



**ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION**

4<sup>th</sup> Floor, Singareni Bhavan, Red Hills, Hyderabad – 500 004

O.P.No. 15 of 2018

Dated: 21-07-2018

Present

Sri Justice G. Bhavani Prasad, Chairman

Dr. P. Raghu, Member

**In the matter of determination of tariff for intra-state transmission lines of AP Transco for FY2018-19 to include the same in PoC Transmission charges under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.**

Between:

Transmission Corporation of Andhra Pradesh Ltd. (APTRANSCO)

..... Petitioner

AND

NIL

..... Respondent

The petition has come up for hearing on 13-07-2018 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:

## **ORDER**

1. A petition dated 14.06.2018, under section 62 of the Electricity Act, 2003 and APERC Regulation 5 of 2005 to:
  - (i) approve the annual fixed charges for the assets covered under the petition;
  - (ii) determine the tariff of the Intra-State transmission lines of AP Transco, 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 important submissions in the petition are as hereunder:
  - i) The erstwhile Andhra Pradesh State is reorganized into Andhra Pradesh State and Telangana State on 2<sup>nd</sup> June, 2014. As per A.P. Reorganization Act and due to the effect of the bifurcation of erstwhile Andhra Pradesh, it resulted in number of Inter-State lines between the divided Andhra Pradesh and Telangana States. This has resulted in 38 lines that are partly/wholly owned by AP (As per section 2(36) (i) of the A.P. Reorganization Act). Further, there are 4 lines connecting with Tamilnadu, Karnataka and Pondicherry. Since, the transmission lines are inter-state in nature connecting two states, APTRANSCO has filed petition before CERC for determination of tariff of the 42 transmission lines so that, the assets can be included in the PoC Mechanism.
  - ii) There are number of transmission lines which are intra-state, but are incidental to the power flow of Inter-state power. As per the CERC sharing regulations, these intra-state transmission lines also can be included in the PoC Mechanism subject to certification of respective Regional Power Committee (RPC) and availability of yearly transmission charges for such lines.
  - iii) The APERC has issued Multi-year Tariff Order on 9<sup>th</sup> May 2014 for the Control period from FY2014-15 to FY2018-19. The DISCOMs under APTRANSCO i.e. APSPDCL and APEPDCL have a total energy share of 46.11% in-line with G.O.Ms. No. 20 of Government of Andhra Pradesh dated 08.05.2014 (G.O of Erstwhile Andhra Pradesh). The ARR of divided APTRANSCO is considered as 46.11% of the overall ARR of the State in line with the ratio of energy consumption of the two DISCOMs. The

overall ARR for the State of divided AP for FY2018-19 is INR 1,451.99Cr. (46.11% of INR 3148.98Cr.).

- iv) Yearly Transmission Charges (YTC) are defined in Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations 2010 vide 3<sup>rd</sup> amendment as below:

“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.

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.”

- v) SRPC has issued certification of Non-ISTS Lines carrying inter-state power with other States having more than 50% utilization during the year 2017-18 vide letter No. SRPC/SE-I/2018/1723-49, dt.20.03.2018 for 36 lines.
- vi) The list of Non-ISTS lines carrying ISTS power as per SRPC certification is as given below.

<b>Sl.no.</b>	<b>Line</b>	<b>Voltage Level</b>	<b>Configuration</b>	<b>Length in CKm</b>
1	CHITTOOR-SDSTPS:1	400	D/C QM	187.7
2	CHITTOOR-SDSTPS:2	400	D/C QM	187.7
3	GAZUWAKA1-KALPAKKA1:1	400	D/C TM	3.39
4	GAZUWAKA1-KALPAKKA1:2	400	D/C TM	3.39
5	JAMALAMADUGU-URAVAKONDA:1	400	D/C QM	127.62
6	JAMALAMADUGU-URAVAKONDA:2	400	D/C QM	127.62
7	NUNNA2-STNPLLI1:1	400	S/C	107.98
8	NUNNA2-VEMAGIRI1:1	400	S/C	140
9	NUNNA2-VTS-IV:1	400	D/C TM	18.7
10	VEMAGIRI1-STNPLLI1:1	400	S/C	107.98
11	CHITTOOR4-CHITTOOR:1	220	D/C	17.1
12	CHITTOOR4-CHITTOOR:2	220	D/C	17.1
13	GOOTY-PG-DHONE:1	220	D/C	90.16
14	GOOTY-PG-DHONE:2	220	D/C	90.16
15	KONAPPLY-CHILALLU:1	220	D/C	59.7
16	KONAPPLY-CHILALLU:2	220	D/C	59.7
17	KONAPPLY-VTPS:1	220	D/C	6.5
18	KONAPPLY-VTPS:2	220	D/C	6.5
19	NPKUNTAPS-NPKUNTAPH1:1	220	S/C	3.1
20	NPKUNTAPS-NPKUNTAPH1:2	220	S/C	3.1
21	SOMYALLI-BELKALAGDUR:2	220	D/C	37.986
22	SOMYALLI-DHONE:2	220	D/C	42.11
23	SOMYALLI-DHONE:3	220	D/C	42.11
24	SRIAILAM-SOMYALLI:1	220	S/C	106
25	SRIAILAM-TALAPLLI:1	220	D/C	98.82
26	SRIAILAM-TALAPLLI:2	220	D/C	98.82
27	SULURETA-NLR42:1	220	S/C	85.8
28	SULURETA-NLR42:2	220	D/C	68.1
29	SULURETA-NLR42:3	220	D/C	68.1
30	TALAPLLI-VTPS:1	220	D/C	62.57
31	TALAPLLI-VTPS:2	220	D/C	62.57
32	TALAPLLI-VTPS:3	220	D/C	137.252
33	VTPS-CHILALLU:1	220	D/C	67.8
34	VTPS-CHILALLU:2	220	D/C	67.8
35	VTPS-NUNNA:1	220	S/C	17.204
36	VTPS-RENACALA:2	220	D/C	111.49

vii) From the above 36 lines, 2 nos. lines namely NPKUNTAPS-NPKUNTAPH1:1 (Sl.No. 19) and NPKUNTAPS-NPKUNTAPH1:2 (Sl.No. 20) were not considered for calculation of YTC as these lines are under the ownership of Andhra Pradesh Solar Power Corporation Limited (APSPCL).

viii) The individual capital cost/ Administrative approval cost, the actual repayment schedule and interest rates of the loans for most of the specified lines and substations are not available due to the fact that the lines are very old. However, for all the lines best estimated costs are provided by considering administrative approval costs.

**Details of Lines:**

S. No.	Line Name	Voltage level	Configuration	Length in KM	D.O.C	Administrative Approval cost (Rs. Cr.)	Repayment Schedule (No. of Installments)	Interest Rate (%)
1	CHITTOOR-SDSTPS:1	400	D/C	187.7	17.07.2015	387.12	120	10.4
2	CHITTOOR-SDSTPS:2	400	D/C	187.7	22.07.2015			
3	GAZUWAKA1-KALPAKKA1:1	400	D/C	3.39	10.12.2000	8.7	240	2.6
4	GAZUWAKA1-KALPAKKA1:2	400	D/C	3.39	27.01.2002			
5	JAMALAMADUG U-URAVAKONDA:1	400	D/C	255.244	15.07.2016	264	120	10.4
6	JAMALAMADUG U-URAVAKONDA:2	400	D/C					
7	NUNNA2-STNPLLI1:1	400	S/C	107.976	12.10.2015	55.56	120	10.4
8	NUNNA2-VEMAGIRI1:1	400	S/C	140.00	30.12.2005	45.83	240	2.6
9	NUNNA2-VTS-IV:1	400	D/C	18.7	27.07.2009	14.44	120	10.03
10	VEMAGIRI1-STNPLLI1:1	400	S/C	107.976	26.10.2015	55.56	120	10.4
11	CHITTOOR4-CHITTOOR:1	220	D/C	17.1	14.02.2006	13.90		
12	CHITTOOR4-CHITTOOR:2	220	D/C	17.1				
13	GOOTY-PG-DHONE:1	220	D/C	180.32	24.08.2011	122.72		
14	GOOTY-PG-DHONE:2	220	D/C					
15	KONAPLLY-CHILALLU:1	220	D/C	59.7	30.09.1989	29.59		
16	KONAPLLY-	220	D/C	59.7				

S. No.	Line Name	Voltage level	Configuration	Length in KM	D.O.C	Administrative Approval cost (Rs. Cr.)	Repayment Schedule (No. of Installments)	Interest Rate (%)
	CHILALLU:2							
17	KONAPLLY-VTPS:2	220	D/C	6.5	27.04.2004	9.22	Loan Closed	
18	KONAPLLY-VTPS:1	220	D/C	6.5				
19	NPKUNTAPS-NPKUNTAPH1:1	220	S/C	3.1	29.04.2016	Pertains to AP Solar Corporation		
20	NPKUNTAPS-NPKUNTAPH1:2	220	S/C	3.1				
21	SOMYALLI-BELKALAGDUR:2	220	D/C	37.986	10.08.2011	27.19		
22	SOMYALLI-DHONE:2	220	D/C	84.22	28.07.2011	59.03		
23	SOMYALLI-DHONE:3	220	D/C					
24	SRIAILAM-SOMYALLI:1	220	S/C	106	1985	46.85		
25	SRIAILAM-TALAPLLI:1	220	D/C	197.64	1985	86.16		
26	SRIAILAM-TALAPLLI:2	220	D/C					
27	SULURETA-NLR42:1	220	S/C	85.8	26.12.2006	41.33		
28	SULURETA-NLR42:2	220	D/C	68.1	10.11.2014	50.65 (Actuals)	48 (Qrly)	10.75
29	SULURETA-NLR42:3	220	D/C	68.1				
30	TALAPLLI-VTPS:1	220	D/C	125.142	30.06.1984	55.06		
31	TALAPLLI-VTPS:2	220	D/C					
32	TALAPLLI-VTPS:3	220	D/C	137.252	17.10.2012	91.645		
33	VTPS-CHILALLU:1	220	D/C	67.8	12.03.1997	34.51		
34	VTPS-CHILALLU:2	220	D/C	67.8				
35	VTPS-NUNNA:1	220	S/C	17.204	20.01.1992	10.10		
36	VTPS-RENACALA:2	220	D/C	111.49	30.06.1984	49.21		

**Assumptions:**

- As the audited capital costs are not available, administrative approval costs are submitted.
- In case of 220 kV lines, Administrative approval costs were arrived by taking 2004, 2008, 2010 Administrative approval costs as base costs for arriving at best cost estimate.

- ix) Due to non-availability of the exact costs, the petitioner has calculated the tariff on the basis of the Indicative cost levels available in the CERC document titled “Assumptions in Computation in PoC charges and Losses for FY2017-18 (Q4)” that has been considered for the latest PoC charges computations.
- x) APERC has issued an Order dt. 06.01.2018 for an amount of Rs. 81.01 Cr. as YTC for 18 lines based on the above methodology in O.P. No.40 of 2017 for FY2017-18.
- xi) The overall voltage, configuration wise details of the assets of the licensee for FY2018-19 are as below.

<b>Voltage level</b>	<b>Conductor Type</b>	<b>Ckt. Kms</b>
400kV	D/C ACSR Quad Moose	1638.536
	D/C ACSR Twin Moose	3061.312
	S/C	595.5
220kV	D/C	6183.32
	S/C	5253.066
132kV	D/C	3813.17
	S/C	8336.028
<b>Total</b>		<b>28880.932</b>

- xii) As per the methodology adopted in the order dated 06-01-2018 of APERC in O.P.No.40 of 2017 for FY2017-18 the Yearly Transmission Charges (YTC) of 34 transmission lines of APTRSCO has been computed and furnished below:

<b>Sl. No.</b>	<b>Line</b>	<b>Configuration</b>	<b>Length</b>	<b>Lakhs / Ckt km</b>	<b>YTC in Lakhs</b>
1	CHITTOOR-SDSTPS:1	400 D/C QM	187.7	13.98	2624.34
2	CHITTOOR-SDSTPS:2	400 D/C QM	187.7	13.98	2624.34
3	GAZUWAKA1-KALPAKKA1:1	400 D/C TM	3.39	10.86	36.82
4	GAZUWAKA1-KALPAKKA1:2	400 D/C TM	3.39	10.86	36.82
5	JAMALAMADUGU-URAVAKONDA:1	400 D/C QM	127.62	13.98	1784.33
6	JAMALAMADUGU-URAVAKONDA:2	400 D/C QM	127.62	13.98	1784.33
7	NUNNA2-STNPLLI1:1	400 S/C	107.976	11.58	1249.87
8	NUNNA2-	400 S/C	140	11.58	1620.56

Sl. No.	Line	Configuration	Length	Lakhs / Ckt km	YTC in Lakhs	
	VEMAGIRI1:1					
9	NUNNA2-VTS-IV:1	400	D/C TM	18.7	10.86	203.08
10	VEMAGIRI1-STNPLLI1:1	400	S/C	107.976	11.58	1249.87
11	CHITTOOR4-CHITTOOR:1	220	D/C	17.1	3.32	56.71
12	CHITTOOR4-CHITTOOR:2	220	D/C	17.1	3.32	56.71
13	GOOTY-PG-DHONE:1	220	D/C	90.16	3.32	299.02
14	GOOTY-PG-DHONE:2	220	D/C	90.16	3.32	299.02
15	KONAPPLY-CHILALLU:1	220	D/C	59.7	3.32	198.00
16	KONAPPLY-CHILALLU:2	220	D/C	59.7	3.32	198.00
17	KONAPPLY-VTPS:2	220	D/C	6.5	3.32	21.56
18	KONAPPLY-VTPS:1	220	D/C	6.5	3.32	21.56
19	SOMYALLI-BELKALAGDUR:2	220	D/C	37.986	3.32	125.98
20	SOMYALLI-DHONE:2	220	D/C	42.11	3.32	139.66
21	SOMYALLI-DHONE:3	220	D/C	42.11	3.32	139.66
22	SRIAILAM-SOMYALLI:1	220	S/C	106	4.16	441.17
23	SRIAILAM-TALAPLLI:1	220	D/C	98.82	3.32	327.74
24	SRIAILAM-TALAPLLI:2	220	D/C	98.82	3.32	327.74
25	SULURETA-NLR42:1	220	S/C	85.8	4.16	357.10
26	SULURETA-NLR42:2	220	D/C	68.1	3.32	225.86
27	SULURETA-NLR42:3	220	D/C	68.1	3.32	225.86
28	TALAPLLI-VTPS:1	220	D/C	62.57	3.32	207.52
29	TALAPLLI-VTPS:2	220	D/C	62.57	3.32	207.52
30	TALAPLLI-VTPS:3	220	D/C	137.252	3.32	455.20
31	VTPS-CHILALLU:1	220	D/C	67.8	3.32	224.86
32	VTPS-CHILALLU:2	220	D/C	67.8	3.32	224.86
33	VTPS-NUNNA:1	220	S/C	17.204	4.16	71.60
34	VTPS-RENACALA:2	220	D/C	111.49	3.32	369.76
<b>Total</b>						<b>18437.04</b>

3. Therefore, the petitioner has claimed Rs.18437.04 lakhs for 34 lines as YTC for FY2018-19.
4. After careful examination of the computations in the petition, the Commission has determined tariff as below for the instant lines furnished in the petition by APTRANSCO.
5. CERC has issued an order dated 21-06-2018 in Petition No.237/TT/2016 in the matter of determination /approval of Transmission Tariff of the Inter-State



transmission lines connecting two States for the AP Transco owned transmission lines/system as per the Central Electricity Regulatory Commission's order dated 14-03-2012 in petition No.15 / Suo-Motu 2012, for inclusion in PoC Transmission charges under Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

6. The Tariff methodology followed by CERC in the said order is extracted and placed below:

*“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:-*

<b>S.No.</b>	<b>Reference cost of 400 kV S/C TL</b>	<b>Rs. X lakh/km</b>
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 Rs. 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.”*

7. The normative operation and maintenance expenses which shall be admissible for the transmission system is extracted from the CERC Tariff Regulations (Terms and Conditions of Tariff) Regulations, 2014 as given below:

<b>Norms for sub-stations (in Rs Lakh per bay)</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
765 kV	84.42	87.22	90.12	93.11	96.20
400 kV	60.30	62.30	64.37	66.51	68.71
220 kV	42.21	43.61	45.06	46.55	48.10
132 kV and below	30.15	31.15	32.18	33.25	34.36
400 kV Gas Insulated Substation	51.54	53.25	55.02	56.84	58.73
<b>Norms for AC and HVDC lines (in Rs Lakh per km)</b>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.707	0.731	0.755	0.780	0.806
Single Circuit (Bundled Conductor with four sub-conductors)	0.606	0.627	0.647	0.669	0.691
Single Circuit (Twin & Triple Conductor)	0.404	0.418	0.432	0.446	0.461
Single Circuit (Single Conductor)	0.202	0.209	0.216	0.223	0.230
Double Circuit (Bundled conductor with four or more sub-conductors)	1.062	1.097	1.133	1.171	1.210
Double Circuit (Twin & Triple Conductor)	0.707	0.731	0.755	0.780	0.806
Double Circuit (Single Conductor)	0.303	0.313	0.324	0.334	0.346
Multi Circuit (Bundled conductor with four or more sub-conductors)	1.863	1.925	1.989	2.055	2.123
Multi Circuit (Twin & Triple Conductor)	1.240	1.282	1.324	1.368	1.413

8. So the Commission has adopted the above methodology and the normative operation and maintenance expenses as per the CERC Tariff Regulations (Terms and Conditions of Tariff) Regulations, 2014, as a guide for determination of tariff. Accordingly, all the transmission lines in the petition are divided into three categories and tariff is determined as given below:

(i) Transmission Lines completed 25 years of life.

Transmission lines completed 25 Years of life as on 31-03-2017							
Sl.no.		Line	Voltage Level	Configuration	Length in CKm	DOC	Life as on 31-03-2017
1	Asset - XV	KONAPLLY-CHILALLU:1	220	D/C	59.7	30-09-1989	27.50
2	Asset - XVI	KONAPLLY-CHILALLU:2	220	D/C	59.7		
3	Asset - XXII	SRIAILAM-SOMYALLI:1	220	S/C	106	01-01-1985	32.25
4	Asset - XXIII	SRIAILAM-TALAPLLI:1	220	D/C	98.82		
5	Asset - XXIV	SRIAILAM-TALAPLLI:2	220	D/C	98.82	30-06-1984	32.75
6	Asset - XXVIII	TALAPLLI-VTPS:1	220	D/C	62.57		
7	Asset - XXIX	TALAPLLI-VTPS:2	220	D/C	62.57	20-01-1992	25.20
8	Asset - XXXIII	VTPS-NUNNA:1	220	S/C	17.204		
9	Asset - XXXIV	VTPS-RENACALA:2	220	D/C	111.49	30-06-1984	32.75

Only O&M Costs and interest on Working Capital are considered for determination of the Yearly Transmission Charges for all the above lines as per the methodology adopted by the CERC. The details of computations asset wise are appended as Annexure - I.

The YTC so computed line-wise /asset-wise is given below:

Transmission lines completed 25 Years of life as on 31-03-2017								
Sl.no.		Line	Voltage Level	Configuration	Length in CKm	DOC	Life as on 31-03-2017	YTC in Lakhs
1	Asset - XV	KONAPLLY-CHILALLU:1	220	D/C	59.7	30-09-1989	27.50	43.54
2	Asset - XVI	KONAPLLY-CHILALLU:2	220	D/C	59.7			
3	Asset - XXII	SRIAILAM-SOMYALLI:1	220	S/C	106	01-01-1985	32.25	25.70
4	Asset - XXIII	SRIAILAM-TALAPLLI:1	220	D/C	98.82	01-01-1985	32.25	72.08
5	Asset - XXIV	SRIAILAM-TALAPLLI:2	220	D/C	98.82			
6	Asset - XXVIII	TALAPLLI-VTPS:1	220	D/C	62.57	30-06-1984	32.75	45.64
7	Asset - XXIX	TALAPLLI-VTPS:2	220	D/C	62.57			
8	Asset - XXXIII	VTPS-NUNNA:1	220	S/C	17.204	20-01-1992	25.20	4.17
9	Asset - XXXIV	VTPS-RENACALA:2	220	D/C	111.49	30-06-1984	32.75	40.66
<b>Total YTC</b>								<b>231.78</b>

(ii) Transmission lines less than 25 years of life and commissioned before 31-03-2014.

Transmission Lines of less than 25 years of Life and Commissioned before 31-03-2014							
Sl.no.		Line	Voltage Level	Configuration	Length in CKm	DOC	Life as on 31-03-2017
1	Asset - III	GAZUWAKA1-KALPAKKA1:1	400	D/C TM	3.39	10-12-2000	16.31
2	Asset - IV	GAZUWAKA1-KALPAKKA1:2	400	D/C TM	3.39	27-01-2002	15.18
3	Asset - VIII	NUNNA2-VEMAGIRI1:1	400	S/C	140	30-12-2005	11.25
4	Asset - IX	NUNNA2-VTS-IV:1	400	D/C TM	18.7	27-07-2009	7.68
5	Asset - XI	CHITTOOR4-CHITTOOR:1	220	D/C	17.1	14-02-2006	11.13
6	Asset - XII	CHITTOOR4-CHITTOOR:2	220	D/C	17.1		
7	Asset - XIII	GOOTY-PG-DHONE:1	220	D/C	90.16	24-08-2011	5.60
8	Asset - XIV	GOOTY-PG-DHONE:2	220	D/C	90.16		
9	Asset - XVII	KONAPLLY-VTPS:1	220	D/C	6.5	27-04-2004	12.93
10	Asset - XVIII	KONAPLLY-VTPS:2	220	D/C	6.5		
11	Asset - XIX	SOMYALLI-BELKALAGDUR:2	220	D/C	37.986	10-08-2011	5.64
12	Asset - XX	SOMYALLI-DHONE:2	220	D/C	42.11	28-07-2011	5.68
13	Asset - XXI	SOMYALLI-DHONE:3	220	D/C	42.11		
14	Asset - XXV	SULURETA-NLR42:1	220	S/C	85.8	26-12-2006	10.26
15	Asset - XXX	TALAPLLI-VTPS:3	220	D/C	137.252	17-10-2012	4.46
16	Asset - XXXI	VTPS-CHILALLU:1	220	D/C	67.8	12-03-1997	20.05
17	Asset - XXXII	VTPS-CHILALLU:2	220	D/C	67.8		

With respect to the above lines as per the CERC methodology, the Yearly Transmission Charges are computed and appended as Annexure-II. Rationalized costs are taken from CERC order Dt.21.06.2018 in petition no 237/TT/2016 and rationalized costs are derived for some years by applying CAGR of 5.17% forward or back ward appropriately.

The YTC so computed line-wise /asset-wise is given below:

Transmission Lines of less than 25 years of Life and Commissioned before 31-03-2014								
Sl.no.		Line	Voltage Level	Configuration	Length in CKm	DOC	Life as on 31-03-2017	YTC in Lakhs
1	Asset - III	GAZUWAKA1-KALPAKKA1:1	400	D/C TM	3.39	10-12-2000	16.31	21.26
2	Asset - IV	GAZUWAKA1-KALPAKKA1:2	400	D/C TM	3.39	27-01-2002	15.18	17.72
3	Asset - VIII	NUNNA2-VEMAGIRI1:1	400	S/C	140	30-12-2005	11.25	708.90
4	Asset - IX	NUNNA2-VTS-IV:1	400	D/C TM	18.7	27-07-2009	7.68	123.59
5	Asset - XI	CHITTOOR4-CHITTOOR:1	220	D/C	17.1	14-02-2006	11.13	97.35
6	Asset - XII	CHITTOOR4-CHITTOOR:2	220	D/C	17.1			
7	Asset - XIII	GOOTY-PG-DHONE:1	220	D/C	90.16	24-08-2011	5.60	894.42
8	Asset - XIV	GOOTY-PG-DHONE:2	220	D/C	90.16			
9	Asset - XVII	KONAPLLY-VTPS:1	220	D/C	6.5	27-04-2004	12.93	25.22
10	Asset - XVIII	KONAPLLY-VTPS:2	220	D/C	6.5			
11	Asset - XIX	SOMYALLI-BELKALAGDUR:2	220	D/C	37.986	10-08-2011	5.64	183.57
12	Asset - XX	SOMYALLI-DHONE:2	220	D/C	42.11	28-07-2011	5.68	416.91
13	Asset - XXI	SOMYALLI-DHONE:3	220	D/C	42.11			
14	Asset - XXV	SULURETA-NLR42:1	220	S/C	85.8	26-12-2006	10.26	167.05
15	Asset - XXX	TALAPLLI-VTPS:3	220	D/C	137.252	17-10-2012	4.46	467.88
16	Asset - XXXI	VTPS-CHILALLU:1	220	D/C	67.8	12-03-1997	20.05	349.51
17	Asset - XXXII	VTPS-CHILALLU:2	220	D/C	67.8			
<b>Total YTC</b>								<b>3473.38</b>

(iii) Transmission lines commissioned after 31-03-2014.

<b>Transmission Lines Commissioned after 31-03-2014</b>							
Sl.no.		Line	Voltage Level	Configuration	Length in CKm	DOC	Life as on 31-03-2017
1	Asset - I	CHITTOOR-SDSTPS:1	400	D/C QM	187.7	17-07-2015	1.71
2	Asset - II	CHITTOOR-SDSTPS:2	400	D/C QM	187.7	22-07-2015	1.69
3	Asset - V	JAMALAMADUGU-URAVAKONDA:1	400	D/C QM	127.62	15-07-2016	0.71
4	Asset - VI	JAMALAMADUGU-URAVAKONDA:2	400	D/C QM	127.62		
5	Asset - VII	NUNNA2-STNPLL1:1	400	S/C	107.98	12-10-2015	1.47
6	Asset - X	VEMAGIRI1-STNPLL1:1	400	S/C	107.98	26-10-2015	1.43
7	Asset - XXVI	SULURETA-NLR42:2	220	D/C	68.1	10-11-2014	2.39
8	Asset - XXVII	SULURETA-NLR42:3	220	D/C	68.1		

CERC has not determined Yearly Transmission Charges for the lines commissioned after 31-03-2014 stating that audited capital costs are required to be submitted for computation. In the present petition also the audited capital costs are not submitted by the petitioner for the lines commissioned after 31-03-2014. However, administrative capital costs for the same have been submitted.

As audited capital costs are not available, the Commission has adopted the methodology followed in its order dt. 06-01-2018 in O.P.No.40 of 2017 for determination of tariff for all the lines commissioned after 31.03.2014.

As per said methodology, the tariff determination as is follows:

Over all voltage configuration-wise details of assets of the petitioner for FY2018-19 are as hereunder:

<b>Transmission assets for FY 2018-19</b>		
Voltage level	Conductor Type	Upto FY 2018-19 (Ckt Kms)
400kV	D/C ACSR Quad Moose	1638.536
	D/C ACSR Twin Moose	3061.312
	S/C	595.5
220kV	D/C	6183.32
	S/C	5253.066
132kV	D/C	3813.17
	S/C	8336.028
<b>Total</b>		<b>28880.932</b>

Considering the indicative cost levels available in the CERC document titled “assumptions in computation in PoC charges and losses for FY2018-19(Q1), with 400kV D/C quad as the base (a) :

Calculations of Co-efficients based on Indicative Costs levels of Q1 of FY 2018-19 (PoC)							
S.No	Type	Cost	Cost/Ckt	Coefficient	Ratio w.r.t. a	Ckt kms	Weighted Ckt Km
1	(a)	(b)	(C)	(d)	(e)	(f)	(f) / (e)
2	400 KV D/C Quad Moose	215	107.5	a	1	1638.54	1638.54
3	400 KV D/C Twin Moose	167	83.5	b	1.29	3061.31	2377.86
4	400 KV S/C Twin Moose	89	89	c	1.21	595.5	493.02
5	220 KV D/C	51	25.5	d	4.22	6183.32	1466.74
6	220 KV S/C	32	32	e	3.36	5253.07	1563.70
7	132 KV D/C	38	19	f	5.66	3813.17	673.96
8	132 KV S/C	28	28	g	3.84	8336.03	2171.24
9	Total					28880.9	10385.06

Accordingly, the YTC per Ckt. Km for 400 kV D/C Quad Moose configuration is derived from the ARR of residual Andhra Pradesh and Weighted Ckt. Km as Rs. 13.98 Lakhs/Ckt Km. (1451.99 x100/10385.06).

The YTC per circuit Km for FY2018-19 for the different configurations are as hereunder:

YTC per Ckt KM calculations based on Co-efficients			
Configuration	YTC/Ckt Km	Calculations	co-efficient
400 KV D/C Quad Moose	13.98	13.98/1	1
400 KV D/C Twin Moose	10.86	13.98/1.29	1.29
400 KV S/C Twin Moose	11.58	13.98/1.21	1.21
220 KV D/C	3.32	13.98/4.22	4.22
220 KV S/C	4.16	13.98/3.36	3.36
132 KV D/C	2.47	13.98/5.66	5.66
132 KV S/C	3.64	13.98/3.84	3.84

Based on the above, the line-wise/asset-wise YTC for the all the 8 lines commissioned after 31.03.2014 is computed which is as given below:

YTC for FY 2018-19							
Sl.no	Asset	Line	Configuration	Length	Lakhs /Ckt km	YTC in Lakhs	
1	Asset-I	CHITTOOR-SDSTPS:1	400 D/C QM	187.7	13.98	2624.34	
2	Asset-II	CHITTOOR-SDSTPS:2	400 D/C QM	187.7	13.98	2624.34	
3	Asset-V	JAMALAMADUGU-URAVAKONDA:1	400 D/C QM	127.62	13.98	1784.33	
4	Asset-VI	JAMALAMADUGU-URAVAKONDA:2	400 D/C QM	127.62	13.98	1784.33	
5	Asset-VII	NUNNA2-STNPLLI:1	400 S/C	107.976	11.58	1249.87	
6	Asset-X	VEMAGIRI1-STNPLLI:1	400 S/C	107.976	11.58	1249.87	
7	Asset-XXVI	SULURETA-NLR42:2	220 D/C	68.1	3.32	225.86	
8	Asset-XXVII	SULURETA-NLR42:3	220 D/C	68.1	3.32	225.86	
<b>Total YTC</b>						<b>11768.80</b>	



Based on the approved administrative costs furnished in the petition, the YTC for the 8 nos. of lines which are commissioned after 31.03.2014 is estimated as Rs. 13271.6 lakhs taking parameters required for calculations like debt equity ratio, return on equity etc. as per the MYT Orders of the Commission for the control period from FY2014-15 to FY2018-19.

Out of the two computations mentioned above, the YTC of Rs. 11768.60 lakhs arrived based on the methodology adopted by the Commission while passing the Order dated 6.01.2018 is lower compared to the YTC of Rs. 13271.6 lakhs determined based on administrative costs, which are not certified audited accounts. As such, Rs. 11768.60 lakhs is considered by the Commission as YTC for the said 8 nos. of lines.

9. Yearly Transmission Charges for FY2018-19 are herewith determined by the Commission for all the 34 lines of the petitioner at Rs. 15473.96 lakhs and the lines-wise/asset-wise YTC details are as given below:

<b>Toatl YTC for FY 2018-19 of Intra-State lines (APTRANSCO)carrying Inter-state power</b>							
Sl.no.	Asset	Line	Voltage Level	Configu ration	Length in CKm	DOC	YTC in Lakhs
1	Asset - I	CHITTOOR-SDSTPS:1	400	D/C QM	187.7	17.07.2015	2624.34
2	Asset - II	CHITTOOR-SDSTPS:2	400	D/C QM	187.7	22.07.2015	2624.34
3	Asset - III	GAZUWAKA1-KALPAKKA1:1	400	D/C TM	3.39	10-12-2000	21.26
4	Asset - IV	GAZUWAKA1-KALPAKKA1:2	400	D/C TM	3.39	27.01.2002	17.72
5	Asset - V	JAMALAMADUGU-URAVAKONDA:1	400	D/C QM	127.62		1784.33
6	Asset - VI	JAMALAMADUGU-URAVAKONDA:2	400	D/C QM	127.62	15.07.2016	1784.33
7	Asset - VII	NUNNA2-STNPLLI1:1	400	S/C	107.98	12.10.2015	1249.87
8	Asset - VIII	NUNNA2-VEMAGIRI1:1	400	S/C	140	30.12.2005	708.90
9	Asset - IX	NUNNA2-VTS-IV:1	400	D/C TM	18.7	27.07.2009	123.59
10	Asset - X	VEMAGIRI1-STNPLLI1:1	400	S/C	107.98	26.10.2015	1249.87
11	Asset - XI	CHITTOOR4-CHITTOOR:1	220	D/C	17.1		97.35
12	Asset - XII	CHITTOOR4-CHITTOOR:2	220	D/C	17.1	14.02.2006	97.35
13	Asset - XIII	GOOTY-PG-DHONE:1	220	D/C	90.16		894.42
14	Asset - XIV	GOOTY-PG-DHONE:2	220	D/C	90.16	24.08.2011	894.42
15	Asset - XV	KONAPLLY-CHILALLU:1	220	D/C	59.7		43.54
16	Asset - XVI	KONAPLLY-CHILALLU:2	220	D/C	59.7	30.09.1989	43.54
17	Asset - XVII	KONAPLLY-VTPS:1	220	D/C	6.5		25.22
18	Asset - XVIII	KONAPLLY-VTPS:2	220	D/C	6.5	27.04.2004	25.22
19	Asset - XIX	SOMYALLI-BELKALAGDUR:2	220	D/C	37.986	10.08.2011	183.57
20	Asset - XX	SOMYALLI-DHONE:2	220	D/C	42.11		416.91
21	Asset - XXI	SOMYALLI-DHONE:3	220	D/C	42.11	28.07.2011	416.91
22	Asset - XXII	SRIALAM-SOMYALLI:1	220	S/C	106	1985	25.70
23	Asset - XXIII	SRIALAM-TALAPLLI:1	220	D/C	98.82		72.08
24	Asset - XXIV	SRIALAM-TALAPLLI:2	220	D/C	98.82	1985	72.08
25	Asset - XXV	SULURETA-NLR42:1	220	S/C	85.8	26.12.2006	167.05
26	Asset - XXVI	SULURETA-NLR42:2	220	D/C	68.1		225.86
27	Asset - XXVII	SULURETA-NLR42:3	220	D/C	68.1	10.11.2014	225.86
28	Asset - XXVIII	TALAPLLI-VTPS:1	220	D/C	62.57		45.64
29	Asset - XXIX	TALAPLLI-VTPS:2	220	D/C	62.57	30.06.1984	45.64
30	Asset - XXX	TALAPLLI-VTPS:3	220	D/C	137.252	17.10.2012	467.88
31	Asset - XXXI	VTPS-CHILALLU:1	220	D/C	67.8		349.51
32	Asset - XXXII	VTPS-CHILALLU:2	220	D/C	67.8	12.03.1997	349.51
33	Asset - XXXIII	VTPS-NUNNA:1	220	S/C	17.204	20.01.1992	4.17
34	Asset - XXXIV	VTPS-RENACALA:2	220	D/C	111.49	30.06.1984	40.66
<b>Total YTC</b>							<b>15473.96</b>

10. On inclusion of the assets covered in the petition 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 petitioner.
  
11. The petition is ordered accordingly.

**Sd/-**  
**P. RAGHU**  
**MEMBER**

**Sd/-**  
**JUSTICE G. BHAVANI PRASAD**  
**CHAIRMAN**

**ANNEXURE - I**

KONAPALLY - CHILALLU : 1 & 2 (D/C)		DoC	30-09-1989
Annexure - I			
<b>CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSETS - XV &amp; XVI</b>			
<b>(Rs in lakh)</b>			
Rataionalised cost of 400 kV line Rs lakh per km		0	
Transmission Line length, in km		119.4	Voltage, kV - 220
Multiplication factor		0	
<b>2018-19</b>			
<b>Gross Block</b>			0
Addition during 2014-19 due to Projected			0
Gross Block total			0
Average Gross Block			0
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	0
Elapsed Life as on	31.03.2017		27.500000
Balance useful life of the asset			0
Remaining Depreciation value			0
Cumulative Depreciation	0		0
Depreciation			0
<b>Interest on Loan</b>			
Gross Normative Loan		0	0
Cumulative Repaymrnt upto Previous Year			0
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			0.0000%
Interest			0
<b>Return on Enquiry</b>			
Gross Notional Equity		0	
Opening Equity			0
Average Equity			0
Rate of Return on Equity			0.0%
Return on Equity			0
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		6.19686
O & M expenses	1 Month of O&M		3.4427
Receivables	2 months		6.8854
Total			16.52496
Interest		13.50%	<b>2.2308696</b>
<b>Annual Transmission Charges</b>			
Depreciation			0
Interest on Loan			0
Return on Equity			0
Interest on Working Capital			2.2308696
O & M Expenses		0.346	41.3124
<b>Total</b>			<b>43.54</b>

SRIAILAM - SOMYALLI : 1 (S/C)		DoC	01-01-1985
<b>Annexure - I</b>			
<b>CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSETS - XXII</b>			
<b>(Rs in lakh)</b>			
Rataionalised cost of 400 kV line Rs lakh per km		0	
Transmission Line length, in km		106	Voltage, kV - 220
Multiplication factor		0	
			<b>2018-19</b>
<b>Gross Block</b>			0
Addition during 2014-19 due to Projected			0
Gross Block total			0
Average Gross Block			0
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	0
Elapsed Life as on	31.03.2017		32.250000
Balance useful life of the asset			0
Remaining Depreciation value			0
Cumulative Depreciation	0		0
Depreciation			0
<b>Interest on Loan</b>			
Gross Normative Loan		0	0
Cumulative Repaymnt upto Previous Year			0
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			0.0000%
Interest			0
<b>Return on Enquiry</b>			
Gross Notional Equity		0	
Opening Equity			0
Average Equity			0
Rate of Return on Equity			0.0%
Return on Equity			0
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		3.657
O & M expenses	1 Month of O&M		2.031666667
Receivables	2 months		4.063333333
Total			9.752
Interest		13.50%	1.31652
<b>Annual Transmission Charges</b>			
Depreciation			0
Interest on Loan			0
Return on Equity			0
Interest on Working Capital			1.31652
O & M Expenses		0.23	24.38
<b>Total</b>			<b>25.70</b>

SRIAILAM - TALAPLLI : 1 & 2 (D/C)		DoC	01-01-1985
<b>Annexure - I</b>			
<b>CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSETS - XXIII &amp; XXIV</b>			
<b>(Rs in lakh)</b>			
Rataionalised cost of 400 kV line Rs lakh per km	0		
Transmission Line length, in km	197.64	Voltage, kV - 220	
Multiplication factor	0.57		
			<b>2018-19</b>
<b>Gross Block</b>			0
Addition during 2014-19 due to Projected			0
Gross Block total			0
Average Gross Block			0
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	0
Elapsed Life as on	31.03.2017		32.250000
Balance useful life of the asset			0
Remaining Depreciation value			0
Cumulative Depreciation	0		0
Depreciation			0
<b>Interest on Loan</b>			
Gross Normative Loan		0	0
Cumulative Repaymrent upto Previous Year			0
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			0.0000%
Interest			0
<b>Return on Enquiry</b>			
Gross Notional Equity		0	
Opening Equity			0
Average Equity			0
Rate of Return on Equity			0.0%
Return on Equity			0
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		10.257516
O & M expenses	1 Month of O&M		5.69862
Receivables	2 months		11.39724
Total			27.353376
Interest		13.50%	<b>3.69270576</b>
<b>Annual Transmission Charges</b>			
Depreciation			0
Interest on Loan			0
Return on Equity			0
Interest on Working Capital			3.69270576
O & M Expenses		0.346	68.38344
<b>Total</b>			<b>72.08</b>

TALAPALLI - VTPS : 1 & 2 (D/C)		DoC	30-06-1984
<b>Annexure - I</b>			
<b>CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSETS - XXVIII &amp; XXIX</b>			
<b>(Rs in lakh)</b>			
Rataionalised cost of 400 kV line Rs lakh per km		0	
Transmission Line length, in km		125.142	Voltage, kV - 220
Multiplication factor		0	
			<b>2018-19</b>
<b>Gross Block</b>			0
Addition during 2014-19 due to Projected			0
Gross Block total			0
Average Gross Block			0
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	0
Elapsed Life as on	31.03.2017		32.750000
Balance useful life of the asset			0
Remaining Depreciation value			0
Cumulative Depreciation	0		0
Depreciation			0
<b>Interest on Loan</b>			
Gross Normative Loan		0	0
Cumulative Repaymrnt upto Previous Year			0
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			0.0000%
Interest			0
<b>Return on Enquiry</b>			
Gross Notional Equity		0	
Opening Equity			0
Average Equity			0
Rate of Return on Equity			0.0%
Return on Equity			0
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		6.4948698
O & M expenses	1 Month of O&M		3.608261
Receivables	2 months		7.216522
Total			17.3196528
Interest		13.50%	<b>2.338153128</b>
<b>Annual Transmission Charges</b>			
Depreciation			0
Interest on Loan			0
Return on Equity			0
Interest on Working Capital			2.338153128
O & M Expenses		0.346	43.299132
<b>Total</b>			<b>45.64</b>

VTPS - NUNNA : 1 (S/C)		DoC	20-01-1992
Annexure - I			
CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSETS - XXXIII			
(Rs in lakh)			
Rataionalised cost of 400 kV line Rs lakh per km		0	
Transmission Line length, in km		17.204	Voltage, kV - 220
Multiplication factor		0	
			<b>2018-19</b>
<b>Gross Block</b>			0
Addition during 2014-19 due to Projected			0
Gross Block total			0
Average Gross Block			0
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	0
Elapsed Life as on	31.03.2017	0.0000000	25.197222
Balance useful life of the asset			0
Remaining Depreciation value			0
Cumulative Depreciation	0		0
Depreciation			0
<b>Interest on Loan</b>			
Gross Normative Loan		0	0
Cumulative Repaymnt upto Previous Year			0
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			0.0000%
Interest			0
<b>Return on Enquiry</b>			
Gross Notional Equity		0	
Opening Equity			0
Average Equity			0
Rate of Return on Equity			0.0%
Return on Equity			0
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		0.593538
O & M expenses	1 Month of O&M		0.329743333
Receivables	2 months		0.659486667
Total			1.582768
Interest		13.50%	<b>0.21367368</b>
<b>Annual Transmission Charges</b>			
Depreciation			0
Interest on Loan			0
Return on Equity			0
Interest on Working Capital			0.21367368
O & M Expenses		0.23	3.95692
<b>Total</b>			<b>4.17</b>

VTPS - RENACALA : 2 (D/C)		DoC	30-06-1984
Annexure - I			
CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSETS - XXXIV			
(Rs in lakh)			
Rataionalised cost of 400 kV line Rs lakh per km		0	
Transmission Line length, in km		111.49	Voltage, kV - 220
Multiplication factor		0	
			<b>2018-19</b>
<b>Gross Block</b>			0
Addition during 2014-19 due to Projected			0
Gross Block total			0
Average Gross Block			0
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	0
Elapsed Life as on	31.03.2017	0.0000000	32.750000
Balance useful life of the asset			0
Remaining Depreciation value			0
Cumulative Depreciation	0		0
Depreciation			0
<b>Interest on Loan</b>			
Gross Normative Loan		0	0
Cumulative Repaymrnt upto Previous Year			0
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			0.0000%
Interest			0
<b>Return on Enquiry</b>			
Gross Notional Equity		0	
Opening Equity			0
Average Equity			0
Rate of Return on Equity			0.0%
Return on Equity			0
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		5.786331
O & M expenses	1 Month of O&M		3.214628333
Receivables	2 months		6.429256667
Total			15.430216
Interest		13.50%	<b>2.08307916</b>
<b>Annual Transmission Charges</b>			
Depreciation			0
Interest on Loan			0
Return on Equity			0
Interest on Working Capital			2.08307916
O & M Expenses		0.346	38.57554
<b>Total</b>			<b>40.66</b>



## ANNEXURE - II

GAZUWAKA1-KALPAKKA1:1 (D/C)	Doc	10-12-2000
Annexure - II		
CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSET - III		
(Rs in lakh)		
Rataionalised cost of 400 kV line Rs lakh per km	54.57	
Transmission Line length, in km	3.39	Voltage, kV - 400
Multiplication factor	1	
<b>2018-19</b>		
<b>Gross Block</b>		184.9923
Addition during 2014-19 due to Projected		0
Gross Block total		184.9923
Average Gross Block		184.9923
<b>Depreciation</b>		
Rate of Depreciation	5.28%	5.28%
Depreciation value	90%	166.49307
Elapsed Life as on	31.03.2017	0.0000000
Balance useful life of the asset		8.691666667
Remaining Depreciation value		7.199900316
Cumulative Depreciation	159.2931697	169.0607631
Depreciation		<b>9.76759344</b>
<b>Interest on Loan</b>		
Gross Normative Loan	129.49461	129.49461
Cumulative Repayment upto Previous Year		129.49461
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		0.0000%
Interest		0
<b>Return on Enquiry</b>		
Gross Notional Equity	55.49769	
Opening Equity		55.49769
Average Equity		55.49769
Rate of Return on Equity		15.5%
Return on Equity		<b>8.60214195</b>
<b>Interest on Working Capital</b>		
Maintenance Spares	15% of O&M	0.3513735
O & M expenses	1 Month of O&M	0.1952075
Receivables	2 months	3.510599815
Total		4.057180815
Interest	13.50%	<b>0.54771941</b>
<b>Annual Transmission Charges</b>		
Depreciation		9.76759344
Interest on Loan		0
Return on Equity		8.60214195
Interest on Working Capital		0.54771941
O & M Expenses	0.691	2.34249
<b>Total</b>		<b>21.26</b>

GAZUWAKA1-KALPAKKA1:2 (D/C)		DoC	27-01-2002
<b>Annexure - II</b>			
<b>CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSET - IV</b>			
<b>(Rs in lakh)</b>			
Rataionalised cost of 400 kV line Rs lakh per km		44.28	
Transmission Line length, in km		3.39	Voltage, kV - 400
Multiplication factor		1	
			<b>2018-19</b>
<b>Gross Block</b>			150.1092
Addition during 2014-19 due to Projected			0
Gross Block total			150.1092
Average Gross Block			150.1092
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	135.09828
Elapsed Life as on	31.03.2017	0.0000000	15.177778
Balance useful life of the asset			9.822222222
Remaining Depreciation value			14.80276858
Cumulative Depreciation	120.2955114		128.2212772
Depreciation			<b>7.92576576</b>
<b>Interest on Loan</b>			
Gross Normative Loan		105.07644	105.07644
Cumulative Repayment upto Previous Year			105.07644
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			0.0000%
Interest			0
<b>Return on Enquiry</b>			
Gross Notional Equity		45.03276	
Opening Equity			45.03276
Average Equity			45.03276
Rate of Return on Equity			15.5%
Return on Equity			<b>6.9800778</b>
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		0.3513735
O & M expenses	1 Month of O&M		0.1952075
Receivables	2 months		2.96
Total			3.506581
Interest		13.50%	<b>0.473388435</b>
<b>Annual Transmission Charges</b>			
Depreciation			7.92576576
Interest on Loan			0
Return on Equity			6.9800778
Interest on Working Capital			0.473388435
O & M Expenses		0.691	2.34249
<b>Total</b>			<b>17.72</b>

NUNNA2-VEMAGIRI:1 (S/C)		DoC	30-12-2005
<b>Annexure - II</b>			
<b>CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSET - VIII</b>			
<b>(Rs in lakh)</b>			
Rataionalised cost of 400 kV line Rs lakh per km		40.33	
Transmission Line length, in km		140	Voltage, kV - 400
Multiplication factor		1	
			<b>2018-19</b>
<b>Gross Block</b>			5646.2
Addition during 2014-19 due to Projected			0
Gross Block total			5646.2
Average Gross Block			5646.2
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	5081.58
Elapsed Life as on	31.03.2017		11.250000
Balance useful life of the asset			13.75
Remaining Depreciation value			1727.7372
Cumulative Depreciation	3353.8428		3651.96216
Depreciation			<b>298.11936</b>
<b>Interest on Loan</b>			
Gross Normative Loan		3952.34	3952.34
Cumulative Repayment upto Previous Year			3353.8428
Net Loan - Opening			598.4972
Addition due to Additional Capitalisation			0
Repayment during the year			298.11936
Net Loan-Closing			300.37784
Average Loan			449.43752
Weighted Average Rate of Interest on Loan			7.2104%
Interest			<b>32.40624294</b>
<b>Return on Enquiry</b>			
Gross Notional Equity		1693.86	
Opening Equity			1693.86
Average Equity			1693.86
Rate of Return on Equity			15.5%
Return on Equity			<b>262.5483</b>
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		14.511
O & M expenses	1 Month of O&M		8.06166667
Receivables	2 months		118.83
Total			141.4026667
Interest		13.50%	19.08936
<b>Annual Transmission Charges</b>			
Depreciation			298.11936
Interest on Loan			32.40624294
Return on Equity			262.5483
Interest on Working Capital			19.08936
O & M Expenses		0.691	96.74
<b>Total</b>			<b>708.90</b>

NUNNA2-VTS-IV:1 (D/C)		DoC	27-07-2009
<b>Annexure - II</b>			
<b>CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSET - IX</b>			
<b>(Rs in lakh)</b>			
Rataionalised cost of 400 kV line Rs lakh per km		48.44	
Transmission Line length, in km		18.7	Voltage, kV - 400
Multiplication factor		1	
			<b>2018-19</b>
<b>Gross Block</b>			905.828
Addition during 2014-19 due to Projected			0
Gross Block total			905.828
Average Gross Block			905.828
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	815.2452
Elapsed Life as on	31.03.2017	0.0000000	7.677778
Balance useful life of the asset			17.32222222
Remaining Depreciation value			448.0346065
Cumulative Depreciation	367.2105935		415.0383119
Depreciation			<b>47.8277184</b>
<b>Interest on Loan</b>			
Gross Normative Loan		634.0796	634.0796
Cumulative Repaymnt upto Previous Year			367.2105935
Net Loan - Opening			266.8690065
Addition due to Additional Capitalisation			0
Repayment during the year			47.8277184
Net Loan-Closing			219.0412881
Average Loan			242.9551473
Weighted Average Rate of Interest on Loan			7.2104%
Interest			<b>17.51803794</b>
<b>Return on Enquiry</b>			
Gross Notional Equity		271.7484	
Opening Equity			271.7484
Average Equity			271.7484
Rate of Return on Equity			15.5%
Return on Equity			<b>42.121002</b>
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		1.938255
O & M expenses	1 Month of O&M		1.076808333
Receivables	2 months		20.67
Total			23.68506333
Interest		13.50%	3.19748355
<b>Annual Transmission Charges</b>			
Depreciation			47.8277184
Interest on Loan			17.51803794
Return on Equity			42.121002
Interest on Working Capital			3.19748355
O & M Expenses		0.691	12.9217
<b>Total</b>			<b>123.59</b>

CHITTOOR4-CHITTOOR:1 & CHITTOOR4-CHITTOOR:2 (D/C)	DoC	14-02-2006
<b>Annexure - II</b>		
<b>CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSETS - XI &amp; XII</b>		
<b>(Rs in lakh)</b>		
Rataionalised cost of 400 kV line Rs lakh per km	40.33	
Transmission Line length, in km	34.2	Voltage, kV - 220
Multiplication factor	0.57	
		<b>2018-19</b>
<b>Gross Block</b>		786.19302
Addition during 2014-19 due to Projected		0
Gross Block total		786.19302
Average Gross Block		786.19302
<b>Depreciation</b>		
Rate of Depreciation		5.28%
Depreciation value		90%
Elapsed Life as on	31.03.2017	0.0000000
Balance useful life of the asset		13.86944444
Remaining Depreciation value		245.5333214
Cumulative Depreciation	462.0403966	503.551388
Depreciation		<b>41.51099146</b>
<b>Interest on Loan</b>		
Gross Normative Loan		550.335114
Cumulative Repaymnt upto Previous Year		462.0403966
Net Loan - Opening		88.29471743
Addition due to Additional Capitalisation		0
Repayment during the year		41.51099146
Net Loan-Closing		46.78372598
Average Loan		67.5392217
Weighted Average Rate of Interest on Loan		7.2104%
Interest		<b>4.869848042</b>
<b>Return on Enquiry</b>		
Gross Notional Equity		235.857906
Opening Equity		235.857906
Average Equity		235.857906
Rate of Return on Equity		15.5%
Return on Equity		<b>36.55797543</b>
<b>Interest on Working Capital</b>		
Maintenance Spares	15% of O&M	1.77498
O & M expenses	1 Month of O&M	0.9861
Receivables	2 months	16.32
Total		19.08108
Interest		13.50%
		<b>2.5759458</b>
<b>Annual Transmission Charges</b>		
Depreciation		41.51099146
Interest on Loan		4.869848042
Return on Equity		36.55797543
Interest on Working Capital		2.5759458
O & M Expenses		0.346
		11.8332
<b>Total</b>		<b>97.35</b>

GOOTY-PG-DHONE: 1 & 2 (D/C)		DoC	24-08-2011
<b>Annexure -II</b>			
<b>CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSETS - XIII &amp; XIV</b>			
<b>(Rs in lakh)</b>			
Rataionalised cost of 400 kV line Rs lakh per km		62.27	
Transmission Line length, in km		180.32	Voltage, kV - 220
Multiplication factor		0.57	
			<b>2018-19</b>
<b>Gross Block</b>			6400.260048
Addition during 2014-19 due to Projected			0
Gross Block total			6400.260048
Average Gross Block			6400.260048
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	5760.234043
Elapsed Life as on	31.03.2017	0.0000000	5.602778
Balance useful life of the asset			19.39722222
Remaining Depreciation value			3866.866447
Cumulative Depreciation	1893.367596		2231.301326
Depreciation			<b>337.9337305</b>
<b>Interest on Loan</b>			
Gross Normative Loan		4480.182034	4480.182034
Cumulative Repaymnt upto Previous Year			1893.367596
Net Loan - Opening			2586.814438
Addition due to Additional Capitalisation			0
Repayment during the year			337.9337305
Net Loan-Closing			2248.880707
Average Loan			2417.847573
Weighted Average Rate of Interest on Loan			7.2104%
Interest			<b>174.3364814</b>
<b>Return on Enquiry</b>			
Gross Notional Equity		1920.078014	
Opening Equity			1920.078014
Average Equity			1920.078014
Rate of Return on Equity			15.5%
Return on Equity			<b>297.6120922</b>
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		9.358608
O & M expenses	1 Month of O&M		5.199226667
Receivables	2 months		149.51
Total			164.0678347
Interest		13.50%	<b>22.14915768</b>
<b>Annual Transmission Charges</b>			
Depreciation			337.9337305
Interest on Loan			174.3364814
Return on Equity			297.6120922
Interest on Working Capital			22.14915768
O & M Expenses		0.346	62.39072
<b>Total</b>			<b>894.42</b>

KONAPALLY - VTPS : 1 & 2 (D/C)		DoC	27-04-2004
Annexure - II			
CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSETS - XVII & XVIII			
(Rs in lakh)			
Rataionalised cost of 400 kV line Rs lakh per km		27.2	
Transmission Line length, in km		13	Voltage, kV - 220
Multiplication factor		0.57	
			<b>2018-19</b>
<b>Gross Block</b>			201.552
Addition during 2014-19 due to Projected			0
Gross Block total			201.552
Average Gross Block			201.552
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	181.3968
Elapsed Life as on	31.03.2017	0.0000000	12.927778
Balance useful life of the asset			12.07222222
Remaining Depreciation value			43.82009216
Cumulative Depreciation	137.5767078		148.2186534
Depreciation			<b>10.6419456</b>
<b>Interest on Loan</b>			
Gross Normative Loan		141.0864	141.0864
Cumulative Repaymnt upto Previous Year			137.5767078
Net Loan - Opening			3.50969216
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			7.2104%
Interest			0
<b>Return on Enquiry</b>			
Gross Notional Equity		60.4656	
Opening Equity			60.4656
Average Equity			60.4656
Rate of Return on Equity			15.5%
Return on Equity			<b>9.372168</b>
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		0.6747
O & M expenses	1 Month of O&M		0.374833333
Receivables	2 months		4.23
Total			5.279533333
Interest		13.50%	<b>0.712737</b>
<b>Annual Transmission Charges</b>			
Depreciation			10.6419456
Interest on Loan			0
Return on Equity			9.372168
Interest on Working Capital			0.712737
O & M Expenses		0.346	4.498
<b>Total</b>			<b>25.22</b>

SOMYALLI - BELKALAGDUR:2 (D/C)		DoC	10-08-2011
<b>Annexure - II</b>			
<b>CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSETS - XIX</b>			
<b>(Rs in lakh)</b>			
Rataionalised cost of 400 kV line Rs lakh per km		62.27	
Transmission Line length, in km		37.986	Voltage, kV - 220
Multiplication factor		0.57	
			<b>2018-19</b>
<b>Gross Block</b>			1348.271285
Addition during 2014-19 due to Projected			0
Gross Block total			1348.271285
Average Gross Block			1348.271285
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	1213.444157
Elapsed Life as on	31.03.2017	0.0000000	5.641667
Balance useful life of the asset			19.35833333
Remaining Depreciation value			811.8211064
Cumulative Depreciation	401.6230505		472.8117744
			<b>71.18872387</b>
<b>Interest on Loan</b>			
Gross Normative Loan		943.7898998	943.7898998
Cumulative Repaymnt upto Previous Year			401.6230505
Net Loan - Opening			542.1668493
Addition due to Additional Capitalisation			0
Repayment during the year			71.18872387
Net Loan-Closing			470.9781254
Average Loan			506.5724874
Weighted Average Rate of Interest on Loan			7.2104%
Interest			<b>36.52590263</b>
<b>Return on Enquiry</b>			
Gross Notional Equity		404.4813856	
Opening Equity			404.4813856
Average Equity			404.4813856
Rate of Return on Equity			15.5%
Return on Equity			<b>62.69461477</b>
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		1.310517
O & M expenses	1 Month of O&M		0.728065
Receivables	2 months		30.7
Total			32.738582
			<b>4.41970857</b>
<b>Annual Transmission Charges</b>			
Depreciation			71.18872387
Interest on Loan			36.52590263
Return on Equity			62.69461477
Interest on Working Capital			4.41970857
O & M Expenses		0.23	8.73678
<b>Total</b>			<b>183.57</b>



SOMYALLI - DHONE :2 & 3 (D/C)		DoC	28-07-2011
<b>Annexure - II</b>			
<b>CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSETS - XX&amp; XXI</b>			
<b>(Rs in lakh)</b>			
Rataionalised cost of 400 kV line Rs lakh per km		62.27	
Transmission Line length, in km		84.22	Voltage, kV - 220
Multiplication factor		0.57	
			<b>2018-19</b>
<b>Gross Block</b>			2989.296258
Addition during 2014-19 due to Projected			0
Gross Block total			2989.296258
Average Gross Block			2989.296258
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	2690.366632
Elapsed Life as on	31.03.2017	0.0000000	5.675000
Balance useful life of the asset			19.325
Remaining Depreciation value			1794.653901
Cumulative Depreciation	895.7127307		1053.547573
			<b>157.8348424</b>
<b>Interest on Loan</b>			
Gross Normative Loan		2092.507381	2092.507381
Cumulative Repaymrnt upto Previous Year			895.7127307
Net Loan - Opening			1196.79465
Addition due to Additional Capitalisation			0
Repayment during the year			157.8348424
Net Loan-Closing			1038.959807
Average Loan			1117.877229
Weighted Average Rate of Interest on Loan			7.2104%
Interest			<b>80.60341969</b>
<b>Return on Enquiry</b>			
Gross Notional Equity		896.7888774	
Opening Equity			896.7888774
Average Equity			896.7888774
Rate of Return on Equity			15.5%
Return on Equity			<b>139.002276</b>
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		4.371018
O & M expenses	1 Month of O&M		2.428343333
Receivables	2 months		69.69
Total			76.48936133
			<b>10.32606378</b>
<b>Annual Transmission Charges</b>			
Depreciation			157.8348424
Interest on Loan			80.60341969
Return on Equity			139.002276
Interest on Working Capital			10.32606378
O & M Expenses		0.346	29.14012
<b>Total</b>			<b>416.91</b>

SULURETA - NLR 42:1 (S/C)		DoC	26-12-2006
<b>Annexure - II</b>			
<b>CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSETS - XXV</b>			
<b>(Rs in lakh)</b>			
Rataionalised cost of 400 kV line Rs lakh per km		42.53	
Transmission Line length, in km		85.8	Voltage, kV - 220
Multiplication factor		0.36	
			<b>2018-19</b>
<b>Gross Block</b>			1313.66664
Addition during 2014-19 due to Projected			0
Gross Block total			1313.66664
Average Gross Block			1313.66664
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	1182.299976
Elapsed Life as on	31.03.2017	0.0000000	10.263889
Balance useful life of the asset			14.73611111
Remaining Depreciation value			470.3802349
Cumulative Depreciation	711.9197411		781.2813397
			<b>69.36159859</b>
<b>Interest on Loan</b>			
Gross Normative Loan		919.566648	919.566648
Cumulative Repaymnt upto Previous Year			711.9197411
Net Loan - Opening			207.6469069
Addition due to Additional Capitalisation			0
Repayment during the year			69.36159859
Net Loan-Closing			138.2853083
Average Loan			172.9661076
Weighted Average Rate of Interest on Loan			7.2104%
Interest			<b>12.47154822</b>
<b>Return on Enquiry</b>			
Gross Notional Equity		394.099992	
Opening Equity			394.099992
Average Equity			394.099992
Rate of Return on Equity			15.5%
Return on Equity			<b>61.08549876</b>
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		2.9601
O & M expenses	1 Month of O&M		1.6445
Receivables	2 months		27.99
Total			32.5946
			<b>4.400271</b>
<b>Annual Transmission Charges</b>			
Depreciation			69.36159859
Interest on Loan			12.47154822
Return on Equity			61.08549876
Interest on Working Capital			4.400271
O & M Expenses		0.23	19.734
<b>Total</b>			<b>167.05</b>

TALAPALLI - VTPS : 3 (D/C)		DoC	17-10-2012
<b>Annexure - II</b>			
<b>CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSETS - XXX</b>			
<b>(Rs in lakh)</b>			
Rataionalised cost of 400 kV line Rs lakh per km		65.67	
Transmission Line length, in km		137.252	Voltage, kV - 220
Multiplication factor		0.36	
			<b>2018-19</b>
<b>Gross Block</b>			3244.801982
Addition during 2014-19 due to Projected			0
Gross Block total			3244.801982
Average Gross Block			3244.801982
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	2920.321784
Elapsed Life as on	31.03.2017	0.0000000	4.455556
Balance useful life of the asset			20.54444444
Remaining Depreciation value			2156.971302
Cumulative Depreciation	763.3504824		934.676027
Depreciation			<b>171.3255447</b>
<b>Interest on Loan</b>			
Gross Normative Loan		2271.361388	2271.361388
Cumulative Repaymnt upto Previous Year			763.3504824
Net Loan - Opening			1508.010905
Addition due to Additional Capitalisation			0
Repayment during the year			171.3255447
Net Loan-Closing			1336.685361
Average Loan			1422.348133
Weighted Average Rate of Interest on Loan			7.2104%
Interest			<b>102.5569898</b>
<b>Return on Enquiry</b>			
Gross Notional Equity		973.4405947	
Opening Equity			973.4405947
Average Equity			973.4405947
Rate of Return on Equity			15.5%
Return on Equity			<b>150.8832922</b>
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		4.735194
O & M expenses	1 Month of O&M		2.630663333
Receivables	2 months		78.15
Total			85.51585733
Interest		13.50%	<b>11.54464074</b>
<b>Annual Transmission Charges</b>			
Depreciation			171.3255447
Interest on Loan			102.5569898
Return on Equity			150.8832922
Interest on Working Capital			11.54464074
O & M Expenses		0.23	31.56796
<b>Total</b>			<b>467.88</b>

VTPS - CHILALLU : 1 & 2 (D/C)		DoC	12-03-1997
<b>Annexure - II</b>			
<b>CALCULATION OF ANNUAL TRANSMISSION CHARGES OF ASSETS - XXXI &amp; XXXII</b>			
<b>(Rs in lakh)</b>			
Rataionalised cost of 400 kV line Rs lakh per km		38.2	
Transmission Line length, in km		135.6	Voltage, kV - 220
Multiplication factor		0.57	
			<b>2018-19</b>
<b>Gross Block</b>			2952.5544
Addition during 2014-19 due to Projected			0
Gross Block total			2952.5544
Average Gross Block			2952.5544
<b>Depreciation</b>			
Rate of Depreciation		5.28%	5.28%
Depreciation value		90%	2657.29896
Elapsed Life as on	31.03.2017	0.0000000	20.052778
Balance useful life of the asset			4.94722222
Remaining Depreciation value			-468.8262713
Cumulative Depreciation	3126.125231		3282.020104
			<b>155.8948723</b>
<b>Interest on Loan</b>			
Gross Normative Loan		2066.78808	2066.78808
Cumulative Repaymrnt upto Previous Year			0
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			0.0000%
Interest			0
<b>Return on Enquiry</b>			
Gross Notional Equity		885.76632	
Opening Equity			885.76632
Average Equity			885.76632
Rate of Return on Equity			15.5%
Return on Equity			<b>137.2937796</b>
<b>Interest on Working Capital</b>			
Maintenance Spares	15% of O&M		7.03764
O & M expenses	1 Month of O&M		3.9098
Receivables	2 months		58.68
Total			69.62744
			<b>9.3997044</b>
<b>Annual Transmission Charges</b>			
Depreciation			155.8948723
Interest on Loan			0
Return on Equity			137.2937796
Interest on Working Capital			9.3997044
O & M Expenses		0.346	46.9176
<b>Total</b>			<b>349.51</b>