M Expenses for line	98.82		162.06
Total			168.69
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XIV			
Name of the Tr. System:	Asset-XIV	SRISAILAMRB1-MYDUKUR:1	
		COD:	27-11-1969
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	165.96	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			50
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		20.41
O & M expenses	1 Months		11.34
Receivables	1.5 Months		17.62
Total			49.37
Interest	11.25%		5.55
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			5.55
O & M Expenses for line	165.96		136.09
Total			141.64
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure -XV			
Name of the Tr. System:	Asset – XV	SRISAILAMRB1-SOMYZULPALLI:1	
		COD:	01-01-1985
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	106.00	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			35
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		13.04
O & M expenses	1 Months		7.24
Receivables	1.5 Months		11.31
Total			31.59
Interest	11.25%		3.55
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			3.55
O & M Expenses for line	106.00		86.92
Total			90.47
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XVI(A)			
Name of the Tr. System:	Asset-XVI (A)	SRISAILAMRB1-BELKALAGUDUR:1	
		COD:	24-03-1980
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	70.72	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			40
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		8.70
O & M expenses	1 Months		4.83
Receivables	1.5 Months		7.55
Total			21.08
Interest	11.25%		2.37
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			2.37
O & M Expenses for line	70.72		57.99
Total			60.36
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XVI (B)			
Name of the Tr. System:	Asset-XVI (B)	SRISAILAMRB1-BELKALAGUDUR:1	
		COD:	10-08-2011
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	62.27	Life in years	25
Transmission Line length in km	4.94	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			110.74
Additional Capitalisation			0.00
Gross Block total			110.74
Average Gross Block			110.74
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	99.67
Elapsed Life as on 31.03.2020			8
Balance useful life of the asset			17
Remaining Depreciable value			52.89
Cumulative Depreciation			46.78
Depreciation			5.85
Interest on Loan			
Gross Normative Loan			77.52
Cumulative Repayment upto Previous Year			46.78
Net Loan-Opening			30.74
Addition due to Additional Capitalisation			0.00
Repayment during the year			5.85
Net Loan-Closing			24.89
Average Loan			27.82
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			2.78
Return on Equity			
Gross Notional Equity			33.22
Opening Equity			33.22
Average Equity			33.22
Rate of Return on Equity			15.50%
Return on Equity			5.15
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.61
O & M expenses	1 Months		0.34
Receivables	1.5 Months		2.27
Total			3.22
Interest	11.25%		0.36
Annual Transmission Charges			
Depreciation			5.85
Interest on Loan			2.78
Return on Equity			5.15
Interest on Working Capital			0.36
O & M Expenses for line	4.94		4.05
Total			18.19
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XVII			
Name of the Tr. System:	Asset-XVII	VTS1-CHILAAKALLU1:1	
		COD:	28-08-1999
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kV line Rs lakh per ckt km	20.71	Life in years	25
Transmission Line length in km	67.80	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			505.49
Additional Capitalisation			0.00
Gross Block total			505.49
Average Gross Block			505.49
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	454.94
Elapsed Life as on 31.03.2020			20
Balance useful life of the asset			5
Remaining Depreciable value			51.76
Cumulative Depreciation			403.18
Depreciation			10.36
Interest on Loan			
Gross Normative Loan			353.84
Cumulative Repayment upto Previous Year			353.84
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			151.65
Cumulative Repayment upto Previous Year			49.34
Opening Equity			102.31
Repayment during the year			10.36
Closing Equity			91.95
Average Equity			97.13
Rate of Return on Equity			15.50%
Return on Equity			15.06
Rate of Return on Equity			
Return on Equity			
Interest on Working Capital			
Maintenance Spares	15% of O&M		8.34
O & M expenses	1 Months		4.63
Receivables	1.5 Months		10.45
Total			23.43
Interest	11.25%		2.64
Annual Transmission Charges			
Depreciation			10.36
Interest on Loan			0.00
Return on Equity			15.06
Interest on Working Capital			2.64
O & M Expenses for line	67.80		55.60
Total			83.65
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XVIII-A			
Name of the Tr. System:	Asset-XVIII-A	VTS1-CHILAAKALLU1:2	
		COD:	29-03-1999
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	17.54	Life in years	25
Transmission Line length in km	66.14	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			417.63
Additional Capitalisation			0
Gross Block total			417.63
Average Gross Block			417.63
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.9	375.87
Elapsed Life as on 31.03.2020			21
Balance useful life of the asset			4
Remaining Depreciable value			34.2
Cumulative Depreciation			341.67
Depreciation			8.56
Interest on Loan			
Gross Normative Loan			292.34
Cumulative Repayment upto Previous Year			292.34
Net Loan-Opening			0
Addition due to Additional Capitalisation			0
Repayment during the year			0
Net Loan-Closing			0
Average Loan			0
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0
Return on Equity			
Gross Notional Equity			125.29
Cumulative Repayment upto Previous Year			49.32
Opening Equity			75.97
Repayment during the year			8.56
Closing Equity			67.41
Average Equity			71.69
Rate of Return on Equity			15.50%
Return on Equity			11.11
Interest on Working Capital			
Maintenance Spares	15% of O&M		8.14
O & M expenses	1 Months		4.52
Receivables	1.5 Months		9.55
Total			22.2
Interest	11.25%		2.5
Annual Transmission Charges			
Depreciation			8.56
Interest on Loan			0
Return on Equity			11.11
Interest on Working Capital			2.5
O & M Expenses for line	66.14		54.23
Total			76.4
Norms for O&M Per Km	S/C		0.82

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XVIII -B			
Name of the Tr. System:	Asset-XVIII(B)	VTS1-CHILAAKALLU1:2	
		COD:	03-10-2010
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	52.26	Life in years	25
Transmission Line length in km	1.48	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			27.92
Additional Capitalisation			0
Gross Block total			27.92
Average Gross Block			27.92
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.9	25.13
Elapsed Life as on 31.03.2020			9
Balance useful life of the asset			16
Remaining Depreciable value			11.86
Cumulative Depreciation			13.27
Depreciation			1.47
Interest on Loan			
Gross Normative Loan			19.54
Cumulative Repayment upto Previous Year			13.27
Net Loan-Opening			6.28
Addition due to Additional Capitalisation			0
Repayment during the year			1.47
Net Loan-Closing			4.8
Average Loan			5.54
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.56
Return on Equity			
Gross Notional Equity			8.38
Cumulative Repayment upto Previous Year			0
Opening Equity			8.38
Repayment during the year			0
Closing Equity			8.38
Average Equity			8.38
Rate of Return on Equity			15.50%
Return on Equity			1.3
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.18
O & M expenses	1 Months		0.1
Receivables	1.5 Months		0.58
Total			0.86
Interest	11.25%		0.1
Annual Transmission Charges			
Depreciation			1.47
Interest on Loan			0.56
Return on Equity			1.3
Interest on Working Capital			0.1
O & M Expenses for line	1.48		1.22
Total			4.65
Norms for O&M Per Km	S/C		0.82

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XIX (A)			
Name of the Tr. System:	Asset-XIX (A)	VTPS-RENTACHINTALA:2	
		COD:	30-06-1984
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	110.09	Voltage, kV	220kV, S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			35
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		13.54
O & M expenses	1 Months		7.52
Receivables	1.5 Months		11.75
Total			32.81
Interest	11.25%		3.69
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			3.69
O & M Expenses for line	110.09		90.27
Total			93.96
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XIX(B)			
Name of the Tr. System:	Asset-XIX (B)	VTPS-RENTACHINTALA:2	
		COD:	24-11-2008
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	47.74	Life in years	25
Transmission Line length in km	1.40	Voltage, kV	220kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			24.061
Additional Capitalisation			0
Gross Block total			24.061
Average Gross Block			24.061
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	21.65
Elapsed Life as on 31.03.2020			11
Balance useful life of the asset			14
Remaining Depreciable value			7.68
Cumulative Depreciation			13.97
Depreciation			1.27
Interest on Loan			
Gross Normative Loan			16.84
Cumulative Repayment upto Previous Year			13.97
Net Loan-Opening			2.87
Addition due to Additional Capitalisation			0.00
Repayment during the year			1.27
Net Loan-Closing			1.60
Average Loan			2.23
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.22
Return on Equity			
Gross Notional Equity			7.22
Opening Equity			7.22
Average Equity			7.22
Rate of Return on Equity			15.50%
Return on Equity			1.12
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.17
O & M expenses	1 Months		0.10
Receivables	1.5 Months		0.48
Total			0.75
Interest	11.25%		0.08
Annual Transmission Charges			
Depreciation			1.27
Interest on Loan			0.22
Return on Equity			1.12
Interest on Working Capital			0.08
O & M Expenses for line	1.40		1.15
Total			3.84
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XX			
Name of the Tr. System:	Asset-XX	KURNOOL1-BRAHMANKTKUR:1	
		COD:	29-10-2010
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	52.26	Life in years	25
Transmission Line length in km	23.18	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			436.10
Additional Capitalisation			0.00
Gross Block total			436.10
Average Gross Block			436.10
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	392.49
Elapsed Life as on 31.03.2020			9
Balance useful life of the asset			16
Remaining Depreciable value			185.25
Cumulative Depreciation			207.23
Depreciation			23.03
Interest on Loan			
Gross Normative Loan			305.27
Cumulative Repayment upto Previous Year			207.23
Net Loan-Opening			98.04
Addition due to Additional Capitalisation			0.00
Repayment during the year			23.03
Net Loan-Closing			75.01
Average Loan			86.52
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			8.63
Return on Equity			
Gross Notional Equity			130.83
Opening Equity			130.83
Average Equity			130.83
Rate of Return on Equity			15.50%
Return on Equity			20.28
Interest on Working Capital			
Maintenance Spares	15% of O&M		2.85
O & M expenses	1 Months		1.58
Receivables	1.5 Months		9.06
Total			13.49
Interest	11.25%		1.52
Annual Transmission Charges			
Depreciation			23.03
Interest on Loan			8.63
Return on Equity			20.28
Interest on Working Capital			1.52
O & M Expenses for line	23.18		19.01
Total			72.47
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXI			
Name of the Tr. System:	Asset-XXI	MACHERLA-RENTCHNTHALA:1	
		COD:	27-03-2013
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	65.67	Life in years	25
Transmission Line length in km	14.53	Voltage, kV	132kV/S/C
Multiplication factor	0.31		
			FY 2020-21
Gross Block			295.80
Additional Capitalisation			0.00
Gross Block total			295.80
Average Gross Block			295.80
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	266.22
Elapsed Life as on 31.03.2020			7
Balance useful life of the asset			18
Remaining Depreciable value			156.89
Cumulative Depreciation			109.33
Depreciation			15.62
Interest on Loan			
Gross Normative Loan			207.06
Cumulative Repayment upto Previous Year			109.33
Net Loan-Opening			97.73
Addition due to Additional Capitalisation			0.00
Repayment during the year			15.62
Net Loan-Closing			82.11
Average Loan			89.92
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			8.97
Return on Equity			
Gross Notional Equity			88.74
Opening Equity			88.74
Average Equity			88.74
Rate of Return on Equity			15.50%
Return on Equity			13.75
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.79
O & M expenses	1 Months		0.99
Receivables	1.5 Months		6.41
Total			9.19
Interest	11.25%		1.03
Annual Transmission Charges			
Depreciation			15.62
Interest on Loan			8.97
Return on Equity			13.75
Interest on Working Capital			1.03
O & M Expenses for line	14.53		11.91
Total			51.30
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXII & XXIII			
Name of the Tr. System:	Asset-XXII & XXIII	CHITTOOR-SDSTPS:Q1 CHITTOOR-SDSTPS:Q2	
		COD:	22-07-2015
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	192.00	Voltage, kV	400kV,D/C
Multiplication factor	---		
			FY 2020-21
Gross Block			43505.98
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			309.41
Gross Block total			43815.39
Average Gross Block			43660.69
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	39155.38
Elapsed Life as on 31.03.2020			4
Balance useful life of the asset			21
Remaining Depreciable value			29934.25
Cumulative Depreciation			9221.14
Depreciation			2305.28
Interest on Loan			
Gross Normative Loan			30454.19
Cumulative Repayment upto Previous Year			9221.14
Net Loan-Opening			21233.05
Addition due to Additional Capitalisation			0.00
Repayment during the year			2305.28
Net Loan-Closing			18927.77
Average Loan			20080.41
Rate of Interest on Loan (%)			9.98%
Interest			2004.02
Return on Equity			
Gross Notional Equity			13051.79
Opening Equity			13051.79
Average Equity			13051.79
Base Rate of Return on Equity			15.50%
Return on Equity			2023.03
Interest on Working Capital			
Maintenance Spares	15% of O&M		47.23
O & M expenses	1 Months		26.24
Receivables	1.5 Months		843.82
Total			917.29
Interest	11.25%		103.20
Annual Transmission Charges			
Depreciation			2305.28
Interest on Loan			2004.02
Return on Equity			2023.03
Interest on Working Capital			103.20
O & M Expenses	192.00		314.88
Total			6750.41
	Norms for O&M Per Km	D/C	0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXIV & XXV			
Name of the Tr. System:	Asset-XXIV & XXV	KURNOOL2-JAMMALAMADUGU 1:Q1 KURNOOL2- JAMMALAMADUGU1:Q2	
		COD:	31-03-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	100.86	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			16293.46
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			739.42
Gross Block total			17032.88
Average Gross Block			16663.17
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	14664.12
Elapsed Life as on 31.03.2020			4
Balance useful life of the asset			21
Remaining Depreciable value			11144.86
Cumulative Depreciation			3519.26
Depreciation			879.82
Interest on Loan			
Gross Normative Loan			11405.42
Cumulative Repayment upto Previous Year			3519.26
Net Loan-Opening			7886.16
Addition due to Additional Capitalisation			0.00
Repayment during the year			879.82
Net Loan-Closing			7006.35
Average Loan			7446.25
Rate of Interest on Loan (%)			9.98%
Interest			743.14
Return on Equity			
Gross Notional Equity			4888.04
Opening Equity			4888.04
Average Equity			4888.04
Rate of Return on Equity			15.50%
Return on Equity			757.65
Interest on Working Capital			
Maintenance Spares	15% of O&M		24.81
O & M expenses	1 Months		13.78
Receivables	1.5 Months		323.34
Total			361.94
Interest	11.25%		40.72
Annual Transmission Charges			
Depreciation			879.82
Interest on Loan			743.14
Return on Equity			757.65
Interest on Working Capital			40.72
O & M Expenses	100.86		165.41
Total			2586.73
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXVI & XXVII			
Name of the Tr. System:	Asset-XXVI & XXVII	HINDUJA- KV KOTA1:T1, HINDUJA- KV KOTA1:T2	
		COD:	24-07-2017
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	242.98	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			40597.440
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			63.9
Gross Block total			40661.340
Average Gross Block			40629.390
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	36537.70
Elapsed Life as on 31.03.2020			2
Balance useful life of the asset			23
Remaining Depreciable value			32247.23
Cumulative Depreciation			4290.46
Depreciation			2145.23
Interest on Loan			
Gross Normative Loan			28418.21
Cumulative Repayment upto Previous Year			4290.46
Net Loan-Opening			24127.74
Addition due to Additional Capitalisation			0.00
Repayment during the year			2145.23
Net Loan-Closing			21982.51
Average Loan			23055.13
Rate of Interest on Loan (%)			9.98%
Interest			2300.90
Return on Equity			
Gross Notional Equity			12179.23
Opening Equity			12179.23
Average Equity			12179.23
Rate of Return on Equity			15.50%
Return on Equity			1887.78
Interest on Working Capital			
Maintenance Spares	15% of O&M		59.77
O & M expenses	1 Months		33.21
Receivables	1.5 Months		854.88
Total			947.86
Interest	11.25%		106.63
Annual Transmission Charges			
Depreciation			2145.23
Interest on Loan			2300.90
Return on Equity			1887.78
Interest on Working Capital			106.63
O & M Expenses	242.98		398.49
Total			6839.04
Norms for O&M Per Km		D/C	0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXVIII & XXIX			
Name of the Tr. System:	Asset- XXVIII & XXIX	JAMMALAMADUGU - URAVAKONDA DC Line (Part-1)	
		COD:	15-07-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	127.62	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			17604.40
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			
Gross Block total			17604.40
Average Gross Block			17604.40
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	15843.96
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			22
Remaining Depreciable value			13055.42
Cumulative Depreciation			2788.54
Depreciation			929.51
Interest on Loan			
Gross Normative Loan			12323.08
Cumulative Repayment upto Previous Year			2788.54
Net Loan-Opening			9534.54
Addition due to Additional Capitalisation			0.00
Repayment during the year			929.51
Net Loan-Closing			8605.03
Average Loan			9069.79
Rate of Interest on Loan (%)			9.98%
Interest			905.16
Return on Equity			
Gross Notional Equity			5281.32
Opening Equity			5281.32
Average Equity			5281.32
Rate of Return on Equity			15.50%
Return on Equity			818.60
Interest on Working Capital			
Maintenance Spares	15% of O&M		31.39
O & M expenses	1 Months		17.44
Receivables	1.5 Months		363.62
Total			412.46
Interest	11.25%		46.40
Annual Transmission Charges			
Depreciation			929.51
Interest on Loan			905.16
Return on Equity			818.60
Interest on Working Capital			46.40
O & M Expenses	127.62		209.30
Total			2908.98
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXX & XXXI			
Name of the Tr. System:	Asset-XXX & XXXI	TALARICHERUVU TO LILO POINT OF JAMMALAMADUGU - URAVAKONDA DC LINE (Part-2)	
		COD:	01-12-2018
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	0.50	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			519.57
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			2.38
Gross Block total			521.95
Average Gross Block			520.76
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	467.62
Elapsed Life as on 31.03.2020			1
Balance useful life of the asset			24
Remaining Depreciable value			440.12
Cumulative Depreciation			27.50
Depreciation			27.50
Interest on Loan			
Gross Normative Loan			363.70
Cumulative Repayment upto Previous Year			27.50
Net Loan-Opening			336.21
Addition due to Additional Capitalisation			0.00
Repayment during the year			27.50
Net Loan-Closing			308.71
Average Loan			322.46
Rate of Interest on Loan (%)			9.98%
Interest			32.18
Return on Equity			
Gross Notional Equity			155.87
Opening Equity			155.87
Average Equity			155.87
Rate of Return on Equity			15.50%
Return on Equity			24.16
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.25
O & M expenses	1 Months		0.14
Receivables	1.5 Months		10.84
Total			11.23
Interest	11.25%		1.26
Annual Transmission Charges			
Depreciation			27.50
Interest on Loan			32.18
Return on Equity			24.16
Interest on Working Capital			1.26
O & M Expenses	0.50		1.64
Total			86.74
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXXII & XXXIII			
Name of the Tr. System:	Asset-XXXII & XXXIII	URAVAKONDA-HINDUPUR 3:Q1, URAVAKONDA-HINDUPUR 3:Q2	
		COD:	23-01-2019
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	126.25	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			33198.53
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			142.68
Gross Block total			33341.21
Average Gross Block			33269.87
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	29878.68
Elapsed Life as on 31.03.2020			1
Balance useful life of the asset			24
Remaining Depreciable value			28122.03
Cumulative Depreciation			1756.65
Depreciation			1756.65
Interest on Loan			
Gross Normative Loan			23238.97
Cumulative Repayment upto Previous Year			1756.65
Net Loan-Opening			21482.32
Addition due to Additional Capitalisation			0.00
Repayment during the year			1756.65
Net Loan-Closing			19725.67
Average Loan			20604.00
Rate of Interest on Loan (%)			1.72%
Interest			354.39
Return on Equity			
Gross Notional Equity			9959.56
Opening Equity			9959.56
Average Equity			9959.56
Rate of Return on Equity			15.50%
Return on Equity			1543.73
Interest on Working Capital			
Maintenance Spares	15% of O&M		31.06
O & M expenses	1 Months		17.25
Receivables	1.5 Months		490.30
Total			538.61
Interest	11.25%		60.59
Annual Transmission Charges			
Depreciation			1756.65
Interest on Loan			354.39
Return on Equity			1543.73
Interest on Working Capital			60.59
O & M Expenses	126.25		207.05
Total			3922.41
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXXIV & XXXV			
Name of the Tr. System:	Asset-XXXIV & XXXV	SULURPET1-NELLORE42:2 SULURPET1-NELLORE42:3	
		COD:	10-11-2014
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	68.13	Voltage, kV	220kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			5086.05
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0.00
Gross Block total			5086.05
Average Gross Block			5086.05
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	4577.44
Elapsed Life as on 31.03.2020			5
Balance useful life of the asset			20
Remaining Depreciable value			3234.73
Cumulative Depreciation			1342.72
Depreciation			268.54
Interest on Loan			
Gross Normative Loan			3560.23
Cumulative Repayment upto Previous Year			1342.72
Net Loan-Opening			2217.52
Addition due to Additional Capitalisation			0.00
Repayment during the year			268.54
Net Loan-Closing			1948.97
Average Loan			2083.25
Rate of Interest on Loan (%)			9.98%
Interest			207.91
Return on Equity			
Gross Notional Equity			1525.81
Opening Equity			1525.81
Average Equity			1525.81
Rate of Return on Equity			15.50%
Return on Equity			236.50
Interest on Working Capital			
Maintenance Spares	15% of O&M		16.76
O & M expenses	1 Months		9.31
Receivables	1.5 Months		104.94
Total			131.01
Interest	11.25%		14.74
Annual Transmission Charges			
Depreciation			268.54
Interest on Loan			207.91
Return on Equity			236.50
Interest on Working Capital			14.74
O & M Expenses	68.13		111.73
Total			839.42
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXXVI & XXXVII			
Name of the Tr. System:	Asset-XXXVI & XXXVII	URAVAKONDA-BORAMPALLY 1:1, URAVAKONDA-BORAMPALLY 1:2	
		COD:	06-01-2017
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kV line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	33.58	Voltage, kV	220kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			3833.20
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			3833.20
Average Gross Block			3833.20
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	3449.88
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			22
Remaining Depreciable value			2842.70
Cumulative Depreciation			607.18
Depreciation			202.39
Interest on Loan			
Gross Normative Loan			2683.24
Cumulative Repayment upto Previous Year			607.18
Net Loan-Opening			2076.06
Addition due to Additional Capitalisation			0.00
Repayment during the year			202.39
Net Loan-Closing			1873.67
Average Loan			1974.86
Rate of Interest on Loan (%)			9.98%
Interest			197.09
Return on Equity			
Gross Notional Equity			1149.96
Opening Equity			1149.96
Average Equity			1149.96
Rate of Return on Equity			15.50%
Return on Equity			178.24
Interest on Working Capital			
Maintenance Spares	15% of O&M		8.26
O & M expenses	1 Months		4.59
Receivables	1.5 Months		80.41
Total			93.26
Interest	11.25%		10.49
Annual Transmission Charges			
Depreciation			202.39
Interest on Loan			197.09
Return on Equity			178.24
Interest on Working Capital			10.49
O & M Expenses	33.58		55.07
Total			643.29
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXXVIII & XXXIX			
Name of the Tr. System:	Asset- XXXVIII & XXXIX	URAVAKONDA-BORAMPALLY 1:3, URAVAKONDA-BORAMPALLY 1:4	
		COD:	10-07-2017
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	34.73	Voltage, kV	220kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			3554.54
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0.00
Gross Block total			3554.54
Average Gross Block			3554.54
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	3199.09
Elapsed Life as on 31.03.2020			2
Balance useful life of the asset			23
Remaining Depreciable value			2823.73
Cumulative Depreciation			375.36
Depreciation			187.68
Interest on Loan			
Gross Normative Loan			2488.18
Cumulative Repayment upto Previous Year			375.36
Net Loan-Opening			2112.82
Addition due to Additional Capitalisation			0.00
Repayment during the year			187.68
Net Loan-Closing			1925.14
Average Loan			2018.98
Rate of Interest on Loan (%)			9.98%
Interest			201.49
Return on Equity			
Gross Notional Equity			1066.36
Opening Equity			1066.36
Average Equity			1066.36
Rate of Return on Equity			15.50%
Return on Equity			165.29
Interest on Working Capital			
Maintenance Spares	15% of O&M		8.54
O & M expenses	1 Months		4.75
Receivables	1.5 Months		77.71
Total			91.00
Interest	11.25%		10.24
Annual Transmission Charges			
Depreciation			187.68
Interest on Loan			201.49
Return on Equity			165.29
Interest on Working Capital			10.24
O & M Expenses	34.73		56.96
Total			621.65
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XL			
Name of the Tr. System:	Asset-XL	SUZLON W1-VAJRAKUR:1	
		COD:	12-08-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	5.20	Voltage, kV	220kV SC
Multiplication factor	---		
			FY 2020-21
Gross Block			0.00
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			22
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.64
O & M expenses	1 Months		0.36
Receivables	1.5 Months		0.55
Total			1.54
Interest	11.25%		0.17
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			0.17
O & M Expenses	5.20		4.26
Total			4.44
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XLI			
Name of the Tr. System:	Asset-XLI	MACHERLA-RENTCHNTHALA:2	
		COD:	11-07-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	14.53	Voltage, kV	132kV SC
Multiplication factor	---		
			FY 2020-21
Gross Block			200.39
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			200.39
Average Gross Block			200.39
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	180.35
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			22
Remaining Depreciable value			148.61
Cumulative Depreciation			31.74
Depreciation			10.58
Interest on Loan			
Gross Normative Loan			140.27
Cumulative Repayment upto Previous Year			31.74
Net Loan-Opening			108.53
Addition due to Additional Capitalisation			0.00
Repayment during the year			10.58
Net Loan-Closing			97.95
Average Loan			103.24
Rate of Interest on Loan (%)			9.98%
Interest			10.30
Return on Equity			
Gross Notional Equity			60.12
Opening Equity			60.12
Average Equity			60.12
Rate of Return on Equity			15.50%
Return on Equity			9.32
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.79
O & M expenses	1 Months		0.99
Receivables	1.5 Months		5.38
Total			8.16
Interest	11.25%		0.92
Annual Transmission Charges			
Depreciation			10.58
Interest on Loan			10.30
Return on Equity			9.32
Interest on Working Capital			0.92
O & M Expenses	14.53		11.91
Total			43.03
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XLII(A)			
Name of the Tr. System:	Asset-XLII (A)	VEMAGIRI 1 - SATTENAPALLI 1 (LILO Point to Sattenapalli)	
		COD:	26-10-2015
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	107.87	Voltage, kV	400kV SC
Multiplication factor	---		
			FY 2020-21
Gross Block			8872.41
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			8872.41
Average Gross Block			8872.41
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	7985.17
Elapsed Life as on 31.03.2020			4
Balance useful life of the asset			21
Remaining Depreciable value			6111.31
Cumulative Depreciation			1873.85
Depreciation			468.46
Interest on Loan			
Gross Normative Loan			6210.69
Cumulative Repayment upto Previous Year			1873.85
Net Loan-Opening			4336.83
Addition due to Additional Capitalisation			0.00
Repayment during the year			468.46
Net Loan-Closing			3868.37
Average Loan			4102.60
Rate of Interest on Loan (%)			9.98%
Interest			409.44
Return on Equity			
Gross Notional Equity			2661.72
Opening Equity			2661.72
Average Equity			2661.72
Rate of Return on Equity			15.50%
Return on Equity			412.57
Interest on Working Capital			
Maintenance Spares	15% of O&M		13.27
O & M expenses	1 Months		7.37
Receivables	1.5 Months		177.04
Total			197.68
Interest	11.25%		22.24
Annual Transmission Charges			
Depreciation			468.46
Interest on Loan			409.44
Return on Equity			412.57
Interest on Working Capital			22.24
O & M Expenses	107.87		88.45
Total			1401.16
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XLII(B)			
Name of the Tr. System:	Asset-XLII (B)	VEMAGIRI 1 - SATTENAPALLI 1 (Vemagiri to LILO Point)	
		COD:	28-12-2005
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	25
Transmission Line length in km	136.98	Voltage, kV	400kV SC
Multiplication factor	1.00		
			FY 2020-21
Gross Block			5524.40
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			5524.40
Average Gross Block			5524.40
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	4971.96
Elapsed Life as on 31.03.2020			14
Balance useful life of the asset			11
Remaining Depreciable value			1245.29
Cumulative Depreciation			3726.68
Depreciation			113.21
Interest on Loan			
Gross Normative Loan			3867.08
Cumulative Repayment upto Previous Year			3726.68
Net Loan-Opening			140.40
Addition due to Additional Capitalisation			0.00
Repayment during the year			113.21
Net Loan-Closing			27.20
Average Loan			83.80
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			8.36
Return on Equity			
Gross Notional Equity			1657.32
Opening Equity			1657.32
Average Equity			1657.32
Rate of Return on Equity			15.50%
Return on Equity			256.88
Interest on Working Capital			
Maintenance Spares	15% of O&M		16.85
O & M expenses	1 Months		9.36
Receivables	1.5 Months		62.60
Total			88.81
Interest	11.25%		9.99
Annual Transmission Charges			
Depreciation			113.21
Interest on Loan			8.36
Return on Equity			256.88
Interest on Working Capital			9.99
O & M Expenses	136.98		112.32
Total			500.77
Norms for O&M Per Km	S/C		0.820



TRANSMISSION CORPORATION OF ANDHRA PRADESH LTD.
VIDYUT SOUDHA :: VIJAYAWADA

From
Chief Engineer,
 PS, Plg & designs,
 APTRANSCO,
 Vidyut Soudha, Gunadala,
 Vijayawada – 520004.

To
The Implementing Agency,
 Power System Operation Corporation Limited,
 B-9, 1st Floor, Qutub institutional area,
 Katwara Sarai,
 New Delhi – 110016

Lr.No.CE/Plg,PS&D/SE/Plg/EE/RA/APERC/D.No. 99 /2021, dt. 10.07.2021.

Sir,

Sub: Inclusion of APTRANSCO assets i.e., intra state lines carrying interstate power for FY 2015-16, FY2016-17 and FY2020-21 in PoC mechanism – Requested - Reg.

Ref: 1. APERC order dt. 07.07.2021 issued in O.P.No. 42 of 2020 & 47 of 2020.
 2. Certification dt. 23.01.2020 issued by SRPC
 3. Certification Dt.30.04.2020 issued by SRPC.

This is in accordance with CERC Sharing of Inter-state Transmission Charges Regulations 2010 and subsequent amendments, Section 2(1)(y), “Yearly Transmission Charge (YTC) means the Annual Transmission Charges for existing and new transmission assets of the inter-state transmission licensees, deemed ISTS licensees, owners of inter-state transmission lines connecting two states and owners of **non-ISTS lines certified by Regional Power Committees for inter-state transmission of Power**, determined by the appropriate commission under Section 62 of the Act or adopted by the Appropriate commission under section 63 of the Act or as otherwise provided in these regulations

Provided that in case of non-ISTS lines, the asset wise tariff determined by the respective state commissions or approved by the central commission based on the approved Annual Revenue Requirement of STU, shall be used”

Accordingly, APTRANSCO has filed a petition OP NO.42 of 2020 before Hon’ble APERC on 18.03.2020 for approval of transmission tariff of the intra state transmission lines carrying Inter-State power for FY 2015-16 (9Nos.) and 2016-17 (14Nos.) based on SRPC certification No. SRPC/SE-I/2020/622-39, dt.23.01.2020.

Contd...

:: 02 ::

Further , APTRANSCO has also filed another petition OP NO.47 of 2020 before Hon'ble APERC on 05.10.2020 for approval of transmission tariff of 42 Nos. intra state transmission lines carrying Inter-State power for FY 2020-21 based on SRPC certification No. No. SRPC/SE-I/2020,dt.30.04.2020.

Both the petitions for intra-state lines , but are incidental to the power flow of Inter-state were processed by Hon'ble APERC and Hon'ble APERC has issued an order on 07.07.2021 in O.P No. 42 of 2020 and OP No.47 of 2020 , copy of the order is enclosed at Annexure-I, details are as below:

S.No.	Petition No.	FY	No. of lines	YTC
1.	42 of 2020	2015-16	9	Rs.14.35 Cr
2.	42 of 2020	2016-17	14	Rs.85.53 Cr.
3.	47 of 2020	2020-21	42	Rs.295.32 Cr.

Hence, it is requested that the above lines as in the Annexure-II be immediately included in the PoC mechanism for the Q3 of FY 2021-22 so that APTRANSCO be allowed to get immediate benefit from the Q3 of FY 2021-22.

Your's faithfully,


Chief Engineer/PS, Plg & Designs
Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 004

Copy to,

1. Central Electricity Regulatory Commission, 3rd & 4th Floor, Chandra lok Building, 36-Janpath, New Delhi – 110001
2. Southern Region Power Committee (SRPC), CEA, 29, Race Course Road, Bangalore – 560009



ANNEXURE-II

The summary of the YTC determined by the Commission for the 9 Nos transmission lines for the FY 2015-16 is as given in the table below:

Sl. No.	Asset Name	Name of the Line	YTC in Lakhs
1	Asset I	CHITTOOR-RENIGUNTA:1	170.90
2	Asset II(A) & II(B)	CHITTOOR-NAGARI:2	81.97
			182.40
3	Asset III(A) & III(B)	SULURPETA-NELLORE- PG:1	44.73
			25.89
4	Asset -IV & V	KRISHNAPATNAM- NELLORE-AP:1	566.82
5		KRISHNAPATNAM- NELLORE-AP:2	
6	Asset - VI (A) & VI(B)	NELLORE-NELLORE-PG:1	12.23
			28.00
7	Asset - VII (A) & VII(B)	NELLORE-NELLORE-PG:2	12.23
			28.00
8	Asset - VIII	NELLORE-NELLORE-PG:3	65.50
9	Asset - IX (A) & IX(B)	RENIGUNTA-NAGARI:1	14.29
			182.40
YTC Total in Cr.			14.35

The summary of the YTC determined by the Commission for the 14 Nos transmission lines for the FY 2016-17 is as given in the table below:

Sl. No.	Asset Name	Name of the Line	YTC in Lakhs
1	Asset - I (A) & I (B)	SULURUPETA-NELLORE:1	46.57
			25.30
2	Asset - II	KONDAPALLI-VTPS:1	3.98
3	Asset - III	KONDAPALLI-VTPS:2	7.74
4	Asset - IV	KONDAPALLI-CHILAKALLU:1	81.84
5	Asset - V	KONDAPALLI-CHILAKALLU:2	112.31
6	Asset - VI	VTPS-CHILAKALLU:1	68.34
7	Asset - VII	VTPS-CHILAKALLU:2	221.35
8	Asset -VIII (A) & VIII (B)	VTPS-RENTACHINTALA:2	67.73
			4.11
9	Asset -IX	KURNOOL-BRAHMANKTUR:1	78.21
10	Asset - X & XI	CHITTOOR-SDSTPS:1	7674.53
11		CHITTOOR-SDSTPS:2	
12	Asset - XII	NUNNA2-VTPS-IV:1	133.52
13	Asset - XIII	GAZUWAKA1-KALAPAKKA1:1	14.83
14	Asset - XIV	GAZUWAKA1-KALAPAKKA1:2	12.63
YTC Total in Cr.			85.53

The summary of the YTC determined by the Commission for the 42 Nos transmission lines for the FY 2020-21 is as given in the table below:

Sl. No.	Asset Name	Name of the Line	YTC in Lakhs
1	A1	NUNNA2-VEMAGIRI1:T3	530.08
2	A2	GAZUWAKA2-KALPAKKA 1:T1	17.77
3	A3	GAZUWAKA2-KALPAKKA 1:T2	
4	A4	CHITTOOR42-CHITTOOR1:1	56.50
5	A5	CHITTOOR42-CHITTOOR1:2	
6	A6-A	SULURPET1-NELLORE42:1	84.81
	A6-B		19.69
7	A7	CHITTOOR1-KALIKIRI1:1	66.19
8	A8	GOOTY-PG-DHONE1:2	557.58
9	A9	GOOTY-PG-DHONE1:1	
10	A10	KONDAPALLI1-CHILLAKALLU1:1	96.15
11	A11	KONDAPALLI1-CHILLAKALLU1:2	121.65
12	A12	SRISAILAMRB1-TALLAPALLI:1	168.69
13	A13	SRISAILAMRB1-TALLAPALLI:2	
14	A14	SRISAILAMRB1-MYDUKUR:1	141.84
15	A15	SRISAILAMRB1-SOMYZULPALLI:1	90.47
16	A16-A	SRISAILAMRB1-BELKALAGUDUR:1	60.36
	A16-B		18.19
17	A17	VTS1-CHILLAKALLU1:1	83.65
18	A18-A	VTS1-CHILLAKALLU1:2	76.4
	A18-B	VTS1-CHILLAKALLU1:2	4.65
19	A19-A	VTS1-RENTACHINTHALA1:2	93.96
	A19-B		3.64
20	A20	KURNOOL1-BRAHMANKUR:1	72.47
21	A21	MACHERLA-RENTCHINTHALA:1	51.30
22	A22	CHITTOOR2-SDSTPS:Q2	6750.41
23	A23	CHITTOOR2-SDSTPS:Q1	
24	A24	KURNOOL2-JAMALAMADUGU1:Q1	2586.73
25	A25	KURNOOL2-JAMALAMADUGU1:Q2	
26	A26	HINDUJA-KVKOTA1:T2	6839.04
27	A27	HINDUJA-KVKOTA1:T1	
28	A28	JAMMALAMADUGU - URAVAKONDA	2908.98
29	A29	DC Line (Part-1)	
30	A30	TALARICHERUVU TO LILO POINT OF	86.74
31	A31	JAMMALAMADUGU - URAVAKONDA DC LINE (Part-2)	
32	A32	URVAKONDA-HINDUPUR3:Q1	3922.41
33	A33	URVAKONDA-HINDUPUR3:Q2	
34	A34	SULURPET1-NELLORE42:2	839.42
35	A35	SULURPET1-NELLORE42:3	
36	A36	URAVAKONDA-BORAMPALLI:2	643.29
37	A37	URAVAKONDA-BORAMPALLI:1	
38	A38	URAVAKONDA-BORAMPALLI:4	621.65
39	A39	URAVAKONDA-BORAMPALLI:3	
40	A40	SUZLON-W1-VAJRAKUR:1	4.44
41	A41	MACHERLA-RENTACHINTHALA:2	43.03
42	A42-A	VEMAGIRI1-SATTENAPALLI:T1	1401.46
	A42-B		500.77
YTC total in Cr. for FY2020-21			296.32

Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 004

Sl. No.



पावर सिस्टम ऑपरेशन कारपोरेशन लिमिटेड
(भारत सरकार का उपक्रम)
POWER SYSTEM OPERATION CORPORATION LIMITED
(A Government of India Enterprise)



पंजीकृत एवं केंद्रीय कार्यालय: बी-9, कुतुब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली-110016 (CIN No: U40105DL2009GOI188682)
Registered & Corporate Office: B - 9, 1st Floor, Qutab Institutional Area, Katwaria Sarai, New Delhi - 110013
Website: www.posoco.in, Tel: 011 - 26536832, 26524522, Fax: 011 - 26524525, 26536901

पोसोको/पारेषण मूल्य निर्धारण/

दिनांक: 15.07.2021

सेवा में,

Chief Engineer
PS, Plg & designs
APTRANSCO, Vidyut Soudha,
Gunadala, Vijayawada - 520004

विषय: Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses), Regulations, 2020 - Request from APTRANSCO for inclusion of intra-state lines carrying inter-state power for FY 2015 - 16, FY2016 - 17 and FY2020-21 in PoC mechanism regarding.

संदर्भ: Lr. No.CE/Plg,PS&D/SE/Plg/EE/RA/APERC/D.No. 99 /2021 dated 10.07.2021

Sir,

With reference to the above mentioned letter It is to inform that Hon'ble CERC had notified (Sharing of Inter-State Transmission Charges & Losses) Regulations 2020 vide notification dated 04th May 2020 which came into force w.e.f. 01st Nov, 2020. Relevant part of the regulations is quoted below:

Quote

"(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."

Unquote

As per SoR published by CERC for Sharing Regulations, 2020 dated 10.08.2020, tariff of any Intra-state transmission asset carrying ISTS power is to be approved by CERC. Relevant part of the SoR is quoted below:

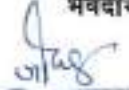
Quote

"39.3.2 Approval of tariff for intra-State system is done by SERCs. However, in circumstances where an Intra-State system is used for inter-State flow of power, its tariff is required to be approved by CERC, if such system is to be considered for recovery of transmission charges under the 2020 Sharing Regulations."

Unquote

In view of the above provisions of the Sharing Regulations, 2020, it is informed that in absence of the tariff approved by CERC, the Intra-state transmission assets as provided vide your letter dated 10.07.2021 shall not be considered for recovery of transmission charges under the Sharing Regulations, 2020.

सादर शन्यवाद

भवदीय

15.7.2021

(जी. चक्रवर्ती)

मुख्य महाप्रबंधक / रा. शा. प्रे. के.





TRANSMISSION CORPORATION OF ANDHRA PRADESH LTD.
VIDYUT SOUDHA :: VIJAYAWADA

From
Chief Engineer,
 PS, Plg & designs,
 APTRANSCO,
 Vidyut Soudha, Gunadala,
 Vijayawada – 520004.

To
The Implementing Agency,
 Power System Operation Corporation Limited,
 B-9, 1st Floor, Qutub institutional area,
 Katwara Sarai,
 New Delhi – 110016

Lr.No.CE/Plg,PS&D/SE/Plg/EE/RA/APERC/D.No. 115/2021, dt. 26.07.2021.

Sir,

Sub: Inclusion of APTRANSCO assets i.e., intra state lines carrying interstate power for FY 2015-16, FY2016-17 and FY2020-21 in PoC mechanism – Requested - Reg.

Ref: 1. Lr.No.CE/Plg,PS&D/SE/Plg/EE/RA/APERC/D.No.99/2021,dt.10.07.2021.
 2. M/s POSOCO letter dated 15.07.2021 received through e-mail.

Referring to the above correspondence, it is to bring to your notice, an order dated 14.02.2021 passed by the Hon'ble CERC in exercise of their powers under Regulation 28 of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 ('Sharing Regulations 2020'). The said order clarifies that all bills in the calendar year 2020 will be as per the 2010 Sharing Regulation and those in the calendar year 2021 will be as per the 2020 Sharing Regulations.

The relevant extracts of the said order are reproduced herein below:

"9. Thus, the bills raised in the month of November 2020 and December 2020 shall be based on the notified PoC rates for October 2020 and November 2020 respectively, determined in accordance with the 2010 Sharing Regulations.

10. Accordingly, we direct that bills in the month of November 2020 and in the month of December 2020 would be raised as per the 2010 Sharing Regulations and thereafter, from January 2021 onwards as per the 2020 Sharing Regulations, as clarified in paragraph 8 and 9 above.

11. Thus, it can be seen that there will be 12 monthly bills raised for the 12 months in the calendar year 2020, implying thereby that only one bill (first bill) is raised for each month. Similarly, in the calendar year 2021 also, 12 monthly bills will be raised for the 12 months (i.e. in the billing month of January 2021, bill for the billing period of

Contd...

:: 02 ::

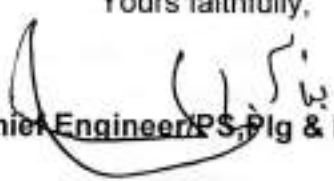
November 2020 will be raised and in the billing month of February 2021, bill for the billing period of December 2020 will be raised and so on). Thus, the DICs will be required to pay for only 12 monthly bills, one for each month in the calendar year 2020 as well as in 2021. All bills in the calendar year 2020 will be as per the 2010 Sharing Regulation and those in the calendar year 2021 will be as per the 2020 Sharing Regulations."

The aforesaid order entitles APTRANSCO to claim transmission charges in accordance with the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 ('Sharing Regulations 2010') for all bills in the calendar year until December 2020. It is clear that the claim of PoC charges sought by APTRANSCO vide letter dated 10.07.2021, is based on the order dated 07.07.2021 passed by the Ld. APERC. Such PoC charges pertain to FY 2015-17 and FY 2020-2021 prior to December 2020. Thus, as per the order dated 14.02.2021 passed by the Hon'ble CERC, the PoC charges will be determined as per the Sharing Regulation 2010.

You are requested to kindly re-consider your decision and are called upon to comply with the said order of Hon'ble CERC dated 14.02.2021.

Hence, it is once again requested to consider for immediate inclusion of assets as communicated vide reference 1st cited in the PoC mechanism for the Q3 of FY 2021-22 so that APTRANSCO be allowed to get immediate benefit from the Q3 of FY 2021-22.

Yours faithfully,


Chief Engineer, PS, Plg & Designs

Copy to:

1. Hon'ble CERC, 3rd & 4th Floor, Chandralok Building, 36-Janpath, New Delhi – 01
2. Southern Region Power Committee (SRPC), CEA, 29, Race Course Road, Bangalore – 560009



BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

PETITION NO. 25/MP/2022

REVISED MEMO OF PARTIES

In the matter of:

PETITION UNDER SECTION 79 OF THE ELECTRICITY ACT, 2003 READ WITH REGULATION 111 AND 113 OF THE CERC (CONDUCT OF BUSINESS) REGULATIONS 1999, SEEKING ISSUANCE OF APPROPRIATE DIRECTIONS TO THE RESPONDENT TO INCLUDE THE YEARLY TRANSMISSION CHARGES AS DETERMINED BY LD. APERC *VIDE* ORDER DATED 07.07.2021 IN THE PoC TRANSMISSION CHARGES FOR THE BILLING PERIOD OF FY 2015-16, 2016-17 AND 2020-2021, AS PER THE CERC (SHARING OF INTER-STATE TRANSMISSION CHARGES AND LOSSES) REGULATIONS, 2010.

In the matter of:

Transmission Corporation of Andhra Pradesh Ltd.

Through Authorised Representative
Vidyut Soudha, Gunadala,
Eluru Rd, Vijayawada,
Andhra Pradesh 520004.

..... Petitioner

VERSUS

1. Power System Operation Corporation Ltd.

Through Authorised Representative
1st Floor, Qutub Institutional Area,
Katwara Sarai, New Delhi- 110016.

2. Central Transmission Utility of India Limited (CTUIL)

First Floor, Saudamini, Plot No.2, Sector 29,
Near IFFCO Chowk Metro Station, Gurgaon-122001,
Haryana.

....Respondent(s)

22/05/23
Chief General Manager/Commercial & Legal
APTRANSCO, Vidyut Soudha,
Vijayawada-520004.

5/22/23, 4:55 PM

CERC



केन्द्रीय विद्युत विनियामक आयोग

Central Electricity Regulatory Commission



Online Help

HOME

ADMIN

PETITIONS

DEFICIENCIES

PLEADINGS

LOGOUT

WELCOME ! TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED (APTRANSCO) (EDPLG123APTRANSCO) [view profile](#) 22-May-2023 16:55:10

[Nodal Officer](#) [Advocates](#) [IA](#)

[Respondent Details](#) [Pleadings](#) [Asset Details](#) [Summary](#) [Notices](#) [ROP / Orders](#) [Print Reports](#)

FILING - RESPONDENT LIST

Petition No. : 23/MP/2022

Diary No. : 300/2021

Reference No. : 418/2021

[Add Respondent](#)[Change Respondent Order](#)

Name	Represented By	Address	Added On	Mobile	E-Mail
Power System Operation Corporation Ltd (POSOCO)	Jayantika Singh	B9 Outub Institutional Area Katwaria Sarai, New Delhi, DELHI - 110016	07/10/2021	8866478332	nidclaw@posoco.in
Central Transmission Utility (CTU)	SWAPNIL VERMA	Plot No. 2, Sector 29, Gurugram, Gurgaon, HARYANA - 122001	22/05/2023	7042398704	swapnilverma@powergrid.in

Cancel

**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION,
NEW DELHI**

PETITION NO. 25/MP/2022

IN THE MATTER OF:

PETITION UNDER SECTION 79 OF THE ELECTRICITY ACT, 2003 READ WITH REGULATION 111 AND 113 OF THE CERC (CONDUCT OF BUSINESS) REGULATIONS 1999, SEEKING ISSUANCE OF APPROPRIATE DIRECTIONS TO THE RESPONDENT TO INCLUDE THE YEARLY TRANSMISSION CHARGES AS DETERMINED BY LD. APERC *VIDE* ORDER DATED 07.07.2021 IN THE PoC TRANSMISSION CHARGES FOR THE BILLING PERIOD OF FY 2015-16, 2016-17 AND 2020-2021, AS PER THE CERC (SHARING OF INTER-STATE TRANSMISSION CHARGES AND LOSSES) REGULATIONS, 2010.

AND IN THE MATTER OF:

Transmission Corporation of Andhra Pradesh Ltd. ... PETITIONER

VERSUS

Power System Operation Corporation Ltd. & Anr. RESPONDENTS

INDEX

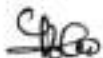
NDOH: 26.07.2023

S.NO.	PARTICULARS	PAGE NO.
1.	Additional Affidavit on behalf of the Petitioner in compliance with the R.O.P. dated 15.05.2023 passed by this Hon'ble Commission in the captioned matter.	1-7
2.	Exhibit P/1 Colly True copies of the Petitioner's letters dated 09.12.2016 and 16.12.2016 addressed to SRPC	8-31
3.	Exhibit P/2 True copy of the SRPC letter dated 30.12.2016	32
4.	Exhibit P/3 True copy of the response letter issued by the Petitioner on 09.01.2017	33-34
5.	Exhibit P/4 True copy of the extract of the Minutes of the 33 rd Meeting of Commercial Sub-Committee of SRPC held on 31.01.2017	35-38



6.	Exhibit P/5 True copy of the Petitioner's letter dated 03.02.2017 sent to SRPC	39-41
7.	Exhibit P/6 True copy of the Minutes of the 31 st SRPC held on 25.02.2017	42-47
8.	Exhibit P/7 True copy of the SRPC certification dated 19.06.2017 for FY 2017-18	48-49
9.	Exhibit P/8 True copy of the Petitioner's letter dated 25.04.2019 to SRPC	50
10.	Exhibit P/9 True copy of the SRPC certificate dated 23.01.2020 for FY 2014-17	51-55
11.	Exhibit P/10 True copy of the SRPC letter dated 29.05.2023	56-57
12.	Exhibit P/11 True copy of the Petition bearing O.P. No. 42/2020 filed by the Petitioner before APERC	58-73
13.	Exhibit P/12 True copy of the order dated 07.07.2021 passed by APERC	74-151
14.	Exhibit P/13 True copy of the letter dated 10.07.2021 sent by the Petitioner to Respondent No.1	152-155
15.	Exhibit P/14 Location of the energy/ inter-face meters in the transmission lines claimed as ISTS.	156-159

THROUGH


PETITIONER
 Chief General Manager/Commercial & Legal
 APTRANSCO, Vidyut Soudha,
 Vijayawada-520 004.

SIDHANT KUMAR/ MANYAA CHANDOK

ADVOCATE FOR THE PETITIONERS

A-75, LOWER GROUND FLOOR, DEFENCE COLONY

NEW DELHI-110024

MOBILE: +91-9899675905

E-MAIL: manyaa@sidhantkumar.net

NEW DELHI

DATED: 05.06.2023



**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION,
NEW DELHI**

PETITION NO. 25/MP/2022

IN THE MATTER OF:

PETITION UNDER SECTION 79 OF THE ELECTRICITY ACT, 2003 READ WITH REGULATION 111 AND 113 OF THE CERC (CONDUCT OF BUSINESS) REGULATIONS 1999, SEEKING ISSUANCE OF APPROPRIATE DIRECTIONS TO THE RESPONDENT TO INCLUDE THE YEARLY TRANSMISSION CHARGES AS DETERMINED BY LD. APERC VIDE ORDER DATED 07.07.2021 IN THE PoC TRANSMISSION CHARGES FOR THE BILLING PERIOD OF FY 2015-16, 2016-17 AND 2020-2021, AS PER THE CERC (SHARING OF INTER-STATE TRANSMISSION CHARGES AND LOSSES) REGULATIONS, 2010.

AND IN THE MATTER OF:

Transmission Corporation of Andhra Pradesh Ltd. ... PETITIONER

VERSUS

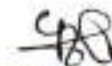
Power System Operation Corporation Ltd.& Anr. RESPONDENTS

ADDITIONAL AFFIDAVIT ON BEHALF OF THE PETITIONER IN COMPLIANCE WITH THE R.O.P. DATED 15.05.2023 PASSED BY THIS HON'BLE COMMISSION.

I, Yalla Appa Rao, S/o Y. Tatayya, aged about 58 years, presently working as Chief General Manager/Commercial & Legal with the Petitioner, APTRANSCO having office at Vidyut Soudha, Gunadala, Vijayawada, Andhra Pradesh, do hereby solemnly affirm and declare as under:

1. That I am the authorized representative on behalf of the Petitioner. I am fully conversant with the facts and circumstances of the captioned matter, hence competent to swear the present Affidavit.
2. That the Petition seeks issuance of directions to the Respondent, Power System Operation Corporation Ltd. (now 'Grid Controller of India Ltd.') for inclusion of the Yearly Transmission Charges ('YTC') in respect of intra-state




 Chief General Manager/Commercial & Legal
 APTRANSCO, Vidyut Soudha,
 Vijayawada-520 004.



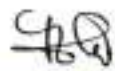
transmission lines ('**Subject Non-ISTS lines**') owned by the Petitioner, in the Point of Connection common pool ('**PoC**').

3. That these YTC charges concern two billing periods (i) period prior to 01.11.2020; (ii) period after 01.11.2020 till 31.12.2020. Notably, these billing periods are squarely covered by the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 ('**Sharing Regulations 2010**').
4. That the matter was admitted by this Commission on 15.07.2022. It was subsequently listed on 15.05.2023. During the hearing, the Commission directed the Petitioner to file an additional affidavit stating:
 - (a) Reasons for approaching Respondent in 2021 for YTC claims concerning the period 2015-17;
 - (b) The location of ISTS interface meters in the transmission lines claimed as ISTS.
5. That this Affidavit is being filed in compliance with the aforesaid directions passed by this Commission.

A. Reasons for approaching Respondent in 2021 for claims concerning the period 2015-17

6. That on 06.04.2015, the Third Amendment to the Sharing Regulations 2010 came into effect. By this amendment, YTC charges for non-ISTS transmission lines carrying interstate power were included in the common PoC pool, subject to satisfaction of prescribed pre-requisites. This amendment was implemented with prospective effect. Plainly, the Petitioner is entitled to the benefit of this amendment from April 2015 onwards.




 Chief General Manager/Commercial & Legal
 APTRANSCO, Vidyut Soudha,
 Vijayawada-520 004.



7. That the procedure for inclusion of these YTC charges for non-ISTS lines under the Sharing Regulations 2010 is below:

- a. Certification of non-ISTS lines as Natural/ Deemed Inter-State Transmission System by the appropriate Regional Power Committee ('RPC');
- b. Determination of YTC charges/ tariff by the appropriate State Commission for such non-ISTS lines;
- c. Inclusion of such determined YTC charges / tariff in the PoC mechanism formulated by the Implementing Agency *i.e.* the Respondent;
- d. Recovery of YTC charges by the transmission licensee.

8. That accordingly, by letter dated 09.12.2016, the Petitioner requested the Southern Regional Power Committee ('SRPC') to identify and certify the non-ISTS/ intra-state lines carrying inter-state power, for the purpose inclusion in the PoC mechanism. This request was reiterated by the Petitioner by letter dated 16.12.2016.

True copies of the Petitioner's letters dated 09.12.2016 and 16.12.2016 addressed to SRPC are marked herewith as **Exhibit P/1 Colly**.

9. That for the purpose of issuing the certification, the respective RPCs were required to finalise the methodology to identify non-ISTS lines having more than 50% utilization for carrying inter-state power transmission. This methodology for the southern region was deliberated on various occasions.

10. That SRPC by letter dated 30.12.2016 informed the Petitioner that this methodology for issuing certifications, will be finalised by the Commercial Sub-Committee of SRPC at its next meeting. In response, the Petitioner reiterated its request for timely certification *vide* letter dated 09.01.2017.




 Chief General Manager/Commercial & Legal
 APTRANSCO, Vidut Soudha,
 Vijayawada-520 004.



True copy of the SRPC letter dated 30.12.2016 is marked herewith as Exhibit P/2.

True copy of the response letter issued by the Petitioner on 09.01.2017 is marked herewith as Exhibit P/3.

11. That the methodology was finalised and recommended for approval during the 33rd Meeting of Commercial Sub-Committee of SRPC held on 31.01.2017. Thereafter, the Petitioner, by letter dated 03.02.2017, again requested SRPC to expedite the approval of this methodology and consequently, grant certification of the non-ISTS lines owned by the Petitioner.

True copy of the extract of the Minutes of the 33rd Meeting of Commercial Sub-Committee of SRPC held on 31.01.2017 is marked herewith as Exhibit P/4.

True copy of the Petitioner's letter dated 03.02.2017 sent to SRPC is marked herewith as Exhibit P/5.

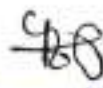
12. That this methodology was approved by SRPC on 25.02.2017. Thereafter, SRPC furnished the appropriate certification for the non-ISTS lines of the Petitioner on 19.06.2017. However, this was granted only for the FY 2017-18.

True copy of the Minutes of the 31st SRPC held on 25.02.2017 is marked herewith as Exhibit P/6.

True copy of the SRPC certification dated 19.06.2017 for FY 2017-18 is annexed herewith as Exhibit P/7.

13. That on the basis of this certification, the Petitioner approached the Andhra Pradesh Electricity Regulatory Commission ('**State Commission**') for determination of YTC charges on 14.07.2017. The State Commission




 Chief General Manager/Commercial & Legal
 APTRANSCO, Vidyut Soudha,
 Vijayawada-520 004.

determined the YTC charges for FY 2017-18 by order dated 06.10.2018 and permitted recovery of such charges from the common PoC pool.

14. That accordingly, by letter dated 19.01.2018, the Petitioner requested the Respondent to include the YTC charges for FY 2017-18 in the PoC mechanism.

15. That since the certification issued by SRPC on 19.06.2017 was limited to the FY 2017-18, on 25.04.2019, the Petitioner requested SRPC to identify and certify the non-ISTS lines having more than 50% utilization for carrying inter-state power transmission for the previous years i.e. FY 2014-17.

True copy of the Petitioner's letter dated 25.04.2019 to SRPC is marked herewith as **Exhibit P/8**.

16. That however, the certificate for FY 2014-17 came to be issued by SRPC on 23.01.2020, after a delay of more than 9 months. By this certificate, the Subject Non-ISTS Lines were certified by SRPC to be deemed ISTS, utilized for carrying inter-state power.

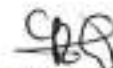
True copy of the SRPC certificate dated 23.01.2020 for FY 2014-17 is marked herewith as **Exhibit P/9**.

17. That the aforesaid delay is also admitted by SRPC *vide* its letter dated 29.05.2023.

True copy of the SRPC letter dated 29.05.2023 is marked herewith as **Exhibit P/10**.

18. That thereafter on 12.03.2020, the Petitioner forth with filed the Petition bearing O.P.No. 42/2020 before the State Commission for determination of the YTC charges in respect of these Subject Non-ISTS Lines, for the FY 2015-17.




Chief General Manager/Commercial & Legal
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.



True copy of the Petition bearing O.P. No. 42/2020 filed by the Petitioner before APERC is marked herewith as Exhibit P/11.

19. That the State Commission by order dated 07.07.2021, determined the YTC charges for these Subject Non-ISTS Lines and permitted recovery of such charges from the PoC pool. Immediately thereafter on 10.07.2021, the Petitioner requested the Respondent to include these YTC charges in the PoC pool.

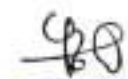
True copy of the order dated 07.07.2021 passed by APERC is marked herewith as Exhibit P/12.

True copy of the letter dated 10.07.2021 sent by the Petitioner to Respondent No.1 is marked herewith as Exhibit P/13.

20. That clearly, the reason for approaching the Respondent in 2021 in respect of the FY 2015-17 is on account of factors beyond the control of the Petitioner. Notably, since 2016, the Petitioner has been requesting SRPC to identify and certify the non-ISTS carrying inter-state power, to avail the benefit of the Sharing Regulations 2010. Despite repeated requests and reminders of the Petitioner, there was substantial delay in finalizing the methodology for identifying such non-ISTS carrying inter-state power. This led to a consequential delay in issuance of the requisite certification by SRPC. The delay is also on account of the pendency of the Petition seeking determination of YTC charges for more than 15 months before the State Commission.

21. That clearly, the Petitioner has promptly approached SRPC, the State Commission and the Respondent, without any delay. In any event, there is no time line stipulated under the Sharing Regulations 2010 to approach the




 Chief General Manager/Commercial & Legal
 APTRANSCO, Vidyal Soudha,
 Vijayawada-520 004.



Respondent for inclusion/ recovery of YTC charges as per the PoC mechanism.

22. That the Petitioner having approached the Respondent immediately upon receiving the SRPC certification and consequent determination by the State Commission, is entitled to the benefits accrued to it under the Sharing Regulations 2010.

B. The Location of Energy meters in the transmission lines claimed as ISTS.

23. The location of the energy / interface meters of the non-ISTS lines is annexed as Exhibit P/14.

24. That the exhibits filed along with this Affidavit are the true copies of their respective originals. The present Affidavit is *bonafide* and in the interest of justice. No material facts have been concealed by the Petitioner.

DEPONENT

[Signature]
Chief General Manager, APTRANSCO, Vidyut Soudha,
Vijayawada-520004

VERIFICATION

I, the deponent above named do hereby verify on this the 5th day of June, 2023 that the contents of this affidavit are true and correct to my personal knowledge. No part of this Affidavit is false and nothing material has been concealed therefrom.

DEPONENT

[Signature]
Chief General Manager/Commercial & Legal
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.



G.S.P.R. 5/6/2023
G. SIVA PRASADA RAJU
Advocate & Notary
Regd.No: 5758
Vanapalavari St., Mutyalampadu,
VIJAYAWADA-520 011, A.P.

[Signature]

EXHIBIT P/1 COLLY



TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

From

Chief Engineer/SLDC
APTRANSCO
Vidyut Soudha
Khairatabad
Hyderabad - 500 082.

To

Member-Secretary
Southern Regional Power Committee (SRPC)
Central Electricity Authority
29, Race Course Cross Road
Bangalore-560 009
Tel: 080-22259343
Fax: 080-22352616

Letter No. CE(SLDC)/SE(SLDC)/F.POC/D.No. 594 /2016, dated: 09.12.2016.

Sir,

Sub: APTRANSCO - SLDC - Request for certification of intra-state lines of APTRANSCO with incidental flows for inter-state power transfers as Interstate Transmission System (ISTS) lines.

Ref: (1) Letter No. CE/SLDC/SE/SLDC/F.POC/D.No.634/16, dated: 26.10.2016.
(2) Letter No. SRPC/SE-1/4(Dev)/2016/7296-97, dated: 31.10.2016.
(3) Letter No. CE/SLDC/SE/SLDC/F.POC/D.No.519/16, dated: 23.11.2016.
(4) Letter No. SRPC/SE-1/4(dev)/2016, dated: 23.11.2016

As per the Central Electricity Regulatory Commission (CERC) (Sharing of Interstate Transmission Charges and Losses Regulations, 2010 or Sharing Regulations), it must be noted that State Transmission Utility (STU) lines used for carrying Inter-State power need to be certified by the Regional Power Committee (RPC) in order to be considered for inclusion in PoC charges.

It must be also noted that Section 2(36) of the Electricity Act, 2003 defines the ISTS as under:

"Inter-State transmission system" includes-

(ii) The conveyance of electricity across the territory of any intervening State as well as conveyance within the State which is incidental to such inter-State transmission of electricity;

Further, the Intra-State lines used for carrying Inter-State power can be considered for inclusion in the PoC charges only if it is certified by RPC as per Clause 2.1.3 of Annexure-I CERC (Sharing of Inter-State Transmission Charges and Losses Regulations, 2010) as amended in CERC (Sharing of Inter-State Transmission Charges and Losses) (Third Amendment) Regulations 2015, extracted as under,

"Certification of non-ISTS lines carrying inter-State power, which were not approved by the RPCs on the date of notification of the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2009, shall be done on the basis of load flow studies. For this purpose, STU shall put up proposal to the respective RPC Secretariat for approval. RPC Secretariat, in consultation with RLDC, using Web Net Software would examine

the proposal. The results of the load flow studies and participation factor indicating flow of Inter State power on these lines shall be used to compute the percentage of usage of these lines as inter State transmission. The software in the considered scenario will give percentage of usage of these lines by home State and other than home State. For testing the usage, tariff of similar ISTS line may be used. The tariff of the line will also be allocated by software to the home State and other than home State. Based on percentage usage of ISTS in base case, RPC will approve whether the particular State line is being used as ISTS or not. Concerned STU will submit asset-wise tariff. If asset wise tariff is not available, STU will file petition before the Commission for approval of tariff of such lines. The tariff in respect of these lines shall be computed based on Approved ARR and it shall be allocated to lines of different voltage levels and configurations on the basis of methodology which is being done for ISTS lines."

In line with the stated regulations, we have identified the Intra-State lines that carry inter-state power and are submitting the same for approval as ISTS lines. The intra-state lines have been identified as ISTS lines based on power flow studies carried out on the WebNet Software. The assumptions taken while doing the power flow studies on WebNet software for Q3 FY16-17 are given in Annexure – I.

Only the transmission lines that have more than 10% utilization by other states have been requested for approval as ISTS lines. The total list of transmission lines of the STU along with the utilization by home state (Andhra Pradesh) and other states has been enclosed in the Annexure – II. SRPC may consider a lower utilization as cutoff for classification of the lines as ISTS line. (The details of results of power flow studies and PSS/E file is sent through mail).

The list of lines with more than 10% utilization by other states is as below:

Sr No	Line	Voltage kV	% Utilization by Andhra Pradesh	% Utilization by other States	Monthly Cost (Lakhs)
1	CHITTOOR-SDSTPS:1	400	16%	84%	302.53
2	CHITTOOR-SDSTPS:2	400	16%	84%	302.53
3	GAZUWAKA1-KALPAKKA1:1	400	5%	95%	3.16
4	GAZUWAKA1-KALPAKKA1:2	400	5%	95%	3.16
5	JAMALAMADUGU-URAVAKONDA:1	400	33%	67%	118.32
6	JAMALAMADUGU-URAVAKONDA:2	400	33%	67%	118.32
7	KALPAKKA1-HINDUJA:1	400	66%	34%	6.80
8	KALPAKKA1-HINDUJA:2	400	66%	34%	6.80
9	KALPAKKA1-SIMHADRI:1	400	69%	31%	3.47
10	KALPAKKA1-SIMHADRI:2	400	69%	31%	3.47
11	KALPAKKA1-SIMHADRI:3	400	69%	31%	3.47
12	KALPAKKA1-SIMHADRI:4	400	69%	31%	3.47
13	KALPAKKA1-VEMAGIRI1:1	400	64%	36%	155.52
14	KALPAKKA1-VEMAGIRI1:2	400	64%	36%	155.52
15	NLR-AP-SDSTPS:1	400	63%	37%	58.82
16	NLR-AP-SDSTPS:2	400	63%	37%	58.82
17	NUNNA2-STNPLI1:1	400	35%	65%	142.12

Sr No	Line	Voltage kV	% Utilization by Andhra Pradesh	% Utilization by other States	Monthly Cost (Lakhs)
18	NUNNA2-VEMAGIRI:1	400	37%	63%	183.89
19	NUNNA2-VTS-IV:1	400	17%	83%	17.38
20	SIMHADRI-SMHDRI-2:@1	400	75%	25%	1.29
21	VEMAGIRI1-GMR1:1	400	58%	42%	1.64
22	VEMAGIRI1-GMR1:2	400	58%	42%	1.64
23	VEMAGIRI1-STNPLLI:1	400	43%	57%	316.48
24	VTS-IV-NLR-AP:1	400	35%	65%	17.38
25	VTS-IV-STNPLLI:1	400	46%	54%	61.49
26	VTS-IV-STNPLLI:2	400	46%	54%	61.49
27	KURNOOL1-JAMALAMADUGU:1 *	400	33%	67%	160.39
28	KURNOOL1-JAMALAMADUGU:2 *	400	33%	67%	160.39
29	A.PCADES-KURNOOL:1	220	63%	37%	5.64
30	A.PCADES-KURNOOL:2	220	63%	37%	5.64
31	ANATHPUR-TIMMPR:1	220	83%	17%	18.16
32	ANATHPUR-TIMMPR:2	220	83%	17%	18.16
33	BHEMAOLU-PALL:1	220	71%	29%	11.49
34	BHEMAOLU-PALL:2	220	71%	29%	11.49
35	BHEMAOLU-VIJESM-I:1	220	75%	25%	24.83
36	BOMMUR-LOWRERU:1	220	67%	33%	49.76
37	BOMMUR-PEDAPRAM:1	220	89%	11%	19.20
38	BOMMUR-VEMAGIRI:1	220	74%	26%	1.41
39	BOMMUR-VEMAGIRI:2	220	74%	26%	1.41
40	BOMMUR-VEMAGIRI:3	220	74%	26%	7.25
41	BOMMUR-VIJESM-I:1	220	75%	25%	4.99
42	BOMMUR-VIJHE-II:2	220	73%	27%	4.99
43	BOYRELLI-TADPATRI:1	220	88%	12%	12.46
44	CHITTOOR4-CHITTOOR:1	220	28%	72%	6.32
45	CHITTOOR4-CHITTOOR:2	220	28%	72%	6.32
46	CHITTOOR4-NGRI:1	220	85%	15%	41.90
47	CHITTOOR4-RENGUNTA:2	220	83%	17%	31.36
48	CHITTOOR-KALIKIRI:1	220	22%	78%	28.22
49	CHNKMPY-KALIKIRI:1	220	61%	39%	36.84
50	CHNKMPY-MUDDANUR:1	220	83%	17%	21.16
51	CHNKMPY-MUDDANUR:2	220	83%	17%	21.16
52	CHNKMPY-MUDDANUR:3	220	82%	18%	22.34
53	CHNKMPY-MUDDANUR:4	220	82%	18%	22.34
54	CHNKMPY-RAJAMPET:1	220	82%	18%	24.57
55	CHNKMPY-RENGUNTA:1	220	77%	23%	56.86
56	CUDDAPAH-CHNKMPY:1	220	89%	11%	6.21

Sr No	Line	Voltage kV	% Utilization by Andhra Pradesh	% Utilization by other States	Monthly Cost (Lakhs)
57	CUDDAPAH-MYDUKUR:1	220	75%	25%	13.74
58	DONKARAI-LOWRERU:1	220	67%	33%	20.51
59	DONKARAI-UPPRERU:1	220	67%	33%	12.36
60	GAZUWAKA-GANGAVRAM:2	220	83%	17%	3.49
61	GAZUWAKA-GAZUWAKA-PG:1	220	83%	17%	5.24
62	GAZUWAKA-PENURTHI:1	220	83%	17%	18.55
63	GAZUWAKA-PG-GANGAVRAM:2	220	84%	16%	4.36
64	GAZUWAKA-PG-KAKINADA:1	220	71%	29%	79.00
65	GAZUWAKA-PG-KALPAKKA:1	220	79%	21%	1.37
66	GAZUWAKA-PG-KALPAKKA:2	220	79%	21%	1.37
67	GAZUWAKA-PG-PARWADA:1	220	70%	30%	2.71
68	GAZUWAKA-PG-PENURTHI:1	220	83%	17%	11.93
69	GAZUWAKA-PG-PENURTHI:2	220	83%	17%	11.93
70	GOOTY-PG-ANATHPUR:1	220	66%	34%	25.93
71	GOOTY-PG-BHOGASRAM:1	220	40%	60%	18.94
72	GOOTY-PG-BOYRELLI:1	220	84%	16%	16.01
73	GOOTY-PG-DHONE:1 *	220	67%	33%	33.53
74	GOOTY-PG-DHONE:2 *	220	67%	33%	33.53
75	GOOTY-PG-GTY-RLY:2	220	54%	46%	1.55
76	GOOTY-PG-SHAPURAM:1	220	70%	30%	54.03
77	GTY-AP2-GOOTY-PG:1	220	54%	46%	1.88
78	GTY-AP2-GTY-RLY:2	220	54%	46%	1.54
79	GTY-AP2-RGLPDU:1	220	36%	64%	25.04
80	GUDIVADA-BHEMARAM:1	220	57%	43%	21.94
81	GUDIVADA-BHEMARAM:2	220	57%	43%	21.94
82	GUNADALA-NUNNA:1	220	53%	47%	2.69
83	HINDUPUR-PULVEULA:1	220	90%	10%	46.70
84	HINDUPUR-PULVEULA:2	220	90%	10%	46.70
85	HINDUPUR-SHAPURAM:1	220	83%	17%	13.29
86	HINDUPUR-SHAPURAM:2	220	83%	17%	13.29
87	JEGRUADU-NIDDAOLU:1	220	86%	14%	10.82
88	KALPAKKA-BRANDIX:1	220	84%	16%	8.72
89	KALPAKKA-BRANDIX:2	220	84%	16%	8.72
90	KALPAKKA-DAIYARM:1	220	83%	17%	19.16
91	KALPAKKA-DAIYARM:2	220	83%	17%	19.16
92	KONAPALLY-CHILALLU:1	220	7%	93%	22.05
93	KONAPALLY-CHILALLU:2	220	7%	93%	22.05
94	KONAPALLY-KONAPGS:1	220	44%	56%	0.30
95	KONAPALLY-KONAPGS:2	220	44%	56%	0.30

Sr No	Line	Voltage kV	% Utilization by Andhra Pradesh	% Utilization by other States	Monthly Cost (Lakhs)
96	KONAPPLY-VTPS:1	220	22%	78%	2.40
97	KONAPPLY-VTPS:2	220	22%	78%	2.40
98	KURNOOL-BKOTKUR:1	220	26%	74%	10.12
99	MUDDANUR-TIMMPR:1	220	80%	20%	15.56
100	MUDDANUR-TIMMPR:2	220	80%	20%	15.56
101	NARARETA-STNPLI:1	220	61%	39%	17.32
102	NARARETA-STNPLI:2	220	61%	39%	17.32
103	NELLORE-NLR42:1	220	80%	20%	17.21
104	NELLORE-NLR42:2	220	80%	20%	17.21
105	NELLORE-NLR42:3	220	80%	20%	13.53
106	NELLORE-ONGOLE:1	220	51%	49%	55.78
107	NELLORE-PODILI:1	220	51%	49%	61.41
108	NELLORE-PODILI:2	220	51%	49%	61.41
109	NIDDAOLU-PALL:1	220	74%	26%	11.49
110	NIDDAOLU-PALL:2	220	74%	26%	11.49
111	NLR42-RCHGNRI:1	220	49%	51%	32.50
112	NLR42-RCHGNRI:2	220	49%	51%	32.50
113	NLR42-SBQ:1	220	75%	25%	8.05
114	NLR42-SBQ:2	220	75%	25%	8.05
115	NUNNA-GUDIVADA:1	220	84%	16%	37.12
116	NUNNA-GUDIVADA:2	220	84%	16%	37.12
117	ONGOLE-PODILI:1	220	81%	19%	13.62
118	ONGOLE-PODILI:2	220	81%	19%	13.62
119	PALL-PATT:1	220	88%	12%	11.08
120	PALL-PATT:2	220	88%	12%	11.08
121	PEDAPRAM-ANRAKU:1	220	78%	22%	52.16
122	PEDAPRAM-BSES:1	220	76%	24%	0.92
123	PEDAPRAM-BSES:2	220	76%	24%	0.92
124	PEDAPRAM-GMRBORGE:1	220	76%	24%	10.45
125	PEDAPRAM-GMRBORGE:2	220	76%	24%	10.45
126	PENURTHI-DAIYARM:1	220	81%	19%	5.48
127	PENURTHI-DAIYARM:2	220	81%	19%	5.48
128	PENURTHI-UPPRERU:1	220	70%	30%	72.77
129	PODILI-MARKAPRAM:1	220	52%	48%	31.41
130	PODILI-NARARETA:1	220	56%	44%	39.65
131	PODILI-PRCHUR:1	220	56%	44%	28.81
132	PODILI-PRCHUR:2	220	56%	44%	28.81
133	PRCHUR-STNPLI:1	220	65%	35%	46.48
134	PRCHUR-STNPLI:2	220	65%	35%	46.48

Sr No	Line	Voltage kV	% Utilization by Andhra Pradesh	% Utilization by other States	Monthly Cost (Lakhs)
135	RAJAMPET-KODURU:1	220	78%	22%	16.71
136	RENGUNTA-KODURU:1	220	76%	24%	25.86
137	RENGUNTA-NGRI:1	220	52%	48%	22.04
138	RENGUNTA-RCHGNRI:1	220	44%	56%	6.68
139	RENGUNTA-RCHGNRI:2	220	44%	56%	6.68
140	RGLPDU-SUZLON-W21:1	220	33%	67%	0.37
141	RGLPDU-SUZLON-W21:2	220	33%	67%	0.37
142	SOMYALLI-BELKALAGDUR:2	220	58%	42%	16.57
143	SOMYALLI-DHONE:2	220	38%	62%	15.77
144	SOMYALLI-DHONE:3	220	38%	62%	15.77
145	SOMYALLI-KURNOOL:1	220	64%	36%	8.10
146	SOMYALLI-KURNOOL:2	220	64%	36%	8.10
147	SRIAILAM-BELKALAGDUR:1	220	62%	38%	33.61
148	SRIAILAM-MARKAPRAM:1	220	90%	10%	32.35
149	SRIAILAM-MYDUKUR:1	220	45%	55%	75.07
150	SRIAILAM-PODILI:1	220	85%	15%	51.34
151	SRIAILAM-SOMYALLI:1	220	59%	41%	46.26
152	SRIAILAM-TALAPLLI:1	220	35%	65%	36.49
153	SRIAILAM-TALAPLLI:2	220	35%	65%	36.49
154	SajjlonPS-VAJR:1	220	33%	67%	2.27
155	SULURETA-NLR42:1	220	13%	87%	25.16
156	SULURETA-NLR42:2	220	13%	87%	37.45
157	SULURETA-NLR42:3	220	13%	87%	25.16
158	TADKONDA-ONGOLE:1	220	69%	31%	41.55
159	TADKONDA-VTPS:1	220	79%	21%	11.17
160	TADKONDA-VTPS:2	220	79%	21%	11.17
161	TALAPLLI-RENACALA:2	220	74%	26%	7.37
162	TALAPLLI-VTPS:1	220	25%	75%	50.69
163	TALAPLLI-VTPS:2	220	25%	75%	54.62
164	TALAPLLI-VTPS:3	220	25%	75%	50.69
165	TIMMPR-KNDAPRM:1	220	86%	14%	3.55
166	TIMMPR-KNDAPRM:2	220	86%	14%	3.55
167	URVAKONDA-VAJR:1	220	33%	67%	5.91
168	URVAKONDA-VAJR:2	220	33%	67%	5.91
169	VEMAGIRI-BHEMARAM:1	220	65%	35%	23.12
170	VEMAGIRI-BHEMARAM:2	220	65%	35%	23.12
171	VIJHE-II-K.V.KOTA:1	220	73%	27%	35.18
172	VIJHE-II-VEMAGIRI:1	220	75%	25%	7.42
173	VTPS-CHILALLU:1	220	7%	93%	25.04

Sr No	Line	Voltage kV	% Utilization by Andhra Pradesh	% Utilization by other States	Monthly Cost (Lakhs)
174	VTPS-CHILALLU:2	220	7%	93%	25.04
175	VTPS-NARARETA:1	220	79%	21%	28.69
176	VTPS-PODILI:1	220	67%	33%	64.16
177	VTPS-RENACALA:2	220	32%	68%	48.66
178	ADNI-ALUR:1	132	78%	22%	5.72
179	ADNI-YEMN:1	132	76%	24%	8.84
180	ADNI-YEMN:2	132	76%	24%	8.84
181	ALIP-TRML:1	132	87%	13%	2.59
182	APC-GDRK:1	132	88%	12%	10.44
183	APC-KNL:1	132	87%	13%	5.64
184	APC-KNL:2	132	87%	13%	5.64
185	APC-NANDIK:1	132	60%	40%	10.21
186	APC-YEMN:1	132	85%	15%	10.99
187	ATKR-NANDIK:1	132	64%	36%	14.64
188	ATKR-SUNPTA:1	132	70%	30%	15.51
189	ATMK-UDAY:1	132	87%	13%	16.46
190	ATP-NGPM-W:1	132	84%	16%	9.55
191	BDWL-ATMK:1	132	68%	32%	26.17
192	BHMDVM-KPORT:1	132	84%	16%	3.63
193	BHMDVM-NIDRLY:1	132	84%	16%	4.07
194	BKKT1-BKKT:1	132	74%	26%	3.60
195	BMD-KNML:1	132	73%	27%	14.66
196	BMD-NDV-1:1	132	79%	21%	16.74
197	BMD-PEDA:1	132	78%	22%	10.75
198	BPT-PRCH:1	132	78%	22%	10.75
199	BRANDI-PTPRM:1	132	82%	18%	26.58
200	CDP-NALIN:1	132	89%	11%	15.32
201	CDP-NALIN:2	132	89%	11%	14.28
202	CDP-RTSSK:1	132	78%	22%	3.93
203	CGRI-ALIP:1	132	87%	13%	2.59
204	CGRI-RCGNRI:1	132	76%	24%	17.16
205	CHEN-MANUBD:1	132	82%	18%	11.10
206	CHPT-NALLAP:1	132	86%	14%	10.37
207	CHPT-NRSPT:1	132	82%	18%	5.33
208	CHPT-NRSPT:2	132	82%	18%	5.33
209	CHPT-VNIK:1	132	84%	16%	17.83
210	CNP-MULAVA:1	132	71%	29%	3.00
211	COMP-SMHC:1	132	73%	27%	3.30
212	CTR-IRALA:1	132	84%	16%	8.39

Sr No	Line	Voltage kV	% Utilization by Andhra Pradesh	% Utilization by other States	Monthly Cost (Lakhs)
213	DARSI-PODILJ:1	132	89%	11%	9.98
214	DHON-RACHER:1	132	77%	23%	6.70
215	ELUR-PEDA:1	132	76%	24%	9.66
216	GDL-ATNGR:1	132	79%	21%	1.06
217	GDL-GANGUR:1	132	78%	22%	5.78
218	GDR-MANUBO:1	132	67%	33%	8.30
219	GDR-MANUBO:2	132	67%	33%	6.42
220	GDR-MNKR:1	132	82%	18%	9.09
221	GDR-NDPTA:1	132	57%	43%	10.43
222	GRMKD-SMBPAL:1	132	68%	32%	12.98
223	GRWN-RNG:1	132	88%	12%	2.56
224	GTY-NGPM-W:1	132	78%	22%	9.55
225	GTY-PTKD:1	132	81%	19%	13.89
226	GTY-RACHER:1	132	82%	18%	18.37
227	GVPRT-MALK:1	132	30%	70%	2.91
228	GZK-1-BRAND:1	132	68%	32%	2.00
229	GZK-1-PRWD:1	132	69%	31%	2.00
230	GZK-GZK-1:1	132	47%	53%	0.35
231	IRALA-SOMALA:1	132	62%	38%	10.11
232	KDP-NZVD:1	132	84%	16%	16.81
233	KLH-RCGNRI:1	132	74%	26%	9.62
234	KLH-RNG:1	132	83%	17%	8.92
235	KLH-SLP:1	132	77%	23%	11.20
236	KLK-GRMKD:1	132	70%	30%	9.48
237	KLK-MDPL:1	132	84%	16%	9.19
238	KLK-MDPL:2	132	84%	16%	9.19
239	KLK-SOMALA:1	132	69%	31%	6.61
240	KNL-DHON:1	132	70%	30%	18.37
241	KNML-ELUR:1	132	88%	12%	6.73
242	KNML-GDV:1	132	82%	18%	7.72
243	KNML-GDV:2	132	82%	18%	8.17
244	KNML-NZVD:1	132	88%	12%	9.22
245	KONPRM-W-GANKOT:1	132	75%	25%	0.80
246	KRPL-TUNE:1	132	88%	12%	10.26
247	KVL-KDKR:1	132	78%	22%	18.68
248	LNGSM-PODILJ:1	132	89%	11%	18.58
249	MARTUR-AMRT:1	132	78%	22%	0.18
250	MCL-KARMPU:1	132	67%	33%	12.52
251	MCL-NSRC:1	132	84%	16%	7.54

Sr No	Line	Voltage kV	% Utilization by Andhra Pradesh	% Utilization by other States	Monthly Cost (Lakhs)
252	MCL-RENTA:1	132	58%	42%	3.89
253	MCL-RENTA:2	132	58%	42%	3.89
254	MDPL-PUNGA:1	132	88%	12%	13.15
255	MULAVA-RTSSK:1	132	77%	23%	2.48
256	MURTSS-GANKOT:1	132	75%	25%	10.93
257	NAD-PNYM:1	132	73%	27%	10.31
258	NAGR-KPMT:1	132	81%	19%	12.71
259	NAGR-KPMT:2	132	81%	19%	12.71
260	NARS1-BRANDI:1	132	89%	11%	9.69
261	NARS1-KRPL:1	132	88%	12%	2.77
262	NDPTA-ESUG:1	132	80%	20%	3.63
263	NDV-1-PTDP:1	132	87%	13%	7.61
264	NLR-ADUR:1	132	84%	16%	15.69
265	NLR-ATMK:1	132	77%	23%	17.63
266	NLR-BHMDVM:1	132	84%	16%	5.15
267	NLR-BHMDVM:2	132	84%	16%	5.15
268	NLR-NTS:1	132	86%	14%	8.67
269	NLR-NVG:1	132	86%	14%	6.35
270	NTS-ALLUR:1	132	90%	10%	14.74
271	ONG-KDKR:1	132	81%	19%	13.04
272	ONGN-INKOLL:1	132	83%	17%	14.77
273	ONG-ONGN:1	132	85%	15%	0.92
274	PDG-KARMPU:1	132	62%	38%	8.57
275	PDG-RNTPL:1	132	43%	57%	15.27
276	PDP-PTPRM:1	132	71%	29%	7.12
277	PDP-SAMRLA:1	132	83%	17%	2.34
278	PDP-SAMRLA:2	132	83%	17%	2.34
279	PKL-KPMT:1	132	67%	33%	10.08
280	PKL-ROMP:1	132	90%	10%	11.64
281	PLMN-PLMN:1	132	89%	11%	0.35
282	PMRU-AVGADD:1	132	76%	24%	8.61
283	PMRU-GDV:1	132	77%	23%	10.11
284	PMRU-MACP:1	132	76%	24%	6.13
285	PMRU-MACP:2	132	76%	24%	6.13
286	PORT-NKVP:1	132	75%	25%	2.31
287	PRCH-CHRL:1	132	78%	22%	7.93
288	PRCH-INKOLL:1	132	81%	19%	9.59
289	PRCH-MARTUR:1	132	78%	22%	6.77
290	PTKD-ALUR:1	132	78%	22%	5.72

Sr No	Line	Voltage kV	% Utilization by Andhra Pradesh	% Utilization by other States	Monthly Cost (Lakhs)
291	PUNGA-PLMN1:1	132	89%	11%	11.01
292	PUTR-NAGR:1	132	70%	30%	5.03
293	PUTR-NAGR:2	132	70%	30%	5.03
294	PUTR-RNG:1	132	76%	24%	6.61
295	PUTR-RNG:2	132	76%	24%	6.61
296	RAYA-CNP:1	132	73%	27%	12.22
297	RAYA-SMBPAL:1	132	74%	26%	4.98
298	RCGNRI-LILR:1	132	81%	19%	0.42
299	RNG-AMAR:1	132	88%	12%	2.91
300	RNG-CGR:1	132	84%	16%	7.72
301	RNG-CGR:2	132	84%	16%	7.72
302	RNG-TPT:1	132	82%	18%	5.74
303	SHKT-SLP:1	132	82%	18%	9.52
304	SLP-CHER:1	132	81%	19%	3.90
305	SLP-NDPTA:1	132	89%	11%	9.38
306	SMHC-GZK-1:1	132	67%	33%	5.52
307	SMHC-GZK-1:2	132	67%	33%	5.52
308	SMHC-NKVP:1	132	83%	17%	3.30
309	SMHC-PEN:1	132	72%	28%	2.42
310	SMHC-PEN:2	132	72%	28%	2.42
311	SMHC-VSEZ:3	132	77%	23%	2.86
312	SS-SUNPTA:1	132	70%	30%	0.35
313	TDK-MARRIP:2	132	87%	13%	11.31
314	TDK-NALLAP:1	132	89%	11%	5.62
315	TDK-RNTPL:1	132	55%	45%	12.45
316	TDK-TDP:1	132	84%	16%	10.30
317	TDP-ATNGR:1	132	84%	16%	4.23
318	TDP-GANGUR:1	132	87%	13%	7.23
319	TDPT-KONPRM-W:1	132	75%	25%	10.36
320	TPT-KPMT:1	132	75%	25%	17.10
321	VKTG-RCGNRI:1	132	82%	18%	12.66
322	YEMN-GDRK:1	132	85%	15%	10.99
323	YGT-MURTSS:1	132	81%	19%	8.52
324	YGT-NALIN:1	132	89%	11%	2.03
325	YGT-NALIN:2	132	89%	11%	2.03

* These lines are AP lines but have been considered erroneously as PGCIL lines.

Therefore, it is requested to kindly certify the above lines as ISTS so that the same lines can be considered for inclusion in POC charges.

Thank you in anticipation.

Regards

Yours faithfully,


Chief Engineer/SLDC/APTRANSCO



Annexure-I: Assumptions on Power flow studies in WebNet Software

Basic Network

The basic network of Q3 FY16-17 has been considered as available in the PoC Data tab in the NLDC website. The transmission network of Andhra Pradesh has been corrected in the All India basic network of Q3 FY16-17 case considered by NLDC.

Load and Generation

The load and generation projections for Oct 2016- Dec 2016 as given in NLDC website have been considered for the analysis. The load and generation for Andhra Pradesh were not submitted for The Q3 FY16-17 period.

The load and generation for Andhra Pradesh has been projected based on the principles of the Data submission. A detailed exercise of generation at each node has been arrived based on the historic trend and Solar/Wind Profile for renewables. The projections are based on monthly maximum injection in the last three years from actual metered data. The total demand projection of the state has been apportioned to various nodes based on historic demand in each node for the same Q3 FY15-16 period.

The overall Generation and Demand has been normalized to the All India peak demand and the power flow studies has been carried out.

Cost Allocation Profile

The Cost allocation has been kept same as the cost allocation profile considered in the All India FY 16-17 Q3 case of NLDC.

Transmission Charges Profile

The CERC regulations state that *"for testing the usage, tariff of similar ISTS line may be used"*. To determine the percentage utilization of the Andhra Pradesh lines, monthly cost/tariff has been filled for all the Intra-state Andhra Pradesh lines. The monthly cost/tariff for the Andhra Pradesh STU lines has been derived based on the overall ARR of the divided Andhra Pradesh and the indicative cost levels of different voltage configurations. This is in line with clause 2.1.3 of Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) (Third Amendment) Regulations 2015.



Annexure - II Total List of Lines- Webnet Power Flow Studies Results

Sr. No.	Branch Name	Voltage	Base Flow (From) MW	Base Flow (To) MW	Allocated Cost	% Share of TL Cost	% Share by others
1	KURNOOL1-JAMALAMADUGU:1	400	0.23	-0.03	5259386.21	32.79	67.21
2	KURNOOL1-JAMALAMADUGU:2	400	0.23	-0.03	5259386.21	32.79	67.21
3	GAZUWAKA1-KALPAKKA1:1	400	63.02	-62.98	15528.17	4.92	95.08
4	GAZUWAKA1-KALPAKKA1:2	400	63.02	-62.98	15528.17	4.92	95.08
5	JAMALAMADUGU-URAVAKONDA:2	400	-44.16	44.19	3881769.74	32.81	67.19
6	JAMALAMADUGU-URAVAKONDA:1	400	-44.16	44.19	3881769.74	32.81	67.19
7	CHITTOOR-SDSTPS:1	400	-347.52	349.71	4751549.98	15.71	84.29
8	CHITTOOR-SDSTPS:2	400	-347.52	349.71	4751551.80	15.71	84.29
9	NUNNA2-VTS-IV:1	400	292.70	-292.38	289739.17	16.67	83.33
10	VTS-IV-NLR-AP:1	400	139.57	-138.36	613423.61	35.29	64.71
11	NUNNA2-STNPLLI1:1	400	150.59	-150.08	4921799.23	34.63	65.37
12	NUNNA2-VEMAGIRI1:1	400	-144.05	144.62	6852624.61	37.27	62.73
13	VTS-IV-STNPLLI1:1	400	92.24	-92.01	2810941.96	45.71	54.29
14	VTS-IV-STNPLLI1:2	400	92.24	-92.01	2810941.96	45.71	54.29
15	VEMAGIRI1-STNPLLI1:1	400	151.83	-150.78	13736676.72	43.40	56.60
16	KALPAKKA1-VEMAGIRI1:1	400	243.42	-241.50	9911306.00	63.73	36.27
17	KALPAKKA1-VEMAGIRI1:2	400	243.42	-241.50	9911306.00	63.73	36.27
18	KALPAKKA1-HINDUJA:1	400	-206.89	206.95	446401.05	65.64	34.36
19	KALPAKKA1-HINDUJA:2	400	-206.95	207.01	446402.61	65.64	34.36
20	KALPAKKA1-SIMHADRI:4	400	-230.19	230.22	240002.17	69.25	30.75
21	KALPAKKA1-SIMHADRI:3	400	-230.19	230.22	240002.17	69.25	30.75
22	KALPAKKA1-SIMHADRI:2	400	-230.19	230.22	240002.17	69.25	30.75
23	KALPAKKA1-SIMHADRI:1	400	-230.19	230.22	240002.17	69.25	30.75
24	NLR-AP-SDSTPS:2	400	-146.87	147.04	3691574.98	62.76	37.24
25	NLR-AP-SDSTPS:1	400	-146.87	147.04	3691576.04	62.76	37.24
26	VEMAGIRI1-GMR1:1	400	0.01	0.00	95006.35	57.94	42.06
27	VEMAGIRI1-GMR1:2	400	0.01	0.00	95006.35	57.94	42.06
28	SIMHADRI-SIMHADRI-2:@1	400	-261.87	261.87	97281.22	75.26	24.74
29	RGLPDU-SUZLON-W21:2	220	-38.81	38.81	12048.26	32.62	67.38
30	RGLPDU-SUZLON-W21:1	220	-38.81	38.81	12048.26	32.62	67.38
31	KURNOOL-BKOTKUR:1	220	40.00	-39.95	266253.71	26.32	73.68
32	GTY-AP2-RGLPDU:1	220	-17.20	17.22	909450.14	36.31	63.69
33	KONAPALLY-CHILALLU:2	220	47.33	-47.11	148852.73	6.75	93.25
34	KONAPALLY-CHILALLU:1	220	47.33	-47.11	148852.73	6.75	93.25
35	VTPS-CHILALLU:1	220	42.40	-42.19	184465.25	7.37	92.63
36	VTPS-CHILALLU:2	220	42.40	-42.19	184465.25	7.37	92.63
37	URVAKONDA-VAJR:2	220	-21.06	21.07	193850.62	32.81	67.19
38	URVAKONDA-VAJR:1	220	-21.06	21.07	193850.62	32.81	67.19
39	SujilonPS-VAJR:1	220	42.16	-42.15	74493.59	32.81	67.19
40	SULURETA-NLR42:2	220	-75.67	76.22	488392.73	13.04	86.96
41	SULURETA-NLR42:1	220	-75.67	76.22	328095.90	13.04	86.96
42	SULURETA-NLR42:3	220	-75.67	76.22	328095.90	13.04	86.96
43	GOOTY-PG-DHONE:2	220	12.91	-12.88	2249396.54	67.08	32.92
44	GOOTY-PG-DHONE:1	220	12.91	-12.88	2249396.54	67.08	32.92
45	SOMYALLI-DHONE:3	220	13.59	-13.58	606473.67	38.46	61.54
46	SOMYALLI-DHONE:2	220	13.59	-13.58	606473.67	38.46	61.54
47	TALAPLU-VTPS:2	220	-13.86	13.90	1365524.71	25.00	75.00
48	TALAPLU-VTPS:3	220	-13.86	13.90	1267256.38	25.00	75.00
49	TALAPLU-VTPS:1	220	-10.97	11.00	1267657.05	25.01	74.99
50	KONAPALLY-VTPS:1	220	-22.02	22.02	53145.60	22.14	77.86
51	KONAPALLY-VTPS:2	220	-22.02	22.02	53145.60	22.14	77.86

Sr. No.	Branch Name	Voltage	Base Flow (From) MW	Base Flow (To) MW	Allocated Cost	% Share of TL Cost	% Share by others
52	SRIALAM-TALAPLI:1	220	-47.22	47.58	1261853.70	34.58	65.42
53	SRIALAM-TALAPLI:2	220	-48.67	49.05	1262134.59	34.58	65.42
54	VTPS-RENACALA:2	220	20.08	-19.99	1536837.58	31.58	68.42
55	CHITTOOR4-CHITTOOR:2	220	77.12	-76.97	179086.69	28.34	71.66
56	CHITTOOR4-CHITTOOR:1	220	77.12	-76.97	179086.69	28.34	71.66
57	CUDDAPAH-MYDUKUR:1	220	5.57	-5.56	1034255.05	75.28	24.72
58	SOMYALI-KURNOOL:2	220	-5.09	5.12	516033.55	63.68	36.32
59	SOMYALI-KURNOOL:1	220	-5.09	5.12	516033.55	63.68	36.32
60	GOOTY-PG-BHOGASRAM:1	220	0.00	0.00	761811.46	40.22	59.78
61	KONAPLY-KONAPGS:2	220	-61.97	62.10	12867.36	43.55	56.45
62	KONAPLY-KONAPGS:1	220	-61.97	62.10	12867.36	43.55	56.45
63	SOMYALI-BELKALAGDUR:2	220	-69.64	69.98	967755.61	58.40	41.60
64	GOOTY-PG-ANATHPUR:1	220	-29.74	29.84	1723045.96	66.46	33.54
65	SRIALAM-SOMYALI:1	220	100.01	-98.31	2746423.88	59.36	40.64
66	SRIALAM-MYDUKUR:1	220	43.94	-43.43	3356555.88	44.71	55.29
67	NELLORE-ONGOLE:1	220	-21.62	21.76	2831520.13	50.76	49.24
68	RENGUNTA-RCHGNRI:1	220	-64.18	64.30	292033.39	43.69	56.31
69	RENGUNTA-RCHGNRI:2	220	-64.18	64.30	292033.39	43.69	56.31
70	NELLORE-PODILI:2	220	-30.73	30.95	3145001.15	51.21	48.79
71	NELLORE-PODILI:1	220	-30.73	30.95	3145001.15	51.21	48.79
72	SRIALAM-BELKALAGDUR:1	220	90.46	-89.40	2080803.38	61.92	38.08
73	GTY-AP2-GTY-RLY:2	220	-18.40	18.41	83147.71	54.12	45.88
74	GTY-AP2-GOOTY-PG:1	220	-18.76	18.78	101741.31	54.21	45.79
75	PARWADA-ANRAKU:1	220	-1.54	1.54	2401619.68	95.68	4.32
76	PODILI:1-PRCHUR:1	220	-35.52	35.58	1612401.88	55.98	44.02
77	PODILI:1-PRCHUR:2	220	-35.52	35.58	1612401.88	55.98	44.02
78	GOOTY-PG-GTY-RLY:2	220	19.14	-19.12	84431.31	54.49	45.51
79	GUNADALA-NUNNA:1	220	-145.99	146.17	141348.53	52.63	47.37
80	PODILI:1-NARARETA:1	220	-86.67	87.57	2219170.55	55.97	44.03
81	NLR42-RCHGNRI:2	220	89.29	-88.44	1585696.65	48.79	51.21
82	NLR42-RCHGNRI:1	220	89.29	-88.44	1585696.65	48.79	51.21
83	GUDIVADA-BHEMARAM:1	220	-31.82	31.94	1240871.17	56.57	43.43
84	GUDIVADA-BHEMARAM:2	220	-31.82	31.94	1240871.17	56.57	43.43
85	DONKARAI-LOWRERU:1	220	73.20	-73.04	1371759.68	66.87	33.13
86	A.PCADES-KURNOOL:1	220	-107.93	108.19	357189.36	63.34	36.66
87	A.PCADES-KURNOOL:2	220	-107.93	108.19	357189.36	63.34	36.66
88	RENGUNTA-NGRI:1	220	37.36	-37.19	1145616.79	51.98	48.02
89	DONKARAI-UPPRERU:1	220	-56.64	56.79	829581.88	67.13	32.87
90	GOOTY-PG-BOYRELLI:1	220	-18.97	18.99	1343643.12	83.93	16.07
91	VEMAGIRI-BHEMARAM:1	220	61.61	-61.30	1496510.13	64.73	35.27
92	VEMAGIRI-BHEMARAM:2	220	61.61	-61.30	1496510.13	64.73	35.27
93	VTPS-PODILI:1	220	75.24	-74.19	4309786.89	67.17	32.83
94	BOMMUR-LOWRERU:1	220	-139.29	142.79	3346497.83	67.26	32.74
95	NARARETA-STNPLI:1	220	-40.66	40.70	1060906.54	61.25	38.75
96	NARARETA-STNPLI:2	220	-40.66	40.70	1060906.54	61.25	38.75
97	PRCHUR-STNPLI:1	220	-123.70	124.76	3015068.45	64.87	35.13
98	PRCHUR-STNPLI:2	220	-123.70	124.76	3015068.45	64.87	35.13
99	CHNKMPLY-KALIKIRI:1	220	101.24	-99.66	2243471.19	60.90	39.10
100	PENURTHI-UPPRERU:1	220	-66.02	67.41	5090033.98	69.95	30.05
101	TADKONDA-ONGOLE:1	220	81.20	-80.19	2854396.23	68.70	31.30
102	GAZUWAKA-PG-KAKINADA:1	220	40.90	-40.36	5599103.35	70.88	29.12
103	BOMMUR-VIHE-II:2	220	55.76	-55.64	364377.15	73.09	26.91
104	GAZUWAKA-PG-PARWADA:1	220	145.92	-145.73	189633.87	70.08	29.92
105	GOOTY-PG-SHAPURAM:1	220	-2.25	2.25	3770974.81	69.79	30.21

Sr. No.	Branch Name	Voltage	Base Flow (From) MW	Base Flow (To) MW	Allocated Cost	% Share of TL Cost	% Share by others
106	BHEMAOLU-PALL:1	220	-15.31	15.31	810911.78	70.60	29.40
107	BHEMAOLU-PALL:2	220	-15.31	15.31	810911.78	70.60	29.40
108	VUHE-II-VEMAGIRI:1	220	-101.43	101.45	552990.52	74.53	25.47
109	VUHE-II-K.V.KOTA:1	220	98.06	-97.09	2557365.71	72.70	27.30
110	MUDDANUR-TIMMPR:1	220	53.98	-53.73	1245099.39	80.04	19.96
111	MUDDANUR-TIMMPR:2	220	53.98	-53.73	1245099.39	80.04	19.96
112	TALAPLI-RENACALA:2	220	72.17	-72.04	542258.66	73.60	26.40
113	NIDDAOLU-PALL:1	220	28.42	-28.42	851302.90	74.12	25.88
114	NIDDAOLU-PALL:2	220	28.42	-28.42	851302.90	74.12	25.88
115	BOMMUR-VEMAGIRI:3	220	-61.67	61.70	533807.71	73.68	26.32
116	BOMMUR-VEMAGIRI:2	220	-61.67	61.70	104213.71	73.68	26.32
117	BOMMUR-VEMAGIRI:1	220	-61.67	61.70	104213.71	73.68	26.32
118	BHEMAOLU-VUESM-I:1	220	-79.00	79.56	1872391.75	75.40	24.60
119	BOMMUR-VUESM-I:1	220	79.68	-79.56	375895.99	75.40	24.60
120	PEDAPRAM-ANRAKU:1	220	-66.56	67.54	4089377.74	78.40	21.60
121	GAZUWAKA-PG-KALPAKKA:2	220	-68.60	68.67	108452.71	79.37	20.63
122	GAZUWAKA-PG-KALPAKKA:1	220	-68.60	68.67	108452.71	79.37	20.63
123	PEDAPRAM-GMRBORGE:2	220	0.00	0.00	792888.12	75.87	24.13
124	PEDAPRAM-GMRBORGE:1	220	0.00	0.00	792888.12	75.87	24.13
125	PEDAPRAM-BSES:2	220	0.00	0.00	70043.12	75.87	24.13
126	PEDAPRAM-BSES:1	220	0.00	0.00	70043.12	75.87	24.13
127	VTPS-NARARETA:1	220	107.08	-106.08	2270541.73	79.15	20.85
128	CHITTOOR-KALIKIRI:1	220	-17.43	17.49	606858.17	21.50	78.50
129	BOYRELLI-TADPATRI:1	220	-33.43	33.48	1097642.85	88.12	11.88
130	RENGUNTA-KODURU:1	220	-34.34	34.41	1977309.16	76.46	23.54
131	ANATHPUR-TIMMPR:2	220	-57.77	58.02	1501713.85	82.70	17.30
132	ANATHPUR-TIMMPR:1	220	-57.77	58.02	1501713.85	82.70	17.30
133	CHNKMPY-RENGUNTA:1	220	67.15	-66.23	4386939.42	77.16	22.84
134	TADKONDA-VTPS:1	220	-182.13	183.41	878071.13	78.61	21.39
135	TADKONDA-VTPS:2	220	-177.66	178.92	878072.59	78.61	21.39
136	KALPAKKA-BRANDIX:2	220	99.04	-99.04	731697.45	83.95	16.05
137	KALPAKKA-BRANDIX:1	220	99.04	-99.04	731697.45	83.95	16.05
138	RAJAMPET-KODURU:1	220	52.14	-51.90	1302580.78	77.97	22.03
139	NLR42-SBQ:2	220	-17.85	17.85	605359.89	75.22	24.78
140	NLR42-SBQ:1	220	-17.85	17.85	605359.89	75.22	24.78
141	PENURTHI-DAIYARM:1	220	-80.15	80.30	445986.26	81.38	18.62
142	PENURTHI-DAIYARM:2	220	-80.15	80.30	445986.26	81.38	18.62
143	TIMMPR-KNDAPRM:2	220	2.73	-2.73	306352.16	86.32	13.68
144	TIMMPR-KNDAPRM:1	220	2.73	-2.73	306352.16	86.32	13.68
145	GAZUWAKA-PG-PENURTHI:1	220	97.35	-96.71	989170.60	82.93	17.07
146	GAZUWAKA-PG-PENURTHI:2	220	97.35	-96.71	989170.60	82.93	17.07
147	GAZUWAKA-PENURTHI:1	220	75.55	-75.14	1538375.63	82.94	17.06
148	GAZUWAKA-GAZUWAKA-PG:1	220	-51.78	51.82	435333.38	83.12	16.88
149	GAZUWAKA-GANGAVRAM:2	220	-23.77	23.77	290789.01	83.28	16.72
150	ONGOLE-PODILI:1	220	-64.78	65.01	1104094.66	81.08	18.92
151	ONGOLE-PODILI:2	220	-64.78	65.01	1104094.66	81.08	18.92
152	KALPAKKA-DAIYARM:2	220	99.44	-98.97	1591977.47	83.08	16.92
153	KALPAKKA-DAIYARM:1	220	99.44	-98.97	1591977.47	83.08	16.92
154	GAZUWAKA-PG-GANGAVRAM:2	220	26.96	-26.94	364843.80	83.59	16.41
155	ANATHPUR-RAMAGIRI:1	220	-20.08	20.12	2500018.90	90.84	9.16
156	HINDUPUR-SHAPURAM:1	220	-22.13	22.15	1104296.73	83.06	16.94
157	HINDUPUR-SHAPURAM:2	220	-22.13	22.15	1104296.73	83.06	16.94
158	CHNKMPY-RAJAMPET:1	220	84.70	-84.06	2016209.41	82.05	17.95
159	NELLORE-NLR42:3	220	-30.79	30.83	1085861.17	80.28	19.72

Sr. No.	Branch Name	Voltage	Base Flow (From) MW	Base Flow (To) MW	Allocated Cost	% Share of TL Cost	% Share by others
160	NELLORE-NLR42:2	220	-45.94	46.02	1381803.52	80.31	19.69
161	NELLORE-NLR42:1	220	-45.94	46.02	1381803.52	80.31	19.69
162	CHNKMPLY-MUDDANUR:4	220	-22.22	22.51	1831233.69	81.96	18.04
163	CHNKMPLY-MUDDANUR:3	220	-22.22	22.51	1831233.69	81.96	18.04
164	JEGRUADU-NIDDAOLU:1	220	103.01	-102.61	927313.61	85.67	14.33
165	CHNKMPLY-MUDDANUR:2	220	-150.27	151.10	1752970.43	82.83	17.17
166	CHNKMPLY-MUDDANUR:1	220	-150.27	151.10	1752970.43	82.83	17.17
167	HINDUPUR-PULVEULA:1	220	-55.27	55.84	4193710.00	89.80	10.20
168	HINDUPUR-PULVEULA:2	220	-55.27	55.84	4193710.00	89.80	10.20
169	CHITTOOR4-RENGUNTA:2	220	2.16	-2.04	2606359.24	83.10	16.90
170	BOMMUR-PEDAPRAM:1	220	-24.18	24.22	1716452.62	89.38	10.62
171	NUNNA-GUDIVADA:1	220	67.70	-67.40	3106039.94	83.69	16.31
172	NUNNA-GUDIVADA:2	220	67.70	-67.40	3106039.94	83.69	16.31
173	PODILU-MARKAPRAM:1	220	6.38	-6.37	1635954.44	52.08	47.92
174	CHITTOOR4-NGRI:1	220	15.47	-15.42	3551739.29	84.77	15.23
175	SRIAILAM-PODILU:1	220	40.86	-40.56	4387921.35	85.47	14.53
176	BOMMUR-KAKINADA:1	220	-14.47	14.50	2575277.63	92.20	7.80
177	VEMAGIRI-PEDAPRAM:1	220	-16.18	16.19	1394248.77	92.40	7.60
178	VEMAGIRI-PEDAPRAM:2	220	-16.18	16.19	1394248.77	92.40	7.60
179	SOMYALLI-NANDYALA:2	220	75.48	-75.15	1202080.50	91.90	8.10
180	SOMYALLI-NANDYALA:1	220	75.48	-75.15	1202080.50	91.90	8.10
181	PENURTHI-BHIM:1	220	24.71	-24.71	304394.77	90.11	9.89
182	PENURTHI-BHIM:2	220	24.71	-24.71	304394.77	90.11	9.89
183	GUNADALA-VTPS:1	220	-50.56	50.71	733747.71	90.29	9.71
184	SRIAILAM-MARKAPRAM:1	220	70.40	-69.82	2910583.01	89.97	10.03
185	PALL-PATT:1	220	0.00	0.00	971771.30	87.71	12.29
186	PALL-PATT:2	220	0.00	0.00	971771.30	87.71	12.29
187	CUDDAPAH-CHNKMPLY:1	220	-78.13	78.33	553678.50	89.15	10.85
188	VUHE-II-NIDDAOLU:1	220	141.81	-141.60	254048.07	90.95	9.05
189	MUDDANUR-PULVEULA:1	220	87.38	-86.97	1463952.72	93.43	6.57
190	MUDDANUR-PULVEULA:2	220	87.38	-86.97	1463952.72	93.43	6.57
191	CHITTOOR4-PLMNERU:1	220	41.92	-41.79	1912681.01	90.57	9.43
192	CHITTOOR4-PLMNERU:2	220	42.57	-42.44	1912833.66	90.57	9.43
193	VSP-MRS:2	220	8.00	-8.00	102105.35	92.16	7.84
194	VSP-MRS:1	220	8.00	-8.00	102105.35	92.16	7.84
195	VSP-GAZUWAKA-PG:1	220	-57.90	57.91	91023.90	92.35	7.65
196	VSP-GAZUWAKA-PG:2	220	-57.90	57.91	91023.90	92.35	7.65
197	GARIVIDI-PENURTHI:1	220	-96.75	98.04	2067893.46	93.32	6.68
198	GARIVIDI-PENURTHI:2	220	-96.75	98.04	2067893.46	93.32	6.68
199	RAMAGIRI-SHAPURAM:1	220	46.79	-46.55	916049.26	94.37	5.63
200	BOBB-BHIM:1	220	-81.67	82.37	3560458.11	94.26	5.74
201	ANATHPUR-KALANURG:1	220	13.60	-13.54	2592515.94	94.33	5.67
202	GARIVIDI-TEKKALI:2	220	37.47	-37.39	3131319.72	95.02	4.98
203	GARIVIDI-TEKKALI:1	220	37.18	-37.03	3132379.64	95.06	4.94
204	BHEMAOLU-NUNNA:1	220	-39.53	39.73	3944635.41	94.15	5.85
205	VTPS-K.V.KOTA:1	220	59.93	-59.44	4369655.75	94.99	5.01
206	BKOTKUR-MALYALA:2	220	8.57	-8.57	373574.70	95.70	4.30
207	BKOTKUR-MALYALA:1	220	8.57	-8.57	373574.70	95.70	4.30
208	BOMMUR-JEGRUADU:1	220	-12.90	12.91	342560.03	98.11	1.89
209	TADPATRI-RCI-W:1	220	-23.53	23.53	1152614.42	100.26	(0.26)
210	MUDDANUR-YERAGTLA:1	220	82.43	-81.21	564719.17	98.05	1.95
211	MUDDANUR-YERAGTLA:2	220	82.43	-81.21	564719.17	98.05	1.95
212	TIMMPR-YLLNR-LS:2	220	-7.02	7.02	307323.45	100.26	(0.26)
213	TIMMPR-YLLNR-LS:1	220	-7.02	7.02	307323.45	100.26	(0.26)

Sr. No.	Branch Name	Voltage	Base Flow (From) MW	Base Flow (To) MW	Allocated Cost	% Share of TL Cost	% Share by others
214	BOMMUR-RAMPACDRAM:1	220	16.73	-16.70	2617012.71	99.94	0.06
215	DHONE-KMBLPD-LIS:1	220	29.88	-29.87	512932.75	97.13	2.87
216	KMBLPD-LIS-LKKSGRAM-LIS:1	220	19.25	-19.24	389997.00	97.13	2.87
217	LKKSGRAM-LIS-NANSURLLA:1	220	8.94	-8.94	288259.13	97.13	2.87
218	DHONE-KRISNGRI-LIS:1	220	23.03	-23.02	487504.18	97.13	2.87
219	KRISNGRI-LIS-SETIPALU-LIS:1	220	11.80	-11.80	445113.36	97.13	2.87
220	KNDAPRM-SHPRM-W:1	220	-35.43	35.43	43781.02	100.26	(0.26)
221	RAMAGIRI-RAYALA-W:1	220	-25.36	25.36	1666211.49	100.26	(0.26)
222	RAMAGIRI-RAYALA-W:2	220	-25.36	25.36	1666211.49	100.26	(0.26)
223	BOYRELLI-PENACNTS:1	220	14.44	-14.44	29756.18	100.26	(0.26)
224	SPECTRUM1-KAKINADA:1	220	57.96	-57.91	370269.22	100.26	(0.26)
225	SPECTRUM1-KAKINADA:2	220	57.96	-57.91	370269.22	100.26	(0.26)
226	BHIM-SRDAL-NEW:1	220	-16.48	16.52	370133.47	100.26	(0.26)
227	BHIM-SRDAL-NEW:2	220	-16.48	16.52	370133.47	100.26	(0.26)
228	PEDAPRAM-SRIGIRIJA:1	220	-56.43	56.43	166284.54	100.26	(0.26)
229	GVPRM-MALK:1	132	0.00	0.00	88771.39	30.49	69.51
230	PDG-RNTPL:1	132	-12.89	12.97	657822.46	43.09	56.91
231	GZK-GZK-1:1	132	-25.51	25.51	16683.26	47.33	52.67
232	APC-NANDIK:1	132	-14.96	15.19	610338.48	59.76	40.24
233	TDK-RNTPL:1	132	36.88	-36.45	679852.05	54.62	45.38
234	ATKR-NANDIK:1	132	34.85	-34.26	940032.64	64.23	35.77
235	MCL-RENTA:2	132	-39.98	40.21	225764.34	58.04	41.96
236	MCL-RENTA:1	132	-41.05	41.29	225786.67	58.05	41.95
237	KNL-DHON:1	132	3.15	-3.14	1292603.70	70.37	29.63
238	SS-SUNPTA:1	132	52.05	-51.97	24597.20	69.78	30.22
239	ATKR-SUNPTA:1	132	-50.83	51.97	1082278.42	69.78	30.22
240	GDR-NDPTA:1	132	23.77	-23.39	593932.72	56.92	43.08
241	PDG-KARMPU:1	132	-21.52	21.63	532578.27	62.12	37.88
242	SMHC-GZK-1:1	132	8.10	-8.08	369951.18	67.00	33.00
243	SMHC-GZK-1:2	132	8.10	-8.08	369951.18	67.00	33.00
244	ADNI-YEMN:1	132	-2.74	2.75	669396.19	75.76	24.24
245	ADNI-YEMN:2	132	-2.74	2.75	669396.19	75.76	24.24
246	COMP-NAVW:1	132	-2.97	2.97	205005.38	93.80	6.20
247	GZK-1-BRANDI:1	132	-34.81	35.18	136635.08	68.17	31.83
248	DGNP-PORT:1	132	1.18	-1.18	115538.59	93.64	6.36
249	NAVW-DGNP:1	132	0.59	-0.59	82527.44	93.64	6.36
250	NAVW-DGNP:2	132	0.59	-0.59	82527.44	93.64	6.36
251	GZK-1-PRWD:1	132	-48.93	49.56	138319.38	69.01	30.99
252	DHON-RACHER:1	132	-36.44	36.80	518748.76	77.45	22.55
253	NAD-PNYM:1	132	18.98	-18.88	753011.25	73.00	27.00
254	MCL-KARMPU:1	132	42.33	-41.46	835919.11	66.76	33.24
255	PTKD-ALUR:1	132	33.19	-32.97	444881.82	77.72	22.28
256	ADNI-ALUR:1	132	-32.75	32.97	444902.04	77.72	22.28
257	PDP-PTPRM:1	132	-12.38	12.51	505024.46	70.92	29.08
258	GTU-RACHER:1	132	56.68	-55.76	1500211.19	81.67	18.33
259	TDPT-KONPRM-W:1	132	4.99	-4.98	776121.26	74.94	25.06
260	SMHC-PEN:1	132	-67.98	68.43	175102.77	72.21	27.79
261	SMHC-PEN:2	132	-67.98	68.43	175102.77	72.21	27.79
262	BDWL-ATMK:1	132	-2.99	3.04	1791253.46	68.44	31.56
263	COMP-SMHC:1	132	-15.78	15.81	239964.63	72.80	27.20
264	KLK-SOMALA:1	132	11.20	-11.14	454698.96	68.76	31.24
265	KVL-ALLUR:1	132	-5.56	5.57	1282801.07	92.36	7.64
266	GDR-MANUBO:1	132	-34.21	34.47	556460.75	67.00	33.00
267	GDR-MANUBO:2	132	-44.93	45.28	429883.90	67.00	33.00

Sr. No.	Branch Name	Voltage	Base Flow (From) MW	Base Flow (To) MW	Allocated Cost	% Share of TL Cost	% Share by others
268	GTU-PTKD:1	132	51.31	-50.24	1122319.37	80.83	19.17
269	PKL-KPMT:1	132	-5.46	5.50	674813.24	66.96	33.04
270	KLK-GRMKD:1	132	-21.48	21.62	666230.80	70.28	29.72
271	BMD-KNML:1	132	12.53	-12.44	1064864.98	72.61	27.39
272	PORT-NKVP:1	132	-16.52	16.55	172259.13	74.61	25.39
273	GRMKD-SMBPAL:1	132	-23.57	23.79	876306.60	67.52	32.48
274	PUTR-NAGR:2	132	8.65	-8.60	352817.21	70.08	29.92
275	PUTR-NAGR:1	132	8.65	-8.60	352817.21	70.08	29.92
276	YEMN-GDRK:1	132	-12.26	12.34	934498.46	84.99	15.01
277	SMHC-VSEZ:3	132	23.25	-23.19	220313.81	77.16	22.84
278	APC-YEMN:1	132	38.97	-38.46	936375.57	85.16	14.84
279	KVL-KDKR:1	132	-33.17	33.60	1460055.97	78.15	21.85
280	ELUR-PEDA:1	132	-8.96	8.99	733180.21	75.91	24.09
281	GDL-GANGUR:1	132	48.10	-47.71	452006.78	78.18	21.82
282	YGT-MURTSS:1	132	2.40	-2.35	693782.92	81.42	18.58
283	GDL-ATNGR:1	132	71.42	-71.29	83886.81	79.32	20.68
284	KLH-RCGNRI:1	132	-15.74	15.75	709075.41	73.68	26.32
285	RAYA-SMBPAL:1	132	38.69	-38.60	367390.96	73.71	26.29
286	TPT-KPMT:1	132	12.81	-12.74	1285813.27	75.21	24.79
287	NLR-ATMK:1	132	33.31	-32.72	1351352.10	76.67	23.33
288	CNP-MULAVA:1	132	-2.51	2.52	213028.71	71.10	28.90
289	PRCH-INKOLL:1	132	35.57	-35.09	775037.87	80.83	19.17
290	PUTR-RNG:2	132	-23.47	23.64	499916.80	75.64	24.36
291	PUTR-RNG:1	132	-23.47	23.64	499916.80	75.64	24.36
292	MURTSS-GANKOT:1	132	-1.10	1.13	816452.38	74.71	25.29
293	KONPRM-W-GANKOT:1	132	1.13	-1.13	59654.13	74.71	25.29
294	CGRI-RCGNRI:1	132	-1.74	1.76	1305106.06	76.06	23.94
295	APC-GDRK:1	132	31.27	-31.01	916594.02	87.78	12.22
296	KLH-SLP:1	132	-4.08	4.08	856821.85	76.51	23.49
297	ONG-KDKR:1	132	55.75	-55.04	1052785.05	80.72	19.28
298	ONGN-INKOLL:1	132	-25.57	26.01	1226690.10	83.05	16.95
299	BMD-NDV:1:1	132	-7.17	7.27	1319185.99	78.78	21.22
300	GOLD-PEN:1	132	-4.13	4.35	148640.11	94.11	5.89
301	RAYA-CNP:1	132	-41.41	41.52	889933.33	72.84	27.16
302	BMD-PEDA:1	132	38.22	-37.80	841413.08	78.26	21.74
303	BRANDI-PTPRM:1	132	28.56	-28.55	2186981.57	82.28	17.72
304	TDP-ATNGR:1	132	-44.72	45.09	353198.96	83.49	16.51
305	PMRU-GDV:1	132	-67.53	68.30	774813.30	76.60	23.40
306	PRCH-CHRL:1	132	28.78	-28.61	618044.86	77.92	22.08
307	PRCH-MARTUR:1	132	34.39	-34.18	527851.40	77.92	22.08
308	MARTUR-AMRT:1	132	10.94	-10.94	13732.55	77.92	22.08
309	BKKT1-BKKT:1	132	0.00	0.00	264371.62	73.53	26.47
310	BPT-PRCH:1	132	-22.68	22.81	837543.06	77.92	22.08
311	GTU-NGPM-W:1	132	11.40	-11.28	748705.51	78.36	21.64
312	PMRU-MACP:1	132	7.62	-7.61	462947.80	75.52	24.48
313	PMRU-MACP:2	132	7.62	-7.61	462947.80	75.52	24.48
314	PMRU-AVGADD:1	132	12.78	-12.74	651113.22	75.59	24.41
315	SMHC-NKVP:1	132	44.94	-44.92	275135.79	83.48	16.52
316	MULAVA-RTSSK:1	132	-17.39	17.41	190218.59	76.65	23.35
317	PDP-SAMRLA:1	132	-25.95	26.00	194716.19	83.15	16.85
318	PDP-SAMRLA:2	132	-25.95	26.00	194716.19	83.15	16.85
319	ONG-ONGN:1	132	-6.73	6.74	77700.79	84.78	15.22
320	CDP-RTSSK:1	132	21.68	-21.63	307073.45	78.05	21.95
321	NAGR-KPMT:2	132	19.04	-18.86	1023637.09	80.54	19.46

Sr. No.	Branch Name	Voltage	Base Flow (From) MW	Base Flow (To) MW	Allocated Cost	% Share of TL Cost	% Share by others
322	NAGR-KPMT:1	132	19.04	-18.86	1023637.09	80.54	19.46
323	MCL-NSRC:1	132	-21.07	21.13	637350.25	84.49	15.51
324	RCGNRI-LILR:1	132	5.81	-5.81	33710.73	81.05	18.95
325	RNG-TPT:1	132	66.98	-66.36	469893.02	81.88	18.12
326	APC-KNL:2	132	42.98	-42.84	490745.78	87.02	12.98
327	APC-KNL:1	132	45.85	-45.70	491527.26	87.16	12.84
328	TDP-GANGUR:1	132	-11.88	11.92	626282.78	86.66	13.34
329	GDR-MNKR:1	132	17.04	-16.97	740891.11	81.49	18.51
330	SLP-CHER:1	132	17.77	-17.75	317829.55	81.44	18.56
331	SHKT-SLP:1	132	-2.42	2.42	776269.76	81.56	18.44
332	VKTG-RCGNRI:1	132	-14.90	14.90	1031771.96	81.53	18.47
333	CHPT-NRSPT:1	132	-35.05	35.27	439836.92	82.46	17.54
334	CHPT-NRSPT:2	132	-35.05	35.27	439836.92	82.46	17.54
335	CHEN-MANUBO:1	132	-29.68	29.93	905532.64	81.55	18.45
336	KNML-GDV:1	132	-43.07	43.65	635852.51	82.36	17.64
337	KNML-GDV:2	132	-57.78	58.57	672579.29	82.36	17.64
338	KLH-RNG:1	132	-8.63	8.93	740518.69	83.03	16.97
339	CHPT-NALLAP:1	132	-3.86	3.91	895997.63	86.37	13.63
340	RNG-CGRI:1	132	6.54	-6.32	648384.17	83.96	16.04
341	RNG-CGRI:2	132	6.54	-6.32	648384.17	83.96	16.04
342	KRPL-TUNI:1	132	23.51	-23.34	898819.17	87.62	12.38
343	ATP-NGPM-W:1	132	-41.13	41.15	800062.84	83.73	16.27
344	TOK-TDP:1	132	16.68	-16.62	863548.97	83.81	16.19
345	IRALA-SOMALA:1	132	-3.22	3.29	626333.43	61.95	38.05
346	CUMB-MRK:1	132	-38.49	38.98	1030173.57	91.32	8.68
347	TOK-MARRIP:2	132	26.04	-25.83	987839.42	87.32	12.68
348	KLK-MDPL:2	132	21.62	-21.44	772666.33	84.08	15.92
349	KLK-MDPL:1	132	21.62	-21.44	772666.33	84.08	15.92
350	GVD-VZNG:1	132	13.95	-13.87	1347031.59	90.08	9.92
351	CHPT-VNK:1	132	27.50	-27.14	1495856.92	83.90	16.10
352	KDP-NZVD:1	132	52.34	-50.99	1419965.98	84.47	15.53
353	ALIP-TRML:1	132	0.96	-0.96	223947.57	86.61	13.39
354	CGRI-ALIP:1	132	0.96	-0.96	223959.28	86.61	13.39
355	NARS1-KRPL:1	132	25.50	-25.30	245556.20	88.49	11.51
356	KNML-NZVD:1	132	44.86	-44.09	812907.86	88.18	11.82
357	PKL-ROMP:1	132	-3.63	3.65	1043976.56	89.72	10.28
358	TOK-NALLAP:1	132	32.49	-32.31	498880.57	88.73	11.27
359	NLR-ADUR:1	132	11.35	-11.29	1321736.12	84.26	15.74
360	NARS1-BRANDI:1	132	-30.61	30.86	865950.02	89.33	10.67
361	TDPT-KOMALI:1	132	-11.33	11.34	360806.31	92.79	7.21
362	BHMDVM-KPORT:1	132	3.23	-3.23	306455.65	84.43	15.57
363	BHMDVM-NIDRLY:1	132	1.91	-1.91	343905.46	84.44	15.56
364	NLR-BHMDVM:2	132	15.40	-15.36	435006.47	84.44	15.56
365	NLR-BHMDVM:1	132	15.40	-15.36	435006.47	84.44	15.56
366	GNT-TDP:1	132	-28.99	29.40	1062870.52	91.04	8.96
367	ANKPL-W-KOMALI:1	132	13.64	-13.57	1101183.40	93.33	6.67
368	CTR-IRALA:1	132	2.75	-2.68	703719.46	83.84	16.16
369	NDV-1-PTDP:1	132	46.05	-45.57	662348.85	86.99	13.01
370	NLR-NVG:1	132	56.41	-55.88	543525.35	85.66	14.34
371	NLR-NTS:1	132	42.89	-42.44	746752.38	86.11	13.89
372	ATP-PANB:1	132	-17.10	17.23	866053.67	94.24	5.76
373	PANB-ANKPAL:1	132	-17.23	17.29	866053.67	94.24	5.76
374	RNG-AMAR:1	132	24.34	-24.30	257052.25	88.28	11.72
375	GRWN-RNG:1	132	-1.23	1.23	225847.00	88.30	11.70

Sr. No.	Branch Name	Voltage	Base Flow (From) MW	Base Flow (To) MW	Allocated Cost	% Share of TL Cost	% Share by others
376	KNML-ELUR:1	132	50.64	-50.18	591907.17	87.91	12.09
377	ATMK-UDAY:1	132	17.60	-17.46	1431322.84	86.94	13.06
378	NDV-2-NALL:1	132	31.10	-30.62	1399801.86	90.25	9.75
379	ANKPL-W-GUDPAD:1	132	24.31	-24.26	305204.39	95.25	4.75
380	DARSI-PODILI:1	132	-20.10	20.10	886362.75	88.85	11.15
381	LNGSM-PODILI:1	132	-8.07	8.07	1651226.69	88.85	11.15
382	DVRM-BGPL:1	132	-7.69	7.73	1172342.92	92.25	7.75
383	GNT-TDK:2	132	-58.75	59.50	578481.87	90.23	9.77
384	GNT-TDK:1	132	-58.75	59.50	578481.87	90.23	9.77
385	HDP-8GPL:1	132	-16.14	16.17	1169576.19	92.03	7.97
386	YGT-NAJIN:1	132	18.15	-16.58	179752.68	88.57	11.43
387	YGT-NAJIN:2	132	18.15	-16.58	179752.68	88.57	11.43
388	CDP-NAJIN:1	132	-18.09	18.20	1367848.78	89.30	10.70
389	CDP-NAJIN:2	132	-18.09	18.20	1274979.87	89.30	10.70
390	APPM-MLPT:1	132	-0.03	0.03	70264.53	99.66	0.34
391	NTS-ALLUR:1	132	21.62	-21.45	1322684.17	89.76	10.24
392	MDPL-PUNGA:1	132	-6.77	6.79	1162846.18	88.41	11.59
393	KNGR-PAMURU:1	132	17.41	-17.30	1166692.08	91.00	9.00
394	KNGR-ONG:1	132	-44.69	45.78	1845044.13	91.02	8.98
395	CTR-PKL:1	132	25.89	-25.62	1364668.27	90.66	9.34
396	ONG-MDMT:1	132	50.63	-49.94	883320.51	91.12	8.88
397	ONG-TNGTR:1	132	11.53	-11.51	643400.42	91.26	8.74
398	KLDG-ANKPAL:1	132	-14.46	14.52	926912.76	93.08	6.92
399	SLP-NDPTA:1	132	14.93	-14.88	833947.09	88.94	11.06
400	BMR-NDV-1:1	132	54.46	-53.43	435430.76	91.95	8.05
401	BMR-NDV-1:2	132	57.56	-56.64	435454.45	91.96	8.04
402	NAGR-NAGAL:1	132	7.01	-7.00	636217.79	90.63	9.37
403	MDMT-ADNKI:1	132	21.49	-21.49	720435.65	91.53	8.47
404	ROMP-SRPM:1	132	-21.19	21.32	252451.10	91.74	8.26
405	KLK-SRPM:1	132	21.44	-21.32	252460.56	91.74	8.26
406	KDP-VTS:1	132	-55.30	55.97	707101.23	91.13	8.87
407	RCPE-EDITHA:1	132	-11.57	11.62	718205.96	92.61	7.39
408	TENL-REPL:1	132	21.23	-21.08	1065130.55	92.18	7.82
409	GNT-TENL:2	132	33.90	-33.67	536469.14	92.21	7.79
410	GNT-TENL:1	132	33.90	-33.67	536469.14	92.21	7.79
411	BOWL-VMITTA:1	132	-45.36	46.14	1360562.76	92.25	7.75
412	PUNGA-PLMN:1	132	-13.22	13.55	979700.48	88.96	11.04
413	PLMN-PLMN:1	132	13.55	-13.55	31359.06	88.96	11.04
414	BHNV-RAZOL:1	132	-10.09	10.11	2103444.67	93.53	6.47
415	KDP-VJA:1	132	-22.75	22.85	614333.41	91.72	8.28
416	CDP-VMITTA:1	132	54.09	-53.28	877358.81	92.82	7.18
417	BBLI-GVD:1	132	5.34	-5.33	1268407.99	94.56	5.44
418	BBLI-GVD:2	132	5.34	-5.33	1268407.99	94.56	5.44
419	BBLI-BOBN:1	132	-40.80	40.83	88230.19	94.26	5.74
420	BBLI-BOBN:2	132	-40.80	40.83	88230.19	94.26	5.74
421	NLR-MANUBO:1	132	-12.13	12.32	807108.77	91.58	8.42
422	NDV-1-PNGD:1	132	0.24	-0.23	590096.14	98.47	1.53
423	AML-RAZOL:1	132	22.48	-22.48	3948331.32	94.23	5.77
424	AML-RAZOL:2	132	22.48	-22.48	3948331.32	94.23	5.77
425	ATP-DVRM:1	132	33.50	-33.03	1191150.40	93.60	6.40
426	GTU-GUDPAD:1	132	-31.50	31.99	1750958.54	96.30	3.70
427	GZK-NAVW:1	132	1.09	-1.09	237140.68	93.43	6.57
428	GZK-NAVW:2	132	1.09	-1.09	237140.68	93.43	6.57
429	KRPL-PRWD:1	132	-36.82	37.36	1365299.13	94.46	5.54

Sr. No.	Branch Name	Voltage	Base Flow (From) MW	Base Flow (To) MW	Allocated Cost	% Share of TL Cost	% Share by others
430	VJA-BHAVAN:1	132	-50.48	50.57	152580.77	92.84	7.16
431	CHPT-MARRIP:2	132	12.58	-12.51	538827.60	93.83	6.17
432	BHMY-PNGD:1	132	6.25	-6.25	1129731.45	93.16	6.84
433	GZK-1-VSEZ:3	132	10.81	-10.80	268018.43	93.86	6.14
434	RCPE-KOTPET:1	132	22.04	-22.03	1297490.50	94.38	5.62
435	VTS-BHAVAN:1	132	54.90	-54.56	413185.79	92.99	7.01
436	ANLP-RCPE:1	132	-48.13	48.15	1034216.86	94.64	5.36
437	EDITHA-RVK:1	132	-31.87	31.98	532528.88	94.42	5.58
438	BMR-RVK:1	132	31.03	-30.54	373630.54	94.21	5.79
439	ANLP-KOTPET:1	132	-26.12	26.13	847064.61	94.98	5.02
440	NDV-1-NDV-2:2	132	-14.47	14.48	166946.50	93.59	6.41
441	NDV-1-NDV-2:1	132	-21.92	21.94	142863.66	93.60	6.40
442	CHPT-PRCH:1	132	-42.61	43.49	580485.45	93.40	6.60
443	NVG-NTS:1	132	6.51	-6.50	315672.34	94.26	5.74
444	KDA-RCPE:2	132	49.13	-48.31	843584.08	95.36	4.64
445	KDA-RCPE:1	132	49.13	-48.31	843584.08	95.36	4.64
446	PEN-LVS:1	132	0.00	0.00	116308.68	94.27	5.73
447	CUMB-YRGP:1	132	-3.13	3.29	2673773.69	94.81	5.19
448	KNML-PMRU:1	132	-4.98	5.00	1257413.93	96.51	3.49
449	PDP-TUNI:1	132	15.75	-15.54	1842824.20	95.05	4.95
450	KRPL-NARS:1	132	7.18	-7.18	1776017.11	95.06	4.94
451	PLS-ICHA:1	132	7.97	-7.93	2053591.39	95.41	4.59
452	PEN-KVLS:1	132	17.34	-17.09	150911.65	95.55	4.45
453	CFL-GZK:1	132	-4.64	4.64	65105.29	96.24	3.76
454	CFL-GZK:2	132	-4.64	4.64	65105.29	96.24	3.76
455	PLS-BARU:1	132	6.53	-6.51	818324.85	95.41	4.59
456	TKL-PLS:2	132	13.13	-13.09	727420.69	95.42	4.58
457	TKL-PLS:1	132	13.13	-13.09	727420.69	95.42	4.58
458	TKL-NR5NPT:1	132	10.11	-10.09	995774.91	95.43	4.57
459	TKL-PTPM:1	132	3.72	-3.71	1050264.24	95.43	4.57
460	KSMK-PEN:2	132	-19.49	19.66	893953.40	95.44	4.56
461	KSMK-PEN:1	132	-19.49	19.66	893953.40	95.44	4.56
462	ANAND-BIRLA:1	132	20.49	-20.43	487964.89	95.46	4.54
463	PEN-ANAND:1	132	44.70	-44.32	673105.79	95.47	4.53
464	PEN-DFAL:1	132	0.01	-0.01	202026.46	95.52	4.48
465	TENL-CKPM:1	132	0.00	0.00	362012.80	95.32	4.68
466	TBV-KVLS:1	132	-13.25	13.30	151747.79	96.08	3.92
467	GVD-PYDBHM:1	132	78.13	-76.55	878867.28	95.89	4.11
468	BMD-KVKT:1	132	20.94	-20.84	760610.65	96.32	3.68
469	GVD-PLKD:1	132	14.29	-14.17	1445536.91	96.11	3.89
470	GVD-RAJM:1	132	6.81	-6.80	626138.17	96.01	3.99
471	PDG-TANGED:1	132	-3.06	3.06	1161617.95	94.69	5.31
472	TBV-GOLD:1	132	-24.31	24.43	751035.34	96.84	3.16
473	GVD-TBV:1	132	-7.02	7.05	1792091.98	96.14	3.86
474	APC-PNYM:1	132	4.34	-4.33	1362034.45	97.62	2.38
475	TKL-PONDU:1	132	17.60	-17.40	2249107.79	97.00	3.00
476	BHMY-NRSPM:1	132	0.47	-0.46	975419.95	97.26	2.74
477	TKL-PLKD:1	132	1.96	-1.79	1702464.92	97.89	2.11
478	GDL-KNML:1	132	14.05	-13.97	989254.46	94.51	5.49
479	CHPM-PYDBHM:1	132	-23.69	23.71	1676186.99	97.04	2.96
480	GDL-KNML:2	132	13.80	-13.72	989569.37	94.54	5.46
481	TDK-GJNDL:1	132	16.20	-16.18	322939.92	97.25	2.75
482	BHMY-RSMILL:1	132	-32.00	32.01	1373073.90	97.38	2.62
483	PULI-VMPL:1	132	1.60	-1.52	1639508.69	95.50	4.50

Sr. No.	Branch Name	Voltage	Base Flow (From) MW	Base Flow (To) MW	Allocated Cost	% Share of TL Cost	% Share by others
484	TBV-VZNG:1	132	24.65	-24.41	1089734.48	96.82	3.18
485	BBLI-PRTPRM:2	132	8.19	-8.18	729167.49	97.65	2.35
486	BBLI-PRTPRM:1	132	8.19	-8.18	729167.49	97.65	2.35
487	YRGP-DORNAL:1	132	-35.37	35.82	1095030.58	97.07	2.93
488	NDV-2-RSMILL:1	132	38.70	-38.69	1154644.31	97.48	2.52
489	BDWL-PORMA:1	132	26.88	-26.87	1260486.20	98.28	1.72
490	YANM-PTPNGR:1	132	-9.21	9.24	1047038.64	98.03	1.97
491	CHPM-PONDU:1	132	-14.43	14.48	529512.60	97.43	2.57
492	PULI-YGT:1	132	-13.51	13.89	1471278.66	97.06	2.94
493	KDA-PTPNGR:1	132	30.95	-30.86	435421.74	98.03	1.97
494	PDP-PRAT:2	132	5.01	-5.00	715125.19	97.53	2.47
495	PDP-PRAT:1	132	5.01	-5.00	653239.35	97.53	2.47
496	BMR-RAJANA:1	132	-9.69	9.70	611248.98	97.41	2.59
497	NRSPM-RAZOL:1	132	-22.36	22.36	1037888.76	98.14	1.86
498	KOVR-NDV-2:1	132	-11.59	11.62	488403.47	97.57	2.43
499	PDP-GZK-1:1	132	-74.40	74.49	195518.95	97.55	2.45
500	BMR-PDP:2	132	-18.73	18.92	1373906.52	97.44	2.56
501	RJP-THIM:1	132	5.49	-5.48	726625.47	98.58	1.42
502	SS-DORNAL:1	132	46.05	-45.37	1099650.36	97.48	2.52
503	KDP-KMBPD:1	132	50.09	-48.76	1721108.07	98.22	1.78
504	BHMY-VUNDI:2	132	-15.79	15.81	281320.00	98.29	1.71
505	BHMY-VUNDI:1	132	-15.79	15.81	281320.00	98.29	1.71
506	MDPL-BKKT1:1	132	19.73	-19.57	974504.75	98.91	1.09
507	PDP-RAJANA:1	132	32.60	-32.37	821373.67	97.90	2.10
508	PULI-PULIV:2	132	-27.28	27.36	182226.84	97.27	2.73
509	PULI-PULIV:1	132	-27.28	27.36	182226.84	97.27	2.73
510	YGT-VMPL:1	132	16.20	-16.02	1403024.96	98.20	1.80
511	KVKT-JRDY:1	132	27.67	-27.55	625513.21	97.50	2.50
512	CNTPUD-KVKT1:1	132	-49.56	50.18	962515.77	97.52	2.48
513	JRDY-KVKT1:1	132	-25.10	25.22	612275.36	97.58	2.42
514	KDA-PDP:2	132	-18.13	18.18	408477.27	98.12	1.88
515	KDA-PDP:1	132	-18.13	18.18	408477.27	98.12	1.88
516	RENTA-PARASH:1	132	10.49	-10.48	256824.07	98.72	1.28
517	RENTA-NSRTP:2	132	0.03	-0.03	220909.26	98.72	1.28
518	RENTA-NSRTP:1	132	0.03	-0.03	220909.26	98.72	1.28
519	KVKT-NALL:1	132	16.37	-16.28	1139705.41	98.57	1.43
520	BMD-PTDP:1	132	24.10	-23.95	924856.69	98.63	1.37
521	PLMN-SANT:1	132	22.96	-22.64	1538192.44	98.94	1.06
522	PLMN-SANT:2	132	22.96	-22.64	1538192.44	98.94	1.06
523	CKL-NANDI:1	132	22.28	-22.15	898650.82	99.11	0.89
524	HPCL-NAVW:1	132	-2.35	2.35	20829.83	100.07	(0.07)
525	HPCL-NAVW:2	132	-2.35	2.35	20829.83	100.07	(0.07)
526	BHMY-TNK:1	132	24.36	-24.15	1165194.88	99.26	0.74
527	SANT-KUPM:1	132	18.25	-18.20	484982.62	99.41	0.59
528	SANT-KUPM:2	132	18.25	-18.20	484982.62	99.41	0.59
529	KVKT-KVKT1:1	132	-50.81	50.82	12896.25	99.13	0.87
530	KVKT-KVKT1:2	132	-50.81	50.82	12896.25	99.13	0.87
531	RAK-SAMRLA:1	132	-8.26	8.26	134306.74	100.26	(0.26)
532	CTR-NUNPL:2	132	12.20	-12.19	247741.14	99.70	0.30
533	CTR-NUNPL:1	132	12.20	-12.19	247741.14	99.70	0.30
534	PLMN-NUNPL:2	132	-7.59	7.59	870411.87	99.71	0.29
535	PLMN-NUNPL:1	132	-7.59	7.59	870411.87	99.71	0.29
536	NDV-1-TNK:1	132	28.12	-27.87	906388.64	99.66	0.34
537	BMR-MLPT:2	132	23.01	-22.93	518613.15	99.66	0.34

Sr. No.	Branch Name	Voltage	Base Flow (From) MW	Base Flow (To) MW	Allocated Cost	% Share of TL Cost	% Share by others
538	BMR-MLPT:1	132	23.01	-22.93	518613.15	99.66	0.34
539	HDP-JMBD:1	132	34.85	-34.31	1575276.73	100.26	(0.26)
540	HDP-TKUNTA:1	132	57.76	-57.18	763427.81	100.26	(0.26)
541	PUTT-HDP:1	132	-23.51	23.51	2175415.81	100.26	(0.26)
542	NAD-ALGD:2	132	21.95	-21.77	1072308.20	99.81	0.19
543	NAD-ALGD:1	132	21.95	-21.77	1072308.20	99.81	0.19
544	MRK-KSNP:1	132	12.67	-12.67	633698.08	99.04	0.96
545	KOVR-NDV:1:1	132	-7.18	7.21	487229.60	100.16	(0.16)
546	CUMB-GIDD:1	132	22.79	-22.62	1296031.26	99.37	0.63
547	APSUG-SAGO:1	132	-2.56	2.56	88215.10	100.10	(0.10)
548	SAGO-NDV:2:1	132	-34.60	34.77	911556.30	100.10	(0.10)
549	SAGO-NDV:2:2	132	-34.60	34.77	911556.30	100.10	(0.10)
550	KONPRM-W-TMLPL-W:1	132	-30.02	30.11	763427.81	100.26	(0.26)
551	PROD-JMLMDG:1	132	-6.19	6.28	742267.31	100.26	(0.26)
552	PROD-YGT:2	132	-14.72	14.78	406555.73	100.26	(0.26)
553	PROD-YGT:1	132	-14.72	14.78	406555.73	100.26	(0.26)
554	ARK-TBV:1	132	2.68	-2.67	339130.20	100.26	(0.26)
555	ARK-TBV:2	132	2.68	-2.67	339130.20	100.26	(0.26)
556	PULIV1-LINGAL:1	132	5.66	-5.66	558503.94	100.26	(0.26)
557	TEXM-YGT:2	132	-4.38	4.38	374872.33	100.26	(0.26)
558	TEXM-YGT:1	132	-4.38	4.38	374872.33	100.26	(0.26)
559	PULIV1-GOVRAJ:1	132	10.24	-10.24	70687.76	100.26	(0.26)
560	GTKL-HMP:1	132	-9.83	9.93	3435778.57	100.26	(0.26)
561	ARK-MKD:1	132	-12.94	13.03	1651133.95	100.26	(0.26)
562	ARK-MKD:2	132	-12.94	13.03	1651133.95	100.26	(0.26)
563	RADG-OBUL:1	132	1.57	-1.57	1449099.08	100.26	(0.26)
564	GTKL-GTY:1	132	33.79	-33.39	1318680.16	100.26	(0.26)
565	GTKL-URAVA:1	132	-36.11	36.51	1056782.01	100.26	(0.26)
566	KDR-TNKL:1	132	6.36	-6.35	1031829.23	100.26	(0.26)
567	KDR-PULI:1	132	-43.51	44.14	1013662.48	100.26	(0.26)
568	KLDG-RADG:2	132	21.35	-21.21	794249.35	100.26	(0.26)
569	KLDG-RADG:1	132	21.35	-21.21	794249.35	100.26	(0.26)
570	PROD-DUWU:1	132	8.20	-8.20	742221.47	100.26	(0.26)
571	GDV-SRIB:1	132	-1.04	1.33	684257.52	100.26	(0.26)
572	KPMT-SagS:1	132	-1.35	1.35	586708.41	100.26	(0.26)
573	HDP-ARHI:1	132	-29.73	29.87	550986.71	100.26	(0.26)
574	NAD-VEMP:1	132	14.11	-14.02	541148.95	99.54	0.46
575	BNGPLI-VEMP:1	132	-55.53	55.84	544453.57	100.15	(0.15)
576	JMLMDG-SUZLON-W1:2	132	-12.99	13.05	541960.53	100.26	(0.26)
577	JMLMDG-SUZLON-W1:1	132	-12.99	13.05	541960.53	100.26	(0.26)
578	BNGPLI-MDGD:1	132	6.54	-6.54	467436.03	100.15	(0.15)
579	MACP-GBR:1	132	-1.44	1.44	444979.45	100.26	(0.26)
580	BALAPA-PULIV1:1	132	15.84	-15.79	417623.29	100.26	(0.26)
581	TDPT-KOMA:1	132	16.67	-16.63	389843.00	100.26	(0.26)
582	NDPTA-ESUG:1	132	0.98	-0.96	291032.93	80.15	19.85
583	BBLI-NC5:1	132	-10.25	10.28	307491.76	100.26	(0.26)
584	RCPE-SSSU:1	132	-6.81	6.81	176719.40	100.26	(0.26)
585	PRAT-NBVL:1	132	-12.58	12.58	141375.52	100.26	(0.26)
586	CCIV-YGT:1	132	-1.72	1.72	91305.02	100.26	(0.26)
587	CCIV-YGT:2	132	-1.72	1.72	91305.02	100.26	(0.26)
588	RAZOL-VATSA:1	132	-3.90	3.91	70687.76	100.26	(0.26)
589	GUDPAD-BMMC:1	132	-7.73	7.73	56550.21	100.26	(0.26)
590	ADNI-CHAG:1	132	-23.24	23.30	35342.32	100.26	(0.26)

TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

From

To

Chief Engineer,
State Load Dispatch Centre,
APTRANSCO,
Hyderabad – 500 082

Member Secretary,
Southern Regional Power Committee,
29, Race Course Cross Road,
Bangalore – 560 009

Letter No. CE(SLDC)/SE(SLDC)/F.POC/D.No. 605 /16, dated:16.12.2016

Sir,

Sub: APTRANSCO – SLDC – Certification of intra-state lines of APTRANSCO with incidental flows for inter-state power transfers as Inter State Transmission System (ISTS) lines – Requested - Regarding.

Ref: (1) Letter No. CE(SLDC)/SE(SLDC)/F.POC/D.No.594/16, dated:09.12.2016

Kindly peruse this office letter dated:09.12.2016 (ref) where in it was requested for certification of certain intra-state lines of APTRANSCO with incidental flows of inter-state power transfers as ISTS lines for inclusion in POC charges.

It is requested that the matter may please be expedited for claiming the benefits for the Q4 period of 2016-17.

Yours faithfully,

Chief Engineer/SLDC

Copy submitted to:
Director/Grid & Transmission Management/APTRANSCO



MC
11/12/16
A/L
17/12/16

EXHIBIT P/2

भारत सरकार केन्द्रीय विद्युत प्राधिकरण दक्षिण क्षेत्रीय विद्युत समिति बैंगलूरु - 560 009			Government of India Central Electricity Authority Southern Regional Power Committee Bengaluru - 560 009		
Web site: www.srpc.kar.nic.in		e-mail: mssrpc- ka@nic.in		Ph: 080- 22287205	Fax: 080- 22259343
सं/No	SRPC/SEI/2016/ 8296		दिनांक / Date		30.12.2016

Chief Engineer/SLDC
APTRANSCO
Vidyuth Soudha
Khairatabad
HYDERABAD - 500 082



Sub: Request for certification of intra state lines of APTRANSCO with incidental flows for inter state power transfers as ISTS lines

Sir,

Kind reference is invited to letter no CE (SLDC)/SE (SLDC)/F.POC/D No 594/2016 dated 09.12.2016 on the subject.

The above matter is being included as an Agenda Item in the next Meeting of Commercial Sub Committee. This is in order to evolve a consensus on the methodology to be followed for such certification.

Thanking you,

Yours faithfully,



[Signature]
Superintending Engineer

31

copy to Ed/SLDC
CE/SLDC

} for info and action

CE/APSLDC

EXHIBIT P/3

TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

From
Chief Engineer
APSLDC, APTRANSCO
Vidyut Soudha, Hyderabad 82

To
Shri S.R.Bhat,
Member Secretary, SRPC
29, Race Course X Road
Bangalore

Lr.No.CE(SLDC)/SE(SLDC)/F.POC/D.No. 201/17, Dt. 9.01.17

Sir,

- Sub: Request to certify APTRANSCO 132KV/220KV/400 KV intra state lines facilitating to carry inter-state power also incidentally - to consider for payment of poc charges by other SR beneficiaries to PGCIL - regarding.
- Ref: 1) APSLDC's Lr.No.CE(SLDC)/SE(SLDC)/F.POC/D.No.594/2016, Dtd.9.12.2016
2) SRPC Lr.No.SRPC/SEI/2016/8296, dtd.30.12.2016

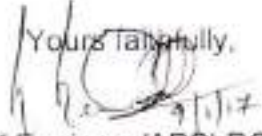
I invite your kind attention to the subject matter and ref 1st cited wherein SRPC Secretariat was requested to certify that APTRANSCO's 132KV/220KV/400KV intra state lines which are also carrying inter-state power incidentally for evacuation of power from central generating stations along with PGCIL inter-state transmission lines. This incidental flow of inter-state power was observed from the software being utilized by NLDC/SRLDC/CERC for determination of POC Rates in every quarter and after thorough examination of this inter-state power flow, SRPC Secretariat was requested vide ref 1st cited, to certify certain lines for collection of poc charges from other SR Beneficiaries by PGCIL subject to approval of CERC for YTC along with reimbursement to APTRANSCO i.e., as per the regulations on inter-state transmission charges & losses in vogue.

In turn, SRPC Secretariat vide reference 2nd cited had intimated that consensus from other SR beneficiaries need to be evolved for issuing the certification on the request of APTRANSCO and this issue would be discussed in the ensuing commercial sub-committee meeting. In this connection, it is to submit that APTRANSCO had taken the software from CERC for a period of 15 days and after conducting studies on this software, the above fact was noticed by APTRANSCO/APSLDC. Later on SRPC Secretariat was requested to certify these lines additionally also as inter-state transmission lines which are carrying the inter-state power also incidentally. This issue



might not be known by other SR beneficiaries without utilizing the software for determination of POC rates through load flows. It is of the view that SRPC Secretariat may kindly utilize the software of CERC for ascertaining the notice of APTRANSCO/ APSLDC about the intra state lines of APTRANSCO also carrying the inter-state power incidentally for consideration of request of APSLDC. Further, APTRANSCO opines that this issue need not be discussed in commercial sub-committee meeting to arrive the consensus from other SR beneficiaries.

Under the above background, SRPC Secretariat is once again requested that APTRANSCO intra state transmission lines may also be considered to certify as the inter-state lines, as requested by APSLDC in the reference 1st cited and SRPC may kindly accept to issue the certification to APTRANSCO/APSLDC, in order to submit before CERC, without further discussion in ensuing commercial sub-committee meeting. Your compliance in this matter is solicited.

Yours faithfully,

 Chief Engineer/APSLDC


 29/01/2017

Copy to Chief Engineer/Comm/APPCC/APTRANSCO/VS/HYD

copy to ED (P&HSD)/APTRANSCO/VS/HYD



EXHIBIT P/4

FAX / POST



भारत सरकार
केन्द्रीय विद्युत प्राधिकरण
दक्षिण क्षेत्रीय विद्युत समिति
29, रेस कोर्स क्रॉस रोड
बैंगलुरु - 560 009



Government of India
Central Electricity Authority
Southern Regional Power Committee
29, Race Course Cross Road
BANGALORE - 560 009



आईएसओ 9001:2000
ISO: 9001-2000

Phone : 080-2228 2516 ; FAX : 080-2225 9343; e-mail: secomm@srpc-ka@nic.in ; web site: www.srpc.kar.nic.in

सं. दक्षेविस /अअ.1/33 CC/2017/

No. SRPC/SE-I/33 CC/2017/

दिनांक/ Dated: 12th January, 2017

सेवा में / To

वितरण सूची के अनुसार
As per Distribution List

विषय: दक्षेविस की वाणिज्य उपसमिति की 33 वी बैठक की कार्यसूची।

Sub: Agenda for 33rd Meeting of Commercial Sub-Committee-Reg

महोदय/महोदया/ Sir/ Madam,

दिनांक 31.01.2017 (मंगलवार) के प्रातः 10:30 बजे को बैंगलुरु में होनेवाली दक्षिण क्षेत्रीय विद्युत समिति की वाणिज्य उपसमिति की 33 वी बैठक की कार्यसूची को दक्षेविस के वेबसाईट (www.srpc.kar.nic.in) में अपलोड कर दिया गया है। सभी सदस्यों, नोडल अधिकारियों एवं नामित व्यक्तियों से अनुरोध है कि बैठक में भाग लें।

The agenda for the 33rd Meeting of Commercial Sub-Committee of SRPC to be held on 31.01.2017 (Tuesday) at 10:30am at SRPC Conference Hall, Bengaluru is uploaded on the SRPC website (www.srpc.kar.nic.in). All the members, Nodal officers and nominees are requested to kindly make it convenient to attend the meeting.

भवदीय/Yours faithfully,

आर.एम. रंगराजन 12/1/17

(आर एम रंगराजन / R.M.RANGARAJAN)

अधीक्षक अभियंता(C) / Superintending Engineer(C)

- 14.7. The DC would be allowed considering the average DC for the past 7 days (with due consideration of normal operation days).
- 14.8. The DC would be allowed from the time block when first unit tripped, i.e. Unit #3, from 09:36 hrs on 12.12.2016.
- 14.9. The DC would be allowed till 8 hours from time of restoration of last 400kV transmission line (400kV Vallur-Kalivandapattu Line-2), which was at 14:45 hr. on 14.12.2016, i.e., up to 22:45 hrs on 14.12.2016.
- 14.10. NTECL-Vallur stated that they could not come back on 14.12.2016, since port clearance was not received to operate coal conveyer system till 15.12.2016.
- 14.11. NTECL requested to consider the average DC, excluding the time blocks when unit was tripped due to turbine pipe steam leakage. As per the SRLDC daily generation outage report the time of the unit outage due to turbine pipe steam leakage was from 18:38 on 5th Dec 2016 to 08:07. On 6th Dec 2016.
- 14.12. Average DC works out to be 1280 for the week starting from 5th Dec 2016 to 11th Dec 2016 excluding blocks from 18:45 on 5th Dec 2016 to 08:15 on 6th Dec 2016.

✚ *Deemed DC for the affected period would be based on the average of the DC of stage – II units for the period 7 days prior to the occurrence of the event excluding any planned outage.*

✚ *CC forum has recommended for Deemed DC of 1280 MW from 09:30 of 12th December 2016 to 22:45 of 14th December 2016 for NTECL Vallur.*

✚ *After deliberation it was decided to put up for the approval of SRPC forum.*

15. Methodology for Certification of Intra-State Transmission line

- APTRANSCO vide letter dated 09-12-2016 (ANNEXURE 13) requested SRPC to certify certain intra state lines so that the same lines can be considered for inclusion in POC charges.
- As per Clause 2.1.3 of Annexure –I CERC Third Amendment of Sharing of inter-State Transmission Charges and Losses Regulations 2015:
 - *“Certification of non-ISTS lines carrying inter-State power, which were not approved by the RPCs on the date of notification of the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2009, shall be done on the basis of load flow studies. For this purpose, STU shall put up proposal to the respective RPC Secretariat for approval. RPC Secretariat, in consultation with RLDC, using WebNet Software would examine the proposal. The*

results of the load flow studies and participation factor indicating flow of Inter State power on these lines shall be used to compute the percentage of usage of these lines as inter State transmission. The software in the considered scenario will give percentage of usage of these lines by home State and other than home State. For testing the usage, tariff of similar ISTS line may be used. The tariff of the line will also be allocated by software to the home State and other than home State. Based on percentage usage of ISTS in base case, RPC will approve whether the particular State line is being used as ISTS or not. Concerned STU will submit asset-wise tariff. If asset wise tariff is not available, STU will file petition before the Commission for approval of tariff of such lines. The tariff in respect of these lines shall be computed based on Approved ARR and it shall be allocated to lines of different voltage levels and configurations on the basis of methodology which is being done for ISTS lines.”

The following methodology for SRPC certification of intra state lines, carrying power to other states, which shall be applicable to all the utilities, was proposed by SRPC secretariat in the meeting:

The certification would be valid for a financial Year. The base case of each quarter submitted by DIC to validation committee for PoC Computation of the previous financial year would be examined for certification in the current Year. If in each base case the usage of state owned line is more by other state than home state then those lines would be certified as Non-ISTS lines carrying Inter State Power. The usage of lines would be obtained through WebNet Software.

Deliberations in the CCM

- 15.1. It was brought to the notice of the forum that APTRANSCO was requesting for inclusion of lines which were utilized more than 10% by other states (ANNEXURE 14).
- 15.2. APTRANSCO stated that PoC regulations ensure that even a fractional utilization of ISTS lines are to be taken into account and the beneficiary should be paid for the same.
- 15.3. SRPC stated that most of the STU lines are built for State DISCOMS and thus non availability may not affect the import capability of other states. Hence it would be prudent to certify those intra state lines whose usages is more by other state than host states.
- 15.4. It was informed to the forum that study would be conducted by using Webnet software and the same would be certified by RPC for inclusion in the POC.



- 15.5. MS, SRPC stated that considering the data for four quarters would facilitate to capture all scenarios of load-generation balances, seasonal load flow pattern etc. He further informed that consolidated certification for intrastate lines eligible from all state would be issued for one year period.



It was decided to put up the item for approval in the next SRPC meeting.

16. Certification of Inter State Transmission Lines between AP and Telangana.

- Lines listed below, owned by Andhra Pradesh STU connecting Andhra Pradesh with other states, viz, Telangana, Tamil Nadu, Karnataka and Union Territory of Puducherry, are certified by SRPC as interstate lines owned by APTRANSCO connecting another state.

S.NO	Substation	Name of the Line	Connected to
1	Sattennapalli	400kV Srisailam LB Line-2	Telangana
2	Sattennapalli	400kV Srisailam LB Line-1	Telangana
3	Kurnool	400kV Srisailam LB	Telangana
4	VTPS	400kV Suryapet	Telangana
5	VTPS	400kV Malkaram Line-1	Telangana
6	Talapalli	220kV Chalakurthy Line	Telangana
7	Brahmanakotkar	220kV Wanaparthy Line	Telangana
8	Talapalli	220kV N'Sagar Line-3	Telangana
9	Talapalli	220kV N'Sagar Line-2	Telangana
10	Talapalli	220kV N'Sagar Line-1	Telangana
11	Srisailam RBReceiving stn	220kV N'Sagar Line	Telangana
12	Chillakallu	220kV Narketpalli Line-2	Telangana
13	Chillakallu	220kV Narketpalli Line-1	Telangana
14	L. Sileru	220kV KTPS line II	Telangana
15	L. Sileru	220kV KTPS line I	Telangana
16	Nunna	220kV KTPS Line	Telangana
17	Sulurpet	220kV Gummidipondi line	Tamil Nadu
18	Srisailam RB	220kV Dindi line II	Telangana
19	Srisailam RB	220kV Dindi line I	Telangana
20	Chittoor(220 kV)	220 kV Tiruvalam line	Tamil Nadu
21	Ragulapadu	220 kV Alipura line	Karnataka
22	Piduguralla#	132kV Wadapalli Line	Telangana
23	Tangeda	132kV Wadapalli Line	Telangana
24	Chillakallu	132kV Seethapuram Line	Telangana

EXHIBIT P/5

TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

From
Chief Engineer/SLDC
APTRANSCO
Vidyut Soudha,
Khairatabad,
Hyderabad - 500 082

To
Member-Secretary
Southern Regional Power Committee (SRPC),
Central Electricity Authority,
29, Race Course Cross Road
Bangalore - 560 009

Letter No. CE(SLDC)/SE(SLDC)/F.POC/D.No. 800 /2017, dated:03.02.2017

Sir,

Sub: APTRANSCO - SLDC - Request for certification of intra-state transmission lines of APTRANSCO having incidental flows due to inter-state power transfers as "Non-Interstate Transmission System (ISTS) lines carrying Inter State Power" - Regarding

Ref: (1) Letter No. CE(SLDC)/SE(SLDC)/F.POC/D.No.594/2016, dated:09.12.2016.
(2) Letter No. SRPC/SE-I/2016/8296, dated:30.12.2016.
(3) Letter No. CE(SLDC)/SE(SLDC)/F.POC/D.No.701/17, dated:09.01.2017.
(4) Letter No. SRPC/SE-I/33 CC/2017, dated:12.01.2017.
(5) Letter No. CE(SLDC)/SE(SLDC)/F/POC/D.No.737/2017, dated:20.01.2017

In line with CERC Regulations, vide this office letter dated:09.12.2016 (ref 1), it was requested for certification of intra-state lines with incidental flows for inter-state transfer of power as Inter-State Transmission System (ISTS) lines. Further, vide this office letter dated:09.01.2017 (ref 3), it was requested to expedite the matter of certification of lines.

The methodology for the same was discussed in the Commercial Sub-Committee meeting held on 31.01.2017. In the meeting, it was intimated that CERC (Sharing of Inter-State Transmission Charges and Losses)(First Amendment) Regulations, 2011 has mentioned a cut-off of 50% of total power carried by it to be inter-state power to qualify as a Non-ISTS lines carrying inter-state power in 2.1.2 (g) of Annexure 1 of Principal Regulations extracted as under.

".... For certifying non-ISTS lines for carrying inter-state power, which were not approved by the RPCs on the date of notification of the Principal Regulations, this shall be determined through the process of load flow studies. The results of the load flow studies, on an annual average basis, should show these lines carrying more than 50% of the total power carried by it to be inter-state power. This shall be vetted by the NLDC in consultation with the respective RLDC on the proposal made by the respective RPC, through a common methodology to be adopted by the NLDC. The YTC for such RPC certified non-ISTS lines which carry inter-state power, shall be approved by the Appropriate Commission."

Further, in CERC (Sharing of Inter-State Transmission Charges and Losses)(Second Amendment) Regulations, 2012, the sub paras in 2.1.2(g) has been placed under a new para 2.1.3 Yearly Transmission Charges.



However, In the CERC (Sharing of Inter-State Transmission Charges and Losses)(Third Amendment) Regulations, 2015, the 2.1.3 of Annexure 1 of Principal Regulations has been revised as under

"...Certification of non-ISTS lines carrying inter-state power, which were not approved by the RPCs on the date of notification of the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2009, shall be done on the basis of load flow studies. For this purpose, STU shall put up proposal to the respective RPC Secretariat for approval. RPC Secretariat, in consultation with RLDC, using Web Net Software would examine the proposal. The results of the load flow studies and participation factor indicating flow of Inter State power on these lines shall be used to compute the percentage of usage of these lines as inter State transmission. The software in the considered scenario will give percentage of usage of these lines by home State and other than home State. For testing the usage, tariff of similar ISTS line may be used. The tariff of the line will also be allocated by software to the home State and other than home State. Based on percentage usage of ISTS in base case, RPC will approve whether the particular State line is being used as ISTS or not."

The cut-off of 50% of total power carried to be inter-state power has been removed in the third amendment and the reason for removing the high cut-off has been detailed in the statement of reasons of the third amendment dated 26th October 2015 as under.

15.21) A question arises for consideration is whether to fix a minimum percentage figure to consider a STU line as an ISTS line or not. As per Electricity Act and Tariff Policy, all lines which are incidental to Inter-state flow of power are to be considered as ISTS. In a meshed transmission system, many intra-state transmission lines carry inter-state power and therefore become incidental to inter-state transmission system. However, as Electricity Grid is being operated in a cooperative manner, for a minor fraction of ISTS power, it is expected that STU would not insist on considering its line(s) to be inter-state as on the one hand it will receive payment for its own lines, on the other it has to pay for usage of other States' lines. If a STU puts up a proposal for considering its line as ISTS and it is found that it is being utilized to a large extent by its own drawee nodes, then it would be merely an academic exercise as major part of tariff would be allocated to home State only. So keeping in view the regulatory process involved in getting a line certified as carrying ISTS power, getting its tariff approved and then adjustment from STU's ARR, it is expected that this claim will be raised judiciously. An interesting situation happened during 2011 when in Eastern and Northern Regions, many lines were submitted to RPCs for approval as ISTS, Southern States realizing that they all are using each other State's line, decided that they will not put up any line for certification by RPC as ISTS. While Commission wants to consider legitimate claims but this must not result in making process too complex. The RPC may therefore uniformly decide a percentage below which (say 10%) such a line would not be considered as an ISTS. Further, it is intended that for assessment of a particular line being used for carrying interstate power, technical knowhow and tools will be provided by Secretariat of RPCs and NLDC/ RLDCs shall provide all necessary support to States in this regard.

Hence, it is requested that a nominal cut-off of 10% or lower be considered for certifying the lines as ISTS or otherwise, in accordance with the intent of the CERC (Sharing of Inter-State Transmission Charges and Losses)(Third Amendment) Regulations,2015 and the statement of reasons of the amendment.

It is also requested to expedite the matter of certification intra-state lines of AP having incidental flows due to inter-state power transfers as non-ISTS lines carrying inter-state power.

Yours faithfully,


Chief Engineer/SLDC/APTRANSCO



SOUTHERN REGIONAL POWER COMMITTEE
BENGALURU

MINUTES OF THE 31st SRPC MEETING HELD ON 25th FEBRUARY 2017 AT
BENGALURU

1. INTRODUCTION

1.1 The 31st Meeting of Southern Regional Power Committee (SRPC) was held on 25th February 2017 at Bengaluru. The list of participants is given at **Annexure-I**.

1.2 KPTCL welcomed the Members, Directors and participants to the 31st Meeting of SRPC. A video was presented on 'Invest Karnataka'; some of the highlights of which are given below:

- ✓ Sivasamudram (4.2 MW) was the first hydro station in Asia commissioned in 1902 for enabling gold mining at Kolar. The power was extended to Kolar through then longest transmission line of 147 kms.
- ✓ Karnataka was the first state to set up professionally managed entity at state level (KPCL) to plan, construct, operate and maintain power generation. Since 1976, KPCL has installed capacity of around 6,500 MW of thermal, hydro, solar and wind energy. 56% of which is hydel energy. Around 9,500 MW is in the pipe line to be commissioned in the future.
- ✓ MNRE sanctioned National Training Centre for Solar Technology to KPCL in 2011.
- ✓ Functions of transmission and distribution of erstwhile KEB were carved out in 1999. Shortly afterwards, KERC was set up to regulate all aspects of electricity sector in a transparent manner.
- ✓ KPTCL was further unbundled in 2002 and four independent Discoms were formed, which was later made into five Discoms.
- ✓ PCKL was incorporated in 2007 to further augment power supply procurement.
- ✓ KPTCL has reduced losses to one of the lowest in the country at 3.66 %.
- ✓ KPTCL was first in the country to commission largest SCADA network to professionally operate and control transmission network.
- ✓ KPTCL switched to compact substations and was the first state in India to use covered conductors.
- ✓ KPTCL was awarded best 'Transmission Utility' in the country by CBIP.
- ✓ KPTCL / Escoms have been responsible for electrifying nearly 100 % of the habitats in Karnataka. By 2020, all the households in Karnataka would be electrified.
- ✓ Bescom was chosen to host the Pilot Project for Smart Grid. Distribution Automation System (DAS) has been implemented in Bescom.
- ✓ CESC earned first prize towards National Energy Conservation.



14	Singareni	Telangana	2 x 600	Unit I: CoD from 25.09.2016 Unit II: CoD from 02.12.2016
15	Manuguru PPP	Telangana	4 x 270	U1 : 20.03.2017 U2: 20.05.2017 U3: 20.09.2017 U4:20.09.2017
16	Kakatiya TPP Stage III	Telangana	1 x 800	2017-18
17	Kothagudem TPS Phase VII	Telangana	1 x 800	
18	Damaracherla (Yadadri)	Telangana	2 x 600 + 4 x 800	2018-19

26.2 Updated status of new projects of IPPs is furnished below:

Sl No.	Name of project	Located in	Capacity in MW	Commissioning Schedule /Remarks
1	Meenakshi PH-II	AP	2 x 350	2017-18 Untied: 640 MW
2	East Coast Energy Thermal	AP	2 x 660	2017-18 AP : 300 MW
3	Thermal Powertech (TPCIL) Unit-III	AP	1 x 660	2017-18
4	SGPL (NCC) Krishnapatnam	AP	2 x 660	Unit I : CoD from 17.11.2016 Unit II: Syn. by June 2017 AP: 500 MW (firmed up PPA to be signed).
5	Godhna TPP, Janjir – Champa Dist, Chhattisgarh	For KAR	2 x 800	2017-18

27 METHODOLOGY FOR CERTIFICATION OF INTRA-STATE TRANSMISSION LINE

27.1 APTRANSCO vide letter dated 09.12.2016 (**Annexure-XXXVII**) had requested SRPC to certify certain intra state lines so that the same could be considered for inclusion in POC charges.

27.2 Clause 2.1.3 of Annexure –I CERC Third Amendment of Sharing of inter-State Transmission Charges and Losses Regulations 2015 states as follows:

“Certification of non-ISTS lines carrying inter-State power, which were not approved by the RPCs on the date of notification of the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2009, shall be done on the basis of load flow studies. For this purpose, STU shall put up proposal to the respective RPC Secretariat for approval. RPC Secretariat, in consultation with RLDC, using WebNet Software would examine the proposal. The results of the load flow studies and participation factor indicating flow of Inter State power on these lines shall be used to compute the percentage of usage of these lines as inter State transmission. The software in the considered scenario will give percentage of usage of these lines by home State and other than home State. For testing the usage, tariff of similar ISTS line may be used. The

tariff of the line will also be allocated by software to the home State and other than home State. Based on percentage usage of ISTS in base case, RPC will approve whether the particular State line is being used as ISTS or not. Concerned STU will submit asset-wise tariff. If asset wise tariff is not available, STU will file petition before the Commission for approval of tariff of such lines. The tariff in respect of these lines shall be computed based on Approved ARR and it shall be allocated to lines of different voltage levels and configurations on the basis of methodology which is being done for ISTS lines."

27.3 It was proposed to evolve a methodology for SRPC certification of intra state lines, carrying power to other states, to be applicable to all the utilities, with consensus on the same. Methodology prepared by SRPC is enclosed as **Annexure-XXXVIII** please.

27.4 This matter had been discussed in the 33rd Meeting of Commercial Sub Committee held on 31st January 2017. After discussions, the Commercial Sub Committee had recommended the methodology prepared by SRPC for approval. This methodology was put up for approval.

27.5 TCC deliberations

- APTRANSCO had stated that the methodology had not been agreed by APTRANSCO in Commercial Committee Meeting. SOR to 3rd Amendment of Sharing Regulations suggested that lines carrying 10 % interstate power could be considered to be included in PoC computations.
- TSTRANSCO had stated that there are no standards in place presently to decide on any percentage.
- TCC had concurred with the recommendations of Commercial Committee and placed the same before SRPC for approval. It was agreed that 50% criteria would be reviewed later after experience/feedback is available on the issue.

27.6 SRPC deliberations

27.7 APTRANSCO stated that 50% criteria seem to be on the higher side and requested for a review.

27.8 SRPC approved the recommendation of TCC. It was agreed that 50% criteria would be reviewed later after experience/feedback is available on the issue.

28 EMERGENCY RESTORATION SYSTEM (ERS)

28.1 Requirement of ERS had been outlined in MoP letter dated 05.12.2014. CEA vide letter dt.18.04.2016 had sought updated status on the ERS which was communicated to the States. Status update is given below:

Transmission Utility	Requirement as per MoP	Existing	Status/Remarks
APTRANSCO	3 Nos.		ERS I – Placed at Nellore ERS II – Placed at Vizag ERS III – Submitted for approval for PSDF funding

ANNEXURE -
XXVIII 1/3

METHODOLOGY FOR CERTIFICATION OF INTRA-STATE TRANSMISSION LINE

As Per Central Electricity Regulatory Commission -Sharing of Inter State Transmission Charges and Losses Third Amendment Regulations, 2015:

Part of (7) Sub-clause (n) of clause (1) of Regulation 7 of the Principal Regulations:

Provided further that in case of non-ISTS lines (lines owned by STUs but being used for carrying inter-State power as certified by respective RPCs), the asset-wise tariff as approved by the respective State Commission shall be considered. Where asset-wise tariff is not available, the tariff as computed by the Commission based on the ARR of the STUs (as approved by respective State Commissions) by adopting the methodology similar to the methodology used for ISTS transmission licensees shall be considered. The transmission charges received by the concerned STU on this account shall be adjusted in its approved Annual Revenue Requirement."

Part of (3) Sub-paras under Para 2.1.3 of the Annexure-I to the Principal Regulations:

Overall charges to be allocated among nodes shall be computed by adopting the YTC of transmission assets of the ISTS licensees, deemed ISTS licensees and owners of the non-ISTS lines which have been certified by the respective Regional Power Committee (RPC) for carrying inter-State power. The Yearly Transmission Charge, computed for assets at each voltage level and conductor configuration in accordance with the provisions of these regulations shall be calculated for each ISTS transmission licensee based on indicative cost provided by the Central Transmission Utility for different voltage levels and conductor configuration. The YTC for the RPC certified non-ISTS lines which carry inter-State power shall be approved by the Appropriate Commission.

In case line-wise tariff for the RPC certified non-ISTS lines has not been specified by the Appropriate Commission, the tariff as computed for the relevant voltage level and conductor configuration shall be used. The methodology for computation of tariff of individual asset shall be similar to the methodology adopted for the ISTS transmission licensees and shall be based on ARR of the STU as approved by the respective State Commission.



Certification of non-ISTS lines carrying inter-State power, which were not approved by the RPCs on the date of notification of the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2009, shall be done on the basis of load flow studies. For this purpose, STU shall put up proposal to the respective RPC Secretariat for approval. RPC Secretariat, in consultation with RLDC, using WebNet Software would examine the proposal. The results of the load flow studies and participation factor indicating flow of Inter State power on these lines shall be used to compute the percentage of usage of these lines as inter State transmission. The software in the considered scenario will give percentage of usage of these lines by home State and other than home State. For testing the usage, tariff of similar ISTS line may be used. The tariff of the line will also be allocated by software to the home State and other than home State. Based on percentage usage of ISTS in base case, RPC will approve whether the particular State line is being used as ISTS or not. Concerned STU will submit asset-wise tariff. If asset wise tariff is not available, STU will file petition before the Commission for approval of tariff of such lines. The tariff in respect of these lines shall be computed based on Approved ARR and it shall be allocated to lines of different voltage levels and configurations on the basis of methodology which is being done for ISTS lines."

Procedure directed by Hon'ble CERC:

1. STU shall put up proposal to the respective RPC Secretariat
2. RPC Secretariat, in consultation with RLDC, using WebNet Software would examine the proposal.
3. The results of the load flow studies and participation factor indicating flow of Inter State power on these lines shall be used to compute the percentage of usage of these lines as inter State transmission.
4. The software in the considered scenario will give percentage of usage of these lines by home State and other than home State.
5. For testing the usage, tariff of similar ISTS line may be used. The tariff of the line will also be allocated by software to the home State and other than home State.
6. Based on percentage usage of ISTS in base case, RPC will approve whether the particular State line is being used as ISTS or not.
7. Concerned STU will submit asset-wise tariff. If asset wise tariff is not available, STU will file petition before the Commission for approval of tariff of such lines.



8. The tariff in respect of these lines shall be computed based on Approved ARR and it shall be allocated to lines of different voltage levels and configurations on the basis of methodology which is being done for ISTS lines.

Proposed Methodology for Certification of Non-ISTS Lines:

The certification would be valid for a financial Year. The base case of each quarter submitted by DIC to validation committee for PoC Computation of the previous financial year would be examined for certification in the current Year. If in each base case the usage of state owned line is more by other state than home state then those lines would be certified as Non-ISTS lines carrying Inter State Power. The usage of lines would be obtained through WebNet Software.

भारत सरकार केंद्रीय विद्युत प्राधिकरण दक्षिण क्षेत्रीय विद्युत समिति बेंगलूरु - 560 009		Government of India Central Electricity Authority Southern Regional Power Committee Bengaluru - 560 009	
Web site: www.srpc.kar.nic.in	e-mail: mssrpc- ka@nic.in	Ph: 080- 22287205	Fax: 080- 22259343
सं/No. SRPC/SE II/2017/ 3395- 402	दिनांक / Date		19.06.2017

- 1) Director (Grid & Tr.Mgmt), APTRANSCO, Hyderabad
- 2) Director (Transmission), KPTCL, Bengaluru
- 3) Managing Director, TANTRANSCO, Chennai

Sub: Certification of Intra State Transmission Lines

Sir,

Kind reference is invited to the deliberations of the 31st SRPC Meeting on the subject. The methodology for certification (50 % criteria) had been discussed and approved by SRPC. In this regard, studies were carried out by SRPC Secretariat along with SRLDC. Based on these studies, please find enclosed the list of intra state lines (non ISTS lines carrying interstate power) that have been certified as per the procedure given under Clause 2.1.3 of Annexure -I CERC Third Amendment of Sharing of inter-State Transmission Charges and Losses Regulations 2015, for further necessary action please.

Thanking you.

Encl: as above

Yours faithfully,


 (एस.आर. भट्ट/S.R. BHAT)
 Member Secretary

Copy for kind information to:

- 1) CMD, APTRANSCO, Hyderabad
- 2) Managing Director, KPTCL, Bengaluru
- 3) Chairman, TNEB, Chennai
- 4) Executive Director, NLDC, New Delhi
- 5) AGM i/c, POSOCO, SRLDC, Bengaluru



DE/H
 5/7/17
 sqn pae



DE/DO.

ANNEX 499

For Year 2017-18			
S.NO	Lines Certified by SRPC	State	Voltage Level
1	CHITTOOR-SDSTPS:1	AP	400
2	CHITTOOR-SDSTPS:2	AP	400
3	GAZUWAKA1-KALPAKKA1:1	AP	400
4	GAZUWAKA1-KALPAKKA1:2	AP	400
5	NUNNA2-VTS-IV:1	AP	400
6	CHITTOOR4-CHITTOOR:1	AP	220
7	CHITTOOR4-CHITTOOR:2	AP	220
8	GOOTY-PG-BHOGASRAM:1	AP	220
9	KONAPALLY-CHILALLU:1	AP	220
10	KONAPALLY-CHILALLU:2	AP	220
11	KONAPALLY-VTPS:1	AP	220
12	KONAPALLY-VTPS:2	AP	220
13	KURNOOL-BKOTKUR:1	AP	220
14	SULURETA-NLR42:1	AP	220
15	SULURETA-NLR42:2	AP	220
16	SULURETA-NLR42:3	AP	220
17	VTPS-CHILALLU:1	AP	220
18	VTPS-CHILALLU:2	AP	220
19	CHIKKODI-BELGAUM:1	KA	220
20	CHIKKODI-BELGAUM:2	KA	220
21	CHIKKODI-GTPRBA:1	KA	220
22	CHIKKODI-GTPRBA:2	KA	220
23	KANABRGI-NARNA-KP:1	KA	220
24	KANABRGI-NARNA-KP:2	KA	220
25	KOLAR-KP-BGPET:1	KA	220
26	KOLAR-KP-BGPET:2	KA	220
27	SEDAM2-SHAHAPUR:1	KA	220
28	ABISEK42-KAYTHAR2:1	TN	220



[Handwritten signature]

EXHIBIT P/8

TRANSMISSION CORPORATION OF ANDHRAPRADESH Ltd

From

Executive Director/APSLDC
APTRANSCO
Vidyut Soudha, Gunadala
Vijayawada- 520004.

To

Member Secretary /SRPC,
29-B, Race Course Road,
Bengaluru - 560009.

Lr.No. ED (SLDC)/SE (SLDC)/EE (SS)/ F.No. Certification/ D.No.15 / 19, date 25.04.2019

Sir,

Sub: SRPC certification for non-ISTS lines ISTS Lines owned by APTRANSCO carrying interstate power having more than 50% utilization during the years FY 2014-15, FY2015-16 and FY 2016-17 - Requested- Regarding.

It is requested to furnish SRPC certification for non-ISTS lines carrying interstate power having more than 50% utilization during the years FY 2014-15, FY2015-16 and FY 2016-17 for filing the petition before honorable CERC/APERC.

Yours sincerely

B.V. Shankar Reddy 25/4/19
Executive Director/APSLDC

* निर्यात (अ) - 1 पक्ष सुप्लाय
चलाना 3/5

अ. व. शंकर रेड्डी
25/4/19
(अ. व. शंकर रेड्डी)

EXHIBIT P/9

FAX/SPEED POST



भारत सरकार
केन्द्रीय विद्युत अधिकार
दक्षिण क्षेत्रीय विद्युत समिति
25, रंग कोर्ट इलाहाबाद रोड
बंगलुरु-560 009



Government of India
Central Electricity Authority
Southern Regional Power Committee
25, Rang Court Court Road
BENGALURU-560009

Phone: 080-22282516, FAX: 080-22282143, e-mail: srpc@vsnl.com, srpc@vsnl.com

No. SRPC/SE-1/2020/622-39

दिनांक/ Dated: 23rd January, 2020

सेवा में/ To:

वितरण सूची के अनुसार /As per Distribution List

Subject: Certification of Non-ISTS Lines carrying interstate power for the period 2014-15, 2015-16 and 2016-17, which were having more than 50% utilization for interstate power transmission during the Years 2013-14, 2014-15 and 2015-16 respectively- reg.

Sir,

CERC Third Amendment of Sharing of Inter-State Transmission Charges and Losses Regulations 2015, Clause 2.1.3 of Annexure - 1 stipulates as below:

"Certification of non-ISTS lines carrying inter-State power, which were not approved by the RPCs on the date of notification of the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2009, shall be done on the basis of load flow studies. For this purpose, STU shall put up proposal in the respective RPC Secretariat for approval. RPC Secretariat, in consultation with RLDC, using WebNet Software would examine the proposal. The results of the load flow studies and participation factor indicating flow of Inter State power on these lines shall be used to compute the percentage of usage of these lines as inter State transmission. The software in the considered scenario will give percentage of usage of these lines by, home State and other than home State. For testing the usage, tariff of similar ISTS line may be used. The tariff of the line will also be allocated by software to the home State and other than home State. Based on percentage usage of ISTS in base case, RPC will approve whether the particular State line is being used as ISTS or not...".

In compliance with the regulations, the lines as listed in the respective Annexures are certified as lines carrying interstate power, in consultation with SRLDC:

- (1) For the year 2014-15, no Non-ISTS Lines have qualified for certification. The data used for the study is taken from Quarter- 1 to Quarter-4 of 2013-14, which is considered for POC computation.

Chief Engineer
Planning, Power Systems & Commercial
APTRANSCO, Vijayawada
Vijayawada-520 004

Chief Engineer
Planning, Power Systems & Commercial
APTRANSCO, Vijayawada
Vijayawada-520 004

- (ii) For the year 2015-16, 16 non ISTS lines, given at Annexure I hereto. The data used for the study is taken from Quarter-1 to Quarter-4 of 2014-15, which is considered for POC computation.
- (iii) For the year 2016-17, 17 non ISTS lines, given at Annexure II hereto. The data used for the study is taken from Quarter-1 to Quarter-4 of 2015-16, which is considered for POC computation.

Yours faithfully,

मेका रामकृष्ण 23/11/2016

(मेका रामकृष्ण/MEKA RAMKRISHNA)
अधीक्षण अभियन्ता(सी)/Superintending Engineer (C)

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vikat Boudha,
Vijayawada-520004

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vikat Boudha,
Vijayawada-520004.

-21-

Annexure-I

Non-ISTS Lines Certified for the year 2015-16

SL.No.	Lines Certified by RPC	Voltage (kV)	State
1.	CHITTIGOR-RENGUNTA:1	220	AP
2.	CHITTIGOR-NAGARI:2	220	AP
3.	SULURETA-NLR-PG:1	220	AP
4.	KRPTNAM-NLR-AP:1	400	AP
5.	KRPTNAM-NLR-AP:2	400	AP
6.	NELLORE-NLR-PG:1	220	AP
7.	NELLORE-NLR-PG:2	220	AP
8.	NELLORE-NLR-PG:3	220	AP
9.	RENGUNTA-NAGARI:1	220	AP
10.	PONDY42-BHAHUR:1	220	PY

2015-16
 Chief Engineer
 System & Commercial
 TSCD, Vidyalaya,
 Vijayawada-520004.

Annexure-II

Non-ISTS Lines Certified for the year 2016-17

SL.No	Lines Certified by RPC	Voltage (kV)	State
1	SULURETA-NLR42:1	220	AP
2	KONAPLLY-VTPS:1	220	AP
3	KONAPLLY-VTPS:2	220	AP
4	KONAPLLY-CHILALLU:1	220	AP
5	KONAPLLY-CHILALLU:2	220	AP
6	VTPS-CHILALLU:1	220	AP
7	VTPS-CHILALLU:2	220	AP
8	VTPS-RENACALA:2	220	AP
9	KURNOOL-BKOTKUR:1	220	AP
10	CHITTOOR-SDSTPS:1	400	AP
11	CHITTOOR-SDSTPS:2	400	AP
12	NUNNA2-VTS-IV:1	400	AP
13	GAZUWAKAI-KALPAKKA1:1	400	AP
14	GAZUWAKAI-KALPAKKA1:2	400	AP
15	TANDUR2-YDMLRM2:1	220	TS
16	ABISEK42-KAYTHAR2:1	220	TN
17	ABISEK42-VERANAM2:1	220	TN

Zelus. S. Subrah

-23-

Chief Engineer/
Transmission & Energy Systems & Commercial
Vidut South,
Vijayawada-820004.

निदेशी नवीन (New List of Companies) (Sub-Committee)

1. मुख्य अभियंता (वाणिज्य), एसीपीसीसी, हैदराबाद / CE (Comm), APSC, Hyderabad.
2. सीपीसीसी, बीएम (आईपीसी) एसीपीसीसीएल, सिविल/Chief V. Ravi GM (PS), APSC, Tirunelveli.
3. सेवा अभियंता, एसएलसीसी-टीबीसी-केवीटीसीएल/CA, SLDC-TRC, KPTCL, Bengaluru.
4. सेवा अभियंता, एसएलसीसी, एसीपीसीसीएल, बंगलूरु/CA, SLDC, KPTCL, Bengaluru.
5. ज्योतिषाध्यक्ष (विद्युत), केपीसीएल, बंगलूरु / Dy. GM (Finance), KPTCL, Bengaluru.
6. अपर निदेशक (वाणिज्य), सीपीसीसी, बंगलूरु / Assistant Director (Prof), PSC, Bengaluru.
7. निदेशक (वाणिज्य), सीपीसीसी, बंगलूरु / Director (Prof), PSC, Bengaluru.
8. कार्यकारी अभियंता (विद्युत), एसीपीसीसी, बंगलूरु / Chief Engineer (Electrical), APSC, Bengaluru.
9. अधीक्षक अभियंता (एलडी & सी), बंगलूरु, चेन्नई / AS (LD & CO), TANTRANSCO, Chennai.
10. कार्यकारी अभियंता (विद्युत), बंगलूरु, चेन्नई / AS (Genl), TANTRANSCO, Chennai.
11. मुख्य अभियंता (निर्वाहक सेवा), बंगलूरु, चेन्नई / CE (Regulatory Cell), TANTRANSCO, Chennai.
12. मुख्य अभियंता (वाणिज्य), एसीपीसीसी, हैदराबाद / CE (Comm), TSPCC, Hyderabad.
13. सुमेय (वाणिज्य), एसीपीसीसी, बंगलूरु / COM (Comm), TSNPDC, Warangal.
14. कार्यकारी अभियंता / एससीसी, विद्युत विभाग, पुणे / EE (S.C.C.), Electricity Department, Pune.
15. महाप्रबंधक (वाणिज्य), सीपी, एनटीपीसी, नई दिल्ली / GM (Comm), CC, NTPC, New Delhi.
16. महाप्रबंधक (वाणिज्य), एसआर - एचओ, एनटीपीसी, सिविल/Chief V. Ravi GM (Comm), SR-HQ, NTPC, Secunderabad.
17. महाप्रबंधक (वाणिज्य), निगम मुख्यालय, एनएनसी, नैवेली / GM (Comm), Corporate Office, NLEI, Neyveli.
18. निदेशक, एमएसीएस, कलपक्कम / Station Director, MAPS, Kalpakam.
19. निदेशक, केवी एस, कैलाश / Station Director, KOS, Kailash.
20. निदेशक, केपीसीसी, कुडकुलम / Station Director, KKNPP, Kudukulam.
21. महाप्रबंधक (वाणिज्य), एनटीपीसी, बंगलूरु एनटीपीसी/AGM (Comm), NTPCL, Valur STPS.
22. उप महाप्रबंधक, एनटीपीसी, बंगलूरु / Dy. GM, NTPCL, Thiruvananthapuram.
23. अतिरिक्त अध्यक्ष (व्यापार विकास), एसीपीसीसी, बंगलूरु/Sr. VP (Business Development), UPCL, Bengaluru.
24. उप महाप्रबंधक, एसएसएसएसएस, बंगलूरु / Deputy General Manager, JSWEL, Bengaluru.
25. श्री अशोक मोहम्मद, कोस्टल एनर्जी प्राइवेट लिमिटेड, चेन्नई / Mr. Asan Mohammed, CEPL, Chennai.
26. पीएस - पावर सेल, भाई एल & एस एनटीपीसी, चेन्नई / GM - Power Sale, IL&PS TNPL, Chennai.
27. उपाध्यक्ष (वाणिज्य), हिमडुर्गा नेशनल पावर कॉर्पोरेशन लिमिटेड, मुंबई / VP (Comm), HNPL, Mumbai.
28. सीएम, शेल्फोर्ड एनर्जी इंडिया लिमिटेड, सेल्बोर्ग/CM, Sembcorp Energy India Limited, SSPR, Nellore.
29. निदेशक (वाणिज्य), सीपीसीसी इंडिया लिमिटेड, नई दिल्ली / Director (Comm), PTC India Limited, New Delhi.
30. मुख्यमहाप्रबंधक, एनटीपीसी, नई दिल्ली / CGM, NVNL, New Delhi.
31. महाप्रबंधक (वाणिज्य), बने-1, पावर लिमिटेड, सिविल/Chief V. Ravi GM (Comm), SRTS-1, PGCIL, Secunderabad.
32. महाप्रबंधक (वाणिज्य), बने-1, पावर लिमिटेड, बंगलूरु/Chief V. Ravi GM (Comm), SRTS-1, PGCIL, Bengaluru.
33. वित्त प्रमुख, एसआरएलसीसी, सीपीसीसी, बंगलूरु / Head of Finance, SRLDC, POSOCO, Bengaluru.
34. वित्त प्रमुख, एसआरएलसीसी, सीपीसीसी, बंगलूरु / Head of MO, SRLDC, POSOCO, Bengaluru.
35. निदेशक, सीएम & एसीपीसी प्रभाग, चेन्नई, नई दिल्ली / Director, GM & NPC Division, CEA, New Delhi.

2024

2024
 Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vijayawada.
 Vijayawada-520004.

EXHIBIT P/10

E-mail

भारत सरकार केंद्रीयविद्युत प्राधिकरण दक्षिण क्षेत्रीय विद्युत समिति 29, रेसकोर्स क्रॉस रोड बेंगलूर- 560 009		Government of India Central Electricity Authority Southern Regional Power Committee 29, Race Course Cross Road Bengaluru- 560 009
Email: mssrpc-ka@nic.in	Phone: 080-22287205	Fax: 080-22259343
सं/No. SRPC/SE-I/GC/2023/	दिनांक/ Date	29th May 2023

सेवा में / To

CGM (Commercial & Legal), APTRANSCO

विषय: सीईआरसी की याचिका No. 25/MP/2022 से संबंधित एपीट्रानस्को प्रश्न के संबंध में।

Subject: APTRANSCO Query related to CERC petition No. 25/MP/2022 -reg.

महोदय/ महोदया/ Sir/ Madam,

APTRANSCO vide mail dated 25.05.2023 (**Annexure-1**) requested SRPC Secretariat to intimate the difficulties/constraints in finalization of the Certification for FY: 2014-17 for submission to CERC in connection with their Petition No: 25/ MP/2022.

In this regard, the following are brought forth for your kind reference & necessary action please:

1. In line with the Provisions of CERC (Sharing of Inter State Transmission Charges and Losses) (Third Amendment) Regulations 2015, the methodology for SRPC certification of intra-State lines, carrying power to other states, which shall be applicable to all the Utilities, was deliberated & recommended for approval of SRPC as under in the 33rd Meeting of Commercial Sub Committee of SRPC held on 31.01.2017 (relevant extracts of its Minutes is at **Annexure-2**):

“The certification would be valid for a financial Year. The base case of each quarter submitted by DIC to validation committee for PoC Computation of the previous financial year would be examined for certification in the current Year. If in each base case the usage of state owned line is more by other state than home state then those lines would be certified as Non-ISTS lines carrying Inter State Power. The usage of lines would be obtained through WebNet Software.”

2. In the 31st SRPC meeting held on 25.02.2017, SRPC deliberated and approved the Methodology (extract of the MoM and detailed methodology is at (**Annexure-3**) for certification for non-ISTS lines having more than 50% utilization for carrying inter-state power transmission by SRPC Secretariat.
3. Accordingly, SRPC Secretariat in consultation with SRLDC was carrying out the Certification for non-ISTS lines having more than 50% utilization for carrying inter-state power transmission on yearly basis based on the BaseCase of each quarter submitted by DIC to validation Committee for PoC computation. The following certifications in consultation with SRLDC were issued by SRPC Secretariat during the period of 2017-2020:



Certification for the Year	PoC Data used for the Certification	Certification Issued by SRPC Secretariat on
2017-18	PoC Data of Quarter-1 to Quarter-4 of 2016-17	19 th June, 2017
2018-19	PoC Data of Quarter-1 to Quarter-4 of 2017-18	20 th March, 2018
2019-20	PoC Data of Quarter-1 to Quarter-4 of 2018-19	7 th March, 2019
2020-21	PoC Data of Quarter-1 to Quarter-4 of 2019-20	30 th April, 2020

4. APSLDC vide letter dated 25.04.2019 (**Annexure-4**) requested SRPC Certification for non-ISTS lines carrying interstate power having more than 50 % utilization during the financial years 2014- 15, 2015-16 and 2016-17 for filing petition before Honorable CERC/APERC. SRPC vide letter dated 13.05.2019 (**Annexure-5**) informed that the Certification could be processed only for the subsequent period from the date of adoption of procedure by SRPC.
5. The matter was discussed in the 36th meeting of SRPC held on 12.07.2019 (**Annexure-6**), wherein the following was deliberated:
 - SRPC Secretariat had informed that the certification could be processed only for the subsequent period from the date of adoption of procedure by SRPC. POC rates could not be revised.
 - In the meeting, SRPC Secretariat was suggested to look into possibility of certifying for previous period. STUs would approach CERC and as per CERC directive future course of action will be taken.
 - POSOCO was requested to provide details to SRPC secretariat. NLDC stated that they would examine and revert back.
6. Subsequently SRPC vide letter dated 24.09.2019 and 29.10.2019 requested NLDC to provide the POC based data files for the year 2013-14, 2014-15, 2015-16 and 2016-17 to SRPC Secretariat. Later, the Certification of non-ISTS lines carrying inter-State power having more than 50 % utilization for the years 2014-15, 2015-16 & 2016-17 had been carried out by SRPC Secretariat and communicated to the State Utilities vide letter dated 23.01.2020 (**Annexure-7**).
7. In this regard, it may also be noted that the Certification of intra-State lines carrying inter-State power had been discontinued from FY 2021-22 by SRPC secretariat since there is no provision for RPC Certification for non-ISTS lines in CERC (Sharing of Interstate transmission charges and losses) Regulations 2020 implemented w.e.f. November 2020.

भवदीय/Yours faithfully,

संलग्नक/ Encl: यथोपरि/ As above

N.R.L.K.

(एन° आर° एल° के° प्रसाद / **N.R.L.K. Prasad**)
अधीक्षक अभियन्ता(वा)/ **Superintending Engineer (C)**



Petition for Determination of Tariff for Intra-State Lines of APTRANSCO for FY 2016-16 & FY 2016-17

**BEFORE THE ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION
HYDERABAD**

FILING NO. _____/2020

OP No.42 of 2020

EXHIBIT P/11

CASE NO. _____/2020

In the matter of:

Petition for Determination of Tariff for intra-State transmission lines of APTRANSCO carrying interstate power for the FY 2015-16 and FY 2016-17 to include the same in the PoC Mechanism.

PETITION FILED UNDER SECTION 62 OF EA 2003. CERC (SHARING OF INTER STATE TRANSMISSION CHARGES AND LOSSES) (THIRD AMENDMENT) REGULATIONS, 2015 AND AS PER CERC (TERMS AND CONDITIONS OF TARIFF) REGULATIONS, 2014.

In the matter of:

TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

... Applicant

AFFIDAVIT OF APPLICANT VERIFYING THE APPLICATION ACCOMPANYING FILING OF PETITION FOR DETERMINATION OF TARIFF FOR INTRA-STATE TRANSMISSION LINES OF APTRANSCO CARRYING INTERSTATE POWER FOR THE FY 2015-16 and FY 2016-17.

I, Sri. CH. V.S. Subba Rao, S/o Sesha Sai, 58 years, officiating as Chief Engineer/Planning, Power Systems & Commercial, APTRANSCO, Vidyut Soudha, Gunadala, Vijayawada – 520004 do solemnly affirm and say as follows:

Ch. V.S. Subba Rao
Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidyut Soudha, ..
Vijayawada-520004.

Petition for Determination of Tariff for Intra-State Lines of APTRANSCO for FY 2015-16 & FY 2016-17

1. I am the Chief Engineer/Planning, Power Systems & Commercial, APTRANSCO, the licensee company operating and controlling the Transmission Business & SLDC Activity of electricity in Andhra Pradesh pursuant to the license granted by the Hon'ble Commission. I am competent and duly authorized by APTRANSCO to affirm, swear, execute and file this affidavit in the present proceedings.
2. I have read and understood the contents of the accompanying petition for determination of tariff for newly Identified Intra-State Lines of APTRANSCO carrying interstate power for FY 2015-16 and FY 2016-17. The statements made in the paragraphs of the accompanying application now shown to me are true to my knowledge derived from the official records made available to me and are based on information and advice received which I believe to be true and correct.

Zeev S. Subbarao
DEPONENT

VERIFICATION:

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520004.

I, the above named Deponent solemnly affirm on this 12th day of March 2020 that the contents of the above affidavit are true to my knowledge, no part of it is false and nothing material has been concealed there from.

Zeev S. Subbarao
DEPONENT

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520004.

Zeev S. Subbarao
Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520004.

[Signature]

Petition for Determination of Tariff for Intra-State Lines of APTRANSCO for FY 2015-16 & FY 2016-17

**BEFORE THE ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION
HYDERABAD**

FILING NO. _____/2020

OP No.42 of 2020

CASE NO. _____/2020

In the matter of:

1. Petition for determination of tariff for intra-State transmission lines of APTRANSCO carrying inter-state power for the FY 2015-16 and FY 2016-17 to include the same in the PoC Mechanism.

PETITION FILED UNDER SECTION 62 OF EA 2003, CERC (SHARING OF INTER STATE TRANSMISSION CHARGES AND LOSSES) (THIRD AMENDMENT) REGULATIONS, 2015 AND AS PER CERC (TERMS AND CONDITIONS OF TARIFF) REGULATIONS, 2014.

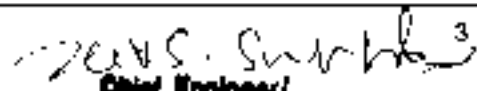
In the matter of:

TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

... Applicant

The Applicant respectfully submits as under: -

2. Pursuant to the applicable provisions of the Andhra Pradesh Electricity Reform Act, 1998, the Government of Andhra Pradesh undertook the reforms and restructuring of the erstwhile Andhra Pradesh State Electricity Board (APSEB). APTRANSCO was formed as a successor entity of the erstwhile APSEB through the First statutory transfer scheme notified in the official gazette on February 1, 1999 to manage the Transmission and Distribution business of erstwhile APSEB. Subsequently, the State Government notified the Second Transfer Scheme on March 31, 2000 (the Second Transfer Scheme) wherein APTRANSCO retained the Transmission, SLDC and Bulk Supply business of the state with itself, while


Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada 520004



transferring the Distribution and Retail supply of the state to the four Distribution Companies formed. Pursuant to obtaining independent licensees by the DISCOMs in December 2000, APTRANSCO has relinquished its Distribution & Retail Supply License. Subsequently on June 7, 2005, the State Government notified the Third Transfer Scheme in its official gazette wherein the Bulk Supply business that was being dealt by APTRANSCO is vested to the DISCOMs with effect from June 9, 2005. As a result, APTRANSCO is presently carrying out solely the Transmission business as the State Transmission Utility (STU) in the State.

3. The erstwhile Andhra Pradesh state is reorganized into the Andhra Pradesh state and Telangana state on 2nd June, 2014. As per A.P. Reorganization Act and by the effect of the bifurcation of erstwhile Andhra Pradesh, it is resulted in to number of Inter-State lines between the divided Andhra Pradesh and Telangana state. This has resulted in 37 lines which are remained as partly/wholly owned by AP (As per section 2(36) (i) of the Act). Further there were 3 lines connecting with Tamilnadu, Karnataka and Pondicherry.
4. There are a number of transmission lines which are intra-state, but are incidental to the power flow of Inter-state power. As per the CERC (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010, these intra-state transmission lines also can be included in the PoC Mechanism subject to if individual YTC for lines are available.
5. The National Electricity Policy (NEP) issued by the Government of India, mandates transmission prices to be the distance and direction sensitive and must capture the utilization of the network by each network user. In line with the said mandate the Central Electricity Regulatory Commission (CERC), has issued Sharing of Interstate Transmission Charges and Losses, 2010 and it came into force with effect from 01.7.2011. Six amendments to the said Sharing Regulations were notified on 25.11.2011, 29.03.2012, 01.05.2015, 03.07.2015, 14.12.2017 and 27.03.2019.


 Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vidut Soudha,
 Vijayawada-520004.



6. The extract of sub clause(y) of Clause 1 of Regulation 2 of principal Regulations and its amendments is as below

"(y) Yearly Transmission Charge (YTC) means the Annual Transmission Charges for the existing and new transmission assets of the inter-State transmission licensees, deemed ISTS Licensees, owners of inter-State transmission lines connecting two states and owners of non-ISTS lines certified by Regional Power Committees for inter-State transmission of power, determined by the Appropriate Commission under Section 62 of the Act or adopted by the Appropriate Commission under Section 63 of the Act or as otherwise provided in these Regulations.

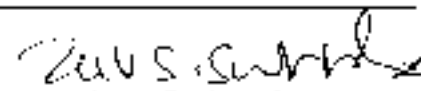
"Provided that in case of non-ISTS lines, the asset-wise tariff determined by the respective State Commissions or approved by the Central Commission based on the approved Annual Revenue Requirement of STU, shall be used:

Provided further that transmission charges received by the STU under these regulations shall be adjusted in the Annual Revenue Requirement of the concerned STU approved by the respective State Commission."

The copy of the CERC Regulation 2010 is attached as **Annexure-A**.

APTRANSCO has filed a petition before Hon'ble CERC for determination of tariff of transmission lines which are inter-state in nature of connecting two states, for the years 2016-17, 2017-18 and 2018-19. Similarly for determination of tariff of the non ISTS lines carrying interstate power were obtained from SRPC and filed petition in APERC for the years 2017-18 and 2018-19 duly following the procedures in vogue. Based on the Commission orders the assets were included in the PoC Mechanism by the Implementing Agency i.e. POSOCO.

7. Now, SRPC has issued certification of Non-ISTS Lines carrying inter-state power for the period 2015-16 and 2016-17 which were having more than 50% utilization during the year 2014-15 and 2015-16 vide letter No. SRPC/SE-I/2020/622-39,


 Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vidul Soudha,
 Vijayawada-520 014



dt.23.01.2020 for 9 and 14 lines respectively. The copy of the SRPC certification is attached as **Annexure-B**.

8. a) The 9Nos. Intrastate lines of Andhra Pradesh carrying Interstate power in the year 2015-16 are as given below.

Sl. No.	Asset	Voltage (Kv)	Configuration	Length in KM	COD	Sl. No. as per SRPC certification	Asset Name
1	CHITTOOR-RENIGUNTA:1	220	S/C	71.86	16-02-2006	1	Asset I
2	CHITTOOR-NAGARI:2	220	S/C	54.49	13-02-2003	2	Asset II(A) & II(B)
		220	S/C	41	15-10-2012		
3	SULURPETA-NELLORE-PG:1	220	S/C	75.701	28-04-1982	3	Asset III(A) & III(B)
		220	S/C	10.1	26-12-2006		
4	KRISHNAPATNAM-NELLORE-AP:1	400	D/C	36.5	23-11-2012	4	Asset -IV & V
5	KRISHNAPATNAM-NELLORE-AP:2	400				5	
6	NELLORE-NELLORE-PG:1	220	S/C	20.7	05-09-1981	6	Asset - VI (A) & VI(B)
		220	S/C	10.1	26-06-2007		
7	NELLORE-NELLORE-PG:2	220	S/C	20.7	05-09-1981	7	Asset - VII (A) & VII(B)
		220	S/C	10.1	26-06-2007		
8	NELLORE-NELLORE-PG:3	220	S/C	28.54	17-04-2005	8	Asset - VIII
9	RENIGUNTA-NAGARI:1	220	S/C	9.5	13-02-2003	9	Asset - IX (A) & IX(B)
		220	S/C	41	15-10-2012		

- b) The 14 Nos. Intrastate lines of Andhra Pradesh carrying interstate power in the year 2016-17 are as given below:

Sl. No.	Asset	Voltage (Kv)	Configuration	Length in KM	COD	Sl. No. as per SRPC certification	Asset Name
1	SULURPETA-NELLORE:1	220	S/C	75.701	28-04-1982	1	Asset - I (A) & I (B)
		220	S/C	10.1	26-12-2006		
2	KONDAPALLI-VTPS:1	220	S/C	6.469	11-11-1989	2	Asset - II
3	KONDAPALLI-VTPS:2	220	S/C	6.469	23-03-1998	3	Asset - III

[Signature]
**Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vidut Boudha,
 Vijayawada-520004.**

4	KONDAPALLI-CHILAKALLU:1	220	S/C	59.705	12-03-1997	4	Asset - IV
5	KONDAPALLI-CHILAKALLU:2	220	S/C	59.705	19-08-2000	5	Asset - V
6	VTPS-CHILAKALLU:1	220	S/C	67.801	28-08-1999	6	Asset - VI
7	VTPS-CHILAKALLU:2	220	S/C	67.801	01-10-2010	7	Asset - VII
8	VTPS-RENTACHINTALA:2	220	S/C	110.09	30-06-1984	8	Asset -VIII (A) & VIII (B)
		220	S/C	1.4	24-11-2008		
9	KURNOOL-BRAHMANKTUR:1	220	S/C	23.18	29-10-2010	9	Asset -IX
10	CHITTOOR-SDSTPS:1	400	D/C	192	17-07-2015	10	Asset - X & XI
11	CHITTOOR-SDSTPS:2	400			22-07-2015	11	
12	NUNNA2-VTPS-IV:1	400	S/C	18.66	26.07.2009	12	Asset - XII
13	GAZUWAKA1-KALAPAKKA1:1	400	S/C	3.393	10.12.2000	13	Asset - XIII
14	GAZUWAKA1-KALAPAKKA1:2	400	S/C	3.393	27.01.2002	14	Asset - XIV

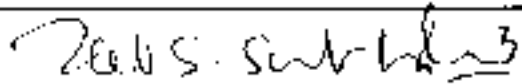
In case of lines which are commissioned before 01.04.2014, the YTC is calculated as per the methodology followed in the petition no.44/TT/2019 filed before APERC. For the lines which are commissioned after 01.04.2014 (Asset X & XI for the year 2016-17), Individual Audited capital cost is taken for calculation of YTC. The methodology indicated in Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 is adopted and computed the tariff.

The methodology used to compute the tariff is in line with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

9. Capital Cost

i. For the Assets I to IX (2015-16) & Assets I to IX& XII to XIV (2016-17)

The individual audited capital cost of the above 9 Nos & 12 No lines are not available and hence the capital cost is considered in line with the Hon'ble


**Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vidut Soudha,
 Vijayawada-520004.**

CERC's methodology. The benchmark cost taken is the same as in order dated 21.06.2018 for petition 237/TT/2016 used for tariff calculation of interstate lines for the year 2015-16 & 2016-17.

The methodology in order dated 21.06.2018 for petition 237/TT/2016 (14) is quoted as below:

"PGCIL's Annual Report data has been used as the reference data; based on which, year wise benchmark cost has been derived.

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 transmission lines' length 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 & 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 TL taken together makes it around 8.3 % of the total line length owned by PGCIL. Further, 132 kV TLs 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 TL 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.

Zee S. Subramanian^B

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Boudha,
Vijayanagara-520004.



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		Rs 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

Therefore, for arriving at the costs of transmission lines of other voltage levels and circuit configurations, the average TL 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 States' transmission lines."

The Capital cost for the 9No assets for the FY 2015-16 are indicated below:

Sl. No.	Asset name	DoC	Rationalized cost of 400 kV line in Rs. Lakh per km	Line length in km	Multiplication factor	Gross block in Rs Lakhs (Capital cost)
1	Asset I	16-02-2006	40.33	71.86	0.36	1043.32
2	Asset II(A)	13-02-2003	34.00	54.49	0.36	666.96
	Asset II(B)	15-10-2012	65.67	41.00	0.36	969.29
3	Asset III(A)	28-04-1982	0.00	75.701	0.36	0.00
	Asset III(B)	26-12-2006	42.53	10.10	0.36	154.64
4	Asset -IV & V	23-11-2012	65.67	36.50	1.39	3331.77
5	Asset - VI (A)	05-09-1981	0.00	20.70	0.36	0.00
	Asset - VI(B)	26-06-2007	47.04	10.10	0.36	171.037
6	Asset - VII (A)	05-09-1981	0.00	20.70	0.36	0.00
	Asset -VII(B)	26-06-2007	47.04	10.10	0.36	171.037
7	Asset - VIII	17-04-2005	40.33	28.54	0.36	414.367

2015-16-17
 Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vijay Soudha,
 Vijayawada-520004.

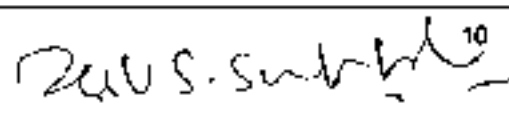
B	Asset - XI (A)	13-02-2003	34.00	9.50	0.36	116.28
	Asset - XII(B)	15-10-2012	65.67	41.00	0.36	969.29

The Capital cost for the 12No assets for the FY 2016-17 are indicated below:

Sl. No.	Asset name	DoC	Rationalized cost of 400 kV line in Rs. Lakh per km	Line length in km	Multiplication factor	Gross block in Rs Lakhs (Capital cost)
1	Asset - I (A)	28-04-1982	0.00	75.701	0.36	0.00
	Asset - I (B)	26-12-2006	42.53	10.10	0.36	154.64
2	Asset - II	11-11-1989	0.00	6.469	0.36	0.00
3	Asset - III	23-03-1998	27.87	6.469	0.36	64.90
4	Asset - IV	12-03-1997	38.20	59.705	0.36	821.06
5	Asset - V	19-08-2000	54.57	59.705	0.36	1172.92
6	Asset - VI	28-08-1999	20.71	67.801	0.36	505.50
7	Asset - VII	01-10-2010	52.26	67.801	0.36	1275.58
8	Asset - VIII(A)	30-06-1984	0.00	110.09	0.36	0.00
	Asset - VIII(B)	24-11-2008	47.74	1.40	0.36	24.061
9	Asset - IX	29-10-2010	52.26	23.18	0.36	436.09
12	Asset - XII	26.07.2009	48.44	18.66	1.00	903.89
13	Asset - XIII	10.12.2000	54.57	3.393	1.00	185.16
14	Asset - XIV	27.01.2002	44.28	3.393	1.00	150.11

I. For the Assets X and XI (2016-17)

These lines are commissioned after 01.04.2014, hence the Audited capital cost has been taken for calculation of YTC. These 2 lines were executed as 2 stretches (i.e. Krishnapatnam – Bonampally and Bonampally - Chittoor). Hence the YTC for these two assets was arrived jointly.


 Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vidut Sourda.
 Vijayawada-520 015

For the Assets X and XI, the Gross Block is as given below.

Asset	Gross block in Rs Lakhs (Capital cost)	Audited certificate enclosed at
Asset X & XI	43505.98	Annexure - XXVII

2. Debt- Equity Ratio for all the assets

The debt- Equity ratio is considered to be the normative debt-equity ratio of 70:30.

3. Depreciation for all the assets

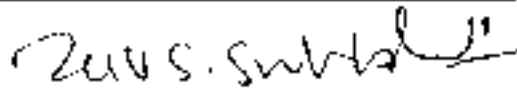
In line with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 asset is depreciated up to 90% of the capital cost, remaining 10% being the salvage value of the asset. For the assets commissioned before 2014 for which the audited capital costs are not available, the rate of depreciation is taken as 5.28% till 12 years and 2.05% beyond that till 25 years as per the methodology adopted by CERC while issuing the orders in Petition No. 237/TT/2016 filed by APTRANSCO. For the assets commissioned after 2014, the rate of depreciation is taken as 5.28%. Further, normative loan repayment during a year shall be deemed to be equal to the depreciation allowed for that year.

4. Interest on Loan

i. For the Assets I to IX (2015-16) & Asset I to IX & XII to XIV (2016-17).

The rate of interest on loan for the assets 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 rate of interest for FY 2015-16 & FY 2016-17 have been considered as the weighted average rate of loan of FY 2015-16 & FY 2016-17.

Year	FY 2015-16	FY 2016-17
Rate of Interest on Loan	10.60	10.75


**Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vaidi Soudha,
 Vijayawada-520004.**



II. For the Assets X and XI (2016-17)

The rate of interest on loan for the assets X and XI for FY 2016-17 is as given below.

Asset	Loan Funded by	Rate of Interest on Loan (%) for FY 2016-2017
Asset X and XI	REC	10.75

5. Return on Equity

Clause (1) and (2) of Regulations 24 and Clause (2) of Regulation 25 of the Central Electricity Regulatory Commission(Terms and Conditions of Tariff) Regulations,2014 specify as under:-

***24. Return on Equity:** (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 18.

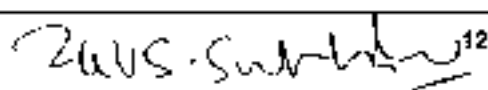
(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system...."

***25. Tax on Return on Equity:**

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

Rate of pre-tax return on equity = Base rate / (1-t)

Where "t" is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the


 Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vitol Boudha,
 Vijayawada-520004.



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."

In line with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, the ROE considered is as follows:

APTRANSCO is a profit-making entity, the total tax rate (including surcharge and Education cess) for the FY 2015-16 & FY 2016-17 is as below

	2015-16	2016-17
Base Rate	30%	30%
Surcharge	12%	12%
Education Cess	3%	3%
Total Tax	34.6080%	34.6080%

Return on Equity	2015-16	2016-17
Return on Equity (Base Rate) (%)	15.50%	15.50%
Tax Rate for respective year (%)	34.61%	34.61%
Rate of Return on Equity (%)	23.70%	23.70%

6. O & M Expenses

The year wise O&M norms approved by Hon'ble APERC in Transmission Tariff Order FY 2014-15 to FY 2018-19 were considered for arriving O&M expenses of respective years.

Year wise O & M Norms approved

	2015-16	2016-17
LL Norm (Rs./ckt.km)	56024	58377

24.6.15
**Chief Engineer/
 Planning, Power Systems & Commercial
 APTRANSCO, Vidut Boudha,
 Vijayawada-520004.**

7. Interest on Working Capital

In accordance with the Clause 1(c) of Regulation 28 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, the rate of interest on working capital is considered to be 13.5% based on SBI base rate of 10% as on 1.4.2014. In accordance with the Clause 1(c) of Regulation 28 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 the working capital is taken as the sum of Maintenance Spares (@15% of the yearly O&M Expenses), O&M Expenses for 1 month and Receivables (equivalent to 2 months of fixed cost).

8. A) The detailed calculations of the Assets I to IX is enclosed at Annexures III to XV. The transmission charges for the 9 No transmission assets for the FY 2015-16 are summarized as below:

(Rs.in Lakhs)

Sl. No.	Asset	Asset Name	YTC for FY 2015-16
1	Asset I	CHITTOOR-RENIGUNTA:1	197.16
2	Asset II(A) & II(B)	CHITTOOR-NAGARI:2	98.76
			206.80
3	Asset III(A) & III(B)	SULURPETA-NELLORE-PG:1	44.73
			29.78
4	Asset - IV & V	KRISHNAPATNAM-NELLORE-AP:1	670.70
		KRISHNAPATNAM-NELLORE-AP:2	
5	Asset - VI (A) & VI(B)	NELLORE-NELLORE-PG:1	12.23
			32.31
6	Asset - VII (A) & VII(B)	NELLORE-NELLORE-PG:2	12.23
			32.31
7	Asset - VIII	NELLORE-NELLORE-PG:3	75.93
8	Asset - IX (A) & IX (B)	RENIGUNTA-NAGARI:1	17.22
			206.80
Total YTC (in Lakhs)			1636.96
Total YTC (in Crores)			16.36

2015.5.2014

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidul Goudha,
Vijayawada-520004.



B) The detailed calculations of the Assets I to XIV is enclosed at Annexures XVI to XXX. The transmission charges for the 14 No transmission assets for the FY 2016-17 are summarized as below:

(Rs. in Lakhs)

Sl. No.	Asset	Asset Name	YTC for FY 2016-17
1	Asset - I (A) & I (B)	SULURUPETA-NELLORE42:1	46.57
			29.19
2	Asset - II	KONDAPALLI-VTPS:1	3.98
3	Asset - III	KONDAPALLI-VTPS:2	10.06
4	Asset - IV	KONDAPALLI-CHILAKALLU:1	113.67
5	Asset - V	KONDAPALLI-CHILAKALLU:2	146.65
6	Asset - VI	VTPS-CHILAKALLU:1	89.08
7	Asset - VII	VTPS-CHILAKALLU:2	253.46
8	Asset -VIII (A) & VIII (B)	VTPS-RENTACHINTALA:2	67.73
			4.71
9	Asset -IX	KURNOOL-BRAHMANKTKUR:1	89.18
10	Asset -- X&XI	CHITTOOR-SDSTPS:1	8745.20
11		CHITTOOR-SDSTPS:2	
12	Asset - XII	NUNNAZ-VTPS-IV:1	156.28
13	Asset - XIII	GAZUWAKA1-KALAPAKKA1:1	19.49
14	Asset - XIV	GAZUWAKA1-KALAPAKKA1:2	16.40
Total YTC (in Lakhs)			9791.65
Total YTC (in Crores)			97.91

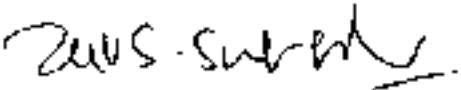
Zub S. Subhakar

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520004

PRAYER

9. In the above circumstances, the petitioner respectfully prays the Hon'ble Commission

- i. to approve the annual fixed charges for the assets covered under this Petition;
- ii. to determine the tariff of the Intra-State transmission lines of APTRANSCO carrying interstate power for FY 2015-16 & FY 2016-17 and
- iii. 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.


PETITIONER

Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520004.

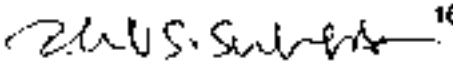
¹⁶
Chief Engineer/
Planning, Power Systems & Commercial
APTRANSCO, Vidut Soudha,
Vijayawada-520004.



EXHIBIT P/12

**ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION**

4th Floor, Singareni Bhavan, Red Hills, Hyderabad – 500 004

WEDNESDAY, THE SEVENTH DAY OF JULY, TWO THOUSAND AND TWENTY ONE

Present

Sri Justice C.V. Nagarjuna Reddy, Chairman

Sri P. Rajagopal Reddy, Member

Sri Thakur Rama Singh, Member

O.P.No.42 of 2020

&

O.P.No.47 of 2020

In the matter of

Determination of Yearly Transmission Charges (YTC) for Non-ISTS (intra-state) transmission lines of AP Transco carrying inter-state power for FY2015-16, FY2016-17 and FY 2020-21 for including the same in PoC Mechanism as per Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010 as amended from time to time.

Petitioner:

Transmission Corporation of Andhra Pradesh Ltd. (APTRANSCO).

The petitions came up for web public hearing finally on 24.03.2021 in the presence of Sri P. Shiva Rao, learned standing Counsel for the petitioner. After carefully considering the material available on record and after hearing the petitioner, Commission passed the following:

COMMON ORDER

1. The petitions have been filed by the Transmission Corporation of Andhra Pradesh Limited (hereinafter referred to as **the APTRANSCO**) seeking determination of Yearly Transmission Charges (YTC) for the APTRANSCO owned non-ISTS Lines (intra-state) which are certified by the Southern Regional Power Committee (hereinafter referred to as **the SRPC**) for FY2015-16, FY2016-17 and FY2020-21 for inclusion in PoC Transmission charges in accordance with Central Electricity Regulatory Commission (hereinafter referred to as **the CERC**) (Sharing of Inter-State Transmission Charges and Losses) (third amendment) Regulations, 2015 with the following prayer:

- i. approve the annual fixed charges for the assets covered under the Petitions;
- ii. determine the tariff of the Intra-State transmission lines of APTRANSCO carrying inter-state power for FY 2015-16, FY2016-17 & FY 2020-21, and
- iii. pass any other order or relief as the Commission may deem fit and proper in the facts and circumstances of the case.

2. The petition for FY2015-16 & FY2016-17 was filed on 18.03.2020 and taken on the file of the Commission as O.P.No 42 on 29.09.2020. A Public Notice along with a copy of the Petition O.P.No. 42 was placed on the website of the Commission on 30.09.2020 inviting views/objections/suggestions from interested persons/stakeholders. Further, it was informed in the Public Notice that the petition will be taken up for public hearing at 11.00 AM on 04.11.2020 through the web hearing and any interested person/organisation desirous of being heard in person, may appear before the Commission on the said date of the public hearing. However, despite the placing of the Public Notice on the website of the Commission, no objections have been received by the date of the



public hearing on 04.11.2020. Therefore, the Commission has provided one more opportunity to the stakeholders for submitting their objections and accordingly posted the date of the next public hearing to 06.01.2021.

3. The petition for the FY 2020-21 was filed on 05.10.2020 and taken on the file of the Commission on 20.11.2020 as O.P.No. 47 of 2020. A Public Notice along with a copy of the Petition O.P.No. 47 was placed on the website of the Commission on the same day inviting views/objections/suggestions from interested persons/stakeholders. Further, it was informed in the Public Notice dated 30.11.2020 that petition will be taken up for public hearing at 11.00 AM on 23.12.2020 through the web hearing and any interested person/organisation desirous of being heard in person, may appear before the Commission on the said date of the public hearing.

4. As both petitions are similar in nature and further based on APTRANSCO's letter, the Commission in the web hearing dated 06.01.2021 has ordered to tag on O.P. No.42 of 2020 along with O.P.No.47 of 2020 and decided to hear both the petitions finally on 24.03.2021.No objections have been received on the above Petitions.

5. The brief facts of the petitions are that the Southern Regional Power Committee (SRPC), in compliance with the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) (third amendment) Regulations, 2015 (Clause 2.13), has certified APTRANSCO Non-ISTS Lines carrying inter-state power for the FY2015-16 and FY2016-17 which were utilized more than 50% during the FY2014-15 and FY2015-16 vide letter No. SRPC/SE-I/2020/622-39, dt.23.01.2020 for 9 Nos and 14 Nos lines respectively. Subsequently, the SRPC vide its letter No. SRPC/SE-I/2020, dt.30.04.2020, has issued certification for 44 Nos Non-ISTS APTRANSCO Lines for FY2020-21.

Accordingly, APTRANSCO filed present petitions for determination of Yearly Transmission Charges (YTC) for all non-ISTS lines certified by the SRPC in respective years. APTRANSCO stated to have followed the procedure adopted by the CERC for determination of tariff for APTRANSCO inter-state lines for the



Common Order in O.P.Nos. 42 & 47 of 2020

FY2016-17 in the order dated 21.06.2018 (petition 237/TT/2016) and claimed YTC year-wise, as under:

A) The YTC for the 9 Nos transmission lines for the FY 2015-16 are as given in the table below.

Sl. No.	Asset	Asset Name	YTC for FY 2015-16 (Rs.in Lakhs)
1	Asset I	CHITTOOR-RENIGUNTA:1	197.16
2	Asset II(A) & II(B)	CHITTOOR-NAGARI:2	98.76
			206.80
3	Asset III(A) & III(B)	SULURPETA-NELLORE-PG:1	44.73
			29.78
4	Asset -IV & V	KRISHNAPATNAM-NELLORE-AP:1	670.70
		KRISHNAPATNAM-NELLORE-AP:2	
5	Asset - VI (A) & VI(B)	NELLORE-NELLORE-PG:1	12.23
			32.31
6	Asset - VII (A) & VII(B)	NELLORE-NELLORE-PG:2	12.23
			32.31
7	Asset - VIII	NELLORE-NELLORE-PG:3	75.93
8	Asset - IX (A) & IX (B)	RENIGUNTA-NAGARI:1	17.22
			206.80
Total YTC (in Lakhs)			1636.96
Total YTC (in Crores)			16.36

B) The YTC for the 14 Nos transmission lines for the FY 2016-17 are as given in the table below.

Sl. No.	Asset	Asset Name	YTC for FY2016-17 (Rs. in Lakhs)
1	Asset - I (A) & I (B)	SULURUPETA-NELLORE42:1	46.57
			29.19
2	Asset - II	KONDAPALLI-VTPS:1	3.98
3	Asset - III	KONDAPALLI-VTPS:2	10.06
4	Asset - IV	KONDAPALLI-CHILAKALLU:1	113.67
5	Asset - V	KONDAPALLI-CHILAKALLU:2	146.65
6	Asset - VI	VTPS-CHILAKALLU:1	89.08
7	Asset - VII	VTPS-CHILAKALLU:2	253.46
8	Asset -VIII (A) & VIII (B)	VTPS-RENTACHINTALA:2	67.73
			4.71
9	Asset -IX	KURNOOL-BRAHMANKTKUR:1	89.18
10	Asset - X & XI	CHITTOOR-SDSTPS:1	8745.20
11		CHITTOOR-SDSTPS:2	
12	Asset - XII	NUNNA2-VTPS-IV:1	156.28
13	Asset - XIII	GAZUWAKA1-KALAPAKKA1:1	19.49
14	Asset - XIV	GAZUWAKA1-KALAPAKKA1:2	16.40
Total YTC (in Lakhs)			9791.65
Total YTC (in Crores)			97.91

Common Order in O.P.Nos. 42 & 47 of 2020

C) The YTC for the 42 No. transmission lines for the FY 2020-21 are as given in the table below.

Sl. No.	Asset Name	Name of the Line	Voltage (kV)	YTC for FY 2020-21 (in Lakhs)
1	Asset 1	NUNNA2-VEMAGIRI1:T3	400	530.2
2	Asset 2	GAZUWAKA2-KALPAKKA 1:T1	400	17.77
3	Asset 3	GAZUWAKA2-KALPAKKA 1:T2		
4	Asset 4	CHITTOOR42-CHITTOOR1:1	220	56.51
5	Asset 5	CHITTOOR42-CHITTOOR1:2		
6	Asset 6-A	SULURPET1-NELLORE42:1	220	64.61
	Asset 6-B			19.69
7	Asset 7	CHITTOOR1-KALIKIRI1:1	220	55.19
8	Asset 8	GOOTY-PG-DHONE1:2	220	558.56
9	Asset 9	GOOTY-PG-DHONE1:1		
10	Asset 10	KONDAPALLI1-CHILLAKALLU1:1	220	95.15
11	Asset 11	KONDAPALLI1-CHILLAKALLU1:2	220	121.65
12	Asset 12	SRISAILAMRB1-TALLAPALLI:1	220	168.69
13	Asset 13	SRISAILAMRB1-TALLAPALLI:2		
14	Asset 14	SRISAILAMRB1-MYDUKUR:1	220	141.64
15	Asset 15	SRISAILAMRB1-SOMYZULPALLI:1	220	90.47
16	Asset 16-A	SRISAILAMRB1-BELKALAGUDUR:1	220	60.36
	Asset 16-B			18.22
17	Asset 17	VTS1-CHILLAKALLU1:1	220	83.65
18	Asset 18	VTS1-CHILLAKALLU1:2	220	212.26
19	Asset 19-A	VTS1-RENTACHNTHALA1:2	220	93.96
	Asset 19-B			3.85
20	Asset 20	KURNOOL1-BRAHMANKTKUR:1	220	72.57
21	Asset 21	MACHERLA-RENTCHNTHALA:1	132	51.41
22	Asset 22	CHITTOOR-SDSTPS:1	400	7475.13
23	Asset 23	CHITTOOR-SDSTPS:2		
24	Asset 24	KURNOOL2-JAMALAMADUGU1:Q1	400	2614.67
25	Asset 25	KURNOOL2-JAMALAMADUGU1:Q2		
26	Asset 26	HINDUJA-KVKOTA1:T2	400	6925.56
27	Asset 27	HINDUJA-KVKOTA1:T1		
28	Asset 28	JAMMALAMADUGU - URAVAKONDA DC Line (Part-1)	400	2943.02
29	Asset 29			
30	Asset 30	TALARICHERUVU TO LILO POINT OF JAMMALAMADUGU - URAVAKONDA DC LINE (Part-2)	400	87.95
31	Asset 31			
32	Asset 32	URVAKONDA-HINDUPUR3:Q1	400	3922.41
33	Asset 33	URVAKONDA-HINDUPUR3:Q2		
34	Asset 34	SULURPET1-NELLORE42:2	220	846.18
35	Asset 35	SULURPET1-NELLORE42:3		

Common Order in O.P.Nos. 42 & 47 of 2020

Sl. No.	Asset Name	Name of the Line	Voltage (kV)	YTC for FY 2020-21 (in Lakhs)
36	Asset 36	URAVAKONDA-BORAMPALLI:2	220	650.70
37	Asset 37	URAVAKONDA-BORAMPALLI:1		
38	Asset 38	URAVAKONDA-BORAMPALLI:4	220	629.23
39	Asset 39	URAVAKONDA-BORAMPALLI:3		
40	Asset 40	SUZLON-W1-VAJRAKUR:1	220	4.44
41	Asset 41	MACHERLA-RENTACHNTHALA:2	132	43.42
42	Asset 42-A	VEMAGIRI1-SATTENAPALLI:T1	400	1416.34
	Asset 42-B			500.87
Total YTC (in Lakhs)				30576.33
Total YTC (in Crores)				305.7633

6. As shown above, the petitioner has claimed YTC of Rs.16.37 Cr. for 9 Nos lines and Rs.97.92 Cr. for 14 Nos lines for FY2015-16 & FY2016-17 respectively. The claim of YTC for 42 Nos lines is Rs.305.76 Cr. for FY2020-21. For 2 Nos of lines certified by the SRPC viz i) NPKUNTA-HINDUPUR3:2 400 KV S/C, ii) NPKUNTA-HINDUPUR3:1 400 KV S/C, which are owned by the PGCIL, the petitioner has not claimed YTC for FY2020-21.

7. After careful examination of the submissions made by the petitioner and the material available on records, in line with its last orders dated 12.07.2019 in O.P.No.44 of 2019 in the matter of determination of tariff for non-ISTS lines certified by the SRPC for FY 2019-20 and, as per the procedure adopted by the CERC in the order dated 21.06.2018 (petition 237/TT/2016) for determination of tariff for APTRANSCO non-ISTS lines for the FY2016-17 and another order dated 05.02.2020 of CERC in petition 10/TT/2019, the Commission has determined the YTC for Non-ISTS lines of APTRANSCO as certified by the SRPC for FY 2015-16 FY2016-17 and FY 2020-21, as detailed below:

- i. For all the transmission lines which have 25 years of life or more, as on 31.03.2015, 31.03.2016 and 31.03.2020 of FY 2015-16, FY 2016-17 and FY 2020-21 respectively, only O&M expenses and interest on working capital are allowed.

[FY2015-16: Asset- III(A), Asset-VI(A), Asset-VII(A)],

[FY2016-17: Asset - I, Asset-II, Asset- III(A), Asset-VI(A), Asset-VIII(A)],

[FY2020-21: Asset-VI (A), Asset-VII, Asset-XII & XIII, Asset-XIV, Asset - XV, Asset-XVI (A), Asset-XIX (A)]

Common Order in O.P.Nos. 42 & 47 of 2020

- ii. For all the transmission lines which were constructed under deposit contributions from the developers and are being maintained by the petitioner, as there is no investment made by the petitioner, only O&M expenses and interest on working capital are allowed.

[FY2020-21: Asset-XL]

- iii. For all the transmission lines which have been commissioned before 31.03.2014, line-wise audited capital costs are not available with the petitioner for these lines, the rationalized cost as on the date of the Commissioning is arrived at for each line based on the reference cost considered for the 400 kV S/C line, multiplied by the factors as indicated in the table below for other voltage level & circuit configuration of lines by the CERC in various orders:

<i>Reference cost of 400 kV S/C TL</i>		<i>Rs X lakh/km</i>
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

wherever the reference data of 400 KV S/C line is not available for a particular year, it was derived based on the previous and successive year by computing the average.

[FY2015-16: Asset - I, Asset-II (A), Asset-II(B), Asset- III(B), Asset- IV & V, Asset-VI(B), Asset-VII(B), Asset-VIII, Asset-IX(A), Asset-IX(B)]

[FY2016-17: Asset-I (B), Asset-III, Asset- IV, Asset-V, Asset- VI, Asset- VII, Asset-VIII(B), Asset-IX, Asset - XII, Asset - XIII, Asset - XIV]

[FY2020-21: Asset - I, Asset - II & III, Asset- IV & V, Asset-VI (B), Asset-VIII & IX, Asset- X, Asset- XI, Asset-XVI (B), Asset-XVII, Asset-XVIII, Asset-XIX (B), Asset-XX, Asset-XXI, Asset-XLII (B)].

- iv. For all the transmission lines which have been commissioned after 31.03.2014, the line-wise audited capital costs are furnished by the petitioner and therefore the same are considered.

[FY2016-17: Asset-X & Asset-XI]

[FY2020-21: Asset-XVIII(B), Asset-XXII & XXIII, Asset-XXIV & XXV, Asset-XXVI & XXVII, Asset-XXVIII & XXIX, Asset-XXX& XXXI, Asset-XXXII &



Common Order in O.P.Nos. 42 & 47 of 2020

XXXIII, Asset-XXXIV & XXXV, Asset-XXXVI & XXXVII, Asset-XXXVIII & XXXIX, Asset-XLI, Asset-XLII (A)]

- v. The Transmission lines which have been made Line in Line out (LILO) after their commissioning as part of the network expansion scheme, the old part of the line and new part of the line are considered separately for determination of the YTC and shown as part A & Part B of the asset. The date of the Commissioning of the original line is taken for the old line and the date of the commissioning for the LILO part is taken for the new line.
- vi. The Debt - Equity ratio: APTRANSCO adopted a normative debt-equity ratio of 70:30 as per the CERC orders and the same has been considered for FY2015-16, FY2016-17 and FY 2020-21 for each asset.
- vii. Depreciation: Asset is depreciated up to 90% of the capital cost, the remaining 10% being the salvage value of the asset. For all the assets the rate of depreciation is taken as 5.28% till 12 years and 2.05% beyond that till 25 years. Further, normative loan repayment during a year shall be deemed to be equal to the depreciation allowed for that year.
- viii. Interest on loan:
APTRANSCO claimed the weighted average rate of the loan of FY2015-16 & FY2016-17 as the rate of interest on the loan for FY2015-16 & FY2016-17, at 10.60% and 10.75% respectively which are less than the cost of the debt considered by the Commission in its transmission tariff Order dated 09.05.2014 for the third control period. Hence, the same are adopted for FY2015-16 and FY2016-17 for the determination of tariff/YTC. For FY2020-21, the APTRANSCO claimed the weighted average of FY 2019-20 @ 10.10 % for 50 percent of assets and for balance assets @ 10.35 % as interest on the loan. APTRANSCO has not submitted any audited certificate in this regard. Hence, the rate of interest on the loan at 9.98 % has been considered for FY2020-21 for determination of tariff/YTC, as adopted by the Commission in its order dated 12.07.2019 for determining tariff for non-ISTS lines for FY2019-20.

However, Asset no 32 and 33 of FY 2020-21 were stated to have been executed under subsidised interest rate of 1.72 % from kfw. Hence, the same has been considered by the Commission for these assets.



Common Order in O.P.Nos. 42 & 47 of 2020

- ix. Return on Equity (RoE): APTRANSCO claimed the RoE @ 23.70 % for FY2015-16 & FY2016-17 and 15.50% for FY2020-21. As per CERC orders, it has been limited to 15.50% for FY2015-16, FY2016-17 and for FY2020-21, as claimed by the petitioner, has been considered.
- x. The CERC in its tariff regulations has specified norms of O&M expenses for transmission lines, circuit configuration wise but not voltage level wise. Whereas the Commission has specified the O&M norms per ckm in its Transmission tariff orders considering the weighted averages of all voltage levels operated by the APTRANSCO. Therefore, O&M expenses of lines have been considered as per the Transmission tariffs orders of the Commission, in line with its earlier order dated 12.07.2019. Accordingly, the year-wise O&M expenses as per the Commission's Transmission's tariffs orders which are considered for determination of tariff are shown below:

FY 2015-16	FY 2016-17	FY 2020-21
Rs.56000 per ckm	Rs.58300 per ckm	Rs.82000 per ckm

- xi. Interest on Working Capital: The rate of interest on working capital is considered as 13.5% for FY2015-16 & FY2016-17 and 11.25% for FY2020-21 as per the CERC tariff regulations. The same are accepted as these are in line with CERC orders. The working capital is taken as the sum of Maintenance of Spares (@15% of the yearly O&M Expenses), O&M Expenses for one month and Receivables equivalent to 2 months of YTC for FY2015-16 and FY2016-17 as per the CERC Tariff regulations 2014 and Receivables equivalent to 1.5 month of YTC for FY2020-21 as per the CERC 2019 tariff regulations.
- xii. The yearly transmission charges (YTC) are the sum of the depreciation, interest on the loan, return on equity, interest on working capital and O&M expenses.

Based on the above decisions, the Commission has determined tariff/YTC year-wise, for all the Non-ISTS transmission lines of APTRANSCO as per the certification of the SRPC. Year-wise and asset-wise computations of YTC are shown in the annexures.



Common Order in O.P.Nos. 42 & 47 of 2020

8. The summary of the YTC determined by the Commission for the 9 Nos transmission lines for the FY 2015-16 is as given in the table below:

Sl. No.	Asset	Volta ge (kV)	Config uration	Length in KM	COD	Sl. No. as per SRPC certification	Asset Name	Annex No.	YTC in Lakhs
1	CHITTOOR-RENIGUNTA:1	220	S/C	71.86	2/16/2006	1	Asset I	I	170.90
2	CHITTOOR-NAGARI:2	220	S/C	54.49	2/13/2003	2	Asset II(A) & II(B)	II(A)	81.97
		220	S/C	41	10/15/2012			II(B)	182.40
3	SULURPETA-NELLORE-PG:1	220	S/C	75.701	4/28/1982	3	Asset III(A) & III(B)	III(A)	44.73
		220	S/C	10.1	12/26/2006			III(B)	25.89
4	KRISHNAPATNAM-NELLORE-AP:1	400	D/C	36.5	11/23/2012	4	Asset -IV &V	IV & V	586.82
5	KRISHNAPATNAM-NELLORE-AP:2	400				5			
6	NELLORE-NELLORE-PG:1	220	S/C	20.7	9/5/1981	6	Asset - VI (A) & VI(B)	VI(A)	12.23
		220	S/C	10.1	6/26/2007			VI(B)	28.00
7	NELLORE-NELLORE-PG:2	220	S/C	20.7	9/5/1981	7	Asset - VII (A) & VII(B)	VII(A)	12.23
		220	S/C	10.1	6/26/2007			VII(B)	28.00
8	NELLORE-NELLORE-PG:3	220	S/C	28.54	4/17/2005	8	Asset - VIII	VIII	65.50
9	RENIGUNTA-NAGARI:1	220	S/C	9.5	2/13/2003	9	Asset - IX (A) & IX(B)	IX(A)	14.29
		220	S/C	41	10/15/2012			IX(B)	182.40
YTC Total in Lakhs									1435.36
YTC Total in Cr.									14.35

9. The summary of the YTC determined by the Commission for the 14 Nos transmission lines for the FY 2016-17 is as given in the table below:

Common Order in O.P.Nos. 42 & 47 of 2020

Sl. No.	Asset	Voltage (kV)	Configuration	Length in KM	COD	Sl. No. as per SRPC certification	Asset Name	Annex. No.	YTC in Lakhs
1	SULURUPETA-NELLORE42:1	220	S/C	75.701	4/28/1982	1	Asset - I (A) & I (B)	I(A)	46.57
		220	S/C	10.1	12/26/2006			I(B)	25.30
2	KONDAPALLI-VTPS:1	220	S/C	6.469	11/11/1989	2	Asset - II	II	3.98
3	KONDAPALLI-VTPS:2	220	S/C	6.469	3/23/1998	3	Asset - III	III	7.74
4	KONDAPALLI-CHILAKALLU:1	220	S/C	59.705	3/12/1997	4	Asset - IV	IV	81.64
5	KONDAPALLI-CHILAKALLU:2	220	S/C	59.705	8/19/2000	5	Asset - V	V	112.31
6	VTPS-CHILAKALLU:1	220	S/C	67.801	8/28/1999	6	Asset - VI	VI	68.34
7	VTPS-CHILAKALLU:2	220	S/C	67.801	10/1/2010	7	Asset - VII	VII	221.35
8	VTPS-RENTACHINTALA:2	220	S/C	110.09	6/30/1984	8	Asset -VIII (A) & VIII (B)	VIII(A)	67.73
		220	S/C	1.4	11/24/2008			VIII(B)	4.11
9	KURNOOL-BRAHMANKTKUR:1	220	S/C	23.18	10/29/2010	9	Asset -IX	IX	78.21
10	CHITTOOR-SDSTPS:1	400	D/C	192	7/17/2015	10	Asset - X & XI	X & XI	7674.53
11	CHITTOOR-SDSTPS:2	400	D/C	192	7/22/2015	11			
12	NUNNA2-VTPS-IV:1	400	S/C	18.66	26.07.2009	12	Asset - XII	XII	133.52
13	GAZUWAKA1-KALAPAKKA1:1	400	S/C	3.393	10.12.2000	13	Asset - XIII	XIII	14.83
14	GAZUWAKA1-KALAPAKKA1:2	400	S/C	3.393	27.01.2002	14	Asset - XIV	XIV	12.63
YTC Total in Lakhs									8552.78
YTC Total in Cr.									85.53

10. The summary of the YTC determined by the Commission for the 42 Nos transmission lines for the FY 2020-21 is as given in the table below:

Sl. No.	Asset	Voltage (kV)	Configuration DC/SC	Length	COD	Sl. No SRPC	Asset Name	Annex No.	YTC in Lakhs
1	NUNNA2-VEMAGIRI1:T3	400	SC	145	30.12.2005	3	A1	I	530.08
2	GAZUWAKA2-KALPAKKA 1:T1	400	DC	3.39	27.01.2002	5	A2	II & III	17.77
3	GAZUWAKA2-KALPAKKA 1:T2	400		3.39	27.01.2002	4	A3		
4	CHITTOOR42-CHITTOOR1:1	220	DC	17.1	14.02.2006	28	A4	IV & V	56.50
5	CHITTOOR42-CHITTOOR1:2	220		17.1	14.02.2006	29	A5		
6	SULURPET1-NELLORE42:1	220	SC	75.7	28.04.1982	30	A6-A	VI(A)	64.61
			SC	10.1	26.12.2006		A6-B	VI(B)	19.69
7	CHITTOOR1-KALIKIRI1:1	220	SC	64.66	21.06.1970	33	A7	VII	55.19
8	GOOTY-PG-DHONE1:2	220	DC	90.16	24.08.2011	34	A8	VIII & IX	557.58
9	GOOTY-PG-DHONE1:1	220		90.16	24.08.2011	35	A9		

Common Order in O.P.Nos. 42 & 47 of 2020

Sl. No.	Asset	Voltage (kV)	Configuration DC/SC	Length	COD	Sl. No SRPC	Asset Name	Annex No.	YTC in Lakhs
10	KONDAPALLI1-CHILLAKALLU1:1	220	DC	59.7	12.03.1997	36	A10	X	95.15
11	KONDAPALLI1-CHILLAKALLU1:2	220		59.7	19.08.2000	37	A11	XI	121.65
12	SRISAILAMRB1-TALLAPALLI:1	220	DC	98.82	01.01.1985	38	A12	XII & XIII	168.69
13	SRISAILAMRB1-TALLAPALLI:2	220		98.82	01.01.1985	40	A13		
14	SRISAILAMRB1-MYDUKUR:1	220	SC	165.96	27.11.1969	39	A14	XIV	141.64
15	SRISAILAMRB1-SOMYZULPALLI:1	220	SC	106	01.01.1985	41	A15	XV	90.47
16	SRISAILAMRB1-BELKALAGUDUR:1	220	SC	70.72	24.03.1980	42	A16-A	XVI-A	60.36
				4.94	10.08.2011		A16-B	XVI-B	18.19
17	VTS1-CHILLAKALLU1:1	220	SC	67.8	28.08.1999	43	A17	XVII	83.65
18	VTS1-CHILLAKALLU1:2	220	SC	66.14	29-03-1999	45	A18-A	XVIII-A	76.4
	VTS1-CHILLAKALLU1:2	220	SC	1.48	03.10.2010	45	A18-B	XVIII-B	4.65
19	VTS1-RENTACHINTHALA1:2	220	SC	110.09	30.06.1984	44	A19-A	XIX-A	93.96
			SC	1.4	24.11.2008		A19-B	XIX-B	3.84
20	KURNOOL1-BRAHMANKTKUR:1	220	SC	23.18	29.10.2010	46	A20	XX	72.47
21	MACHERLA-RENTCHINTHALA:1	132	SC	15	27.03.2013	62	A21	XXI	51.30
22	CHITTOOR2-SDSTPS:Q2	400	DC	192	7/22/2015	1	A22	XXII & XXIII	6750.41
23	CHITTOOR2-SDSTPS:Q1	400		192		2	A23		
24	KURNOOL2-JAMALAMADUGU1:Q1	400	DC	100.86	3/31/2016	6	A24	XXIV & XXV	2586.73
25	KURNOOL2-JAMALAMADUGU1:Q2	400		100.86		7	A25		
26	HINDUJA-KVKOTA1:T2	400	DC	242.98	7/24/2017	9	A26	XXVI & XXVII	6839.04
27	HINDUJA-KVKOTA1:T1	400		242.98		10	A27		
28	JAMMALAMADUGU - URAVAKONDA	400	DC	127.62	7/15/2016	11 12 16 18	A28	XXVIII & XXIX	2908.98
29	DC Line (Part-1)	400		127.92			A29		
30	TALARICHERUVU TO LILO POINT OF JAMMALAMADUGU -	400	DC	0.5	12/1/2018		A30	XXX & XXXI	86.74
31	URAVAKONDA DC LINE (Part-2)	400		0.5			A31		
32	URVAKONDA-HINDUPUR3:Q1	400	DC	126.25	1/23/2019	15	A32	XXXII & XXXIII	3922.41
33	URVAKONDA-HINDUPUR3:Q2	400		126.25		17	A33		
34	SULURPET1-NELLORE42:2	220	DC	68.13	11/10/2014	32	A34	XXXIV & XXXV	839.42
35	SULURPET1-NELLORE42:3	220		68.13		31	A35		
36	URAVAKONDA-BORAMPALLI:2	220	DC	33.58	6/1/2017	48	A36	XXXVI & XXXVII	643.29
37	URAVAKONDA-BORAMPALLI:1	220		33.58		49	A37		
38	URAVAKONDA-BORAMPALLI:4	220	DC	34.73	7/10/2017	50	A38	XXXVII	621.65

Common Order in O.P.Nos. 42 & 47 of 2020

Sl. No.	Asset	Voltage (kV)	Configuration DC/SC	Length	COD	Sl. No SRPC	Asset Name	Annex No.	YTC in Lakhs
39	URAVAKONDA-BORAMPALLI:3	220		34.73		51	A39	I & XXXIX	
40	SUZLON-W1-VAJRAKUR:1	220	SC	5.2	8/12/2016	47	A40	XL	4.44
41	MACHERLA-RENTACHNTHALA:2	132	SC	14.53	7/11/2016	61	A41	XLI	43.03
42	VEMAGIRI1-SATTENAPALLI:T1	400	SC	107.87	10/12/2015	8	A42-A	XLII(A)	1401.16
				136.98	12/28/2005		A42-B	XLII(B)	500.77
	YTC total in Lakhs for FY2020-21								29531.93
	YTC total in Cr. for FY2020-21								295.32

11. As shown in paras 8,9 and 10 above, the Commission has determined YTC of Rs.14.35 Cr, 85.53 Cr. and 295.32 Cr. for the FY 2015-16, FY 2016-17 and FY 2020-21 respectively for the APTRANSCO owned non-ISTS lines certified by the SRPC for inclusion in the PoC transmission charges.

12. On inclusion of the assets covered in the petitions in the PoC methodology by the implementing agency, in line with the sharing of inter-state transmission charges and losses regulations, 2010 and the amendments thereto and upon receiving of the transmission charges, the YTC recovered shall be adjusted against the ARR of the respective years of the petitioner.

13. The petitions are ordered accordingly.

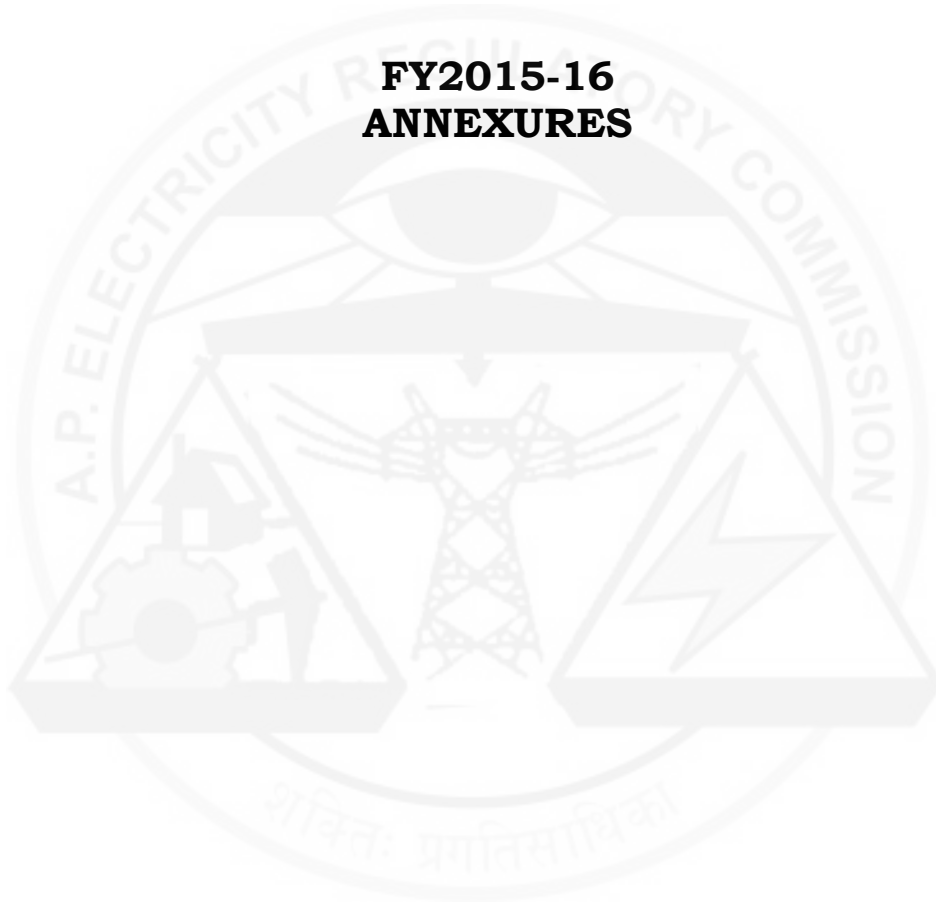
Sd/-
Thakur Rama Singh
Member

Sd/-
Justice C.V. Nagarjuna Reddy
Chairman

Sd/-
P. Rajagopal Reddy
Member

Common Order in O.P.Nos. 42 & 47 of 2020

**FY2015-16
ANNEXURES**



Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - I			
Name of the Tr. System:	Asset - I	CHITTOOR - RENIGUNTA:1	
		COD:	16-02-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	25
Transmission Line length in km	71.86	Voltage, kV	220kV, S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			1043.32
Additional Capitalisation			0.00
Gross Block total			1043.32
Average Gross Block			1043.32
Depreciation			
Rate of Depreciation (%)			5.28%
Depreciable value		0.90	938.99
Elapsed Life as on 31.03.2015			9.00
Balance useful life of the asset			16.00
Remaining Depreciable value			443.20
Cumulative Depreciation			495.79
Depreciation			55.09
Interest on Loan			
Gross Normative Loan			730.32
Cumulative Repayment upto Previous Year			495.79
Net Loan-Opening			234.54
Addition due to Additional Capitalisation			0.00
Repayment during the year			55.09
Net Loan-Closing			179.45
Average Loan			206.99
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			21.94
Return on Equity			
Gross Notional Equity			313.00
Opening Equity			313.00
Average Equity			313.00
Rate of Return on Equity			15.50%
Return on Equity			48.51
Interest on Working Capital			
Maintenance Spares	15% of O&M		6.04
O & M expenses	1 Months		3.35
Receivables	2 Months		28.48
Total			37.87
Interest	13.50%		5.11
Annual Transmission Charges			
Depreciation			55.09
Interest on Loan			21.94
Return on Equity			48.51
Interest on Working Capital			5.11
O & M Expenses	71.86 KM line		40.24
Total			170.90
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - II(A)			
Name of the Tr. System:	Asset-II (A)	CHITTOOR-NAGARI:2	
		COD:	13-02-2003
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	34.00	Life in years	25
Transmission Line length in km	54.49	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY2015-16
Gross Block			666.96
Additional Capitalisation			0.00
Gross Block total			666.96
Average Gross Block			666.96
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	600.26
Elapsed Life as on 31.03.2015			12.00
Balance useful life of the asset			13.00
Remaining Depreciable value			177.68
Cumulative Depreciation			422.58
Depreciation			13.67
Interest on Loan			
Gross Normative Loan			466.87
Cumulative Repayment upto Previous Year			422.58
Net Loan-Opening			44.29
Addition due to Additional Capitalisation			0.00
Repayment during the year			13.67
Net Loan-Closing			30.62
Average Loan			37.45
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			3.97
Return on Equity			
Gross Notional Equity			200.09
Opening Equity			200.09
Average Equity			200.09
Rate of Return on Equity			15.50%
Return on Equity			31.01
Interest on Working Capital			
Maintenance Spares	15% of O&M		4.58
O & M expenses	1 Months		2.54
Receivables	2 Months		13.66
Total			20.78
Interest	13.50%		2.81
Annual Transmission Charges			
Depreciation			13.67
Interest on Loan			3.97
Return on Equity			31.01
Interest on Working Capital			2.81
O & M Expenses	54.49KM line		30.51
Total			81.97
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - II(B)			
Name of the Tr. System:	Asset-II(B)	CHITTOOR-NAGARI:2	
		COD:	15-10-2012
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	65.67	Life in years	25
Transmission Line length in km	41.00	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			969.29
Additional Capitalisation			0.00
Gross Block total			969.29
Average Gross Block			969.29
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	872.36
Elapsed Life as on 31.03.2015			2.00
Balance useful life of the asset			23.00
Remaining Depreciable value			770.00
Cumulative Depreciation			102.36
Depreciation			51.18
Interest on Loan			
Gross Normative Loan			678.50
Cumulative Repayment upto Previous Year			102.36
Net Loan-Opening			576.15
Addition due to Additional Capitalisation			0.00
Repayment during the year			51.18
Net Loan-Closing			524.97
Average Loan			550.56
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			58.36
Return on Equity			
Gross Notional Equity			290.79
Opening Equity			290.79
Average Equity			290.79
Rate of Return on Equity			15.50%
Return on Equity			45.07
Interest on Working Capital			
Maintenance Spares	15% of O&M		3.44
O & M expenses	1 Months		1.91
Receivables	2 Months		30.40
Total			35.76
Interest	13.50%		4.83
Annual Transmission Charges			
Depreciation			51.18
Interest on Loan			58.36
Return on Equity			45.07
Interest on Working Capital			4.83
O & M Expenses	41KM line		22.96
Total			182.40
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - III(A)			
Name of the Tr. System:	Asset- III(A)	SULURPETA-NELLORE-PG:1	
		COD:	28-04-1982
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	75.70	Voltage, kV	220KV/S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			0.00
Additional Capitalisation			0
Gross Block total			
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2015			33.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		6.36
O & M expenses	1 Months		3.53
Receivables	2 Months		7.45
Total			17.34
Interest	13.50%		2.34
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			2.34
O & M Expenses	75.701 KM line		42.39
Total			44.73
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - III(B)			
Name of the Tr. System:	Asset- III(B)	SULURPETA-NELLORE-PG:1	
		COD:	26-12-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	42.53	Life in years	25
Transmission Line length in km	10.10	Voltage, kV	220KV/S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			154.64
Additional Capitalisation			0
Gross Block total			
Average Gross Block			154.64
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	139.18
Elapsed Life as on 31.03.2015			8.00
Balance useful life of the asset			17.00
Remaining Depreciable value			73.86
Cumulative Depreciation			65.32
Depreciation			8.16
Interest on Loan			
Gross Normative Loan			108.25
Cumulative Repayment upto Previous Year			65.32
Net Loan-Opening			42.93
Addition due to Additional Capitalisation			0.00
Repayment during the year			8.16
Net Loan-Closing			34.76
Average Loan			38.85
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			4.12
Return on Equity			
Gross Notional Equity			46.39
Opening Equity			46.39
Average Equity			46.39
Rate of Return on Equity			15.50%
Return on Equity			7.19
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.85
O & M expenses	1 Months		0.47
Receivables	2 Months		4.32
Total			5.64
Interest	13.50%		0.76
Annual Transmission Charges			
Depreciation			8.16
Interest on Loan			4.12
Return on Equity			7.19
Interest on Working Capital			0.76
O & M Expenses	10.10 KM line		5.66
Total			25.89
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - IV & V			
Name of the Tr. System:	Asset- IV & V	KRISHNAPATNAM-NELLORE-AP:1 & KRISHNAPATNAM-NELLORE-AP:2	
		COD:	23-11-2012
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	65.67	Life in years	25
Transmission Line length in km	36.50	Voltage, kV	400kV/D/C
Multiplication factor	1.39		
			FY 2015-16
Gross Block			3331.77
Additional Capitalisation			0.00
Gross Block total			3331.77
Average Gross Block			3331.77
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	2998.59
Elapsed Life as on 31.03.2015			2.00
Balance useful life of the asset			23.00
Remaining Depreciable value			2646.76
Cumulative Depreciation			351.83
Depreciation			175.92
Interest on Loan			
Gross Normative Loan			2332.24
Cumulative Repayment upto Previous Year			351.83
Net Loan-Opening			1980.40
Addition due to Additional Capitalisation			0.00
Repayment during the year			175.92
Net Loan-Closing			1804.49
Average Loan			1892.44
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			200.60
Return on Equity			
Gross Notional Equity			999.53
Opening Equity			999.53
Average Equity			999.53
Rate of Return on Equity			15.50%
Return on Equity			154.93
Interest on Working Capital			
Maintenance Spares	15% of O&M		6.13
O & M expenses	1 Months		3.41
Receivables	2Months		97.81
Total			107.35
Interest	13.50%		14.49
Annual Transmission Charges			
Depreciation			175.92
Interest on Loan			200.60
Return on Equity			154.93
Interest on Working Capital			14.49
O & M Expenses		73 KM line	40.88
Total			586.82
Norms for O&M Per Km	D/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VI(A)			
Name of the Tr. System:	Asset-VI(A)	NELLORE-NELLORE-PG:1	
		COD:	05-09-1981
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	20.70	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2015			34.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.74
O & M expenses	1 Months		0.97
Receivables	2Months		2.03
Total			4.73
Interest	13.50%		0.64
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			0.64
O & M Expenses	20.7KM line		11.59
Total			12.23
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VI(B)			
Name of the Tr. System:	Asset-VI(B)	NELLORE-NELLORE-PG:1	
		COD:	26-06-2007
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	47.04	Life in years	25
Transmission Line length in km	10.10	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			171.037
Additional Capitalisation			0
Gross Block total			171.037
Average Gross Block			171.037
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	153.93
Elapsed Life as on 31.03.2015			8.00
Balance useful life of the asset			17.00
Remaining Depreciable value			81.69
Cumulative Depreciation			72.25
Depreciation			9.03
Interest on Loan			
Gross Normative Loan			119.73
Cumulative Repayment upto Previous Year			72.25
Net Loan-Opening			47.48
Addition due to Additional Capitalisation			0.00
Repayment during the year			9.03
Net Loan-Closing			38.45
Average Loan			42.96
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			4.55
Return on Equity			
Gross Notional Equity			51.31
Opening Equity			51.31
Average Equity			51.31
Rate of Return on Equity			15.50%
Return on Equity			7.95
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.85
O & M expenses	1 Months		0.47
Receivables	2Months		4.67
Total			5.99
Interest	13.50%		0.81
Annual Transmission Charges			
Depreciation			9.03
Interest on Loan			4.55
Return on Equity			7.95
Interest on Working Capital			0.81
O & M Expenses	10.10KM line		5.66
Total			28.00
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VII(A)			
Name of the Tr. System:	Asset-VII(A)	NELLORE-NELLORE-PG:2	
		COD:	05-09-1981
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	20.70	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2015			34.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.74
O & M expenses	1 Months		0.97
Receivables	2 Months		2.03
Total			4.73
Interest	13.50%		0.64
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			0.64
O & M Expenses	20.70 KM line		11.59
Total			12.23
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VII(B)			
Name of the Tr. System:	Asset-VII(B)	NELLORE-NELLORE-PG:2	
		COD:	26-06-2007
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	47.04	Life in years	25
Transmission Line length in km	10.10	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			171.037
Additional Capitalisation			0
Gross Block total			171.037
Average Gross Block			171.037
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	153.93
Elapsed Life as on 31.03.2015			8.00
Balance useful life of the asset			17.00
Remaining Depreciable value			81.69
Cumulative Depreciation			72.25
Depreciation			9.03
Interest on Loan			
Gross Normative Loan			119.73
Cumulative Repayment upto Previous Year			72.25
Net Loan-Opening			47.48
Addition due to Additional Capitalisation			0.00
Repayment during the year			9.03
Net Loan-Closing			38.45
Average Loan			42.96
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			4.55
Return on Equity			
Gross Notional Equity			51.31
Opening Equity			51.31
Average Equity			51.31
Rate of Return on Equity			15.50%
Return on Equity			7.95
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.85
O & M expenses	1 Months		0.47
Receivables	2 Months		4.67
Total			5.99
Interest	13.50%		0.81
Annual Transmission Charges			
Depreciation			9.03
Interest on Loan			4.55
Return on Equity			7.95
Interest on Working Capital			0.81
O & M Expenses	10.10 KM line		5.66
Total			28.00
Norms for O&M Per Km	D/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure – VIII			
Name of the Tr. System:	Asset-VIII	NELLORE-NELLORE-PG:3	
		COD:	17-04-2005
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	25
Transmission Line length in km	28.54	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			414.367
Additional Capitalisation			0
Gross Block total			414.367
Average Gross Block			414.367
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	372.93
Elapsed Life as on 31.03.2015			10.00
Balance useful life of the asset			15.00
Remaining Depreciable value			154.14
Cumulative Depreciation			218.79
Depreciation			21.88
Interest on Loan			
Gross Normative Loan			290.06
Cumulative Repayment upto Previous Year			218.79
Net Loan-Opening			71.27
Addition due to Additional Capitalisation			0.00
Repayment during the year			21.88
Net Loan-Closing			49.39
Average Loan			60.33
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			6.40
Return on Equity			
Gross Notional Equity			124.31
Opening Equity			124.31
Average Equity			124.31
Rate of Return on Equity			15.50%
Return on Equity			19.27
Interest on Working Capital			
Maintenance Spares	15% of O&M		2.40
O & M expenses	1 Months		1.33
Receivables	2Months		10.92
Total			14.65
Interest	13.50%		1.98
Annual Transmission Charges			
Depreciation			21.88
Interest on Loan			6.40
Return on Equity			19.27
Interest on Working Capital			1.98
O & M Expenses	28.54 KM line		15.98
Total			65.50
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

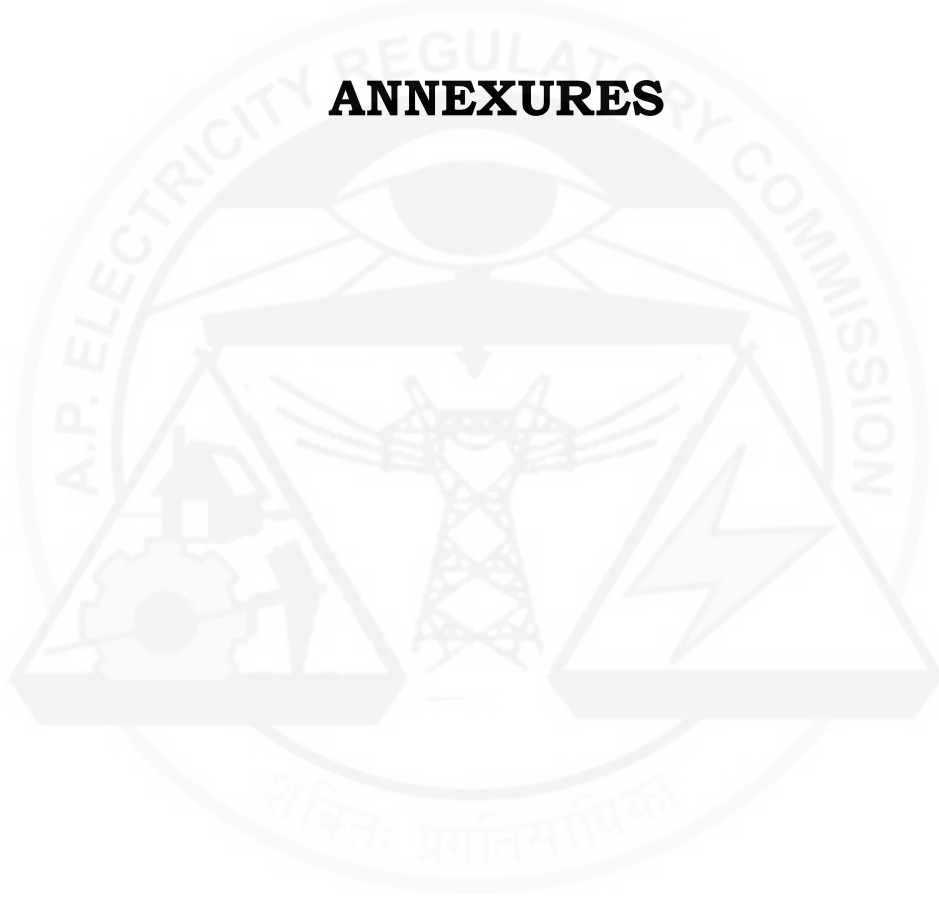
Annexure - IX(A)			
Name of the Tr. System:	Asset-IX(A)	RENIGUNTA- NAGARI:1	
		COD:	13-02-2003
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	34.00	Life in years	25
Transmission Line length in km	9.50	Voltage, kV	220 kV / S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			116.28
Additional Capitalisation			0.00
Gross Block total			116.28
Average Gross Block			116.28
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	104.65
Elapsed Life as on 31.03.2015			12.00
Balance useful life of the asset			13.00
Remaining Depreciable value			30.98
Cumulative Depreciation			73.68
Depreciation			2.38
Interest on Loan			
Gross Normative Loan			81.40
Cumulative Repayment upto Previous Year			73.68
Net Loan-Opening			7.72
Addition due to Additional Capitalisation			0.00
Repayment during the year			2.38
Net Loan-Closing			5.34
Average Loan			6.53
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			0.69
Return on Equity			
Gross Notional Equity			34.88
Opening Equity			34.88
Average Equity			34.88
Rate of Return on Equity			15.50%
Return on Equity			5.41
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.80
O & M expenses	1 Months		0.44
Receivables	2 Months		2.38
Total			3.62
Interest	13.50%		0.49
Annual Transmission Charges			
Depreciation			2.38
Interest on Loan			0.69
Return on Equity			5.41
Interest on Working Capital			0.49
O & M Expenses	9.50KM line		5.32
Total			14.29
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - IX(B)			
Name of the Tr. System:	Asset-IX(B)	RENIGUNTA- NAGARI:1	
		COD:	15-10-2012
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	65.67	Life in years	25
Transmission Line length in km	41.00	Voltage, kV	220 kV / S/C
Multiplication factor	0.36		
			FY 2015-16
Gross Block			969.29
Additional Capitalisation			0.00
Gross Block total			969.29
Average Gross Block			969.29
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	872.36
Elapsed Life as on 31.03.2015			2.00
Balance useful life of the asset			23.00
Remaining Depreciable value			770.00
Cumulative Depreciation			102.36
Depreciation			51.18
Interest on Loan			
Gross Normative Loan			678.50
Cumulative Repayment upto Previous Year			102.36
Net Loan-Opening			576.15
Addition due to Additional Capitalisation			0.00
Repayment during the year			51.18
Net Loan-Closing			524.97
Average Loan			550.56
Weighted Average Rate of Interest on Loan (%)			10.60%
Interest			58.36
Return on Equity			
Gross Notional Equity			290.79
Opening Equity			290.79
Average Equity			290.79
Rate of Return on Equity			15.50%
Return on Equity			45.07
Interest on Working Capital			
Maintenance Spares	15% of O&M		3.44
O & M expenses	1 Months		1.91
Receivables	2 Months		30.40
Total			35.76
Interest	13.50%		4.83
Annual Transmission Charges			
Depreciation			51.18
Interest on Loan			58.36
Return on Equity			45.07
Interest on Working Capital			4.83
O & M Expenses	41KM line		22.96
Total			182.40
Norms for O&M Per Km	S/C		0.560

Common Order in O.P.Nos. 42 & 47 of 2020

FY2016-17
ANNEXURES



Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - I(A)			
Name of the Tr. System:	Asset-I (A)	SULURUPETA-NELLORE42:1	
		COD:	28-04-1982
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	75.70	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2016			34.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		6.62
O & M expenses	1 Months		3.68
Receivables	2 Months		7.76
Total			18.06
Interest	13.50%		2.44
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			2.44
O & M Expenses	75.701KM line		44.13
Total			46.57
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - I(B)			
Name of the Tr. System:	Asset-I (B)	SULURUPETA-NELLORE42:1	
		COD:	26-12-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	42.53	Life in years	25
Transmission Line length in km	10.10	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			154.64
Additional Capitalisation			0.00
Gross Block total			154.64
Average Gross Block			154.64
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	139.18
Elapsed Life as on 31.03.2016			9.00
Balance useful life of the asset			16.00
Remaining Depreciable value			65.69
Cumulative Depreciation			73.48
Depreciation			8.16
Interest on Loan			
Gross Normative Loan			108.25
Cumulative Repayment upto Previous Year			73.48
Net Loan-Opening			34.76
Addition due to Additional Capitalisation			0.00
Repayment during the year			8.16
Net Loan-Closing			26.60
Average Loan			30.68
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			3.30
Return on Equity			
Gross Notional Equity			46.39
Opening Equity			46.39
Average Equity			46.39
Rate of Return on Equity			15.50%
Return on Equity			7.19
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.88
O & M expenses	1 Months		0.49
Receivables	2 Months		4.22
Total			5.59
Interest	13.50%		0.75
Annual Transmission Charges			
Depreciation			8.16
Interest on Loan			3.30
Return on Equity			7.19
Interest on Working Capital			0.75
O & M Expenses	10.10KM line		5.89
Total			25.30
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure – II			
Name of the Tr. System:	Asset-II	KONDAPALLI-VTPS:1	
		COD:	11-11-1989
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	6.47	Voltage, kV	220 KV, S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2016			26.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.57
O & M expenses	1 Months		0.31
Receivables	2 Months		0.66
Total			1.54
Interest	13.50%		0.21
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			0.21
O & M Expenses	6.469KM line		3.77
Total			3.98
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure – III			
Name of the Tr. System:	Asset-III	KONDAPALLI-VTPS:2	
		COD:	23-03-1998
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	27.87	Life in years	25
Transmission Line length in km	6.47	Voltage, kV	220 KV, S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			64.90
Additional Capitalisation			0.00
Gross Block total			64.90
Average Gross Block			64.90
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	58.41
Elapsed Life as on 31.03.2016			18.00
Balance useful life of the asset			7.00
Remaining Depreciable value			9.31
Cumulative Depreciation			49.10
Depreciation			1.33
Interest on Loan			
Gross Normative Loan			45.43
Cumulative Repayment upto Previous Year			45.43
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			19.47
Cumulative Repayment upto Previous Year			3.67
Opening Equity			15.80
Repayment during the year			1.33
Closing Equity			14.47
Average Equity			15.14
Rate of Return on Equity			15.50%
Return on Equity			2.35
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.57
O & M expenses	1 Months		0.31
Receivables	2 Months		1.29
Total			2.17
Interest	13.50%		0.29
Annual Transmission Charges			
Depreciation			1.33
Interest on Loan			0.00
Return on Equity			2.35
Interest on Working Capital			0.29
O & M Expenses	6.469KM line		3.77
Total			7.74
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure – IV			
Name of the Tr. System:	Asset- IV	KONDAPALLI-CHILAKALLU:1	
		COD:	12-03-1997
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	38.20	Life in years	25
Transmission Line length in km	59.71	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			821.06
Additional Capitalisation			0
Gross Block total			821.06
Average Gross Block			821.06
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	738.96
Elapsed Life as on 31.03.2016			19.00
Balance useful life of the asset			6.00
Remaining Depreciable value			100.95
Cumulative Depreciation			638.00
Depreciation			16.83
Interest on Loan			
Gross Normative Loan			574.74
Cumulative Repayment upto Previous Year			574.74
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			246.32
Cumulative Repayment upto Previous Year			63.26
Opening Equity			183.06
Repayment during the year			16.83
Closing Equity			166.23
Average Equity			174.65
Rate of Return on Equity			15.50%
Return on Equity			27.07
Interest on Working Capital			
Maintenance Spares	15% of O&M		5.22
O & M expenses	1 Months		2.90
Receivables	2 Months		13.61
Total			21.73
Interest	13.50%		2.93
Annual Transmission Charges			
Depreciation			16.83
Interest on Loan			0.00
Return on Equity			27.07
Interest on Working Capital			2.93
O & M Expenses	59.705KM line		34.81
Total			81.64
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure – V			
Name of the Tr. System:	Asset-V	KONDAPALLI-CHILAKALLU:2	
		COD:	19-08-2000
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	54.57	Life in years	25
Transmission Line length in km	59.71	Voltage, kV	220KV,S/C
Multiplication factor	0.36		
Gross Block			1172.92
Additional Capitalisation			0
Gross Block total			1172.92
Average Gross Block			1172.92
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	1055.62
Elapsed Life as on 31.03.2016			16.00
Balance useful life of the asset			9.00
Remaining Depreciable value			216.32
Cumulative Depreciation			839.30
Depreciation			24.04
Interest on Loan			
Gross Normative Loan			821.04
Cumulative Repayment upto Previous Year			821.04
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			351.87
Cumulative Repayment upto Previous Year			18.26
Opening Equity			333.61
Repayment during the year			24.04
Closing Equity			309.58
Average Equity			321.60
Rate of Return on Equity			15.50%
Return on Equity			49.85
Interest on Working Capital			
Maintenance Spares	15% of O&M		5.22
O & M expenses	1 Months		2.90
Receivables	2 Months		18.72
Total			26.84
Interest	13.50%		3.62
Annual Transmission Charges			
Depreciation			24.04
Interest on Loan			0.00
Return on Equity			49.85
Interest on Working Capital			3.62
O & M Expenses	59.705KM line		34.81
Total			112.31
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VI			
Name of the Tr. System:	Asset- VI	VTPS-CHILAKALLU:1	
		COD:	28-08-1999
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	20.71	Life in years	25
Transmission Line length in km	67.80	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			505.50
Additional Capitalisation			0.00
Gross Block total			505.50
Average Gross Block			505.50
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	454.95
Elapsed Life as on 31.03.2016			17.00
Balance useful life of the asset			8.00
Remaining Depreciable value			82.87
Cumulative Depreciation			372.08
Depreciation			10.36
Interest on Loan			
Gross Normative Loan			353.85
Cumulative Repayment upto Previous Year			353.85
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			151.65
Cumulative Repayment upto Previous Year			18.23
Opening Equity			133.42
Repayment during the year			10.36
Closing Equity			123.06
Average Equity			101.10
Rate of Return on Equity			15.50%
Return on Equity			15.67
Interest on Working Capital			
Maintenance Spares	15% of O&M		5.93
O & M expenses	1 Months		3.29
Receivables	2Months		11.39
Total			20.61
Interest	13.50%		2.78
Annual Transmission Charges			
Depreciation			10.36
Interest on Loan			0.00
Return on Equity			15.67
Interest on Working Capital			2.78
O & M Expenses	67.801 KM line		39.53
Total			68.34
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure – VII			
Name of the Tr. System:	Asset- VII	VTPS-CHILAKALLU:2	
		COD:	01-10-2010
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	52.26	Life in years	25
Transmission Line length in km	67.80	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			1275.58
Additional Capitalisation			0.00
Gross Block total			1275.58
Average Gross Block			1275.58
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	1148.02
Elapsed Life as on 31.03.2016			6.00
Balance useful life of the asset			19.00
Remaining Depreciable value			743.92
Cumulative Depreciation			404.10
Depreciation			67.35
Interest on Loan			
Gross Normative Loan			892.91
Cumulative Repayment upto Previous Year			404.10
Net Loan-Opening			488.80
Addition due to Additional Capitalisation			0.00
Repayment during the year			67.35
Net Loan-Closing			421.45
Average Loan			455.13
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			48.93
Return on Equity			
Gross Notional Equity			382.67
Opening Equity			382.67
Average Equity			382.67
Rate of Return on Equity			15.50%
Return on Equity			59.31
Interest on Working Capital			
Maintenance Spares	15% of O&M		5.93
O & M expenses	1 Months		3.29
Receivables	2Months		36.89
Total			46.12
Interest	13.50%		6.23
Annual Transmission Charges			
Depreciation			67.35
Interest on Loan			48.93
Return on Equity			59.31
Interest on Working Capital			6.23
O & M Expenses	67.801 KM line		39.53
Total			221.35
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VIII(A)			
Name of the Tr. System:	Asset-VIII(A)	VTPS-RENTACHINTALA:2	
		COD:	30-06-1984
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	110.09	Voltage, kV	220kV, S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2016			32.00
Balance useful life of the asset			0.00
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		9.63
O & M expenses	1 Months		5.35
Receivables	2Months		11.28
Total			26.26
Interest	13.50%		3.54
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			3.54
O & M Expenses	110.09 KM line		64.18
Total			67.73
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VIII(B)			
Name of the Tr. System:	Asset-VIII(B)	VTPS-RENTACHINTALA:2	
		COD:	24-11-2008
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	47.74	Life in years	25
Transmission Line length in km	1.40	Voltage, kV	220kV S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			24.061
Addition during 2014-19 due to Projected Additional Capitalisation			0
Gross Block total			24.061
Average Gross Block			24.061
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	21.65
Elapsed Life as on 31.03.2016			7.00
Balance useful life of the asset			18.00
Remaining Depreciable value			12.76
Cumulative Depreciation			8.89
Depreciation			1.27
Interest on Loan			
Gross Normative Loan			16.84
Cumulative Repayment upto Previous Year			8.89
Net Loan-Opening			7.95
Addition due to Additional Capitalisation			0.00
Repayment during the year			1.27
Net Loan-Closing			6.68
Average Loan			7.31
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.79
Return on Equity			
Gross Notional Equity			7.22
Opening Equity			7.22
Average Equity			7.22
Rate of Return on Equity			15.50%
Return on Equity			1.12
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.12
O & M expenses	1 Months		0.07
Receivables	2Months		0.68
Total			0.88
Interest	13.50%		0.12
Annual Transmission Charges			
Depreciation			1.27
Interest on Loan			0.79
Return on Equity			1.12
Interest on Working Capital			0.12
O & M Expenses	1.40 KM line		0.82
Total			4.11
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - IX			
Name of the Tr. System:	Asset-IX	KURNOOL-BRAHMANKOTKUR:1	
		COD:	29-10-2010
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	52.26	Life in years	25
Transmission Line length in km	23.18	Voltage, kV	220kV,S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			436.099
Additional Capitalisation			0
Gross Block total			436.099
Average Gross Block			436.099
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	392.49
Elapsed Life as on 31.03.2016			5.00
Balance useful life of the asset			20.00
Remaining Depreciable value			277.36
Cumulative Depreciation			115.13
Depreciation			23.03
Interest on Loan			
Gross Normative Loan			305.27
Cumulative Repayment upto Previous Year			115.13
Net Loan-Opening			190.14
Addition due to Additional Capitalisation			0.00
Repayment during the year			23.03
Net Loan-Closing			167.11
Average Loan			178.63
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			19.20
Return on Equity			
Gross Notional Equity			130.83
Opening Equity			130.83
Average Equity			130.83
Rate of Return on Equity			15.50%
Return on Equity			20.28
Interest on Working Capital			
Maintenance Spares	15% of O&M		2.03
O & M expenses	1 Months		1.13
Receivables	2Months		13.04
Total			16.19
Interest	13.50%		2.19
Annual Transmission Charges			
Depreciation			23.03
Interest on Loan			19.20
Return on Equity			20.28
Interest on Working Capital			2.19
O & M Expenses	23.18 KM line		13.51
Total			78.21
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - X & XI			
Name of the Tr. System:	Asset-X & Asset-XI	CHITTOR-SDSTPS:1&CHITTOR-SDSTPS:2	
		COD:	22-07-2015
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km		Life in years	25
Transmission Line length in km	192.00	Voltage, kV	400kV,D/C
Multiplication factor			
			FY 2016-17
Gross Block			43505.98
Additional Capitalisation			309.41
Gross Block total			43815.39
Average Gross Block			43660.69
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	39155.38
Elapsed Life as on 31.03.2016			1.00
Balance useful life of the asset			24.00
Remaining Depreciable value			36858.27
Cumulative Depreciation			2297.12
Depreciation			2297.12
Interest on Loan			
Gross Normative Loan			30670.77
Cumulative Repayment upto Previous Year			2297.12
Net Loan-Opening			28373.66
Addition due to Additional Capitalisation			0.00
Repayment during the year			2297.12
Net Loan-Closing			26076.54
Average Loan			27225.10
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			2926.70
Return on Equity			
Gross Notional Equity			13051.79
Opening Equity			13051.79
Average Equity			13051.79
Rate of Return on Equity			15.50%
Return on Equity			2023.03
Interest on Working Capital			
Maintenance Spares	15% of O&M		33.58
O & M expenses	1 Months		18.66
Receivables	2 Months		1457.53
Total			1509.77
Interest	13.50%		203.82
Annual Transmission Charges			
Depreciation			2297.12
Interest on Loan			2926.70
Return on Equity			2023.03
Interest on Working Capital			203.82
O & M Expenses	384KM line		223.87
Total			7674.53
Norms for O&M Per Km	D/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XII			
Name of the Tr. System:	Asset - XII	NUNNA2-VTPS-IV:1	
		COD:	26-07-2009
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	48.44	Life in years	25
Transmission Line length in km	18.66	Voltage, kV	400KV,S/C
Multiplication factor	1.00		
			FY 2016-17
Gross Block			903.89
Additional Capitalisation			0.00
Gross Block total			903.89
Average Gross Block			903.89
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	813.50
Elapsed Life as on 31.03.2016			7.00
Balance useful life of the asset			18.00
Remaining Depreciable value			479.42
Cumulative Depreciation			334.08
Depreciation			47.73
Interest on Loan			
Gross Normative Loan			632.72
Cumulative Repayment upto Previous Year			334.08
Net Loan-Opening			298.65
Addition due to Additional Capitalisation			0.00
Repayment during the year			47.73
Net Loan-Closing			250.92
Average Loan			274.78
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			29.54
Return on Equity			
Gross Notional Equity			271.17
Opening Equity			271.17
Average Equity			271.17
Rate of Return on Equity			15.50%
Return on Equity			42.03
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.63
O & M expenses	1 Months		0.91
Receivables	2 Months		22.26
Total			24.79
Interest	13.50%		3.35
Annual Transmission Charges			
Depreciation			47.73
Interest on Loan			29.54
Return on Equity			42.03
Interest on Working Capital			3.35
O & M Expenses	18.66 KM line		10.88
Total			133.52
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XIII			
Name of the Tr. System:	Asset - XIII	GAZUWAKA1-KALAPAKKA1:1	
		COD:	10-12-2000
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	54.57	Life in years	25
Transmission Line length in km	3.39	Voltage, kV	400kV,S/C
Multiplication factor	1.00		
			FY 2016-17
Gross Block			185.16
Additional Capitalisation			0.00
Gross Block total			185.16
Average Gross Block			185.16
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	166.64
Elapsed Life as on 31.03.2016			15.00
Balance useful life of the asset			10.00
Remaining Depreciable value			37.94
Cumulative Depreciation			128.70
Depreciation			3.79
Interest on Loan			
Gross Normative Loan			129.61
Cumulative Repayment upto Previous Year			128.70
Net Loan-Opening			0.91
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.91
Net Loan-Closing			0.00
Average Loan			0.46
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.05
Return on Equity			
Gross Notional Equity			55.55
Opening Equity			55.55
Average Equity			55.55
Rate of Return on Equity			15.50%
Return on Equity			8.61
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.30
O & M expenses	1 Months		0.16
Receivables	2 Months		2.47
Total			2.93
Interest	13.50%		0.40
Annual Transmission Charges			
Depreciation			3.79
Interest on Loan			0.05
Return on Equity			8.61
Interest on Working Capital			0.40
O & M Expenses	3.393KM line		1.98
Total			14.83
Norms for O&M Per Km	S/C		0.583

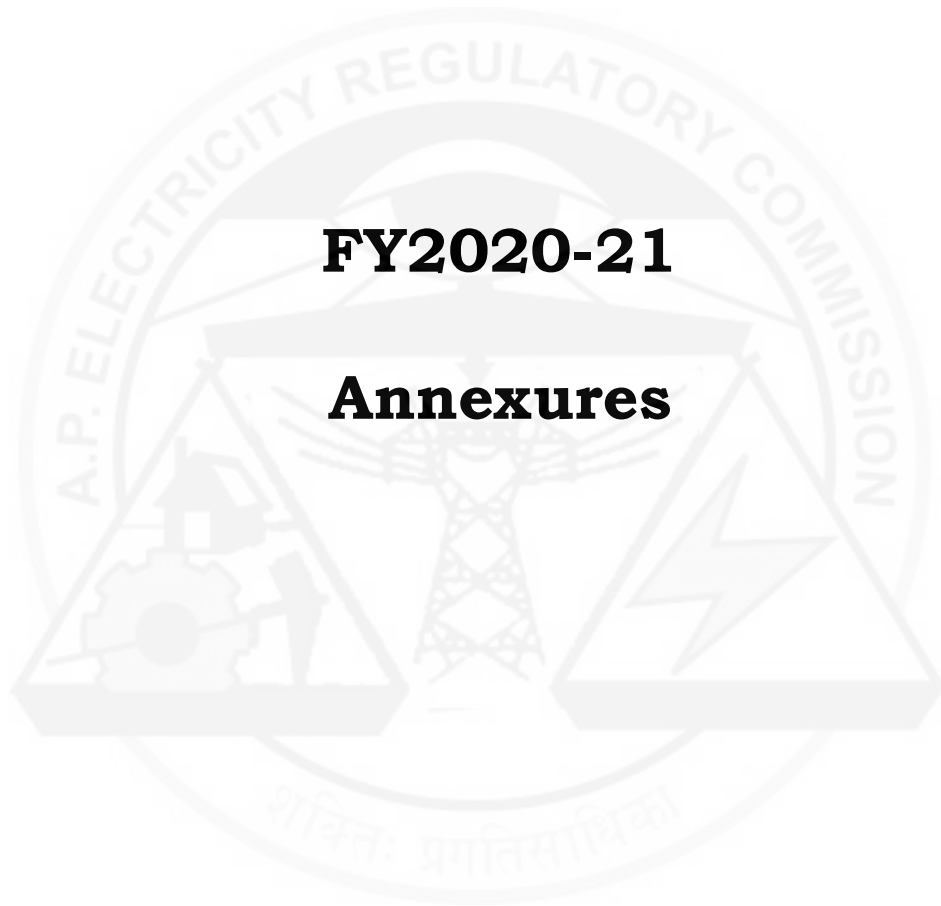
Common Order in O.P.Nos. 42 & 47 of 2020

Annexure -XIV			
Name of the Tr. System:	Asset - XIV	GAZUWAKA1-KALAPAKKA1:2	
		COD:	27-01-2002
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	44.28	Life in years	25
Transmission Line length in km	3.39	Voltage, kV	400kV,S/C
Multiplication factor	1.00		
			FY 2016-17
Gross Block			150.11
Additional Capitalisation			0.00
Gross Block total			150.11
Average Gross Block			150.11
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	135.10
Elapsed Life as on 31.03.2016			14.00
Balance useful life of the asset			11.00
Remaining Depreciable value			33.84
Cumulative Depreciation			101.26
Depreciation			3.08
Interest on Loan			
Gross Normative Loan			105.08
Cumulative Repayment upto Previous Year			101.26
Net Loan-Opening			3.82
Addition due to Additional Capitalisation			0.00
Repayment during the year			3.08
Net Loan-Closing			0.74
Average Loan			2.28
Weighted Average Rate of Interest on Loan (%)			10.75%
Interest			0.24
Return on Equity			
Gross Notional Equity			45.03
Opening Equity			45.03
Average Equity			45.03
Rate of Return on Equity			15.50%
Return on Equity			6.98
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.30
O & M expenses	1 Months		0.16
Receivables	2 Months		2.10
Total			2.57
Interest	13.50%		0.35
Annual Transmission Charges			
Depreciation			3.08
Interest on Loan			0.24
Return on Equity			6.98
Interest on Working Capital			0.35
O & M Expenses	3.393KM line		1.98
Total			12.63
Norms for O&M Per Km	S/C		0.583

Common Order in O.P.Nos. 42 & 47 of 2020

FY2020-21

Annexures



Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - I			
Name of the Tr. System:	Asset - I	NUNNA2-VEMAGIRI1:T3	
		COD:	30-12-2005
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	25
Transmission Line length in km	145.00	Voltage, kV	400 kV S/C
Multiplication factor	1.00		
			FY 2020-21
Gross Block			5847.85
Additional Capitalisation			0
Gross Block total			5847.85
Average Gross Block			5847.85
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	5263.07
Elapsed Life as on 31.03.2020			14
Balance useful life of the asset			11
Remaining Depreciable value			1318.11
Cumulative Depreciation			3944.96
Depreciation			119.84
Interest on Loan			
Gross Normative Loan			4093.50
Cumulative Repayment upto Previous Year			3944.96
Net Loan-Opening			148.54
Addition due to Additional Capitalisation			0.00
Repayment during the year			119.84
Net Loan-Closing			28.70
Average Loan			88.62
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			8.84
Return on Equity			
Gross Notional Equity			1754.36
Opening Equity			1754.36
Average Equity			1754.36
Rate of Return on Equity			15.50%
Return on Equity			271.93
Interest on Working Capital			
Maintenance Spares	15% of O&M		17.84
O & M expenses	1 Months		9.91
Receivables	1.5 Months		66.26
Total			94.00
Interest	11.25%		10.58
Annual Transmission Charges			
Depreciation			119.84
Interest on Loan			8.84
Return on Equity			271.93
Interest on Working Capital			10.58
O & M Expenses for line	145.00		118.90
Total			530.08
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - II & III			
Name of the Tr. System:	Asset - II & III	GAZUWAKA2-KALPAKKA1:T1 & GAZUWAKA2-KALPAKKA1:T2	
		COD:	27-01-2002
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	44.28	Life in years	25
Transmission Line length in km	3.39	Voltage, kV	400 kV D/C
Multiplication factor	1.39		
			FY 2020-21
Gross Block			208.652
Additional Capitalisation			0
Gross Block total			208.652
Average Gross Block			208.652
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	187.79
Elapsed Life as on 31.03.2020			18
Balance useful life of the asset			7
Remaining Depreciable value			29.92
Cumulative Depreciation			157.87
Depreciation			4.28
Interest on Loan			
Gross Normative Loan			146.06
Cumulative Repayment upto Previous Year			146.06
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			62.60
Cumulative Repayment upto Previous Year			11.81
Opening Equity			50.79
Repayment during the year			4.28
Closing Equity			46.51
Average Equity			48.65
Rate of Return on Equity			15.50%
Return on Equity			7.54
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.83
O & M expenses	1 Months		0.46
Receivables	1.5 Months		2.22
Total			3.52
Interest	11.25%		0.40
Annual Transmission Charges			
Depreciation			4.28
Interest on Loan			0.00
Return on Equity			7.54
Interest on Working Capital			0.40
O & M Expenses for line	3.39		5.56
Total			17.77
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - IV & V			
Name of the Tr. System:	Asset- IV & V	CHITTOOR 42 - CHITTOOR 1:2 & CHITTOOR 42 - CHITTOOR 1:1	
		COD:	14-02-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	25
Transmission Line length in km	17.10	Voltage, kV	220 kV D/C
Multiplication factor	0.57		
			FY 2020-21
Gross Block			393.10
Additional Capitalisation			0.00
Gross Block total			393.10
Average Gross Block			393.10
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	353.79
Elapsed Life as on 31.03.2020			14
Balance useful life of the asset			11
Remaining Depreciable value			88.60
Cumulative Depreciation			265.18
Depreciation			8.06
Interest on Loan			
Gross Normative Loan			275.17
Cumulative Repayment upto Previous Year			265.18
Net Loan-Opening			9.98
Addition due to Additional Capitalisation			0.00
Repayment during the year			8.06
Net Loan-Closing			1.93
Average Loan			5.96
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.59
Return on Equity			
Gross Notional Equity			117.93
Opening Equity			117.93
Average Equity			117.93
Rate of Return on Equity			15.50%
Return on Equity			18.28
Interest on Working Capital			
Maintenance Spares	15% of O&M		4.21
O & M expenses	1 Months		2.34
Receivables	1.5 Months		7.06
Total			13.61
Interest	11.25%		1.53
Annual Transmission Charges			
Depreciation			8.06
Interest on Loan			0.59
Return on Equity			18.28
Interest on Working Capital			1.53
O & M Expenses for line	17.10		28.04
Total			56.50
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VI (A)			
Name of the Tr. System:	Asset-VI (A)	SULURUPETA-NELLORE42:1	
		COD:	28-04-1982
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kV line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	75.70	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			37
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		9.31
O & M expenses	1 Months		5.17
Receivables	1.5 Months		8.08
Total			22.56
Interest	11.25%		2.54
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			2.54
O & M Expenses for line	75.70		62.07
Total			64.61
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VI(B)			
Name of the Tr. System:	Asset-VI (B)	SULURUPETA-NELLORE42:1	
		COD:	26-12-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	42.53	Life in years	25
Transmission Line length in km	10.10	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			154.64
Additional Capitalisation			0.00
Gross Block total			1 54.64
Average Gross Block			154.64
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	139.18
Elapsed Life as on 31.03.2020			13
Balance useful life of the asset			12
Remaining Depreciable value			38.03
Cumulative Depreciation			101.15
Depreciation			3.17
Interest on Loan			
Gross Normative Loan			108.25
Cumulative Repayment upto Previous Year			101.15
Net Loan-Opening			7.10
Addition due to Additional Capitalisation			0.00
Repayment during the year			3.17
Net Loan-Closing			3.93
Average Loan			5.51
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.55
Return on Equity			
Gross Notional Equity			46.39
Opening Equity			46.39
Average Equity			46.39
Rate of Return on Equity			15.50%
Return on Equity			7.19
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.24
O & M expenses	1 Months		0.69
Receivables	1.5 Months		2.46
Total			4.39
Interest	11.25%		0.49
Annual Transmission Charges			
Depreciation			3.17
Interest on Loan			0.55
Return on Equity			7.19
Interest on Working Capital			0.49
O & M Expenses for line	10.10		8.28
Total			19.69
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VII			
Name of the Tr. System:	Asset-VII	CHITTOOR1-KALIKIRI1:1	
		COD:	21-06-1970
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	64.66	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			49
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		7.95
O & M expenses	1 Months		4.42
Receivables	1.5 Months		6.90
Total			19.27
Interest	11.25%		2.17
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			2.17
O & M Expenses for line	64.66		53.02
Total			55.19
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - VIII & IX			
Name of the Tr. System:	Asset- VIII & IX	GOOTY - PG - DHONE 1:2 & GOOTY - PG - DHONE 1:1	
		COD:	24-08-2011
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	62.27	Life in years	25
Transmission Line length in km	90.16	Voltage, kV	220 kV D/C
Multiplication factor	0.57		
			FY 2020-21
Gross Block			3200.13
Additional Capitalisation			0
Gross Block total			3200.13
Average Gross Block			3200.13
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	2880.12
Elapsed Life as on 31.03.2020			8
Balance useful life of the asset			17
Remaining Depreciable value			1528.38
Cumulative Depreciation			1351.73
Depreciation			168.97
Interest on Loan			
Gross Normative Loan			2240.09
Cumulative Repayment upto Previous Year			1351.73
Net Loan-Opening			888.36
Addition due to Additional Capitalisation			0.00
Repayment during the year			168.97
Net Loan-Closing			719.39
Average Loan			803.87
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			80.23
Return on Equity			
Gross Notional Equity			960.04
Opening Equity			960.04
Average Equity			960.04
Rate of Return on Equity			15.50%
Return on Equity			148.81
Interest on Working Capital			
Maintenance Spares	15% of O&M		22.18
O & M expenses	1 Months		12.32
Receivables	1.5 Months		69.70
Total			104.20
Interest	11.25%		11.72
Annual Transmission Charges			
Depreciation			168.97
Interest on Loan			80.23
Return on Equity			148.81
Interest on Working Capital			11.72
O & M Expenses for line	90.16		147.86
Total			557.58
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - X			
Name of the Tr. System:	Asset- X	KONDAPALLI-CHILLAKALLU1:1	
		COD:	12-03-1997
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	38.20	Life in years	25
Transmission Line length in km	59.70	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2019-20
Gross Block			820.99
Additional Capitalisation			0.00
Gross Block total			820.99
Average Gross Block			820.99
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	738.89
Elapsed Life as on 31.03.2020			23
Balance useful life of the asset			0
Remaining Depreciable value			33.58
Cumulative Depreciation			705.32
Depreciation			16.82
Interest on Loan			
Gross Normative Loan			574.70
Cumulative Repayment upto Previous Year			574.70
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			246.30
Opening Equity			246.30
Repayment till previous year			130.62
Repayment in current year			16.82
Closing Equity			98.85
Average Equity			172.58
Rate of Return on Equity			15.50%
Return on Equity			26.75
Interest on Working Capital			
Maintenance Spares	15% of O&M		7.34
O & M expenses	1 Months		4.08
Receivables	1.5 Months		11.89
Total			23.32
Interest	11.25%		2.62
Annual Transmission Charges			
Depreciation			16.82
Interest on Loan			0.00
Return on Equity			26.75
Interest on Working Capital			2.62
O & M Expenses for line	59.70		48.95
Total			95.15
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XI			
Name of the Tr. System:	Asset- XI	KONDAPALLI-CHILLAKALLU1:2	
		COD:	19-08-2000
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	54.57	Life in years	25
Transmission Line length in km	59.70	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2019-20
Gross Block			1172.82
Additional Capitalisation			0.00
Gross Block total			1172.82
Average Gross Block			1172.82
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	1055.54
Elapsed Life as on 31.03.2020			19
Balance useful life of the asset			6
Remaining Depreciable value			144.14
Cumulative Depreciation			911.40
Depreciation			24.03
Interest on Loan			
Gross Normative Loan			820.97
Cumulative Repayment upto Previous Year			820.97
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			351.85
Opening Equity			351.85
Repayment till previous year			90.42
Repayment in current year			24.03
Closing Equity			237.39
Average Equity			294.62
Rate of Return on Equity			15.50%
Return on Equity			45.67
Interest on Working Capital			
Maintenance Spares	15% of O&M		7.34
O & M expenses	1 Months		4.08
Receivables	1.5 Months		15.21
Total			26.63
Interest	11.25%		3.00
Annual Transmission Charges			
Depreciation			24.03
Interest on Loan			0.00
Return on Equity			45.67
Interest on Working Capital			3.00
O & M Expenses for line	59.70		48.95
Total			121.65
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XII & XIII			
Name of the Tr. System:	Asset-XII & XIII	SRISAILAMRB1-TALIAPLLI:1 & SRISAILAMRB1-TALIAPLLI:2	
		COD:	01-01-1985
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	98.82	Voltage, kV	220 kV D/C
Multiplication factor	0.57		
			FY 2020-21
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			35
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		24.31
O & M expenses	1 Months		13.51
Receivables	1.5 Months		21.09
Total			58.90
Interest	11.25%		6.63
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			6.63
O & M Expenses for line	98.82		162.06
Total			168.69
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XIV			
Name of the Tr. System:	Asset-XIV	SRISAILAMRB1-MYDUKUR:1	
		COD:	27-11-1969
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	165.96	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			50
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		20.41
O & M expenses	1 Months		11.34
Receivables	1.5 Months		17.62
Total			49.37
Interest	11.25%		5.55
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			5.55
O & M Expenses for line	165.96		136.09
Total			141.64
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure -XV			
Name of the Tr. System:	Asset – XV	SRISAILAMRB1-SOMYZULPALLI:1	
		COD:	01-01-1985
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	106.00	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			35
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		13.04
O & M expenses	1 Months		7.24
Receivables	1.5 Months		11.31
Total			31.59
Interest	11.25%		3.55
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			3.55
O & M Expenses for line	106.00		86.92
Total			90.47
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XVI(A)			
Name of the Tr. System:	Asset-XVI (A)	SRISAILAMRB1-BELKALAGUDUR:1	
		COD:	24-03-1980
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	70.72	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2016-17
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			40
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		8.70
O & M expenses	1 Months		4.83
Receivables	1.5 Months		7.55
Total			21.08
Interest	11.25%		2.37
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			2.37
O & M Expenses for line	70.72		57.99
Total			60.36
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XVI (B)			
Name of the Tr. System:	Asset-XVI (B)	SRISAILAMRB1-BELKALAGUDUR:1	
		COD:	10-08-2011
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	62.27	Life in years	25
Transmission Line length in km	4.94	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			110.74
Additional Capitalisation			0.00
Gross Block total			110.74
Average Gross Block			110.74
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	99.67
Elapsed Life as on 31.03.2020			8
Balance useful life of the asset			17
Remaining Depreciable value			52.89
Cumulative Depreciation			46.78
Depreciation			5.85
Interest on Loan			
Gross Normative Loan			77.52
Cumulative Repayment upto Previous Year			46.78
Net Loan-Opening			30.74
Addition due to Additional Capitalisation			0.00
Repayment during the year			5.85
Net Loan-Closing			24.89
Average Loan			27.82
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			2.78
Return on Equity			
Gross Notional Equity			33.22
Opening Equity			33.22
Average Equity			33.22
Rate of Return on Equity			15.50%
Return on Equity			5.15
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.61
O & M expenses	1 Months		0.34
Receivables	1.5 Months		2.27
Total			3.22
Interest	11.25%		0.36
Annual Transmission Charges			
Depreciation			5.85
Interest on Loan			2.78
Return on Equity			5.15
Interest on Working Capital			0.36
O & M Expenses for line	4.94		4.05
Total			18.19
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XVII			
Name of the Tr. System:	Asset-XVII	VTS1-CHILAAKALLU1:1	
		COD:	28-08-1999
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kV line Rs lakh per ckt km	20.71	Life in years	25
Transmission Line length in km	67.80	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			505.49
Additional Capitalisation			0.00
Gross Block total			505.49
Average Gross Block			505.49
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	454.94
Elapsed Life as on 31.03.2020			20
Balance useful life of the asset			5
Remaining Depreciable value			51.76
Cumulative Depreciation			403.18
Depreciation			10.36
Interest on Loan			
Gross Normative Loan			353.84
Cumulative Repayment upto Previous Year			353.84
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			151.65
Cumulative Repayment upto Previous Year			49.34
Opening Equity			102.31
Repayment during the year			10.36
Closing Equity			91.95
Average Equity			97.13
Rate of Return on Equity			15.50%
Return on Equity			15.06
Rate of Return on Equity			
Return on Equity			
Interest on Working Capital			
Maintenance Spares	15% of O&M		8.34
O & M expenses	1 Months		4.63
Receivables	1.5 Months		10.45
Total			23.43
Interest	11.25%		2.64
Annual Transmission Charges			
Depreciation			10.36
Interest on Loan			0.00
Return on Equity			15.06
Interest on Working Capital			2.64
O & M Expenses for line	67.80		55.60
Total			83.65
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XVIII-A			
Name of the Tr. System:	Asset-XVIII-A	VTS1-CHILAAKALLU1:2	
		COD:	29-03-1999
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	17.54	Life in years	25
Transmission Line length in km	66.14	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			417.63
Additional Capitalisation			0
Gross Block total			417.63
Average Gross Block			417.63
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.9	375.87
Elapsed Life as on 31.03.2020			21
Balance useful life of the asset			4
Remaining Depreciable value			34.2
Cumulative Depreciation			341.67
Depreciation			8.56
Interest on Loan			
Gross Normative Loan			292.34
Cumulative Repayment upto Previous Year			292.34
Net Loan-Opening			0
Addition due to Additional Capitalisation			0
Repayment during the year			0
Net Loan-Closing			0
Average Loan			0
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0
Return on Equity			
Gross Notional Equity			125.29
Cumulative Repayment upto Previous Year			49.32
Opening Equity			75.97
Repayment during the year			8.56
Closing Equity			67.41
Average Equity			71.69
Rate of Return on Equity			15.50%
Return on Equity			11.11
Interest on Working Capital			
Maintenance Spares	15% of O&M		8.14
O & M expenses	1 Months		4.52
Receivables	1.5 Months		9.55
Total			22.2
Interest	11.25%		2.5
Annual Transmission Charges			
Depreciation			8.56
Interest on Loan			0
Return on Equity			11.11
Interest on Working Capital			2.5
O & M Expenses for line	66.14		54.23
Total			76.4
Norms for O&M Per Km	S/C		0.82

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XVIII -B			
Name of the Tr. System:	Asset-XVIII(B)	VTS1-CHILAAKALLU1:2	
		COD:	03-10-2010
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	52.26	Life in years	25
Transmission Line length in km	1.48	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			27.92
Additional Capitalisation			0
Gross Block total			27.92
Average Gross Block			27.92
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.9	25.13
Elapsed Life as on 31.03.2020			9
Balance useful life of the asset			16
Remaining Depreciable value			11.86
Cumulative Depreciation			13.27
Depreciation			1.47
Interest on Loan			
Gross Normative Loan			19.54
Cumulative Repayment upto Previous Year			13.27
Net Loan-Opening			6.28
Addition due to Additional Capitalisation			0
Repayment during the year			1.47
Net Loan-Closing			4.8
Average Loan			5.54
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.56
Return on Equity			
Gross Notional Equity			8.38
Cumulative Repayment upto Previous Year			0
Opening Equity			8.38
Repayment during the year			0
Closing Equity			8.38
Average Equity			8.38
Rate of Return on Equity			15.50%
Return on Equity			1.3
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.18
O & M expenses	1 Months		0.1
Receivables	1.5 Months		0.58
Total			0.86
Interest	11.25%		0.1
Annual Transmission Charges			
Depreciation			1.47
Interest on Loan			0.56
Return on Equity			1.3
Interest on Working Capital			0.1
O & M Expenses for line	1.48		1.22
Total			4.65
Norms for O&M Per Km	S/C		0.82

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XIX (A)			
Name of the Tr. System:	Asset-XIX (A)	VTPS-RENTACHINTALA:2	
		COD:	30-06-1984
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	25
Transmission Line length in km	110.09	Voltage, kV	220kV, S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			35
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		13.54
O & M expenses	1 Months		7.52
Receivables	1.5 Months		11.75
Total			32.81
Interest	11.25%		3.69
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			3.69
O & M Expenses for line	110.09		90.27
Total			93.96
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XIX(B)			
Name of the Tr. System:	Asset-XIX (B)	VTPS-RENTACHINTALA:2	
		COD:	24-11-2008
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	47.74	Life in years	25
Transmission Line length in km	1.40	Voltage, kV	220kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			24.061
Additional Capitalisation			0
Gross Block total			24.061
Average Gross Block			24.061
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	21.65
Elapsed Life as on 31.03.2020			11
Balance useful life of the asset			14
Remaining Depreciable value			7.68
Cumulative Depreciation			13.97
Depreciation			1.27
Interest on Loan			
Gross Normative Loan			16.84
Cumulative Repayment upto Previous Year			13.97
Net Loan-Opening			2.87
Addition due to Additional Capitalisation			0.00
Repayment during the year			1.27
Net Loan-Closing			1.60
Average Loan			2.23
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.22
Return on Equity			
Gross Notional Equity			7.22
Opening Equity			7.22
Average Equity			7.22
Rate of Return on Equity			15.50%
Return on Equity			1.12
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.17
O & M expenses	1 Months		0.10
Receivables	1.5 Months		0.48
Total			0.75
Interest	11.25%		0.08
Annual Transmission Charges			
Depreciation			1.27
Interest on Loan			0.22
Return on Equity			1.12
Interest on Working Capital			0.08
O & M Expenses for line	1.40		1.15
Total			3.84
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XX			
Name of the Tr. System:	Asset-XX	KURNOOL1-BRAHMANKTKUR:1	
		COD:	29-10-2010
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	52.26	Life in years	25
Transmission Line length in km	23.18	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			436.10
Additional Capitalisation			0.00
Gross Block total			436.10
Average Gross Block			436.10
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	392.49
Elapsed Life as on 31.03.2020			9
Balance useful life of the asset			16
Remaining Depreciable value			185.25
Cumulative Depreciation			207.23
Depreciation			23.03
Interest on Loan			
Gross Normative Loan			305.27
Cumulative Repayment upto Previous Year			207.23
Net Loan-Opening			98.04
Addition due to Additional Capitalisation			0.00
Repayment during the year			23.03
Net Loan-Closing			75.01
Average Loan			86.52
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			8.63
Return on Equity			
Gross Notional Equity			130.83
Opening Equity			130.83
Average Equity			130.83
Rate of Return on Equity			15.50%
Return on Equity			20.28
Interest on Working Capital			
Maintenance Spares	15% of O&M		2.85
O & M expenses	1 Months		1.58
Receivables	1.5 Months		9.06
Total			13.49
Interest	11.25%		1.52
Annual Transmission Charges			
Depreciation			23.03
Interest on Loan			8.63
Return on Equity			20.28
Interest on Working Capital			1.52
O & M Expenses for line	23.18		19.01
Total			72.47
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXI			
Name of the Tr. System:	Asset-XXI	MACHERLA-RENTCHNTHALA:1	
		COD:	27-03-2013
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	65.67	Life in years	25
Transmission Line length in km	14.53	Voltage, kV	132kV/S/C
Multiplication factor	0.31		
			FY 2020-21
Gross Block			295.80
Additional Capitalisation			0.00
Gross Block total			295.80
Average Gross Block			295.80
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	266.22
Elapsed Life as on 31.03.2020			7
Balance useful life of the asset			18
Remaining Depreciable value			156.89
Cumulative Depreciation			109.33
Depreciation			15.62
Interest on Loan			
Gross Normative Loan			207.06
Cumulative Repayment upto Previous Year			109.33
Net Loan-Opening			97.73
Addition due to Additional Capitalisation			0.00
Repayment during the year			15.62
Net Loan-Closing			82.11
Average Loan			89.92
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			8.97
Return on Equity			
Gross Notional Equity			88.74
Opening Equity			88.74
Average Equity			88.74
Rate of Return on Equity			15.50%
Return on Equity			13.75
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.79
O & M expenses	1 Months		0.99
Receivables	1.5 Months		6.41
Total			9.19
Interest	11.25%		1.03
Annual Transmission Charges			
Depreciation			15.62
Interest on Loan			8.97
Return on Equity			13.75
Interest on Working Capital			1.03
O & M Expenses for line	14.53		11.91
Total			51.30
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXII & XXIII			
Name of the Tr. System:	Asset-XXII & XXIII	CHITTOOR-SDSTPS:Q1 CHITTOOR-SDSTPS:Q2	
		COD:	22-07-2015
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	192.00	Voltage, kV	400kV,D/C
Multiplication factor	---		
			FY 2020-21
Gross Block			43505.98
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			309.41
Gross Block total			43815.39
Average Gross Block			43660.69
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	39155.38
Elapsed Life as on 31.03.2020			4
Balance useful life of the asset			21
Remaining Depreciable value			29934.25
Cumulative Depreciation			9221.14
Depreciation			2305.28
Interest on Loan			
Gross Normative Loan			30454.19
Cumulative Repayment upto Previous Year			9221.14
Net Loan-Opening			21233.05
Addition due to Additional Capitalisation			0.00
Repayment during the year			2305.28
Net Loan-Closing			18927.77
Average Loan			20080.41
Rate of Interest on Loan (%)			9.98%
Interest			2004.02
Return on Equity			
Gross Notional Equity			13051.79
Opening Equity			13051.79
Average Equity			13051.79
Base Rate of Return on Equity			15.50%
Return on Equity			2023.03
Interest on Working Capital			
Maintenance Spares	15% of O&M		47.23
O & M expenses	1 Months		26.24
Receivables	1.5 Months		843.82
Total			917.29
Interest	11.25%		103.20
Annual Transmission Charges			
Depreciation			2305.28
Interest on Loan			2004.02
Return on Equity			2023.03
Interest on Working Capital			103.20
O & M Expenses	192.00		314.88
Total			6750.41
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXIV & XXV			
Name of the Tr. System:	Asset-XXIV & XXV	KURNOOL2-JAMMALAMADUGU 1:Q1 KURNOOL2- JAMMALAMADUGU1:Q2	
		COD:	31-03-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	100.86	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			16293.46
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			739.42
Gross Block total			17032.88
Average Gross Block			16663.17
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	14664.12
Elapsed Life as on 31.03.2020			4
Balance useful life of the asset			21
Remaining Depreciable value			11144.86
Cumulative Depreciation			3519.26
Depreciation			879.82
Interest on Loan			
Gross Normative Loan			11405.42
Cumulative Repayment upto Previous Year			3519.26
Net Loan-Opening			7886.16
Addition due to Additional Capitalisation			0.00
Repayment during the year			879.82
Net Loan-Closing			7006.35
Average Loan			7446.25
Rate of Interest on Loan (%)			9.98%
Interest			743.14
Return on Equity			
Gross Notional Equity			4888.04
Opening Equity			4888.04
Average Equity			4888.04
Rate of Return on Equity			15.50%
Return on Equity			757.65
Interest on Working Capital			
Maintenance Spares	15% of O&M		24.81
O & M expenses	1 Months		13.78
Receivables	1.5 Months		323.34
Total			361.94
Interest	11.25%		40.72
Annual Transmission Charges			
Depreciation			879.82
Interest on Loan			743.14
Return on Equity			757.65
Interest on Working Capital			40.72
O & M Expenses	100.86		165.41
Total			2586.73
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXVI & XXVII			
Name of the Tr. System:	Asset-XXVI & XXVII	HINDUJA- KV KOTA1:T1, HINDUJA- KV KOTA1:T2	
		COD:	24-07-2017
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	242.98	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			40597.440
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			63.9
Gross Block total			40661.340
Average Gross Block			40629.390
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	36537.70
Elapsed Life as on 31.03.2020			2
Balance useful life of the asset			23
Remaining Depreciable value			32247.23
Cumulative Depreciation			4290.46
Depreciation			2145.23
Interest on Loan			
Gross Normative Loan			28418.21
Cumulative Repayment upto Previous Year			4290.46
Net Loan-Opening			24127.74
Addition due to Additional Capitalisation			0.00
Repayment during the year			2145.23
Net Loan-Closing			21982.51
Average Loan			23055.13
Rate of Interest on Loan (%)			9.98%
Interest			2300.90
Return on Equity			
Gross Notional Equity			12179.23
Opening Equity			12179.23
Average Equity			12179.23
Rate of Return on Equity			15.50%
Return on Equity			1887.78
Interest on Working Capital			
Maintenance Spares	15% of O&M		59.77
O & M expenses	1 Months		33.21
Receivables	1.5 Months		854.88
Total			947.86
Interest	11.25%		106.63
Annual Transmission Charges			
Depreciation			2145.23
Interest on Loan			2300.90
Return on Equity			1887.78
Interest on Working Capital			106.63
O & M Expenses	242.98		398.49
Total			6839.04
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXVIII & XXIX			
Name of the Tr. System:	Asset- XXVIII & XXIX	JAMMALAMADUGU - URAVAKONDA DC Line (Part-1)	
		COD:	15-07-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	127.62	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			17604.40
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			
Gross Block total			17604.40
Average Gross Block			17604.40
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	15843.96
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			22
Remaining Depreciable value			13055.42
Cumulative Depreciation			2788.54
Depreciation			929.51
Interest on Loan			
Gross Normative Loan			12323.08
Cumulative Repayment upto Previous Year			2788.54
Net Loan-Opening			9534.54
Addition due to Additional Capitalisation			0.00
Repayment during the year			929.51
Net Loan-Closing			8605.03
Average Loan			9069.79
Rate of Interest on Loan (%)			9.98%
Interest			905.16
Return on Equity			
Gross Notional Equity			5281.32
Opening Equity			5281.32
Average Equity			5281.32
Rate of Return on Equity			15.50%
Return on Equity			818.60
Interest on Working Capital			
Maintenance Spares	15% of O&M		31.39
O & M expenses	1 Months		17.44
Receivables	1.5 Months		363.62
Total			412.46
Interest	11.25%		46.40
Annual Transmission Charges			
Depreciation			929.51
Interest on Loan			905.16
Return on Equity			818.60
Interest on Working Capital			46.40
O & M Expenses	127.62		209.30
Total			2908.98
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXX & XXXI			
Name of the Tr. System:	Asset-XXX & XXXI	TALARICHERUVU TO LILO POINT OF JAMMALAMADUGU - URAVAKONDA DC LINE (Part-2)	
		COD:	01-12-2018
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	0.50	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			519.57
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			2.38
Gross Block total			521.95
Average Gross Block			520.76
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	467.62
Elapsed Life as on 31.03.2020			1
Balance useful life of the asset			24
Remaining Depreciable value			440.12
Cumulative Depreciation			27.50
Depreciation			27.50
Interest on Loan			
Gross Normative Loan			363.70
Cumulative Repayment upto Previous Year			27.50
Net Loan-Opening			336.21
Addition due to Additional Capitalisation			0.00
Repayment during the year			27.50
Net Loan-Closing			308.71
Average Loan			322.46
Rate of Interest on Loan (%)			9.98%
Interest			32.18
Return on Equity			
Gross Notional Equity			155.87
Opening Equity			155.87
Average Equity			155.87
Rate of Return on Equity			15.50%
Return on Equity			24.16
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.25
O & M expenses	1 Months		0.14
Receivables	1.5 Months		10.84
Total			11.23
Interest	11.25%		1.26
Annual Transmission Charges			
Depreciation			27.50
Interest on Loan			32.18
Return on Equity			24.16
Interest on Working Capital			1.26
O & M Expenses	0.50		1.64
Total			86.74
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXXII & XXXIII			
Name of the Tr. System:	Asset-XXXII & XXXIII	URAVAKONDA-HINDUPUR 3:Q1, URAVAKONDA-HINDUPUR 3:Q2	
		COD:	23-01-2019
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	126.25	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			33198.53
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			142.68
Gross Block total			33341.21
Average Gross Block			33269.87
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	29878.68
Elapsed Life as on 31.03.2020			1
Balance useful life of the asset			24
Remaining Depreciable value			28122.03
Cumulative Depreciation			1756.65
Depreciation			1756.65
Interest on Loan			
Gross Normative Loan			23238.97
Cumulative Repayment upto Previous Year			1756.65
Net Loan-Opening			21482.32
Addition due to Additional Capitalisation			0.00
Repayment during the year			1756.65
Net Loan-Closing			19725.67
Average Loan			20604.00
Rate of Interest on Loan (%)			1.72%
Interest			354.39
Return on Equity			
Gross Notional Equity			9959.56
Opening Equity			9959.56
Average Equity			9959.56
Rate of Return on Equity			15.50%
Return on Equity			1543.73
Interest on Working Capital			
Maintenance Spares	15% of O&M		31.06
O & M expenses	1 Months		17.25
Receivables	1.5 Months		490.30
Total			538.61
Interest	11.25%		60.59
Annual Transmission Charges			
Depreciation			1756.65
Interest on Loan			354.39
Return on Equity			1543.73
Interest on Working Capital			60.59
O & M Expenses	126.25		207.05
Total			3922.41
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXXIV & XXXV			
Name of the Tr. System:	Asset-XXXIV & XXXV	SULURPET1-NELLORE42:2 SULURPET1-NELLORE42:3	
		COD:	10-11-2014
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	68.13	Voltage, kV	220kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			5086.05
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0.00
Gross Block total			5086.05
Average Gross Block			5086.05
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	4577.44
Elapsed Life as on 31.03.2020			5
Balance useful life of the asset			20
Remaining Depreciable value			3234.73
Cumulative Depreciation			1342.72
Depreciation			268.54
Interest on Loan			
Gross Normative Loan			3560.23
Cumulative Repayment upto Previous Year			1342.72
Net Loan-Opening			2217.52
Addition due to Additional Capitalisation			0.00
Repayment during the year			268.54
Net Loan-Closing			1948.97
Average Loan			2083.25
Rate of Interest on Loan (%)			9.98%
Interest			207.91
Return on Equity			
Gross Notional Equity			1525.81
Opening Equity			1525.81
Average Equity			1525.81
Rate of Return on Equity			15.50%
Return on Equity			236.50
Interest on Working Capital			
Maintenance Spares	15% of O&M		16.76
O & M expenses	1 Months		9.31
Receivables	1.5 Months		104.94
Total			131.01
Interest	11.25%		14.74
Annual Transmission Charges			
Depreciation			268.54
Interest on Loan			207.91
Return on Equity			236.50
Interest on Working Capital			14.74
O & M Expenses	68.13		111.73
Total			839.42
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXXVI & XXXVII			
Name of the Tr. System:	Asset-XXXVI & XXXVII	URAVAKONDA-BORAMPALLY 1:1, URAVAKONDA-BORAMPALLY 1:2	
		COD:	06-01-2017
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kV line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	33.58	Voltage, kV	220kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			3833.20
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			3833.20
Average Gross Block			3833.20
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	3449.88
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			22
Remaining Depreciable value			2842.70
Cumulative Depreciation			607.18
Depreciation			202.39
Interest on Loan			
Gross Normative Loan			2683.24
Cumulative Repayment upto Previous Year			607.18
Net Loan-Opening			2076.06
Addition due to Additional Capitalisation			0.00
Repayment during the year			202.39
Net Loan-Closing			1873.67
Average Loan			1974.86
Rate of Interest on Loan (%)			9.98%
Interest			197.09
Return on Equity			
Gross Notional Equity			1149.96
Opening Equity			1149.96
Average Equity			1149.96
Rate of Return on Equity			15.50%
Return on Equity			178.24
Interest on Working Capital			
Maintenance Spares	15% of O&M		8.26
O & M expenses	1 Months		4.59
Receivables	1.5 Months		80.41
Total			93.26
Interest	11.25%		10.49
Annual Transmission Charges			
Depreciation			202.39
Interest on Loan			197.09
Return on Equity			178.24
Interest on Working Capital			10.49
O & M Expenses	33.58		55.07
Total			643.29
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XXXVIII & XXXIX			
Name of the Tr. System:	Asset- XXXVIII & XXXIX	URAVAKONDA-BORAMPALLY 1:3, URAVAKONDA-BORAMPALLY 1:4	
		COD:	10-07-2017
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	34.73	Voltage, kV	220kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			3554.54
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0.00
Gross Block total			3554.54
Average Gross Block			3554.54
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	3199.09
Elapsed Life as on 31.03.2020			2
Balance useful life of the asset			23
Remaining Depreciable value			2823.73
Cumulative Depreciation			375.36
Depreciation			187.68
Interest on Loan			
Gross Normative Loan			2488.18
Cumulative Repayment upto Previous Year			375.36
Net Loan-Opening			2112.82
Addition due to Additional Capitalisation			0.00
Repayment during the year			187.68
Net Loan-Closing			1925.14
Average Loan			2018.98
Rate of Interest on Loan (%)			9.98%
Interest			201.49
Return on Equity			
Gross Notional Equity			1066.36
Opening Equity			1066.36
Average Equity			1066.36
Rate of Return on Equity			15.50%
Return on Equity			165.29
Interest on Working Capital			
Maintenance Spares	15% of O&M		8.54
O & M expenses	1 Months		4.75
Receivables	1.5 Months		77.71
Total			91.00
Interest	11.25%		10.24
Annual Transmission Charges			
Depreciation			187.68
Interest on Loan			201.49
Return on Equity			165.29
Interest on Working Capital			10.24
O & M Expenses	34.73		56.96
Total			621.65
Norms for O&M Per Km	D/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XL			
Name of the Tr. System:	Asset-XL	SUZLON W1-VAJRAKUR:1	
		COD:	12-08-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	5.20	Voltage, kV	220kV SC
Multiplication factor	---		
			FY 2020-21
Gross Block			0.00
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			22
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.64
O & M expenses	1 Months		0.36
Receivables	1.5 Months		0.55
Total			1.54
Interest	11.25%		0.17
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			0.17
O & M Expenses	5.20		4.26
Total			4.44
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XLI			
Name of the Tr. System:	Asset-XLI	MACHERLA-RENTCHNTHALA:2	
		COD:	11-07-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	14.53	Voltage, kV	132kV SC
Multiplication factor	---		
			FY 2020-21
Gross Block			200.39
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			200.39
Average Gross Block			200.39
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	180.35
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			22
Remaining Depreciable value			148.61
Cumulative Depreciation			31.74
Depreciation			10.58
Interest on Loan			
Gross Normative Loan			140.27
Cumulative Repayment upto Previous Year			31.74
Net Loan-Opening			108.53
Addition due to Additional Capitalisation			0.00
Repayment during the year			10.58
Net Loan-Closing			97.95
Average Loan			103.24
Rate of Interest on Loan (%)			9.98%
Interest			10.30
Return on Equity			
Gross Notional Equity			60.12
Opening Equity			60.12
Average Equity			60.12
Rate of Return on Equity			15.50%
Return on Equity			9.32
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.79
O & M expenses	1 Months		0.99
Receivables	1.5 Months		5.38
Total			8.16
Interest	11.25%		0.92
Annual Transmission Charges			
Depreciation			10.58
Interest on Loan			10.30
Return on Equity			9.32
Interest on Working Capital			0.92
O & M Expenses	14.53		11.91
Total			43.03
Norms for O&M Per Km	S/C		0.820

**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION
AT NEW DELHI
PETITION NO. ___/TT/2024**

IN THE MATTER OF:

TRANSMISSION CORPORATION OF
ANDHRA PRADESH LIMITED.

...PETITIONER

VERSUS

TRANSMISSION CORPORATION
OF TELANGANA LTD. & ORS.

...RESPONDENTS

INDEX VOL.3

S NO.	PARTICULARS	PAGE NO.
10.	ANNEXURE P/8 (Cont.) TRUE AND CORRECT COPY OF THE MISCELLANEOUS PETITION ALONG WITH ADDITIONAL AFFIDAVITS FILED BY THE PETITIONER IN 25 MP 2022	600-609
11.	ANNEXURE P/9 TRUE AND CORRECT COPY OF ORDER DATED 7 NOVEMBER 2021 PASSED BY THIS HON'BLE COMMISSION IN PETITION NO. 265/TT/2019.	610-654
12.	ANNEXURE P/10 TRUE AND CORRECT COPY OF THE SINGLE LINE DIAGRAM FOR THE ASSET 42A & 42B I.E NUNNA – VEMAGIRI AND VEMAGIRI SATTENAPALLI	655
13.	ANNEXURE P/11 TRUE AND CORRECT COPY OF THE AUDITOR CERTIFICATE FOR ASSETS OF CATEGORY II	656-658
14.	ANNEXURE P/12 TRUE AND CORRECT COPY OF YTC CALCULATION SHEETS FOR 42 DEEMED ISTS LINES.	659-692
15.	ANNEXURE P/13 A COPY OF THE FEES PAID WITH TRANSACTION ID NO. 29b1f82f81717156cb3e DATED 5 JULY 2024	693
16.	COURT FEES FORM	694-698
17.	VAKALATNAMA WITH AUTHORISATION	699-701



COUNSEL FOR PETITIONER

 UNUM LAW

C-485, GROUND FLOOR
DEFENCE COLONY, NEW DELHI -110024

MOBILE: +91 9899675905

EMAIL: skumar@unumlaw.in
mchandok@unumlaw.in
ssareen@unumlaw.in

NEW DELHI

DATE: 20.08.2024

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XLII(A)			
Name of the Tr. System:	Asset-XLII (A)	VEMAGIRI 1 - SATTENAPALLI 1 (LILO Point to Sattenapalli)	
		COD:	26-10-2015
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	25
Transmission Line length in km	107.87	Voltage, kV	400kV SC
Multiplication factor	---		
			FY 2020-21
Gross Block			8872.41
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			8872.41
Average Gross Block			8872.41
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	7985.17
Elapsed Life as on 31.03.2020			4
Balance useful life of the asset			21
Remaining Depreciable value			6111.31
Cumulative Depreciation			1873.85
Depreciation			468.46
Interest on Loan			
Gross Normative Loan			6210.69
Cumulative Repayment upto Previous Year			1873.85
Net Loan-Opening			4336.83
Addition due to Additional Capitalisation			0.00
Repayment during the year			468.46
Net Loan-Closing			3868.37
Average Loan			4102.60
Rate of Interest on Loan (%)			9.98%
Interest			409.44
Return on Equity			
Gross Notional Equity			2661.72
Opening Equity			2661.72
Average Equity			2661.72
Rate of Return on Equity			15.50%
Return on Equity			412.57
Interest on Working Capital			
Maintenance Spares	15% of O&M		13.27
O & M expenses	1 Months		7.37
Receivables	1.5 Months		177.04
Total			197.68
Interest	11.25%		22.24
Annual Transmission Charges			
Depreciation			468.46
Interest on Loan			409.44
Return on Equity			412.57
Interest on Working Capital			22.24
O & M Expenses	107.87		88.45
Total			1401.16
Norms for O&M Per Km	S/C		0.820

Common Order in O.P.Nos. 42 & 47 of 2020

Annexure - XLII(B)			
Name of the Tr. System:	Asset-XLII (B)	VEMAGIRI 1 - SATTENAPALLI 1 (Vemagiri to LILO Point)	
		COD:	28-12-2005
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	25
Transmission Line length in km	136.98	Voltage, kV	400kV SC
Multiplication factor	1.00		
			FY 2020-21
Gross Block			5524.40
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			5524.40
Average Gross Block			5524.40
Depreciation			
Rate of Depreciation(%)			2.05%
Depreciable value		0.90	4971.96
Elapsed Life as on 31.03.2020			14
Balance useful life of the asset			11
Remaining Depreciable value			1245.29
Cumulative Depreciation			3726.68
Depreciation			113.21
Interest on Loan			
Gross Normative Loan			3867.08
Cumulative Repayment upto Previous Year			3726.68
Net Loan-Opening			140.40
Addition due to Additional Capitalisation			0.00
Repayment during the year			113.21
Net Loan-Closing			27.20
Average Loan			83.80
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			8.36
Return on Equity			
Gross Notional Equity			1657.32
Opening Equity			1657.32
Average Equity			1657.32
Rate of Return on Equity			15.50%
Return on Equity			256.88
Interest on Working Capital			
Maintenance Spares	15% of O&M		16.85
O & M expenses	1 Months		9.36
Receivables	1.5 Months		62.60
Total			88.81
Interest	11.25%		9.99
Annual Transmission Charges			
Depreciation			113.21
Interest on Loan			8.36
Return on Equity			256.88
Interest on Working Capital			9.99
O & M Expenses	136.98		112.32
Total			500.77
Norms for O&M Per Km		S/C	0.820



TRANSMISSION CORPORATION OF ANDHRA PRADESH LTD.
VIDYUT SOUDHA :: VIJAYAWADA

From
Chief Engineer,
 PS, Plg & designs,
 APTRANSCO,
 Vidyut Soudha, Gunadala,
 Vijayawada – 520004.

To
The Implementing Agency,
 Power System Operation Corporation Limited,
 B-9, 1st Floor, Qutub institutional area,
 Katwara Sarai,
 New Delhi – 110016

Lr.No.CE/Plg,PS&D/SE/Plg/EE/RA/APERC/D.No. 99 /2021, dt. 10.07.2021.

Sir,

Sub: Inclusion of APTRANSCO assets i.e., intra state lines carrying interstate power for FY 2015-16, FY2016-17 and FY2020-21 in PoC mechanism – Requested - Reg.

Ref: 1. APERC order dt. 07.07.2021 issued in O.P.No. 42 of 2020 & 47 of 2020.
 2. Certification dt. 23.01.2020 issued by SRPC
 3. Certification Dt.30.04.2020 issued by SRPC.

This is in accordance with CERC Sharing of Inter-state Transmission Charges Regulations 2010 and subsequent amendments, Section 2(1)(y), “Yearly Transmission Charge (YTC) means the Annual Transmission Charges for existing and new transmission assets of the inter-state transmission licensees, deemed ISTS licensees, owners of inter-state transmission lines connecting two states and owners of **non-ISTS lines certified by Regional Power Committees for inter-state transmission of Power**, determined by the appropriate commission under Section 62 of the Act or adopted by the Appropriate commission under section 63 of the Act or as otherwise provided in these regulations

Provided that in case of non-ISTS lines, the asset wise tariff determined by the respective state commissions or approved by the central commission based on the approved Annual Revenue Requirement of STU, shall be used”

Accordingly, APTRANSCO has filed a petition OP NO.42 of 2020 before Hon’ble APERC on 18.03.2020 for approval of transmission tariff of the intra state transmission lines carrying Inter-State power for FY 2015-16 (9Nos.) and 2016-17 (14Nos.) based on SRPC certification No. SRPC/SE-I/2020/622-39, dt.23.01.2020.

Contd...

:: 02 ::

Further , APTRANSCO has also filed another petition OP NO.47 of 2020 before Hon'ble APERC on 05.10.2020 for approval of transmission tariff of 42 Nos. intra state transmission lines carrying Inter-State power for FY 2020-21 based on SRPC certification No. No. SRPC/SE-I/2020,dt.30.04.2020.

Both the petitions for intra-state lines , but are incidental to the power flow of Inter-state were processed by Hon'ble APERC and Hon'ble APERC has issued an order on 07.07.2021 in O.P No. 42 of 2020 and OP No.47 of 2020 , copy of the order is enclosed at Annexure-I, details are as below:

S.No.	Petition No.	FY	No. of lines	YTC
1.	42 of 2020	2015-16	9	Rs.14.35 Cr
2.	42 of 2020	2016-17	14	Rs.85.53 Cr.
3.	47 of 2020	2020-21	42	Rs.295.32 Cr.

Hence, it is requested that the above lines as in the Annexure-II be immediately included in the PoC mechanism for the Q3 of FY 2021-22 so that APTRANSCO be allowed to get immediate benefit from the Q3 of FY 2021-22.

Your's faithfully,


Chief Engineer/PS, Plg & Designs
Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 004

Copy to,

1. Central Electricity Regulatory Commission, 3rd & 4th Floor, Chandra lok Building, 36-Janpath, New Delhi – 110001
2. Southern Region Power Committee (SRPC), CEA, 29, Race Course Road, Bangalore – 560009



ANNEXURE-II

The summary of the YTC determined by the Commission for the 9 Nos transmission lines for the FY 2015-16 is as given in the table below:

Sl. No.	Asset Name	Name of the Line	YTC in Lakhs
1	Asset I	CHITTOOR-RENIGUNTA:1	170.90
2	Asset II(A) & II(B)	CHITTOOR-NAGARI:2	81.97
			182.40
3	Asset III(A) & III(B)	SULURPETA-NELLORE- PG:1	44.73
			25.89
4	Asset -IV & V	KRISHNAPATNAM- NELLORE-AP:1	566.82
5		KRISHNAPATNAM- NELLORE-AP:2	
6	Asset - VI (A) & VI(B)	NELLORE-NELLORE-PG:1	12.23
			28.00
7	Asset - VII (A) & VII(B)	NELLORE-NELLORE-PG:2	12.23
			28.00
8	Asset - VIII	NELLORE-NELLORE-PG:3	65.50
9	Asset - IX (A) & IX(B)	RENIGUNTA-NAGARI:1	14.29
			182.40
YTC Total in Cr.			14.35

The summary of the YTC determined by the Commission for the 14 Nos transmission lines for the FY 2016-17 is as given in the table below:

Sl. No.	Asset Name	Name of the Line	YTC in Lakhs
1	Asset - I (A) & I (B)	SULURUPETA-NELLORE:1	46.57
			25.30
2	Asset - II	KONDAPALLI-VTPS:1	3.98
3	Asset - III	KONDAPALLI-VTPS:2	7.74
4	Asset - IV	KONDAPALLI-CHILAKALLU:1	81.84
5	Asset - V	KONDAPALLI-CHILAKALLU:2	112.31
6	Asset - VI	VTPS-CHILAKALLU:1	68.34
7	Asset - VII	VTPS-CHILAKALLU:2	221.35
8	Asset -VIII (A) & VIII (B)	VTPS-RENTACHINTALA:2	67.73
			4.11
9	Asset -IX	KURNOOL-BRAHMANKTUR:1	78.21
10	Asset - X & XI	CHITTOOR-SDSTPS:1	7674.53
11		CHITTOOR-SDSTPS:2	
12	Asset - XII	NUNNA2-VTPS-IV:1	133.52
13	Asset - XIII	GAZUWAKA1-KALAPAKKA1:1	14.83
14	Asset - XIV	GAZUWAKA1-KALAPAKKA1:2	12.63
YTC Total in Cr.			85.53

The summary of the YTC determined by the Commission for the 42 Nos transmission lines for the FY 2020-21 is as given in the table below:

Sl. No.	Asset Name	Name of the Line	YTC in Lakhs
1	A1	NUNNA2-VEMAGIRI1:T3	530.08
2	A2	GAZUWAKA2-KALPAKKA 1:T1	17.77
3	A3	GAZUWAKA2-KALPAKKA 1:T2	
4	A4	CHITTOOR42-CHITTOOR1:1	56.50
5	A5	CHITTOOR42-CHITTOOR1:2	
6	A6-A	SULURPET1-NELLORE42:1	84.81
	A6-B		19.69
7	A7	CHITTOOR1-KALIKIRI1:1	66.19
8	A8	GOOTY-PG-DHONE1:2	557.58
9	A9	GOOTY-PG-DHONE1:1	
10	A10	KONDAPALLI1-CHILLAKALLU1:1	96.15
11	A11	KONDAPALLI1-CHILLAKALLU1:2	121.65
12	A12	SRISAILAMRB1-TALLAPALLI:1	168.69
13	A13	SRISAILAMRB1-TALLAPALLI:2	
14	A14	SRISAILAMRB1-MYDUKUR:1	141.84
15	A15	SRISAILAMRB1-SOMYZULPALLI:1	90.47
16	A16-A	SRISAILAMRB1-BELKALAGUDUR:1	60.36
	A16-B		18.19
17	A17	VTS1-CHILLAKALLU1:1	83.65
18	A18-A	VTS1-CHILLAKALLU1:2	76.4
	A18-B	VTS1-CHILLAKALLU1:2	4.65
19	A19-A	VTS1-RENTACHINTHALA1:2	93.96
	A19-B		3.64
20	A20	KURNOOL1-BRAHMANKTKUR:1	72.47
21	A21	MACHERLA-RENTCHINTHALA:1	51.30
22	A22	CHITTOOR2-SDSTPS:Q2	6750.41
23	A23	CHITTOOR2-SDSTPS:Q1	
24	A24	KURNOOL2-JAMALAMADUGU1:Q1	2586.73
25	A25	KURNOOL2-JAMALAMADUGU1:Q2	
26	A26	HINDUJA-KVKOTA1:T2	6839.04
27	A27	HINDUJA-KVKOTA1:T1	
28	A28	JAMMALAMADUGU - URAVAKONDA	2908.98
29	A29	DC Line (Part-1)	
30	A30	TALARICHERUVU TO LILO POINT OF	86.74
31	A31	JAMMALAMADUGU - URAVAKONDA DC LINE (Part-2)	
32	A32	URVAKONDA-HINDUPUR3:Q1	3922.41
33	A33	URVAKONDA-HINDUPUR3:Q2	
34	A34	SULURPET1-NELLORE42:2	839.42
35	A35	SULURPET1-NELLORE42:3	
36	A36	URAVAKONDA-BORAMPALLI:2	643.29
37	A37	URAVAKONDA-BORAMPALLI:1	
38	A38	URAVAKONDA-BORAMPALLI:4	621.65
39	A39	URAVAKONDA-BORAMPALLI:3	
40	A40	SUZLON-W1-VAJRAKUR:1	4.44
41	A41	MACHERLA-RENTACHINTHALA:2	43.03
42	A42-A	VEMAGIRI1-SATTENAPALLI:T1	1401.46
	A42-B		500.77
YTC total in Cr. for FY2020-21			296.32

Chief Engineer
Power Systems, Planning & Design
APTRANSCO, Vidyut Soudha
Vijayawada-520 004

EXHIBIT P/14

2015-16

SN	Asset	Voltage (kV)	Meter Location	Remarks
1	CHITTOOR-RENIGUNTA:1	220	400kVSS Chittoor-220kVSS Renigunta	Boundary Meters are available at both ends of the line for energy accounting & losses purpose and are owned by Petitioner.
2	RENIGUNTA-NAGARI:1	220	220kVSS Renigunta-220kVSS Nagari	
3	CHITTOOR-NAGARI:2	220	400kVSS Chittoor-220kVSS Nagari	
4	SULURPETA-NELLORE-PG:1	220	220kVSS Sullurpeta-400kVSS Manubolu(Nellore)	
5	NELLORE-NELLORE-PG:1	220	220kVSS Nellore-400kVSS Manubolu(Nellore)	Interface Meters are available at both ends of the line for energy accounting and losses purpose. Meter at one end belongs to Petitioner and other end to APGenco/APPDCL.
6	NELLORE-NELLORE-PG:2	220	220kVSS Nellore-400kVSS Manubolu(Nellore)	
7	NELLORE-NELLORE-PG:3	220	220kVSS Nellore-400kVSS Manubolu(Nellore)	
8	KRISHNAPATNAM-NELLORE-AP:1	400	Main Control Room of SDSTPS (APPDCL) Switch yard-400kVSS Manubolu(Nellore) of petitioner.	
9	KRISHNAPATNAM-NELLORE-AP:2	400	Main Control Room of SDSTPS (APPDCL) Switch yard-400kVSS Manubolu(Nellore) of petitioner.	



Chief General Manager/Commercial & Legal
APTRANSCO, Vidyal Soudh,
Vijayawada-520 004.

2016-17

S N	Asset	Voltage (kV)	Meter Location	Remarks
1	KONDAPALLI-CHILAKALLU:1	220	220kVSS Kondapally-220kVSS Chilikallu	Boundary Meters are available at both ends of the line for energy accounting & losses purpose and are owned by Petitioner.
2	KONDAPALLI-CHILAKALLU:2	220	220kVSS Kondapally-220kVSS Chilikallu	
3	KURNOL-BRAHMANKTUR:1	220	220kVSS Kurnool-220kVSS Brahmanktur	
4	SULURUPETA-NELLORE:2:1	220	220kVSS Sulurpeta-400kVSS Manubolu (Nellore)	
5	KONDAPALLI-VTPS:1	220	220kVSS Kondapally- Main Control Room of VTPS Switchyard (AP Genco)	Interface Meters are available at both ends of the line for energy accounting and losses purpose. Meter at one end belongs to APGenco.
6	KONDAPALLI-VTPS:2	220	220kVSS Kondapally- Main Control Room of VTPS Switchyard (AP Genco)	
7	VTPS-CHILAKALLU:1	220	Main Control Room of VTPS Switchyard (AP Genco)- 220kVSS Chilikallu	
8	VTPS-CHILAKALLU:2	220	Main Control Room of VTPS Switchyard (AP Genco)- 220kVSS Chilikallu	
9	VTPS-RENTACHINTALA:2	220	Main Control Room of VTPS Switchyard (AP Genco)- 220kVSS Rentachintala	Interface Meters are available at both ends of the line for energy accounting and losses purpose. Meter at one end belongs to APGenco.
10	CHITTOOR-SDSTPS:1	400	400kVSS Chittoor- Main Control Room of SDSTPS Switchyard (APPDCL)	
11	CHITTOOR-SDSTPS:2	400	400kVSS Chittoor- Main Control Room of SDSTPS Switchyard (APPDCL)	
12	NUNNA2-VTPS-IV:1	400	400kVSS Nunna (PGCIL)-Main Control Room of Switch yard of VTPS (APGenco)	Interface Meters are available at both ends of the line for energy accounting and losses purpose. Meter at one end belongs to APGenco and other end belongs to PGCIL.
13	GAZUWAKA1-KALAPAKA1:1	400	400kVSS Gajuwaka (PGCIL)-400kVSS Kalapaka	Interface Meters are available at both ends of the line for energy accounting and losses purpose. Meter at one end belongs to Petitioner and other end belongs to PGCIL.
14	GAZUWAKA1-KALAPAKA1:2	400	400kVSS Gajuwaka (PGCIL)-400kVSS Kalapaka	



Chief General Manager/Commercial Dept.
APTRANSCO, Vijaya Soudha,
Vijayawada-520-004

2020-21

Sl No	Asset	Voltage (kV)	Meter Location	Remarks
1	KURNOOL2-JAMMALAMADUGU1:Q1	400	400kVSS Kurmool-400kVSS Jammalamadugu	Boundary Meters are available at both ends of the line for energy accounting & losses purpose and are owned by Pathroner.
2	KURNOOL2-JAMMALAMADUGU1:Q2	400	400kVSS Kurmool-400kVSS Jammalamadugu	
3	VENMAGIRI1-SATTENAPALLI:TT	400	400kVSS Venmagiri-400kVSS Sattenapalli	
4	JAMMALAMADUGU1-TALARICHERI:Q2	400	400kVSS Jammalamadugu-400kVSS Talaricheruvu	
5	JAMMALAMADUGU1-TALARICHERI:Q1	400	400kVSS Jammalamadugu-400kVSS Talaricheruvu	
6	URAVAKONDA-HINDUPUR3:Q1	400	400kVSS Uravakonda-400kVSS Hindupur	
7	URAVAKONDA-HINDUPUR3:Q2	400	400kVSS Uravakonda-400kVSS Hindupur	
8	URAVAKONDA-TALARICHERI:Q1	400	400kVSS Uravakonda-400kVSS Talaricheruvu	
9	URAVAKONDA-TALARICHERI:Q2	400	400kVSS Uravakonda-400kVSS Talaricheruvu	
10	CHITTOOR42-CHITTOOR1:1	220	400kVSS Chittoor-220kVSS Chittoor	
11	CHITTOOR42-CHITTOOR1:2	220	400kVSS Chittoor-220kVSS Chittoor	
12	CHITTOOR1-KALKIRI1:1	220	220kVSS Chittoor-220kVSS Kalkiri	
13	GOOTY-PG-DHONE1:2	220	220kVSwitching Station Gooty-220kV Switching Station Dhone	Boundary Meters are available at both ends of the line for energy accounting & losses purpose and are owned by Pathroner.
14	GOOTY-PG-DHONE1:1	220	220kVSwitching Station Gooty-220kV Switching Station Dhone	
15	KONDAPALLI1-CHILLAKALLU1:1	220	220kVSS Kondapally-220kVSS Chillakallu	
16	KONDAPALLI1-CHILLAKALLU1:2	220	220kVSS Kondapally-220kVSS Chillakallu	
17	KURNOOL1-BRAHMANKUR1	220	220kVSS Kurmool-220kVSS Brahmanakotkur	
18	URVAKONDA-BORAMPALLI:2	220	400kVSS Uravakonda-220kVSS Borampalli	
19	URVAKONDA-BORAMPALLI:1	220	400kVSS Uravakonda-220kVSS Borampalli	
20	URVAKONDA-BORAMPALLI:4	220	400kVSS Uravakonda-220kVSS Borampalli	
21	URVAKONDA-BORAMPALLI:3	220	400kVSS Uravakonda-220kVSS Borampalli	
22	MACHERLA-RENTCHINTHALA:1	132	132kVSS Macharla-220kVSS Rentachintala	
23	MACHERLA-RENTCHINTHALA:2	132	132kVSS Macharla-220kVSS Rentachintala	
24	SULURPET1-NELLORE42:1	220	220kVSS Sullurpet-400kVSS Manubolu (Nellore)	
25	SULURPET1-NELLORE42:3	220	220kVSS Sullurpet-400kVSS Manubolu (Nellore)	
26	SULURPET1-NELLORE42:2	220	220kVSS Sullurpet-400kVSS Manubolu (Nellore)	
27	CHITTOOR2-SDSTPS:Q2	400	400kVSS Chittoor- Main Control Room of SDSTPS Switchyard (APPDCL)	
28	CHITTOOR2-SDSTPS:Q1	400	400kVSS Chittoor- Main Control Room of SDSTPS Switchyard (APPDCL)	
29	SRISSAILAMRB1-TALLAPALLI:1	220	Main Control Room of Srisaillam Switchyard (AP Genco)- 220kVSS Tallapalli	Interface Meters are available at both ends of
30	SRISSAILAMRB1-TALLAPALLI:2	220	Main Control Room of Srisaillam Switchyard (AP Genco)- 220kVSS Tallapalli	



Chief General Manager/Commercial & Legal
APTRANSCO, Vidyan Soudras,
Vijayawada-520 004.

31	SRISAILAMRB1-MYDUKUR:1	220	Main Control Room of Srisaillam Switchyard (AP Genco)- 220kVSS Mydukur	the line for energy accounting and line losses purpose. Meter at one end belongs to Petitioner and other end to APGenco/APPDCL.
32	VTST1-CHILLAKALLU1:1	220	Main Control Room of VTTS Switchyard (AP Genco)-220kVSS Chillakallu	
33	VTST1-CHILLAKALLU1:2	220	Main Control Room of VTTS Switchyard (AP Genco)-220kVSS Chillakallu	
34	VTST1-RENTACHINTHALA1:2	220	Main control room of VTTS Switchyard (AP Genco)-220kVSS Rentachintala	
35	SRISAILAMRB1-SOMYAZULPALLI:1	220	Main Control Room of Srisaillam Switch yard (AP Genco)- 220kVSS Somayazulpalli	
36	SRISAILAMRB1-BELKALAGUDUR:1	220	Main Control Room of Srisaillam Switch yard (AP Genco)- 220kVSS Belakalagudur	Interface Meters are available at both ends of the line for energy accounting and line losses purpose. Meter at one end belongs to Petitioner and other end to M/s HINDUJA (Private Generator).
37	HINDUJA-KVKOTA1:T2	400	Hinduja Switch yard-400kVSS Kamavarapukota	
38	HINDUJA-KVKOTA1:T1	400	Hinduja Switch yard-400kVSS Kamavarapukota	
39	MUNNA2-VEMAGIRI1:T3	400	400kVSS Munna (PGCIL)-400kVSS Vemagiri	
40	GAZUWAKA2-KALPAKKA 1:T2	400	400kVSS Gajuwaka (PGCIL)-400kVSS Kalapaka	
41	GAZUWAKA2-KALPAKKA 1:T1	400	400kVSS Gajuwaka (PGCIL)-400kVSS Kalapaka	Interface Meters are available at both ends of the line for energy accounting and losses purpose. Meter at one end belongs to Petitioner and other end belongs to PGCIL.
42	SUZLON-W1-VAJRAKUR:1	220	Suzlon Pooling Station-220kVSSVajrakur	



Chief General Manager/Commercial Legal
APTRANSCO, Viduth Soudha,
Vijayawada-520 004.

TC

S. S.

**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



	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		(b)Thus, the Commission is yet to determine the tariff for the 2014-19 period for these 3 Assets.

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-Wanaparthi 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) (b) LILO of Ragulapadu– Allipura (COD: 6.6.2011)	1686.09	1686.09	1686.09	1686.09	1686.09
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
	Asset- XIX and Asset-XX	Srisailam-RB- Dindi-I	0.00	0.00	0.00	0.00	0.00
15		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
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
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
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
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
<i>Norms for AC and HVDC lines (₹ Lakh per km)</i>					
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
<i>Norms for HVDC stations</i>					
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	VTPS – Suryapeta – I	400 kV	D/C	2	02.04.2013	71.63
7		VTPS – 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	2019-20	2020-21	2021-22	2022-23	2023-24
Particulars					
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	2019-20	2020-21	2021-22	2022-23	2023-24
Particulars					
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	2019-20	2020-21	2021-22	2022-23	2023-24
Particulars					
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	2019-20	2020-21	2021-22	2022-23	2023-24
Particulars					
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	2019-20	2020-21	2021-22	2022-23	2023-24
Particulars					
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

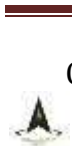
(₹ in lakh)

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 & Asset-II	Kalpaka-Khammam-I feeder	987.80	994.17	1000.79	1008.97	1017.41
2		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 & Asset-VII	VTPS - Suryapeta - I	1276.20	1228.52	1192.95	1158.73	1124.58
7		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) & Asset-XIV(b) (**)	(a) Ragulapadu – Allipura (COD:25.9.1975)	4.89	5.03	5.21	5.38	5.57
		(b) LILO of Ragulapadu–Allipura (COD: 6.6.2011)	52.53	50.76	49.38	48.04	46.71
11	Asset- XV & Asset-XVI	Tallapalli- Nagarjunasagar-I	3.93	4.07	4.19	4.35	4.49
12		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 & Asset-XX	Srisailam-RB-Dindi-I	0.47	0.49	0.50	0.52	0.54
		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 & Asset-XXXV	Chilakallu-Bonakal-I	7.28	7.53	7.76	8.05	8.31
31		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 & Asset-XLI	K.V. Kota-Aswaraopet-I	12.22	12.63	13.02	13.50	13.95
37		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

TC
S. S.

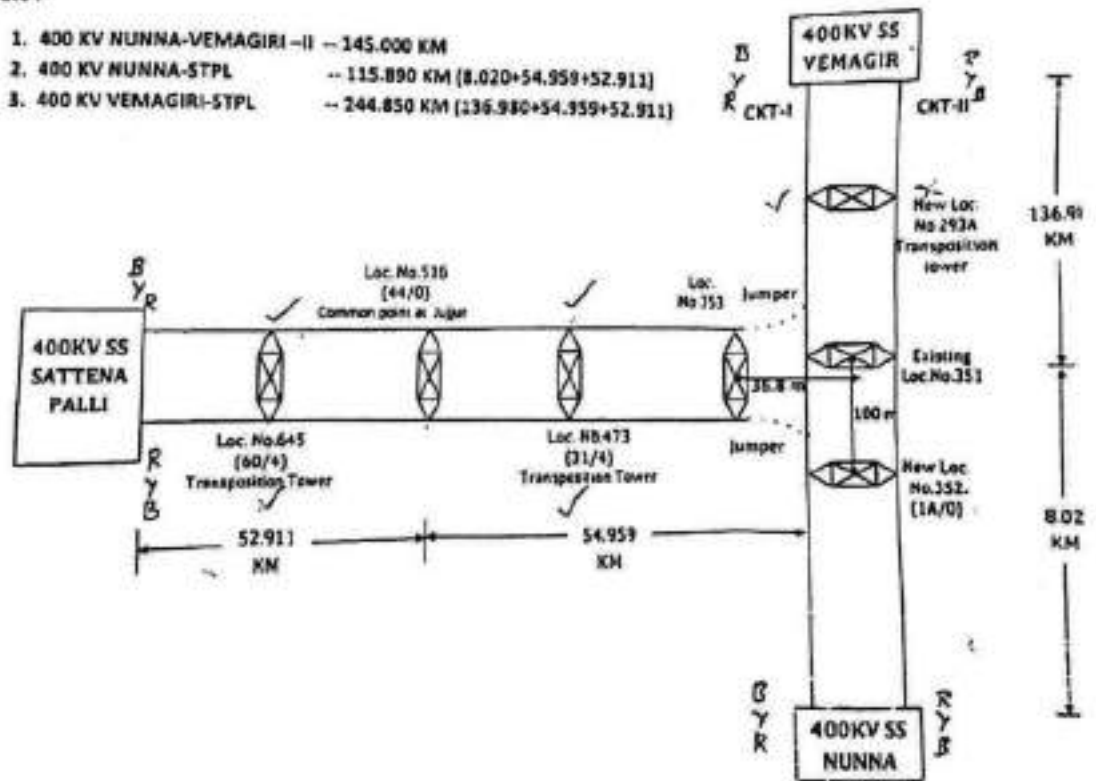


ANNEXURE P/10

SCHEMATIC DIAGRAM SHOWING LINE LENGTHS AFTER MAKING JLO OF
400 KV NUNNA - VEMAGIRI-I TO 400 KV STPLSS

Note :-

1. 400 KV NUNNA-VEMAGIRI -II -- 145.000 KM
2. 400 KV NUNNA-STPL -- 115.890 KM (8.020+54.959+52.911)
3. 400 KV VEMAGIRI-STPL -- 244.850 KM (136.980+54.959+52.911)



Chief General Manager/Commercial
 & Co-ordination
 APTRANSCO, Vidyut Soudha,
 Vijayawada-520 004.

TC

S. S.

SATYANARAYANA AND ASSOCIATES
CHARTERED ACCOUNTANTS
Date: 28th August, 2020.**CERTIFICATE**

This is to certify that we have verified the relevant records and other documents of Transmission Corporation of A.P Ltd having its Registered office at VidyutSoudha, Gunadala, Eluru Road, Vijayawada - 520004 and on the basis of our verification, we certify that the capital cost of Vernagiri- Sattenapally (i.e. Sattenapally to LILO point of Vernagiri - Nunna line) 400kV DC line which is under commercial operation w.e.f., 26-10-2015 is detailed as under:

(Amounts in Rs. Lakhs)

Sr. No	Particulars	Land	Building & Civil Works	Sub-Station	Transmission Line	PLCC/Communication System	I.T Equip. Inc. Software	Total
1	Expenditure up to 26-10-2015 (up to DOCO)				17,744.81			17,744.81
2	Expenditure from DOCO (i.e., from 27.10.2015 to 31.03.2016)				--			--
3	Expenditure from 01.04.2016 to 31.03.2020				--			--
	Total				17,744.81			17,744.81

(Amounts in Rs. Lakhs)

Sl.No	Particulars	Transmission Line	Sub-station
A	Total Plant & Machinery Cost (excluding IDC, IEDC, Land Cost & Cost of Civil Works for the purpose of Initial Spares)	--	--
B	Initial Spares included above #	--	--

#as per estimates provided by Management

Chief General Manager/Commercial
& Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.



Head Office : G-1, B-Block, Matrushi Apartments, Hyderguda, Hyderabad - 500 029.
Mobile : 9391021127, 9302021939 Ph: 040 40128176, Fax : 23296543, Email : satyam_vinnakota@yahoo.com
B. Office : H.No: 20-145/6, 1st Floor, Dayanand Nagar, Malkajgiri, Hyderabad 500047.

TC
S. S.

SATYANARAYANA AND ASSOCIATES
CHARTERED ACCOUNTANTS



Date: 28th August, 2020.

CERTIFICATE

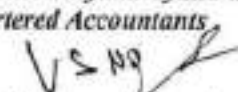
This is to certify that we have verified the relevant records and other documents of Transmission Corporation of A.P Ltd having its Registered office at VidyutSoudha, Gunadala, Eluru Road, Vijayawada - 520004 and on the basis of our verification, we certify that the capital cost of Vemagiri- Sattenapally (i.e. Sattenapally to LILO point of Vemagiri - Nunna line) 400kV DC line which is under commercial operation w.e.f., 26-10-2015 is detailed as under:

(Amounts in Rs. Lakhs)

Sr.No	Particulars	Capital Cost	IDC	IEDC	Total
1	Expenditure up to 26-10-2015(up to DOCO)	16,131.65	1,613.16	--	17,744.81
2	Expenditure from DOCO (i.e 27.10.2015 to 31.03.2016)	--	--	--	--
3	Expenditure from 01.04.2016 to 31.03.2020	--	--	--	--
	Total	16,131.65	1,613.16		17,744.81

We certify that we have verified that the amounts mentioned in Sr.No. 1 (Rs.17,744.81 Lakhs), Sr.No.2 (--) and Sr.No.3 (--) in the above table are based on information drawn from the audited statement of Accounts of Transmission Corporation of A.P Ltd., VidyutSoudha, Gunadala, Eluru Road, Vijayawada - 520004 up to the year ended 31.03.2020.

For M/s. Satyanarayana and Associates
Chartered Accountants

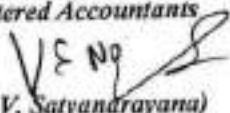

(CA. V. Satyanarayana)
Partner.
UDIN: 20204487AAAADF9853




Chief General Manager/Commercial
& Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.

We certify that we have verified that the amounts mentioned in Sr.No.1(Rs. 17,744.81 Lakhs), Sr.No.2 (--) and Sr.No.3 (--) in the above table are based on information drawn from the audited statement of Accounts of Transmission Corporation of A.P Ltd., Vidyut Soudha, Gunadala, Eluru Road, Vijayawada, Andhra Pradesh - 520004 up to the year ended 31.03.2020.

For M/s. Satyanarayana and Associates
Chartered Accountants


(CA. V. Satyanarayana)
Partner.

UDIN: 20204487AAAADF9853




Chief General Manager/Commercial
& Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.

TC

S. S.



Annexure - XVI

Name of the Tr. System:	Asset - I	NUNNA2-VEMAGIRI:1	
		COD:	30-12-2005
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. in lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	35
Transmission Line length in km	145.00	Voltage, kV	400 kV S/C
Multiplication factor	1.00		
			FY 2020-21
Gross Block			5847.85
Additional Capitalisation			0
Gross Block total			5847.85
Average Gross Block			5847.85
Depreciation			
Rate of Depreciation(%)			1.16%
Depreciable value		0.90	5263.07
Elapsed Life as on 31.03.2020			14
Balance useful life of the asset			21
Remaining Depreciable value			1318.11
Cumulative Depreciation			3944.96
Depreciation			67.84
Interest on Loan			
Gross Normative Loan			3684.15
Cumulative Repayment upto Previous Year			3684.15
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			1754.36
Opening Equity			1754.36
Average Equity			1754.36
Rate of Return on Equity			15.50%
Return on Equity			271.93
Interest on Working Capital			
Maintenance Spares	15% of O&M		11.33
O & M expenses	1 Months		6.30
Receivables	1.5 Months		52.91
Total			70.53
Interest	11.25%		7.93
Annual Transmission Charges			
Depreciation			67.84
Interest on Loan			0.00
Return on Equity			271.93
Interest on Working Capital			7.93
O & M Expenses for line	145.00		75.55
Total			423.24
Norms for O&M Per Km	S/C		0.521

105

TC

Chief General Manager/Comme
& Co-ordination
APTRANSCO, Vidyut Soudha,
Mile marker-520 004.

Annexure - XVII

Name of the Tr. System:	Asset - II & III	GAZUWAKA2-KALPAKKA1:1 & GAZUWAKA2-KALPAKKA1:2	
		COD:	27-01-2002
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
		(Rs. In lacs)	
Rationalised cost of 400 kv line Rs lakh per ckt km	44.28	Life in years	35
Transmission Line length in km	3.39	Voltage, kV	400 kV D/C
Multiplication factor	1.39		
			FY 2020-21
Gross Block			208.652
Additional Capitalisation			0
Gross Block total			208.652
Average Gross Block			208.652
Depreciation			
Rate of Depreciation(%)			1.16%
Depreciable value		6.90	187.79
Elapsed Life as on 31.03.2020			18
Balance useful life of the asset			17
Remaining Depreciable value			29.92
Cumulative Depreciation			157.87
Depreciation			2.42
Interest on Loan			
Gross Normative Loan			131.45
Cumulative Repayment upto Previous Year			131.45
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			62.60
Cumulative Repayment upto Previous Year			26.42
Opening Equity			36.18
Repayment during the year			2.42
Closing Equity			33.76
Average Equity			34.97
Rate of Return on Equity			15.50%
Return on Equity			5.42
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.46
O & M expenses	1 Months		0.26
Receivables	1.5 Months		1.40
Total			2.12
Interest	11.25%		0.24
Annual Transmission Charges			
Depreciation			2.42
Interest on Loan			0.00
Return on Equity			5.42
Interest on Working Capital			0.24
O & M Expenses for line	3.39		3.09
Total			11.17
Norms for O&M Per Km	D/C		0.912

Annexure - XVIII

Name of the Tr. System:	Asset- IV & V	CHITTOOR 42 - CHITTOOR 1:2 & CHITTOOR 42 - CHITTOOR 1:1	
		COD:	14-02-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	35
165.98	17.10	Voltage, kV	220 kV D/C
Multiplication factor	0.57		
			FY 2020-21
Gross Block			393.10
Additional Capitalisation			0.00
Gross Block total			393.10
Average Gross Block			393.10
Depreciation			
Rate of Depreciation(%)			1.16%
Depreciable value		0.90	353.79
Elapsed Life as on 31.03.2020			14
Balance useful life of the asset			21
Remaining Depreciable value			88.60
Cumulative Depreciation			265.18
Depreciation			4.56
Interest on Loan			
Gross Normative Loan			247.65
Cumulative Repayment upto			247.65
Net Loan-Opening			0.00
Addition due to Additional			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest			9.98%
Interest			0.00
Return on Equity			
Gross National Equity			117.93
Opening Equity			117.93
Average Equity			117.93
Rate of Return on Equity			15.50%
Return on Equity			18.28
Interest on Working Capital			
Maintenance Spares	15% of O&M		1.00
O & M expenses	1 Months		0.56
Receivables	1.5 Months		3.77
Total			5.33
Interest	11.25%		0.60
Annual Transmission Charges			
Depreciation			4.56
Interest on Loan			0.00
Return on Equity			18.28
Interest on Working Capital			0.60
O & M Expenses for line	17.10		6.69
Total			30.12
Norms for O&M Per Km	D/C		0.391

Chief General Manager/Commercial
& Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.

107

Annexure - XIX

Name of the Tr. System:	Asset-VI (A)	SULURUPETA-NELLORE42:1
		COD: 28-04-1982
CALCULATION OF ANNUAL TRANSMISSION CHARGES		
		(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years 35
Transmission Line length in km	75.70	Voltage, kV 220kV/S/C
Multiplication factor	0.36	
		FY 2020-21
Gross Block		0.00
Additional Capitalisation		0.00
Gross Block total		0.00
Average Gross Block		0.00
Depreciation		
Rate of Depreciation(%)		0.00%
Depreciable value	0.90	0.00
Elapsed Life as on 31.03.2020		37
Balance useful life of the asset		0
Remaining Depreciable value		0.00
Cumulative Depreciation		0.00
Depreciation		0.00
Interest on Loan		
Gross Normative Loan		0.00
Cumulative Repayment upto Previous Year		0.00
Net Loan-Opening		0.00
Addition due to Additional Capitalisation		0.00
Repayment during the year		0.00
Net Loan-Closing		0.00
Average Loan		0.00
Weighted Average Rate of Interest on Loan (%)		9.98%
Interest		0.00
Return on Equity		
Gross Notional Equity		0.00
Opening Equity		0.00
Average Equity		0.00
Rate of Return on Equity		15.50%
Return on Equity		0.00
Interest on Working Capital		
Maintenance Spares	15% of O&M	2.95
O & M expenses	1 Months	1.64
Receivables	1.5 Months	2.56
Total		7.15
Interest	11.25%	0.80
Annual Transmission Charges		
Depreciation		0.00
Interest on Loan		0.00
Return on Equity		0.00
Interest on Working Capital		0.80
O & M Expenses for line	75.70	19.68
Total		20.49
Norms for O&M Per Km	S/C	0.260

Annexure - XX

Name of the Tr. System:	Asset-VI (B)	SULURUPETA-NELLORE42:1
		COD: 26-12-2006
CALCULATION OF ANNUAL TRANSMISSION CHARGES		
		(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	42.53	Life in years 35
Transmission Line length in km	10.10	Voltage, kV 220kV/S/C
Multiplication factor	0.36	
		FY 2020-21
Gross Block		154.64
Additional Capitalisation		0.00
Gross Block total		154.64
Average Gross Block		154.64
Depreciation		
Rate of Depreciation(%)		1.16%
Depreciable value	0.90	136.18
Elapsed Life as on 31.03.2020		13
Balance useful life of the asset		22
Remaining Depreciable value		38.03
Cumulative Depreciation		101.15
Depreciation		1.79
Interest on Loan		
Gross Normative Loan		97.42
Cumulative Repayment upto Previous Year		97.42
Net Loan-Opening		0.00
Addition due to Additional Capitalisation		0.00
Repayment during the year		0.00
Net Loan-Closing		0.00
Average Loan		0.00
Weighted Average Rate of Interest on Loan (%)		9.98%
Interest		0.00
Return on Equity		
Gross Notional Equity		46.39
Opening Equity		46.39
Average Equity		46.39
Rate of Return on Equity		15.50%
Return on Equity		7.19
Interest on Working Capital		
Maintenance Spares	15% of O&M	0.39
O & M expenses	1 Months	0.22
Receivables	1.5 Months	1.48
Total		2.09
Interest	11.25%	0.24
Annual Transmission Charges		
Depreciation		1.79
Interest on Loan		0.00
Return on Equity		7.19
Interest on Working Capital		0.24
O & M Expenses for line	10.10	2.63
Total		11.85
Norms for O&M Per Km	S/C	0.260



 Chief General Manager/Commercial
 & Co-ordination
 APTRANSCO, Vidyut Soudha,
 Villupuram-605 004.

Annexure - XXI

Name of the Tr. System:	Asset-VII	CHITTOOR1-KALIKIRI1:1	
		COD:	21-06-1970
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. in lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	35
Transmission Line length in km	64.66	Voltage, kV	220kV/S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			49
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		2.52
O & M expenses	1 Months		1.40
Receivables	1.5 Months		2.19
Total			6.11
Interest	11.25%		0.69
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			0.69
O & M Expenses for line	64.66		16.81
Total			17.50
Norms for O&M Per Km	S/C		0.260


 General Manager/Commercial
 & Co-ordination
 APTRANSCO, Vidyut Soudha,
 Hyderabad-500 004.

Annexure - XXII

Name of the Tr. System:	Asset- VIII & IX	GOOTY - PG - DHONE 1:2 & GOOTY - PG - DHONE 1:1	
		COD:	24-08-2011
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. in lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	62.27	Life in years	35
Transmission Line length in km	90.16	Voltage, kV	220 kV D/C
Multiplication factor	0.57		
			FY 2020-21
Gross Block			3200.13
Additional Capitalisation			0
Gross Block total			3200.13
Average Gross Block			3200.13
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	2880.12
Elapsed Life as on 31.03.2020			8
Balance useful life of the asset			27
Remaining Depreciable value			1528.38
Cumulative Depreciation			1351.73
Depreciation			168.97
Interest on Loan			
Gross Normative Loan			2016.06
Cumulative Repayment upto Previous Year			1351.73
Net Loan-Opening			664.35
Addition due to Additional Capitalisation			0.00
Repayment during the year			168.97
Net Loan-Closing			495.38
Average Loan			579.86
Weighted Average Rate of Interest on Loan (%)			9.96%
Interest			57.67
Return on Equity			
Gross Notional Equity			960.04
Opening Equity			960.04
Average Equity			960.04
Rate of Return on Equity			15.50%
Return on Equity			148.81
Interest on Working Capital			
Maintenance Spares	15% of O&M		5.29
O & M expenses	1 Months		2.94
Receivables	1.5 Months		52.21
Total			60.44
Interest	11.25%		6.80
Annual Transmission Charges			
Depreciation			168.97
Interest on Loan			57.67
Return on Equity			148.81
Interest on Working Capital			6.80
O & M Expenses for line	90.16		35.25
Total			417.70
Norms for O&M Per Km	D/C		0.391

Annexure - XXIII

Name of the Tr. System:	Asset- X	KONDAPALLI-CHILLAKALLU1:1	
		COD:	12-03-1997
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	38.20	Life in years	35
Transmission Line length in km	59.70	Voltage, kV	220 kV D/C
Multiplication factor	0.36		
			FY 2019-20
Gross Block			820.99
Additional Capitalisation			0.00
Gross Block total			820.99
Average Gross Block			820.99
Depreciation			
Rate of Depreciation(%)			1.16%
Depreciable value		0.90	738.89
Elapsed Life as on 31.03.2020			23
Balance useful life of the asset			12
Remaining Depreciable value			33.58
Cumulative Depreciation			705.32
Depreciation			9.52
Interest on Loan			
Gross Normative Loan			517.23
Cumulative Repayment upto			517.23
Net Loan-Opening			0.00
Addition due to Additional			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			246.30
Opening Equity			246.30
Repayment till previous year			188.09
Repayment in current year			9.52
Closing Equity			48.68
Average Equity			147.49
Rate of Return on Equity			15.50%
Return on Equity			22.86
Interest on Working Capital			
Maintenance Spares	15% of O&M		3.50
O & M expenses	1 Months		1.95
Receivables	1.5 Months		7.14
Total			12.59
Interest	11.25%		1.42
Annual Transmission Charges			
Depreciation			9.52
Interest on Loan			0.00
Return on Equity			22.86
Interest on Working Capital			1.42
O & M Expenses for line	59.70		23.34
Total			57.14
Norms for O&M Per Km	D/C		0.391

Annexure - XXIV

Name of the Tr. System:	Asset- XI	KONDAPALLI-CHILLAKALLU1:2	
		COD:	19-08-2000
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	54.57	Life in years	35
Transmission Line length in km	59.70	Voltage, kV	220 kV D/C
Multiplication factor	0.36		
			FY 2019-20
Gross Block			1172.82
Additional Capitalisation			0.00
Gross Block total			1172.82
Average Gross Block			1172.82
Depreciation			
Rate of Depreciation(%)			1.16%
Depreciable value		0.90	1055.54
Elapsed Life as on 31.03.2020			19
Balance useful life of the asset			16
Remaining Depreciable value			144.14
Cumulative Depreciation			911.40
Depreciation			13.60
Interest on Loan			
Gross Normative Loan			738.88
Cumulative Repayment upto			738.88
Net Loan-Opening			0.00
Addition due to Additional			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			351.85
Opening Equity			351.85
Repayment till previous year			172.52
Repayment in current year			13.60
Closing Equity			165.72
Average Equity			258.78
Rate of Return on Equity			15.50%
Return on Equity			40.11
Interest on Working Capital			
Maintenance Spares	15% of O&M		3.50
O & M expenses	1 Months		1.95
Receivables	1.5 Months		9.85
Total			15.29
Interest	11.25%		1.72
Annual Transmission Charges			
Depreciation			13.60
Interest on Loan			0.00
Return on Equity			40.11
Interest on Working Capital			1.72
O & M Expenses for line	59.70		23.34
Total			78.78
Norms for O&M Per Km	D/C		0.391

Chief General Manager/Commer.
& Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.

Annexure - XXV

Name of the Tr. System:	Asset-XII & XIII	SRISAILAMRB1-TALIAPLLI:1 & SRISAILAMRB1-TALIAPLLI:2	
		COD:	01-01-1985
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. in lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	35
Transmission Line length in km	98.82	Voltage, kV	220 kV D/C
Multiplication factor:	0.57		
			FY 2020-21
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			35
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto			0.00
Net Loan-Opening			0.00
Addition due to Additional			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		5.80
O & M expenses	1 Months		3.22
Receivables	1.5 Months		5.03
Total			14.04
Interest	11.25%		1.58
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			1.58
O & M Expenses for line	98.82		38.64
Total			40.22
Norms for O&M Per Km	D/C		0.391

114




Chief General Manager/Comms. & Co-ordination
APTRANSCO, Vidyut Soudha
 Vilaswada, 520 004.

Annexure - XXVI

Name of the Tr. System:	Asset-XIV	SRISAILAMRB1-MYDUKUR:1
		COD: 27-11-1969
CALCULATION OF ANNUAL TRANSMISSION CHARGES		
		(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years 35
Transmission Line length in km	165.96	Voltage, kV 220kV/S/C
Multiplication factor	0.36	
		FY 2020-21
Gross Block		0.00
Additional Capitalisation		0.00
Gross Block total		0.00
Average Gross Block		0.00
Depreciation		
Rate of Depreciation(%)		0.00%
Depreciable value	0.90	0.00
Elapsed Life as on 31.03.2020		50
Balance useful life of the asset		0
Remaining Depreciable value		0.00
Cumulative Depreciation		0.00
Depreciation		0.00
Interest on Loan		
Gross Normative Loan		0.00
Cumulative Repayment upto Previous Year		0.00
Net Loan-Opening		0.00
Addition due to Additional Capitalisation		0.00
Repayment during the year		0.00
Net Loan-Closing		0.00
Average Loan		0.00
Weighted Average Rate of Interest on Loan (%)		9.98%
Interest		0.00
Return on Equity		
Gross Notional Equity		0.00
Opening Equity		0.00
Average Equity		0.00
Rate of Return on Equity		15.50%
Return on Equity		0.00
Interest on Working Capital		
Maintenance Spares	15% of O&M	6.47
O & M expenses	1 Months	3.60
Receivables	1.5 Months	5.61
Total		15.68
Interest	11.25%	1.76
Annual Transmission Charges		
Depreciation		0.00
Interest on Loan		0.00
Return on Equity		0.00
Interest on Working Capital		1.76
O & M Expenses for line	165.96	43.15
Total		44.91
Norms for O&M Per Km	S/C	0.260

115



Chief General Manager/Commissioner
& Co-ordination
APTRANSCO, Vidyut Soudha,
M.H. Road, Sec-5, Hyderabad-500 066.

Annexure -XXVII

Name of the Tr. System:	Asset - XV	SRISAILAMRB1-SOMYULPALLI:1	
		COD:	01-01-1985
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. in lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	35
Transmission Line length in km	106.00	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.00
Additional Capitalisation			0.00
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			35
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto			0.00
Net Loan-Opening			0.00
Addition due to Additional			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		4.13
O & M expenses	1 Months		2.30
Receivables	1.5 Months		3.59
Total			10.02
Interest	11.25%		1.13
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			1.13
O & M Expenses for line	106.00		27.56
Total			28.69
Norms for O&M Per Km	S/C		0.260

Annexure - XXVIII

Name of the Tr. System:	Asset-XVI (A)	SRISAILAMRB1-BELKALAGUDUR:1
		COD: 24-03-1980
CALCULATION OF ANNUAL TRANSMISSION CHARGES		
		(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years 35
Transmission Line length in km	70.72	Voltage, kV 220kV/S/C
Multiplication factor	0.36	
		FY 2016-17
Gross Block		0.00
Additional Capitalisation		0.00
Gross Block total		0.00
Average Gross Block		0.00
Depreciation		
Rate of Depreciation(%)		0.00%
Depreciable value	0.90	0.00
Elapsed Life as on 31.03.2020		40
Balance useful life of the asset		0
Remaining Depreciable value		0.00
Cumulative Depreciation		0.00
Depreciation		0.00
Interest on Loan		
Gross Normative Loan		0.00
Cumulative Repayment upto Previous Year		0.00
Net Loan-Opening		0.00
Addition due to Additional Capitalisation		0.00
Repayment during the year		0.00
Net Loan-Closing		0.00
Average Loan		0.00
Weighted Average Rate of Interest on Loan (%)		9.98%
Interest		0.00
Return on Equity		
Gross Notional Equity		0.00
Opening Equity		0.00
Average Equity		0.00
Rate of Return on Equity		15.50%
Return on Equity		0.00
Interest on Working Capital		
Maintenance Spares	15% of O&M	2.76
O & M expenses	1 Months	1.53
Receivables	1.5 Months	2.39
Total		6.68
Interest	11.25%	0.75
Annual Transmission Charges		
Depreciation		0.00
Interest on Loan		0.00
Return on Equity		0.00
Interest on Working Capital		0.75
O & M Expenses for line	70.72	18.39
Total		19.14
Norms for O&M Per Km	S/C	0.260

112




Chief General Manager/Commer
& Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.

Annexure - XXIX

Name of the Tr. System:	Asset-XVI (B)	SRISAILAMRB1-BELKALAGUDUR:1
		COD: 10-08-2011
CALCULATION OF ANNUAL TRANSMISSION CHARGES		
		(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	82.27	Life in years 35
Transmission Line length in km	4.94	Voltage, kV 220kV/S/C
Multiplication factor	0.36	
		FY 2020-21
Gross Block		110.74
Additional Capitalisation		0.00
Gross Block total		110.74
Average Gross Block		110.74
Depreciation		
Rate of Depreciation(%)		5.28%
Depreciable value	0.90	99.67
Elapsed Life as on 31.03.2020		8
Balance useful life of the asset		27
Remaining Depreciable value		52.89
Cumulative Depreciation		46.78
Depreciation		5.85
Interest on Loan		
Gross Normative Loan		69.77
Cumulative Repayment upto Previous Year		46.78
Net Loan-Opening		22.99
Addition due to Additional Capitalisation		0.00
Repayment during the year		5.85
Net Loan-Closing		17.14
Average Loan		20.07
Weighted Average Rate of Interest on Loan (%)		9.98%
Interest		2.00
Return on Equity		
Gross Notional Equity		33.22
Opening Equity		33.22
Average Equity		33.22
Rate of Return on Equity		15.50%
Return on Equity		5.15
Interest on Working Capital		
Maintenance Spares	15% of O&M	0.19
O & M expenses	1 Months	0.11
Receivables	1.5 Months	1.82
Total		2.11
Interest	11.25%	0.24
Annual Transmission Charges		
Depreciation		5.85
Interest on Loan		2.00
Return on Equity		5.15
Interest on Working Capital		0.24
O & M Expenses for line	4.94	1.28
Total		14.52
Norms for O&M Per Km	S/C	0.260

Annexure - XXX

Name of the Tr. System:	Asset-XVII	VTS1-CHILAAKALLU:1	
		COD:	28-08-1999
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
		(Rs. in lacs)	
Rationalised cost of 400 kv line Rs lakh per ckt km	20.71	Life in years	35
Transmission Line length in km	67.60	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			505.49
Additional Capitalisation			0.00
Gross Block total			505.49
Average Gross Block			505.49
Depreciation			
Rate of Depreciation(%)			1.18%
Depreciable value		0.90	454.94
Elapsed Life as on 31.03.2020			26
Balance useful life of the asset			15
Remaining Depreciable value			51.76
Cumulative Depreciation			403.18
Depreciation			5.86
Interest on Loan			
Gross Normative Loan			318.46
Cumulative Repayment upto			318.46
Net Loan-Opening			0.00
Addition due to Additional			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			151.65
Cumulative Repayment upto Previous Year			64.72
Opening Equity			66.93
Repayment during the year			5.86
Closing Equity			61.08
Average Equity			63.99
Rate of Return on Equity			15.50%
Return on Equity			9.92
Rate of Return on Equity			
Return on Equity			
Interest on Working Capital			
Maintenance Spares	15% of O&M		2.64
O & M expenses	1 Months		1.47
Receivables	1.5 Months		4.30
Total			8.41
Interest	11.25%		0.95
Annual Transmission Charges			
Depreciation			5.86
Interest on Loan			0.00
Return on Equity			9.92
Interest on Working Capital			0.95
O & M Expenses for line	67.60		17.63
Total			34.36
Norms for O&M Per Km	S/C		0.260

Annexure - XXXI

Name of the Tr. System:	Asset-XVIII	VTS1-CHILAAKALLU1.2	
		COD:	29.03.1999
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	17.54	Life in years	35
Transmission Line length in km	66.14	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			417.63
Additional Capitalisation			0.00
Gross Block total			417.63
Average Gross Block			417.63
Depreciation			
Rate of Depreciation(%)			1.16%
Depreciable value		0.90	375.87
Elapsed Life as on 31.03.2020			21
Balance useful life of the asset			14
Remaining Depreciable value			34.20
Cumulative Depreciation			341.67
Depreciation			4.84
Interest on Loan			
Gross Normative Loan			263.11
Cumulative Repayment upto			263.11
Net Loan-Opening			0.00
Addition due to Additional			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.99%
Interest			0.00
Return on Equity			
Gross Notional Equity			125.29
Cumulative Repayment upto Previous Year			49.32
Opening Equity			75.97
Repayment during the year			8.56
Closing Equity			67.41
Average Equity			71.69
Rate of Return on Equity			15.50%
Return on Equity			11.11
Interest on Working Capital			
Maintenance Spares	15% of O&M		2.58
O & M expenses	1 Months		1.43
Receivables	1.5 Months		4.26
Total			8.27
Interest	11.25%		0.93
Annual Transmission Charges			
Depreciation			4.84
Interest on Loan			0.00
Return on Equity			11.11
Interest on Working Capital			0.93
O & M Expenses for line	66.14		17.20
Total			34.08
Norms for O&M Per Km	S/C		0.260

Annexure - XXXII

Name of the Tr. System:	Asset-XVIII	VTS1-CHILAAKALLU1:2	
		COD:	03-10-2010
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
		(Rs. In lacs)	
Rationalised cost of 400 kv line Rs lakh per ckt km	52.26	Life in years	35
Transmission Line length in km	1.48	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			27.92
Additional Capitalisation			0.00
Gross Block total			27.92
Average Gross Block			27.92
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	25.13
Elapsed Life as on 31.03.2020			9
Balance useful life of the asset			26
Remaining Depreciable value			11.86
Cumulative Depreciation			13.27
Depreciation			1.47
Interest on Loan			
Gross Normative Loan			17.59
Cumulative Repayment upto			13.27
Net Loan-Opening			4.32
Addition due to Additional			0.00
Repayment during the year			1.47
Net Loan-Closing			2.85
Average Loan			3.58
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.36
Return on Equity			
Gross Notional Equity			8.38
Cumulative Repayment upto Previous Year			0.00
Opening Equity			8.38
Repayment during the year			0.00
Closing Equity			8.38
Average Equity			8.38
Rate of Return on Equity			15.50%
Return on Equity			1.30
Rate of Return on Equity			
Return on Equity			
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.06
O & M expenses	1 Months		0.03
Receivables	1.5 Months		0.45
Total			0.54
Interest	11.25%		0.06
Annual Transmission Charges			
Depreciation			1.47
Interest on Loan			0.36
Return on Equity			1.30
Interest on Working Capital			0.06
O & M Expenses for line	1.48		0.39
Total			3.58
Norms for O&M Per Km	S/C		0.260

Annexure - XXXIII

Name of the Tr. System:	Asset-XIX (A)	VTPS-RENTACHINTALA:2	
		COD:	30-06-1984
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	0.00	Life in years	35
Transmission Line length in km	110.09	Voltage, kV	220kV, S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			0.000
Additional Capitalisation			0
Gross Block total			0.000
Average Gross Block			0.000
Depreciation			
Rate of Depreciation(%)			0.00%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			35
Balance useful life of the asset			0
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto Previous Year			0.00
Net Loan-Opening			0.00
Addition due to Additional Capitalisation			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		4.29
O & M expenses	1 Months		2.39
Receivables	1.5 Months		3.72
Total			10.40
Interest	11.25%		1.17
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			1.17
O & M Expenses for line	110.09		28.62
Total			29.79
Norms for O&M Per Km	S/C		0.260

129




APTRANSCO General Manager/Comptroller & Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.

Annexure - XXXIV

Name of the Tr. System:	Asset-XIX (B)	VTPS-RENTACHINTALA-2	
		COD:	24-11-2008
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	47.74	Life in years	35
Transmission Line length in km	1.40	Voltage, kV	220kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			24.061
Additional Capitalisation			0
Gross Block total			24.061
Average Gross Block			24.061
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	21.65
Elapsed Life as on 31.03.2020			11
Balance useful life of the asset			24
Remaining Depreciable value			7.66
Cumulative Depreciation			13.97
Depreciation			1.27
Interest on Loan			
Gross Normative Loan			15.16
Cumulative Repayment upto Previous Year			13.97
Net Loan-Opening			1.18
Addition due to Additional Capitalisation			0.00
Repayment during the year			1.18
Net Loan-Closing			0.00
Average Loan			0.59
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.06
Return on Equity			
Gross Notional Equity			7.22
Opening Equity			7.22
Average Equity			7.22
Rate of Return on Equity			15.50%
Return on Equity			1.12
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.05
O & M expenses	1 Months		0.03
Receivables	1.5 Months		0.36
Total			0.44
Interest	11.25%		0.05
Annual Transmission Charges			
Depreciation			1.27
Interest on Loan			0.06
Return on Equity			1.12
Interest on Working Capital			0.05
O & M Expenses for line	1.40		0.36
Total			2.86
Norms for O&M Per Km	S/C		0.260

Annexure - XXXV

Name of the Tr. System:	Asset-XX	KURNOOL1-BRAHMANKTKUR:1	
		COD:	29-10-2010
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	52.26	Life in years	35
Transmission Line length in km	23.18	Voltage, kV	220 kV S/C
Multiplication factor	0.36		
			FY 2020-21
Gross Block			436.10
Additional Capitalisation			0.00
Gross Block total			436.10
Average Gross Block			436.10
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	392.49
Elapsed Life as on 31.03.2020			9
Balance useful life of the asset			26
Remaining Depreciable value			185.25
Cumulative Depreciation			207.23
Depreciation			23.03
Interest on Loan			
Gross Normative Loan			274.74
Cumulative Repayment upto			207.23
Net Loan-Opening			67.51
Addition due to Additional			0.00
Repayment during the year			23.03
Net Loan-Closing			44.48
Average Loan			56.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			5.59
Return on Equity			
Gross Notional Equity			130.83
Opening Equity			130.83
Average Equity			130.83
Rate of Return on Equity			15.50%
Return on Equity			20.28
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.90
O & M expenses	1 Months		0.50
Receivables	1.5 Months		6.98
Total			8.39
Interest	11.25%		0.94
Annual Transmission Charges			
Depreciation			23.03
Interest on Loan			5.59
Return on Equity			20.28
Interest on Working Capital			0.94
O & M Expenses for line	23.18		6.03
Total			55.86
Norms for O&M Per Km	S/C		0.260

124

Annexure - XXXVI

Name of the Tr. System:	Asset-XXI	MACHERLA-RENTCHINTHALA:1	
		COD:	27-03-2013
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	65.67	Life in years	35
Transmission Line length in km	14.53	Voltage, kV	132kV/S/C
Multiplication factor	0.31		
			FY 2020-21
Gross Block			295.80
Additional Capitalisation			0.00
Gross Block total			295.80
Average Gross Block			295.80
Depreciation			
Rate of Depreciation(%)			5.26%
Depreciable value		0.90	266.22
Elapsed Life as on 31.03.2020			7
Balance useful life of the asset			28
Remaining Depreciable value			156.89
Cumulative Depreciation			109.33
Depreciation			15.62
Interest on Loan			
Gross Normative Loan			186.35
Cumulative Repayment upto Previous Year			109.33
Net Loan-Opening			77.03
Addition due to Additional Capitalisation			0.00
Repayment during the year			15.62
Net Loan-Closing			61.41
Average Loan			69.22
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			6.91
Return on Equity			
Gross Notional Equity			88.74
Opening Equity			88.74
Average Equity			88.74
Rate of Return on Equity			15.50%
Return on Equity			13.75
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.57
O & M expenses	1 Months		0.31
Receivables	1.5 Months		5.09
Total			5.97
Interest	11.25%		0.67
Annual Transmission Charges			
Depreciation			15.62
Interest on Loan			6.91
Return on Equity			13.75
Interest on Working Capital			0.67
O & M Expenses for line	14.53		3.78
Total			40.73
Norms for O&M Per Km	S/C		0.260

Annexure - XXXVII

Name of the Tr. System:	Asset-XXII & XXIII	CHITTOOR-SDSTPS:1 CHITTOOR-SDSTPS:2	
		COD:	22-07-2015
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	35
Transmission Line length in km	192.00	Voltage, kV	400kV D/C
Multiplication factor	---		
			FY 2020-21
Gross Block			43505.98
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			309.41
Gross Block total			43815.39
Average Gross Block			43660.69
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	39433.85
Elapsed Life as on 31.03.2020			4
Balance useful life of the asset			31
Remaining Depreciable value			30212.71
Cumulative Depreciation			9221.14
Depreciation			2305.28
Interest on Loan			
Gross Normative Loan			27603.70
Cumulative Repayment upto Previous Year			9221.14
Net Loan-Opening			18382.56
Addition due to Additional Capitalisation			0.00
Repayment during the year			2305.28
Net Loan-Closing			16077.27
Average Loan			17229.92
Rate of Interest on Loan (%)			9.98%
Interest			1719.55
Return on Equity			
Gross Notional Equity			13144.62
Opening Equity			13144.62
Average Equity			13144.62
Base Rate of Return on Equity			18.78%
Return on Equity			2468.76
Interest on Working Capital			
Maintenance Spares	15% of O&M		39.40
O & M expenses	1 Months		21.89
Receivables	1.5 Months		857.45
Total			918.74
Interest	11.25%		103.36
Annual Transmission Charges			
Depreciation			2305.28
Interest on Loan			1719.55
Return on Equity			2468.76
Interest on Working Capital			103.36
O & M Expenses	192.00		262.66
Total			6859.60
Norms for O&M Per Km.	D/C		1.368

Annexure - XXXVIII

Name of the Tr. System:	Asset-XXIV & XXV	KURNOOL2-JAMMALAMADUGU 1:1 KURNOOL2-JAMMALAMADUGU 1:2	
		COD:	31-03-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. in lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	35
Transmission Line length in km	100.86	Voltage, kV	400kV DC
Multiplication factor	---		FY 2020-21
			16293.46
Gross Block			
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			739.42
Gross Block total			17032.88
Average Gross Block			16663.17
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	15329.60
Elapsed Life as on 31.03.2020			4
Balance useful life of the asset			31
Remaining Depreciable value			11810.33
Cumulative Depreciation			3519.26
Depreciation			879.82
Interest on Loan			
Gross Normative Loan			10730.72
Cumulative Repayment upto			3519.26
Net Loan-Opening			7211.45
Addition due to Additional			0.00
Repayment during the year			879.82
Net Loan-Closing			8331.64
Average Loan			6771.55
Rate of Interest on Loan (%)			9.98%
Interest			675.80
Return on Equity			
Gross Notional Equity			5109.87
Opening Equity			5109.87
Average Equity			5109.87
Rate of Return on Equity			18.78%
Return on Equity			959.71
Interest on Working Capital			
Maintenance Spares	15% of O&M		20.70
O & M expenses	1 Months		11.50
Receivables	1.5 Months		336.85
Total			369.05
Interest	11.25%		41.52
Annual Transmission Charges			
Depreciation			879.82
Interest on Loan			675.80
Return on Equity			959.71
Interest on Working Capital			41.52
O & M Expenses	100.86		137.96
Total			2694.82
Norms for O&M Per Km	D/C		1.368

Annexure - XXXIX

Name of the Tr. System:	Asset-XXVI & XXVII	HINDUJA- KV KOTA1:1, HINDUJA- KV KOTA1:2	
		COD:	24-07-2017
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. in lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	35
Transmission Line length in km	242.98	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			40597.440
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			63.9
Gross Block total			40661.340
Average Gross Block			40629.390
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	36595.21
Elapsed Life as on 31.03.2020			2
Balance useful life of the asset			33
Remaining Depreciable value			32304.74
Cumulative Depreciation			4290.46
Depreciation			2145.23
Interest on Loan			
Gross Normative Loan			25616.64
Cumulative Repayment upto			4290.46
Net Loan-Opening			21326.18
Addition due to Additional			0.00
Repayment during the year			2145.23
Net Loan-Closing			19180.95
Average Loan			20253.56
Rate of Interest on Loan (%)			9.98%
Interest			2021.31
Return on Equity			
Gross Notional Equity			12198.40
Opening Equity			12198.40
Average Equity			12198.40
Rate of Return on Equity			18.78%
Return on Equity			2291.04
Interest on Working Capital			
Maintenance Spares	15% of O&M		33.24
O & M expenses	1 Months		16.47
Receivables	1.5 Months		847.54
Total			899.25
Interest	11.25%		101.17
Annual Transmission Charges			
Depreciation			2145.23
Interest on Loan			2021.31
Return on Equity			2291.04
Interest on Working Capital			101.17
O & M Expenses	242.98		221.60
Total			6780.34
Norms for O&M Per Km	D/C		0.912

Annexure - XL

Name of the Tr. System:	Asset-XXVIII & XXIX	JAMMALAMADUGU - URAVAKONDA DC Line (Part-1)	
		COD:	15-07-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. in lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	35
Transmission Line length in km	127.62	Voltage, kV	400kV DC
Multiplication factor	---		FY 2020-21
			17604.40
Gross Block			
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			
Gross Block total			17604.40
Average Gross Block			17604.40
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	15843.96
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			32
Remaining Depreciable value			13055.42
Cumulative Depreciation			2788.54
			929.51
Depreciation			
Interest on Loan			
Gross Normative Loan			11090.77
Cumulative Repayment upto			2788.54
Net Loan-Opening			8302.24
Addition due to Additional			0.00
Repayment during the year			929.51
Net Loan-Closing			7372.72
Average Loan			7837.48
Rate of Interest on Loan (%)			9.88%
Interest			782.18
Return on Equity			
Gross Notional Equity			5281.32
Opening Equity			5281.32
Average Equity			5281.32
Rate of Return on Equity			18.78%
Return on Equity			991.91
Interest on Working Capital			
Maintenance Spares	15% of O&M		26.19
O & M expenses	1 Months		14.55
Receivables	1.5 Months		365.49
Total			406.22
Interest	11.25%		45.70
Annual Transmission Charges			
Depreciation			929.51
Interest on Loan			782.18
Return on Equity			991.91
Interest on Working Capital			45.70
O & M Expenses	127.62		174.58
Total			2923.89
Norms for O&M Per Km	D/C		1.368


 Chief General Manager/Commercial
 & Co-ordination
 APTRANSCO, Vidyut Soudha,
 Vijayawada-520 004.



Annexure - XLI

Name of the Tr. System:	Asset-XXX & XXXI	TALARICHERUVU TO LILO POINT OF JAMMALAMADUGU - URAVAKONDA DC LINE (Part-2)	
		COD:	01-12-2018
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. in lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	35
Transmission Line length in km	0.50	Voltage, kV	400kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			519.57
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			2.38
Gross Block total			521.95
Average Gross Block			520.76
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	469.76
Elapsed Life as on 31.03.2020			1
Balance useful life of the asset			34
Remaining Depreciable value			442.26
Cumulative Depreciation			27.50
Depreciation			27.50
Interest on Loan			
Gross Normative Loan			328.83
Cumulative Repayment upto			27.50
Net Loan-Opening			301.33
Addition due to Additional			0.00
Repayment during the year			27.50
Net Loan-Closing			273.84
Average Loan			287.59
Rate of Interest on Loan (%)			9.98%
Interest			28.70
Return on Equity			
Gross Notional Equity			156.59
Opening Equity			156.59
Average Equity			156.59
Rate of Return on Equity			18.78%
Return on Equity			29.41
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.10
O & M expenses	1 Months		0.08
Receivables	1.5 Months		10.94
Total			11.10
Interest	11.25%		1.25
Annual Transmission Charges			
Depreciation			27.50
Interest on Loan			28.70
Return on Equity			29.41
Interest on Working Capital			1.25
O & M Expenses	0.50		0.68
Total			87.54
Norms for O&M Per Km	D/C		1.368

Annexure - XLII

Name of the Tr. System:	Asset-XXXII & XXXIII	URAVAKONDA-HINDUPUR 3:1, URAVAKONDA-HINDUPUR 3:2	
		COD:	23-01-2019
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. in lacs)
Rationalised cost of 400 kv line Rs (lakh per ckt km)	---	Life in years	35
Transmission Line length in km	126.25	Voltage, kV	400KV DC
Multiplication factor	---		FY 2020-21
Gross Block			33198.53
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			142.68
Gross Block total			33341.21
Average Gross Block			33289.87
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		6.90	30007.09
Elapsed Life as on 31.03.2020			1
Balance useful life of the asset			34
Remaining Depreciable value			28250.44
Cumulative Depreciation			1756.65
Depreciation			1756.65
Interest on Loan			
Gross Normative Loan			21004.96
Cumulative Repayment upto			1756.65
Net Loan-Opening			19248.31
Addition due to Additional Repayment during the year			0.00
Net Loan-Closing			17491.87
Average Loan			18369.99
Rate of Interest on Loan (%)			1.72%
Interest			315.96
Return on Equity			
Gross Notional Equity			10002.36
Opening Equity			10002.36
Average Equity			10002.36
Rate of Return on Equity			18.78%
Return on Equity			1878.59
Interest on Working Capital			
Maintenance Spares	15% of O&M		25.91
O & M expenses	1 Months		14.39
Receivables	1.5 Months		523.42
Total			563.72
Interest	11.25%		63.42
Annual Transmission Charges			
Depreciation			1756.65
Interest on Loan			315.96
Return on Equity			1878.59
Interest on Working Capital			63.42
O & M Expenses	126.25		172.71
Total			4187.34
Norms for O&M Per Km	D/C		1.368

(3)

Chief General Manager/Commercial
& Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.

Annexure - XLIII

Name of the Tr. System:	Asset-XXXIV & XXXV	SULURPET1-NELLORE42:1 SULURPET1-NELLORE42:2
		COD: 10-11-2014
CALCULATION OF ANNUAL TRANSMISSION CHARGES		
		(Rs. in lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years 35
Transmission Line length in km	68.13	Voltage, kV 220kV DC
Multiplication factor	---	
		FY 2020-21
		5086.05
Gross Block		
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation		0.00
Gross Block total		5086.05
Average Gross Block		5086.05
Depreciation		
Rate of Depreciation(%)		5.28%
Depreciable value	6.90	4577.44
Elapsed Life as on 31.03.2020		5
Balance useful life of the asset		30
Remaining Depreciable value		3234.73
Cumulative Depreciation		1342.72
		268.54
Depreciation		
Interest on Loan		
Gross Normative Loan		3204.21
Cumulative Repayment upto		1342.72
Net Loan-Opening		1861.49
Addition due to Additional		0.00
Repayment during the year		268.54
Net Loan-Closing		1592.95
Average Loan		1727.22
Rate of Interest on Loan (%)		9.98%
Interest		172.38
Return on Equity		
Gross Notional Equity		1525.81
Opening Equity		1525.81
Average Equity		1525.81
Rate of Return on Equity		18.76%
Return on Equity		286.57
Interest on Working Capital		
Maintenance Spares	15% of O&M	4.00
O & M expenses	1 Months	2.22
Receivables	1.5 Months	95.70
Total		101.92
Interest	11.25%	11.47
Annual Transmission Charges		
Depreciation		268.54
Interest on Loan		172.38
Return on Equity		286.57
Interest on Working Capital		11.47
O & M Expenses	68.13	26.64
Total		765.60
Norms for O&M Per Km	D/C	0.391

132

Chief General Manager/Commercial
& Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.

Annexure - XLIV

Name of the Tr. System:	Asset-XXXVI & XXXVII	URAVAKONDA-BORAMPALLY 1:1, URAVAKONDA-BORAMPALLY 1:2	
		COD:	06-01-2017
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. In lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	35
Transmission Line length in km	33.58	Voltage, kV	220kV DC
Multiplication factor	---		
			FY 2020-21
Gross Block			3833.20
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			3833.20
Average Gross Block			3833.20
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	3449.68
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			32
Remaining Depreciable value			2842.70
Cumulative Depreciation			607.18
Depreciation			202.39
Interest on Loan			
Gross Normative Loan			2414.92
Cumulative Repayment upto			607.18
Net Loan-Opening			1807.74
Addition due to Additional			0.00
Repayment during the year			202.39
Net Loan-Closing			1605.34
Average Loan			1706.54
Rate of Interest on Loan (%)			9.98%
Interest			170.31
Return on Equity			
Gross Notional Equity			1149.96
Opening Equity			1149.96
Average Equity			1149.96
Rate of Return on Equity			18.78%
Return on Equity			215.98
Interest on Working Capital			
Maintenance Spares	15% of O&M		4.59
O & M expenses	1 Months		2.55
Receivables	1.5 Months		78.62
Total			85.77
Interest	11.25%		9.65
Annual Transmission Charges			
Depreciation			202.39
Interest on Loan			170.31
Return on Equity			215.98
Interest on Working Capital			9.65
O & M Expenses	33.58		30.62
Total			628.96
Norms for O&M Per Km	D/C		0.912

Annexure - XLV

Name of the Tr. System:	Asset-XXXVIII & XXXIX	URAVAKONDA-BORAMPALLY 1:3, URAVAKONDA-BORAMPALLY 1:4	
		COD:	10-07-2017
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. in lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	35
Transmission Line length in km	34.73	Voltage, kV	220kV DC
Multiplication factor	---		
			FY 2020-21
			3554.54
Gross Block			
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0.00
Gross Block total			3554.54
Average Gross Block			3554.54
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	3199.09
Elapsed Life as on 31.03.2020			2
Balance useful life of the asset			33
Remaining Depreciable value			2823.73
Cumulative Depreciation			375.36
			187.68
Depreciation			
Interest on Loan			
Gross Normative Loan			2239.38
Cumulative Repayment upto			375.36
Net Loan-Opening			1864.00
Addition due to Additional			0.00
Repayment during the year			187.68
Net Loan-Closing			1676.32
Average Loan			1770.16
Rate of Interest on Loan (%)			9.98%
Interest			176.66
Return on Equity			
Gross Notional Equity			1066.36
Opening Equity			1066.36
Average Equity			1066.36
Rate of Return on Equity			18.78%
Return on Equity			200.28
Interest on Working Capital			
Maintenance Spares	15% of O&M		2.04
O & M expenses	1 Month		1.13
Receivables	1.5 Months		73.35
Total			76.52
Interest	11.25%		8.61
Annual Transmission Charges			
Depreciation			187.68
Interest on Loan			176.66
Return on Equity			200.28
Interest on Working Capital			8.61
O & M Expenses	34.73		13.58
Total			586.81
Norms for O&M Per Km	D/C		0.391

Annexure - XLVI

Name of the Tr. System:	Asset-XL	SUZLON W1-VAJRAKUR:1	
		COD:	12-08-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. in lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	35
Transmission Line length in km	5.20	Voltage, kV	220kV SC
Multiplication factor	---		
			FY 2020-21
			0.00
Gross Block			
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			0.00
Average Gross Block			0.00
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	0.00
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			32
Remaining Depreciable value			0.00
Cumulative Depreciation			0.00
Depreciation			0.00
Interest on Loan			
Gross Normative Loan			0.00
Cumulative Repayment upto			0.00
Net Loan-Opening			0.00
Addition due to Additional			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			0.00
Opening Equity			0.00
Average Equity			0.00
Rate of Return on Equity			15.50%
Return on Equity			0.00
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.20
O & M expenses	1 Months		0.11
Receivables	1.5 Months		0.18
Total			0.49
Interest	11.25%		0.06
Annual Transmission Charges			
Depreciation			0.00
Interest on Loan			0.00
Return on Equity			0.00
Interest on Working Capital			0.06
O & M Expenses	5.20		1.35
Total			1.41
Norms for O&M Per Km	S/C		0.260

135

Chief General Manager/Commercial
& Co-ordination
APTRANSCO, Vidyt Soudha,
Vijayawada-520 004.

Annexure - XLVII

Name of the Tr. System:	Asset-XLI	MACHERLA-RENTCHINTHALA:2	
		COD:	11-07-2016
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. in lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	35
Transmission Line length in km	14.53	Voltage, kV	132kV SC
Multiplication factor	---		
			FY 2020-21
			200.39
Gross Block			
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			200.39
Average Gross Block			200.39
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	180.35
Elapsed Life as on 31.03.2020			3
Balance useful life of the asset			32
Remaining Depreciable value			148.61
Cumulative Depreciation			31.74
			10.58
Depreciation			
Interest on Loan			
Gross Normative Loan			126.25
Cumulative Repayment upto			31.74
Net Loan-Opening			94.50
Addition due to Additional			0.00
Repayment during the year			10.58
Net Loan-Closing			83.92
Average Loan			89.21
Rate of Interest on Loan (%)			9.98%
Interest			8.90
Return on Equity			
Gross National Equity			60.12
Opening Equity			60.12
Average Equity			60.12
Rate of Return on Equity			18.78%
Return on Equity			11.29
Interest on Working Capital			
Maintenance Spares	15% of O&M		0.57
O & M expenses	1 Months		0.31
Receivables	1.5 Months		4.39
Total			5.28
Interest	11.25%		0.59
Annual Transmission Charges			
Depreciation			10.58
Interest on Loan			8.90
Return on Equity			11.29
Interest on Working Capital			0.59
O & M Expenses	14.53		3.78
Total			35.15
Norms for O&M Per Km	S/C		0.260

136

Chief General Manager/Commercial
& Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.

Annexure - XLVIII

Name of the Tr. System:	Asset-XLII (A)	VEMAGIRI 1 - SATTENAPALLI 1 (LILO Point to Sattenapalli)	
		COD:	26-10-2015
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. in lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	---	Life in years	35
Transmission Line length in km	107.87	Voltage, kV	400kV SC
Multiplication factor	---		
			FY 2020-21
			8872.41
Gross Block			
Additions after DCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			8872.41
Average Gross Block			8872.41
Depreciation			
Rate of Depreciation(%)			5.28%
Depreciable value		0.90	7985.17
Elapsed Life as on 31.03.2020			4
Balance useful life of the asset			31
Remaining Depreciable value			6111.31
Cumulative Depreciation			1873.85
			468.46
Depreciation			
Interest on Loan			
Gross Normative Loan			6589.82
Cumulative Repayment upto			1873.85
Net Loan-Opening			3715.76
Addition due to Additional			0.00
Repayment during the year			468.46
Net Loan-Closing			3247.30
Average Loan			3481.53
Rate of Interest on Loan (%)			9.98%
Interest			347.46
Return on Equity			
Gross Notional Equity			2661.72
Opening Equity			2661.72
Average Equity			2661.72
Rate of Return on Equity			18.78%
Return on Equity			499.91
Interest on Working Capital			
Maintenance Spares	15% of O&M		14.76
O & M expenses	1 Months		8.20
Receivables	1.5 Months		179.63
Total			202.58
Interest	11.25%		22.79
Annual Transmission Charges			
Depreciation			468.46
Interest on Loan			347.46
Return on Equity			499.91
Interest on Working Capital			22.79
O & M Expenses	107.87		98.38
Total			1437.00
Norms for O&M Per Km	S/C		0.912

Note: The line VEMAGIRI 1 - SATTENAPALLI 1 (LILO Point to Sattenapalli) was executed as DC line. The Auditor certified the capital cost for DC line. As Single Circuit was qualified for claiming YTC, 50% of Audited capital cost is considered for arriving YTC

137

Chief General Manager/Commercial
& Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.

Annexure - XLIX

Name of the Tr. System:	Asset-XLII (B)	VEMAGIRI 1 - SATTENAPALLI 1 (Vemagiri to LILO Point)	
		COD:	28-12-2005
CALCULATION OF ANNUAL TRANSMISSION CHARGES			
			(Rs. in lacs)
Rationalised cost of 400 kv line Rs lakh per ckt km	40.33	Life in years	35
Transmission Line length in km	136.98	Voltage, kV	400kV SC
Multiplication factor	1.00		
			FY 2020-21
Gross Block			5524.40
Additions after DOCO & Up to 31.03.2020 due to Projected Additional Capitalisation			0
Gross Block total			5524.40
Average Gross Block			5524.40
Depreciation			
Rate of Depreciation(%)			1.16%
Depreciable value		0.90	4971.96
Elapsed Life as on 31.03.2020			14
Balance useful life of the asset			21
Remaining Depreciable value			1245.29
Cumulative Depreciation			3726.68
Depreciation			64.08
Interest on Loan			
Gross Normative Loan			3480.37
Cumulative Repayment upto			3480.37
Net Loan-Opening			0.00
Addition due to Additional			0.00
Repayment during the year			0.00
Net Loan-Closing			0.00
Average Loan			0.00
Weighted Average Rate of Interest on Loan (%)			9.98%
Interest			0.00
Return on Equity			
Gross Notional Equity			1657.32
Opening Equity			1657.32
Average Equity			1657.32
Rate of Return on Equity			15.50%
Return on Equity			256.88
Interest on Working Capital			
Maintenance Spares	15% of O&M		18.74
O & M expenses	1 Months		10.41
Receivables	1.5 Months		56.95
Total			86.10
Interest	11.25%		9.69
Annual Transmission Charges			
Depreciation			64.08
Interest on Loan			0.00
Return on Equity			256.88
Interest on Working Capital			9.69
O & M Expenses	136.98		124.53
Total			455.58
Norms for O&M Per Km	S/C		0.912

138

T C
S. S.

Chief General Manager/Commercial
& Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004.

e-PayOrder Details

ANNEXURE P/13

e-PayOrder Details

e-PayOrder Number CHQ4048290

Debit Status Success

05-Jul-2024

Central Electricity Regulatory Commission

Thirteen Lakhs Twenty Two Thousand Eight

13,22,800.00

00000062124921124

NAGESH
SPECIALISED MID CORPORATE BRANCH, VIJAYAWADA
MAKER
CHQ4048290

S THIRUPATHI
REDOY
Authorizer 1
031160507241067761

Counterfoil Description

--

Transaction Type

Real Time Payments

Debit Account Details

Account No.	Branch	Amount
00000062124921124	SPECIALISED MID CORPORATE BRANCH, VIJAYAWADA	13,22,800.00

Credit Account Details

Account No.	Branch	Amount	Credit Status
00004892385162098	DAU-INT	13,22,800.00	Success

TC

S. S.

Form-I

Particulars	
1. Name of the Petitioner	Petitioner – Transmission Corporation of Andhra Pradesh Ltd.
2. Address of the Petitioner	Transmission Corporation of Andhra Pradesh Ltd. (Petitioner) Having office at: Vidyut Soudha, Gunadala, Eluru Rd, Vijayawada, Andhra Pradesh – 520004.
3. Subject Matter	Petition for Determination of tariff for the Intrastate Transmission lines carrying interstate power for the balance period of FY 2020-21 i.e., for the period from 01.11.2020 to 31.03.2021 as per Tariff Regulation, 2019.
4. Petition No., if any	
5. Details of generation assets (a) generating station/units (b) Capacity in MW (c) Date of commercial operation (d) Period for which fee paid (e) Amount of fee paid (f) Surcharge, if any	
6. Details of transmission assets (a) Transmission line and sub-stations (b) Date of commercial operation (c) Period for which fee paid (d) Amount of fee paid (e) Surcharge, if any	(a) Intrastate Transmission lines carrying interstate power (c) November 2020 to March 2021 (d) 13,22,800.00 (e) N/A
7. Fee paid for Adoption of tariff for (a) Generation asset (b) Transmission asset	(b)
8. Application fee for licence (a) Trading licence (b) Transmission licence (c) Period for which paid (d) Amount of fee paid	N/A
9. Fees paid for Miscellaneous Application	N/A
10. Fees paid for Interlocutory Application	N/A
11. Fee paid for Regulatory Compliance petition	N/A

12. Fee paid for Review Application	N/A
13. Licence fee for inter-State Trading (a) Category (b) Period (c) Amount of fee paid (d) Surcharge, if any	N/A
14. Licence fee for inter-State Transmission (a) Expected/Actual transmission charge (b) Period (c) Amount of fee calculated as a percentage of transmission charge. (d) Surcharge, if any	N/A
15. Annual Registration Charge for Power Exchange (a) Period (b) Amount of turnover (c) Fee paid (d) Surcharge, if any	N/A
16. Details of fee remitted (a) Transaction id/Reference No./Payment id (UTR Noo.) (b) Date of remittance (c) Amount remitted	(a) 05-07-2024 (b) (c) Rs.13,22,800.00 (Rupees Thirteen Lakhs Twenty Two Thousand Eight Hundred only)
Note: While Sl. Nos. 1 to 3 and 16 are compulsory, the rest may be filled up as applicable.	
Signature of the authorized signatory with date	
Dated:	 Chief General Manager/Commercial & Co-ordination APTRANSCO, Vidyut Soudha, Vijayawada-520 004.



Form - I (Payment Related Report)

Particulars

1.	Name of the Petitioner / Applicant	TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED APTRANSCO
2.	Address of the Petitioner / Applicant	CHIEF ENGINEER/PLANNING, POWER SYSTEMS & COMMERCIAL, APTRANSCO, VIDYUT SOUDHA, VIJAYAWADA-520004, Vijayawada
3.	Subject Matter	(Petition for Determination of tariff of the APTRANSCO owned intra state transmission lines which facilitated for flow of interstate power for the period from 01.11.2020 to 31.03.2021 for inclusion in POC mechanism in accordance with Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019)
4.	Diary No.	
5.	Petition No., if any	
6.	Details of generation / Transmission assets	TT
	(a) Generating station / units	Chittoor-Chittoor I, Chittoor-Chittoor II, Chittoor-Kallikiri, Chittoor-SDSTPS 1, Chittoor-SDSTPS 2, Gazuwaka-Kalapaka I, Gazuwaka-Kalapaka II, Gooty-PG-Dhone 1, Gooty-PG-Dhone 2, Hinduja-KVKota 1, Hinduja-KVKota 2, Jammalamadugu-Uravakonda (Part-I), Jammalamadugu-Uravakonda (Part-II), Kondapalli-Chillakallu I, Kondapalli-Chillakallu II, Kurnool-Brahmanakotkur, Kurnool-Jammalamadugu 1, Kurnool-Jammalamadugu 2, Macherla-Rentachintala 1, Macherla-Rentachintala 2, Nunna-Vemagiri, Srisaillam RB- Belkalagudur (Part-I), Srisaillam RB-Belkalagudur (Part-II), Srisaillam RB-Mydukur, Srisaillam RB- Somayajulapalli, Srisaillam RB-Tallapalli 1, Srisaillam RB-Tallapalli 2, Sulpurpet-Nellore 2, Sulpurpet-Nellore 3, Sulpurpet-Nellore I (Part- I), Sulpurpet-Nellore I (Part- II), Suzion-W1-Vajrakarur, Talaricheruvu to LILO point of Jammalamadugu-Uravakonda (Part-I), Talaricheruvu to LILO point of Jammalamadugu-Uravakonda (Part-II), Uravakonda-Borampalli 1, Uravakonda-Borampalli 2, Uravakonda-Borampalli 3, Uravakonda-Borampalli 4, Uravakonda-Hindupur 1, Uravakonda-Hindupur 2, Vemagiri-Sattenapalli (Part-I), Vemagiri-Sattenapalli (Part-II), VTS-Chillakallu 2 (Part-I), VTS-Chillakallu 2 (Part-II), VTS-Chillakallu I, VTS-Rentachintala (Part-I), VTS-Rentachintala (Part-II)
	(b) Capacity in MW / ATC	627500, 627500, 729000, 142908500, 142908500, 232500,
	(c) Date of commercial operation	14/02/2006, 14/02/2006, 21/06/1970, 22/07/2015, 22/07/20
	(d) Period of which fee paid	2019-2024
	(e) Amount Paid	1322800
	(f) Surcharge, if any	0
7.	Application fee for licence	
	(a) Trading licence	



	(b) Transmission licence	
	(c) Period of which paid	
	(d) Amount of fee paid	
8.	Fee paid for Miscellaneous Application	
9.	Fee paid for Interlocutory Application	
10	Fee paid for Regulatory Compliance petition	
	Fee paid for Review Application	
	Licence fee for inter-state trading	
	(a) Category	
	(b) Period	
	(c) Amount of fee paid	
	(d) Surcharge, if any	
	Annual Registration Charge for Power Exchange	
	(a) Period	
	(b) Amount of turnover	
	(c) Fee paid	
	(d) Surcharge, if any	
	Details of fee remitted	
	(a) UTR No.	
	(b) Date of remittance	
	(c) Amount remitted	
Note : While Sl. Nos. 1 to 3 and 16 are compulsory, the rest may be filled up as applicable.		
Signature of the authorized signatory with date		



e-PayOrder Details

e-PayOrder Details

e-PayOrder NumberCHQ4048290

Debit StatusSuccess

05-Jul-2024

Central Electricity Regulatory Commission

Thirteen Lakhs Twenty Two Thousand Eight

13,22,800.00

00000062124921124

SPECIALISED MID CORPORATE BRANCH, VIJAYAWADA
NAGESH
MAKER
CHQ4048290

S THIRUPATHI
REDOY
Authorizer 1
031160507241067761

Counterfoil Description

--

Transaction Type

Real Time Payments

Debit Account Details

Account No.	Branch	Amount
00000062124921124	SPECIALISED MID CORPORATE BRANCH, VIJAYAWADA	13,22,800.00

Credit Account Details

Account No.	Branch	Amount	Credit Status
00004892385162098	DAU-INS	13,22,800.00	Success

**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION
AT NEW DELHI
PETITION NO. __/TT/2024**

IN THE MATTER OF:

TRANSMISSION CORPORATION OF
ANDHRA PRADESH LIMITED.

...PETITIONER

VERSUS

TRANSMISSION CORPORATION
OF TELANGANA LTD. & ORS.

...RESPONDENTS

VAKALATNAMA

Know all to whom these presents shall come that I, Sri. yalla Appa Rao, S/o Tatayya, employed as Chief General Manager/Commercial & Coordination with the Petitioner, APTRANSCO, am the Authorized Representative on behalf the Petitioner that is Transmission Corporation of Andhra Pradesh Ltd., in the captioned matter do hereby appoint

SIDHANT KUMAR
Enrolment No.
D/1091/2015

ANUSHKA SHAH
Enrolment No.
MAH/4711/2018

AKSHIT MAGO
Enrolment No.
D/2727/2017

MANYAA CHANDOK
Enrolment No.
D/2797/2019

OM BATRA
Enrolment No.
D/3580/2022

EKSSHA KASHYAP
Enrolment No.
D/3221/2022

SARTHAK SAREEN
Enrolment No.
D/6257/2023

Email: skumar@unumlaw.in ; mchandok@unumlaw.in

Mob: +91 98730 47772; 9899675905

Having their office at:

**Unum Law
C-485, Ground Floor, Defence Colony
New Delhi-110024**

to be our true and lawful attorney (s), in the matter noted above, to do all the following acts, deeds and things, or any of them, (jointly and severally) and also ratify anything already done on our behalf that is to say: -

1. To sign, verify and present and send notices, replies rejoinders, pleadings, appeals, cross-objections or petitions for execution, review, revision, other petitions or affidavit or other documents as shall be deemed necessary or advisable for the prosecution of the case or in relation thereto in all its stages.
2. To appear, act, and plead in the above-mentioned case in the captioned matter.
3. To receive documents, papers, records, orders etc. and to do all other acts all things, which may be necessary or proper to be done for the progress and in all course of the prosecution of the said case.

4. To enter into any settlement or compromise on our behalf

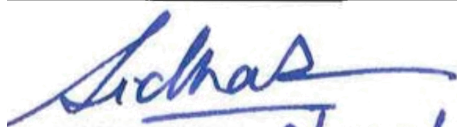
And I/We hereby agree that whatever the Advocate (s) or his/ there substitute shall do in the premises shall be binding on me in all intents and purposes just as if it would have been done by me.

And I/We hereby agree not to hold the Advocate (s) or his/their substitute responsible for the said case in consequence of his absence from the court when the said case is called up for hearing.

And I/We hereby agree that in the event of the whole or any part of the free agreed by me/ us to be paid to the Advocate (s) remaining unpaid he/they shall be entitled to withdraw from the prosecution of the said case, or not to appear until the same is paid.

In witness whereof I/We hereunto set my/our hand to these presents the contents of which have been explained to and understood by me/us.

Date: 28-06-2024


Advocate(s) 0/1091/2015


D/3221/2022


Chief General Manager/Commercial
& Co-ordination
APTRANSCO, Vidyut Soudha,
Vijayawada-520 004,


M.H. 4711/2018

Manjara Chaudhary
D/2792/2019


D/3580/2022


D/6257/2023


D/2727/2017



Transmission Corporation of Andhra Pradesh Limited
(A Govt. of Andhra Pradesh Undertaking)
Office: 4th Floor, AP Transco, Vidyut Soudha,
Vijayawada-520004

701

TO WHOM SO EVER IT MAY CONCERN

Sri. Y. APPA RAO, S/o Y.TATAYYA, Aged 59 Years, Chief General Manager / Commercial & Legal, Vidyut Soudha, AP Transco, Vijayawada is hereby authorized to file Petitions, Affidavits, Counter affidavits, Replies, Rejoinders before various Legal forums i.e. APERC, CERC, APTEL, AP High Court, Supreme Court of India, NCLT and other Courts in INDIA on behalf of Transmission Corporation of Andhra Pradesh Limited (APTRANSCO), Vijayawada, Andhra Pradesh.

Date:01.04.2024

Place: Vijayawada

K.VIJAYANAND IAS, CMD(KV)-FAC, CHAIRMAN AND
MANAGING DIRECTOR-ENE51

**Chairman & Managing Director
APTRANSCO**