

I/28924/2023



सत्यमेव जयते



**भारत सरकार**  
**Government of India**  
**विद्युत मंत्रालय**  
**Ministry of Power**  
**केन्द्रीय विद्युत प्राधिकरण**  
**Central Electricity Authority**  
**विद्युत संचार विकास प्रभाग**

**Power Communication Development Division**

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CEA Case No. : TNG-123		
<b>Induced Voltage (IV) calculations in respect of PTCC proposal for 765 kV D/C line from proposed 765/400 kV Warangal S/S to existing Warora 765/400 kV GIS (332.412 km) - regd.</b>		
S. No	Reference No.	Dated
(i)	M/s Warora-Kurnool Transmission Ltd: WKTL/HYD/2021/126	05.10.2021
(ii)	M/s Warora-Kurnool Transmission Ltd: Email	13.07.2023
(iii)	BSNL: SR-PTCC/STS 0034/18	04.07.2023
(iv)	South Central Railway: SG.85/4/3/PTCC/SCR/2022-23/TS-17 RTD	27.07.2022
(v)	Defense: B/46937/Sigs 7(b)/2622	01.12.2021

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on communication circuits of BSNL and South Central Railway with respect to details furnished vide above reference (iii) and (iv) respectively has been computed. The voltage likely to be induced on paralleling communication circuits of BSNL and South Central Railway under Single Line to Ground fault condition are enclosed at Annexure-I & II respectively. Vide above reference (ii), M/s WKTL have informed that they are following up with Central Railway for telecom details and have requested for provisional PTCC route approval citing that line is nearing completion. IV calculation on circuits of Central Railway has been carried out based on the details in the topographical map and the same is enclosed as Annexure-III. The screening factors as applicable have been considered. DG Signals, MoD have issued No Objection Certificate (NOC) vide above reference (v) (copy enclosed as Annexure-IV).

EPR Zones for proposed substations are mentioned below.

Name of the proposed SS	Half Diagonal Distance, D/2 (mts)	Fault Current, I (kA)	Resistance of earthmat, R (Ohms)	d (mts) at 430 V	d (mts) at 650 V	d (mts) at 7 kV	d (mts) at 10 kV
765/400 kV Warangal S/S	261.7	35	0.0738	1310	778	NIL	NIL

As per the details submitted by BSNL vide reference (iv) above, no telephone exchanges are falling in the EPR zone of the proposed 765/400 kV Warangal S/S.

Taking above into consideration, necessary action for issuance of provisional PTCC route approval may be taken under intimation to this office.

Encl.: As above

**Director**

**To,**

1.	Divisional Engineer (PTCC), Southern Zone	BSNL, Inspection Circle, 1st Floor, Raj Bhavan Exchange No. 26, Sardar Patel Road, Guindy, Chennai-600032
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2.	GM (S&T)	South Central Railway, O/o PCSTE, 7 <sup>th</sup> floor, Rail Nilayam, Secunderabad – 500025	
3	GM (S&T)	Central Railway, O/o PCSTE, 3 <sup>rd</sup> Floor, Annex Building, CSMT Mumbai – 400001	<i>With a request to intimate this office in case any telecom circuits other than Annexure-III are present in the vicinity of the proposed transmission line</i>
4.	M/s Warora Kurnool Transmission Ltd	Adani Corporate House, Shantigram, S G Highway, Ahmedabad - 382421	For kind information

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**ANNEXURE-I**

CEA Case No.: TNG-123		Map Scale : 1 cm= 500 m			
Name of the Power line: 765 kV D/C line from proposed 765/400 kV Warangal S/S to existing Warora 765/400 kV GIS		Total Length : 332.412 km			
		S.R. Value : 20000 Ohm-cm			
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
<b>BSNL Letter no. SR-PTCC/STS 0034/18 Dated 04.07.2023</b>					
<b>SSA: A WARANGAL</b>					
I A1	<b>GHANPUR TELEPHONE EXCHANGE</b>				
1.	EXGE to Ghanpur Bus stand (A1-A2)	IV less than 430 V			
2.	EXGE to Ghanpur Local (A1-B2)				
<b>SSA: B. ADILABAD</b>					
I B	<b>BELLAMPALLI TELEPHONE EXCHANGE</b>				
1.	EXGE to II Town(B-B1)	IV less than 430 V			
2.	EXGE to II Caltex(B-B2)				
3.	EXGE to Area Hospital (B-B3)				
4.	EXGE to Gandhi Stattue (B-B4)				
5.	EXGE to Old Andhrabank(B-B5)				
6.	EXGE to Ladies Corner Shop (B-B6)	5.5	0.0140	18640	261
<b>SSA: C. KARIMNAGAR</b>					
I M	<b>MANTHANI TELEPHONE EXCHANGE</b>				
1.	EXGE to P.71 to DP.7101 (M-M1)	IV less than 430 V			
2.	EXGE to P.61 to DP.6101 (M-M2)				
3.	EXGE to P.41 to DP.4101 (M-M3)				
4.	EXGE to P.42 to DP.4201 (M-M4)				

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5.	EXGE to P.43 to DP.4301 (M-M5)	IV less than 430 V			
II J	<b>JAMMIKUNTA TELEPHONE EXCHANGE</b>				
1.	EXGE to P.25 (J-J1)	IV less than 430 V			
2.	EXGE to P.32 (J-J2)				
3.	EXGE to P.28 (J-J3)				
4.	EXGE to P.26 (J-J4)				
5.	EXGE to P.00 (J-J5)				

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ANNEXURE-II

CEA Case No.: TNG-123		Map Scale : 1 cm= 500 m			
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		S.R. Value : 20000 Ohm-cm			
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
<b>South Central Railway letter no. SG.85/4/3/PTCC/SCR/2022-23/TS-17 RTD Dated 27.07.2022</b>					
1.	Ippaguda (IPG) - Ghanpur (GNP)	2.5	0.0004	17500	7
2.	Ghanpur (GNP) - Nashkal (NSKL)	3.1	0.0039	19482	76
3.	Nashkal (NSKL) - Pindial (PQL)	5.1	0.0044	16337	72
4.	Pindial (PQL) - Kazipet (KZJ)	2.2	0.0003	15953	5
5.	Kazipet (KZJ) -Komatipalli (KMPT)	Out of parallelism			0
6.	Komatipalli (KMPT) - Hasanparthi Road (HSP)				0
7.	Hasanparthi Road (HSP) - Uppal (OPL)	9.5	0.0031	17530	54
8.	Uppal (OPL) - Jammikunta (JMKT)	10.7	0.0152	16858	256
9.	Jammikunta (JMKT) - Bisugirsharif (BGSF)	6.25	0.0015	14010	21
10.	Bisugirsharif (BGSF) - Potkapalli (PTKP)	7.25	0.0008	15738	13
11.	Potkapalli (PTKP) - Kolanur (KOLR)	Outside IV consideration zone			
12.	Kolanur (KOLR) - Peddapalli (PDPL)				
13.	Peddapalli (PDPL) - Raghavapuram (RGPM)				
14.	Raghavapuram (RGPM) - Ramagundam (RDM)				
15.	Ramagundam (RDM) - Peddampet (PPZ)				
16.	Peddampet (PPZ) - Manchiryal (MCI)				
17.	Manchiryal (MCI) - Ravindrakhani (RVKH)				
18.	Ravindrakhani (RVKH) - Mandamarri (MMZ)				

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19.	Mandarri (MMZ) - Bellampalli (BPA)	4	0.0005	10870	5
20.	Bellampalli (BPA) - Rechini Road (RECH)	9.25	0.0040	10046	40
21.	Rechini Road (RECH) - Repallewada (RLW)	6.5	0.0034	9755	33
22.	Repallewada (RLW) - Asifabad Road (ASAF)	7.75	0.0052	9988	52
23.	Asifabad Road (ASAF)- Ralapet (RLT)	2.5	0.0065	10118	66
24.	Ralapet (RLT) - Sirpurkaghaz Nagar (SKZR)	Out of parallelism			0
25.	Gadchandur (GDCR) -MCW	1.7	0.0010	14280	14
26.	MCW - Pandarpawani (PEPI)	Out of parallelism			0
27.	Pandarpawani (PEPI) - Rajura (RJUA)	Outside IV consideration zone			
28.	Rajura (RJUA) - Manikgarh Jn (MAGH)				

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**ANNEXURE-III**

CEA Case No.: TNG-123		Map Scale : 1 cm= 500 m			
Name of the Power line: 765 kV D/C line from proposed 765/400 kV Warangal S/S to existing Warora 765/400 kV GIS		Total Length : 332.412 km			
		S.R. Value : 20000 Ohm-cm			
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
<b>Central Railway (Based on the topo map details)</b>					
1.	Yenor - Nagri	Out of parallelism			0
2.	Nagri – Chikni Road	6.8	0.0012	19952	24
3.	Chikni Road - Warora	Outside IV consideration zone			
4.	Warora - Majri	5.6	0.0007	16998	12
5.	Majri – Majri Khadan	Out of parallelism			0
6.	Majri Khadan – Wani	2.1	0.0056	17803	100
7.	Wani – Kayor	3.9	0.0008	17370	14
8.	Wani – Rajur	5.5	0.0011	17586	19
9.	Majri - Bhandak	1.5	0.0001	19583	2

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Tele : 23019746

Directorate General of Signals  
Signals 7  
General Staff Branch  
Integrated HQ of MoD, (Army)  
DHQ PO, New Delhi – 110011


B/46937/Sigs 7(b)/2622/

01 Dec 2021

Warora-Kurnool Transmission Limited  
Site Office: Ground Floor#001,  
Sai Prema Nilayam Apartments, Brindavan Gardens  
Kishanguda, Telangana-501218

**PTCC PROPOSAL FOR 765KV D/C TRANSMISSION LINE FROM WARANGAL  
(NEW) TO PGCIL SUBSTATION AT WARORA POOL**

1. Refer your letter No WKTL/HYD/2021/126 dt 05 Oct 2021 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided as per Map sheets received vide your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.

  
(Rakesh Kumar)  
Lt Col  
GSO 1 (Comn)  
for SO-in-C

**Enclosures** : As above

**Copy to** :-

The Director (PTCC), CEA  
Power Communication Development Division  
NRPC Complex, 18-A Shaheed Jeet Singh Marg  
Katwaria Sarai, New Delhi – 110016

- for information

The DET(PTCC), Northern Zone  
O/o PGM (North), QA & Inspection Circle,  
D-Tax Building, Eastern Court, Janpath  
New Delhi-110001

