



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. : BHR-202		
Induced voltage calculation for PTCC approval of 132 kV S/C line from 132kV switch yard of KTPS to 132kV/25kV Railway Traction SS at Nawadih (Length: 33.847km)- regd.		
S. No	Reference No.	Dated
(i)	Railway Project : ECR/P/EL/DNR/Nawadih TSS/Trans. Line/PTCC	09.02.2024
(ii)	BSNL: DE/PTCC/ER/EBR070220245564/01	29.02.2024
(iii)	East Central Railway: ECR/P/EL/DNR/Nawadih TSS/Trans.Line	27.02.2024
(iv)	Defense: B/46937/Sigs 7(b)/3723	18.04.2024

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on Block and communication circuits of East Central Railway with respect to details furnished vide above reference (iii) have been computed. The voltage likely to be induced on paralleling block and communication circuits of East Central Railway under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered.

BSNL vide above reference (ii) and DG Signals, MoD vide above reference (iv) have issued No Objection Certificate (NOC) (enclosed as Annexure-II).

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
132/25 kV Railway Traction S/S , Nawadih	58.5	9.261	0.151	132	67	NA	NA

As per the details submitted by BSNL vide reference (ii) above, no telephone exchanges are falling in the EPR zone of the proposed substation.

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

Encl.: As above

Chief Engineer

To,

1.	Divisional Engineer (PTCC), Eastern Zone	BSNL O/o DET(PTCC), Eastern Zone, QA & Inspection Circle, Q.A Bhawan, EP-GP Block, Sector-V, Salt lake, Kolkata-700091.
2.	GM(S&T)	East Central Railway, Office of the General Manager (S&T), Hajipur - 844118

ANNEXURE-I

CEA Case No.: BHR-202		Map Scale : 1 cm= 500 m			
Name of the Power line: 132 kV S/C line from 132kV switch yard of KTPS to 132kV/25kV Railway Traction SS at Nawadih		Total Length : 33.847 km			
		S.R. Value : 5000 Ohm-cm			
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
EAST CENTRAL RAILWAY: ECR/P/EL/DNR/Nawadih TSS/Trans.Line Date: 27.02.2024					
1	Koderma – Koderma Town	2.121	0.0003	8218	2
2	Koderma Town- Nawalsahi Halt	4.778	0.0004	5559	2
3	Nawalsahi Halt- Nawadih	6.789	0.0142	7881	112
4	Koderma-Pipradih	0.32	0.00004	8871	0.35
5	Koderma- Hirodih	4.472	0.0047	7931	37
6	Hirodih- Sarmatand	9.396	0.0015	5597	8
7	Sarmatand-Yadudih	3.65	0.00033	4621	2
8	Yadudih-Parsabad	4.291	0.0004	4564	2

Annexure II

E-mail: webstar@nic.in

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

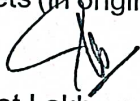
B/46937/Sigs 7(b)/3723

18 Apr 2024

Dy. CEE/GELF/DMH
 Railway Project, Danapur
 Near Jagjeevan Stadium, P.O.-Khagaul
 Dist. Patna (Bihar), PIN-801105

**PTCC CLEARANCE OF 132K S/C TRANSMISSION LINE ON 132KV D/C TOWER
 STRUCTURE ORIGINATING FROM 132KV SWITCH YARD OF KODERMA
 THERMAL POWER STATION (KTSPS) TO 132KV/25KV RAILWAY TRACTION SUB-
 STATION AT NAWADIH (JHARKHAND)**

1. Refer your letter No ECR/P/EL/DNR/Nawadih TSS/ Trans. Line/PTCC dt 09 Feb 2024 (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.


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

Enclosures : As above**Copy to :-**

The Divisional Engineer (PTCC)
 'D' Wing, 3rd Floor, Admn Bdg
 Telecom Complex,
 Juhu Tara Road
 Santacruz West, Mumbai-400054

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

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

DET (PTCC), Eastern Region
 Inspection & QA Circle, BSNL
 Q.A. Bhawan, EP-GP Block
 Sector-V, Salt Lake
 Kolkata-700091

- for information