



सत्यमेव जयते

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत प्रणाली संचार विकास प्रभाग
Power System Communication Development Division

CEA Case No.: MRA-1231		
Induced Voltage (IV) calculation for PTCC proposal of 400 kV S/C line on D/C towers from 400/33 kV RGESPL PSS-4, Konhali to 765/400/220 kV Limbi Chincholi (PGCIL) Solapur S/s (Length: 13.318 km)- regd.		
S. No	Reference No.	Dated
(i)	RGESPL/PTCC/2023-24/41	30.10.2023
(ii)	RGESPL E-mail	16.04.2024
(iii)	BSNL: IC/MBI/PTCC/MRA-2605/03	07.12.2023
(iv)	Central Railway: N.153/PTCC/400kV/MAH-856	05.01.2024
(v)	Defense: B/46937/Sigs 7(b)/3598	08.02.2024

The PTCC proposal submitted vide reference (i) and (ii) has been examined. The LF induction on communication circuits of BSNL and Central Railway with respect to details furnished vide above references (iii) and (iv) respectively have been computed. The voltage likely to be induced on paralleling communication cables of BSNL and Central Railway under Single Line to Ground fault condition are enclosed at Annexure-I and Annexure-II respectively. The screening factors as applicable have been considered. DG Signals, MoD have issued No Objection Certificate (NOC) vide reference (v) (enclosed as Annexure-III).

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
400/33 kV RGESPL PSS-4, Konhali	127	37.8	0.58383	6391	4185	273	153

As per the details submitted by BSNL vide reference (iii) above, no telephone exchange is falling in the EPR zone of the proposed substations.

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


Chief Engineer

To,

1.	Divisional Engineer (PTCC), Western Zone	QA & Inspection circle, 1 st floor, D- wing, BSNL Admin Bldg., Junu Tara Road, Santacruz (West), Mumbai-400054	
2.	PCSTE, Central Railway	3 rd floor, Annex Building, CSMT, Mumbai – 400 001	
3.	M/s ReNew Green Energy Solutions Private Ltd.	ReNew Hub, Commercial Block-1, Zone-6, Golf Course Road, DLF City Phase-V, Gurugram – 122 009	Copy for information

ANNEXURE-I

CEA Case No.: MRA-1231		Map Scale : 1 cm= 500 m			
Name of the Power line: 400 kV S/C line on D/C towers from 400/33 kV RGESPL PSS-4, Konhali to 765/400/220 kV Limbi Chincholi (PGCIL) Solapur S/s		Total Length : 13.318 km			
		S.R. Value : 15000 Ohm-cm			
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
BSNL Letter No IC/MBI/PTCC/MRA-2605/03 Date: 07.12.2023					
1.	Hotgi TE to Hotgi Gaon 100 Pr U/G cable	Out of parallelism			
2.	Hotgi TE to Hotgi Gaon 50 Pr U/G cable				
3.	Hotgi TE to Fatatewadi 50 Pr U/G cable				
4.	Hotgi TE to Hotgi Station 100 Pr U/G cable				
5.	Hotgi TE to Hiple 100 Pr U/G cable	IV less than 430 V			
6.	Hotgi TE to Shingadgaon 100 Pr U/G cable	IV less than 430 V			
7.	Hotgi TE to to Auj (A) 50 Pr U/G cable	IV less than 430 V			
8.	Kumbhari TE to Akkalkot road 50 Pr U/G cable	Out of parallelism			
9.	Kumbhari TE to Solapur road 50 Pr U/G cable				
10.	Kumbhari TE to Vidi Gharkul 50 Pr U/G cable				
11.	Kumbhari TE to Ashwini Hospital 50 pr U/G cable				
12.	Valsang TE to Valsang Bus stand 100 Pr U/G cable	IV less than 430 V			
13.	Valsang TE to Valsang Bus stand 50 Pr U/G cable	0.8	0.0203	20493	416
14.	Valsang TE to T Joint 200 Pr U/G cable	IV less than 430 V			
15.	Valsang TE to Achegaon road 20 Pr U/G cable	1.2	0.0319	19730	629
16.	TE to Shivaji Nagar 20 Pr	Out of parallelism			
17.	Akk road to Highway 100 pr	Out of parallelism			
18.	Akk road to Swami Samarth Temple 100 pr	Out of parallelism			
19.	Zila Parishad to Rajwada 100 pr	Out of parallelism			
20.	ZP to Karanje chowk 100 pr	Out of parallelism			

21.	TE to ZP 100 pr	Out of parallelism
22.	TE to Akk road 200 pr	Out of parallelism
23.	TE ZP 200 pr	Out of parallelism
24.	TE to Cpl road 200 pr	Out of parallelism
25.	TE to Hasapaur Rd 200 pr	Out of parallelism
26.	TE to Basavnagar 200 pr	Out of parallelism
27.	TE to Basavnagar 400 pr	Out of parallelism
28.	Hasapur road to Village 100 pr	Out of parallelism
29.	Hasapur to Hasapur Village 100 pr	Out of parallelism
30.	Hasapur Vill 50 pr 100m	Out of parallelism
31.	Hasapur Vill 50 pr 150 m	Out of parallelism
32.	Akkalkot Local 200 pr	Out of parallelism

ANNEXURE-II

CEA Case No.: MRA-1231			Map Scale : 1 cm= 500 m		
Name of the Power line: 400 kV S/C line on D/C towers from 400/33 kV RGSPL PSS-4, Konhali to 765/400/220 kV Limbi Chincholi (PGCIL) Solapur S/s			Total Length : 13.318 km		
			S.R. Value : 15000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
Central Railway: N.153/PTCC/400kV/MAH-856 Date: 05.01.2024					
1	Tikkerwadi to Hotgi		Out of parallelism		
2	Hotgi to Tilati		Out of IV consideration zone		
3	Tilati to Akkalkot road		Out of IV consideration zone		