



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.: AND-704		
Induced Voltage (IV) calculation in respect of PTCC proposal LILO of 220 kV Gooty – Shapuram DC line at 220 kV Dharmavaram SS (1.642 km)- regd.		
S. No	Reference No.	Dated
(i)	APTRANSCO: CPT 150/SE/PM/Dharmavaram/PTCC proposal/D.No.2540/20	06.11.2020
(ii)	APTRANSCO: Email _ Emd Parameters	12.02.2026
(iii)	BSNL:SR-PTCC/SAP200720224124/02	05.01.2026
(iv)	South Central Railway: SG.85/4/3/PTCC/SCR/2023-24/AP22 RTD	13.02.2024
(v)	South Western Railway: SG/SWR/PTCC/106273/2790	03.03.2025
(vi)	Defense: B/46937/Sigs7(b)/4655	21.07.2025

The PTCC proposal submitted vide above references (i) and (ii) have been examined. The LF induction on Block and Telecom circuits of South-Central Railway and South Western Railway with respect to details furnished vide above reference (iv) and (v) respectively has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of South-Central Railway and South Western 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. DET PTCC, SZ, Bangalore has issued NOC vide reference (iii) above.

ADG (Telecommunications) has issued No Objection Certificate (NOC) vide reference (vi). (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
220 kV Dharmavaram SS	150	20	0.0082	NA	NA	NA	NA

As per the details submitted by BSNL vide reference (iii) above, no Telephone Exchange is falling in the EPR zone of the proposed substation.

Taking above into consideration, necessary action for issuance of PTCC route approval (RAC) shall be taken under intimation to this office in the stipulated period as specified in PTCC Manual and subsequent CLPTCC meetings.

As per the decision taken in 111th and 112th CLPTCC meeting, necessary instructions for “*Deemed Energization approval*” shall be specified while issuing RAC.

Encl.: As above

Chief Engineer

To,

1.	Divisional Engineer Telecom (PTCC), Southern Zone	BSNL, Inspection Circle, 2nd Floor, Sanchar Complex, WMS Compound, Jayanagar 5th Block, 9th Main, 47th Cross, Bangalore-560041	
2.	PCSTE/SCR	O/o Principal Chief Signal & Telecom Engineer, 7th Floor, Rail Nilayam, Secunderabad-500025	
3.	PCSTE/SWR	Principal Chief Signal & Telecom Engineer, Rail Soudha, Gadag Road, Hubballi-580020	
4.	Chief Engineer Construction	Chief Engineer Construction, Vidyut Soudha, Vijayawada -520004	Copy for information

ANNEXURE-I

CEA Case No.: AND-704		Map Scale : 1 cm= 500 m			
Name of the Power line: LILO of 220 kV Gooty – Shapuram DC line at 220 kV Dharmavaram SS		Total Diverted Length: 1.642 km			
		S.R. Value : 50000 Ohm-cm			
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

SCR Letter No:SG.85/4/3/PTCC/SCR/2023-24/AP22 RTD Dated 13.02.2024

1.	ZPL-CCA	Out of Parallelism			
2.	CCA-DMM	1.5	0.0022	27436	60
3.	DMM-CCI	Outside IV consideration zone			

ANNEXURE-II

CEA Case No.: AND-704 Name of the Power line: LILO of 220 kV Gooty – Shapuram DC line at 220 kV Dharmavaram SS			Map Scale : 1 cm= 500 m Total Diverted Length: 1.642 km S.R. Value : 50000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

SWR Letter No: SG/SWR/PTCC/106273/2790 Dated 03.03.2025

1.	Nagasamudram – Dharmavaram	0.6	0.0002	27754	6
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AND-704

Directorate General of Signals (Signals-7)
General Staff Branch
Integrated HQ of MoD (Army)
DHQ PO, New Delhi -11

B/46937/Sigs-7(b)/4655 dt 2 Jul 2025

Chief Engineer Project
Transmission Corporation of Andhra Pradesh Ltd
Vidyut Soudha
Vijayawada - 520 004

ERECTION OF 220KV LILO LINE (3.5KM) FROM EXISTING 220KV
GOOTY - SHAPURAM LINE TO PROPOSED 220KV SS
DHARMAVARAM IN ANANHAPURAMU DISTRICT - TOPO MAPS -
DEFENSE CLEARANCE - REQUESTED - REGARDING

1. Ref your letter No CE(Projects)/SE/Proj/EE-1/DEE-2/F. DMM/D.NO. 15/25 dt 24 Jan 2025.
2. No Objection Certificate (NOC) is **accorded** based on inputs provided as per Map sheet received vide your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.



(Puneet Lakhanpal)
Lieutenant Colonel
General Staff Officer Grade-1(Communication)
for Additional Director General(Telecommunication)



Encls: As above

Copy to:-

HQ Southern Comd (Sigs)

Chief Engineer, PSCD Division
Central Electricity Authority
Room No 702 (North Wing)
Sewa Bhawan, RK Puram, Sector-1
New Delhi-110 066

for info pl.

Sh. Anshu (DD)
20/07

PSCD Division

Diary No. 1008

Date 28-7-2025