



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. : TNG-152		
Induced Voltage (IV) calculation for PTCC proposal of 220 kV D/C Transmission line from existing 220/132kV Mandamarri S/s to proposed 67.5 MW Solar Power Plant of M/s Singareni Collieries Company Limited. (Length - 6.616 km)- regd.		
S. No	Reference No.	Dated
(i)	TGTRANSCO: CE(Const)/SE-II/DE-III/ADE-V/F.67.5MW SCCL 220KV Mandamarri /PTCC/D.No.671/25	15.09.2025
(ii)	TGTRANSCO: e-mail	28.01.2026
(iii)	TGTRANSCO: Undertaking	27.01.2026
(iv)	BSNL: SR-PTCC/MTG221220250002/2025-26	22.12.2025
(v)	South Central Railway: No.SG.85/4/3/PTCC/2025-26/SCRTS 04 RTD	24.12.2025

The PTCC proposal submitted vide reference (i) and (ii) has been examined. As per the Telecom Details submitted by BSNL vide above reference (iv), there are no telecom lines or assets existing within 8 km boundary and hence IV computation is not done. The LF induction on Block and Telecom circuits of South Central Railway with respect to details furnished vide above reference (v) has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of South Central Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered.

EPR zone for proposed S/s is mentioned below:

Name of the proposed Substation	Half diagonal distance , D/2 (mts)	Fault Current I (A)	Resistance of Earth Mat, R (ohms)	d (mts) at 430 V	d (mts) at 650 V	d (mts) at 7 kV	d (mts) at 10 kV
220 kV Solar Power Plant of M/s SCCL	30	50	0.33	1121	732	41	20

Telecommunication details from Defense are pending and the power utility has shown urgency for charging of the line and requested for provisional PTCC approval vide above reference (iii). Taking above into consideration, necessary action regarding issuance of provisional PTCC approval for the subject cited transmission line may be taken under intimation to this office.

Encl.: As above

Chief Engineer

To,

1.	Divisional Engineer Telecom (PTCC), Southern Zone	O/o Divisional Engineer Telecom (PTCC) QA & Inspection circle, 2 nd floor, CTX building, Kaleswara Rao Market Road, Vijayawada -1	
2.	Principal Chief (S&T) SCR	O/o Principal Chief Signal & Telecom Engineer, 7 th Floor, Rail Nilayam, Secunderabad - 500003	Annexure-I
3.	Director General of Signals	General Staff Branch, Integrated HQ, MoD (army), Sena Bhawan, DHQ, PO, New Delhi- 110 105	With a request to provide details of Telecom assets/ NOC at the earliest for issuance of final RAC.
4.	Chief Engineer, Construction, TGTRANSCO	Vidyut Soudha, Hyderabad - 500082	Copy for information.

ANNEXURE-I

CEA Case No.: TNG-152			Map Scale : 1 cm= 500 m		
Name of the Power line: PTCC proposal of 220 kV D/C Transmission line from existing 220/132kV Mandamarri S/s to proposed 67.5 MW Solar Power Plant of M/s Singareni Collieries Company Limited.			Total Length : 6.616 km		
			S.R. Value : 30000 Ohm-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

South Central Railway: No.SG.85/4/3/PTCC/2025-26/SCRTS 04 RTD Dated 24.12.2025

Affected Blocks & Telecom Circuits Details

1.	Rechni Road - Bellampalli	Out Of Parallelism			
2.	Bellampalli – Mandamarri	4.75	0.02041	14700	300
3.	Mandamarri – Ravindrakhani	0.6	0.00057	7050	4
4.	Ravindrakhani - Manchiryal	Out Of Parallelism			