

I/31217/2023



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

CEA Case No. : MP-491		
Induced Voltage (IV) calculation in respect of PTCC proposal for 220 kV DCDS line from 220 kV Pooling S/s RUMS at Goojarkhedi, Suwasra to 400 kV Mandsaur (MPPTCL) S/s (46.883 km) - regd.		
S. No	Reference No.	Dated
(i)	MPPTCL: 04-02/PTCC/2553/PS/2560	10.11.2021
(ii)	MPPTCL: 04-02/PTCC/1202/2083	14.09.2023
(iii)	BSNL: PTCC/WR/2021-22/MP-731	14.06.2022
(iv)	West Central Railway: WCR/N-HQ/120 PTCC-CORR-T-50-Pt-III Case 326	30.11.2021
(v)	Defense: B/46937/Sigs 7(b)/2658 received via MPPTCL email dated 17.05.2023	09.12.2021

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on communication circuits of BSNL and West Central Railway with respect to details furnished vide above reference (iii) & (iv) respectively have been computed. The voltages likely to be induced on paralleling communication cables of BSNL and West Central Railway under Single Line to Ground fault conditions are enclosed at Annexure-I & II respectively. The screening factors as applicable have been considered. Vide reference (v) above, Defense have issued NOC (enclosed as Annexure-III).

EPR details for the proposed substations are given 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
220/33 kV RUMS Pooling S/s at Goojarkhedi	90.31	24	0.20	917.8	576.6	NIL	NIL

As per the details submitted by BSNL, no telecom exchanges are falling within 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

Director

I/31217/2023

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.	GM (S&T)	West Central Railway, O/o GM(S&T), 1 st floor, Annex II Building, Jabalpur	
3.	Chief Engineer (Plg. & Design)	MPPTCL, Block No. 3, Shakti Bhawan, Rampur, Jabalpur – 482008	Copy for information

I/31217/2023

ANNEXURE-I

CEA Case No.: MP-491		Map Scale : 1 cm= 500 m			
Name of the Power line: 220 kV DCDS line from 220 kV Pooling S/s RUMS at Goojarkhedi, Suwasra to 400 kV Mandsaur (MPPTCL) S/s		Total Length : 46.883 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.

BSNL Letter No: PTCC/WR/2021-22/MP-731 Date: 14.06.2022

1	Sitamau Exchange to Laduna Chauraha	IV less than 430 V			
2	Laduna Chauraha to Sadar Bazar				
3	Exchange to Shriram School Campus				
4	Laduna Chauraha to Adarsh Hotel				
5	Sitamau Exchange to Village				
6	Shriram School to Tehsil				
7	Suwasra Exvhange to Runija Road				
8	Suwasra Exchange to Sabjee Market				
9	Suwasra Exchange to Bus Stand				
10	Khejadia Exchange to Main Road				
11	Main Road to Khejadia Village				

I/31217/2023

ANNEXURE-II

CEA Case No.: MP-491 Name of the Power line: 220 kV DCDS line from 220 kV Pooling S/s RUMS at Goojarkhedi, Suwasra to 400 kV Mandsaur (MPPTCL) S/s			Map Scale : 1 cm= 500 m Total Length : 46.883 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.
West Central Railway Letter No: WCR/N-HQ/120 PTCC-CORR-T-50-Pt-III Case 326 Date: 30.11.2021					
1	Shamgarh – Suwasra	Out of parallelism			0
2	Suwasra - Nathukheri	1.3	0.0016	11875	19
3	Nathukheri – Chau Mahla	2.4	0.0004	13916	6

I/31217/2023

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)/2658/

09 Dec 2021

Chief Engineer (Plg. & Design)
Madhya Pradesh PowerTransmission Co. Ltd.
Block No. 3, Shakti Bhawan, Rampur,
Jabalpur(M.P.)482008

4710
20/12/24

CONSTRUCTION OF 220KV DCDS LINE FROM 220KV S/S POOLING S/S
RUMS AT GOJARKHEDI, SUWASRA FOR INTERCONNECTION OF SOLAR
P.V. PLANT OF RUMS TO 400KV S/S MANDSAUR (SITAMAU) MPPTCL FOR
INTERNAL POWER EVACUATION SYSTEM FROM RUMS, SUWASRA-
PTCC ROUTE APPROVAL

S.E.(Planning)


S.E.(Coordination)

S.E.(STU Cell)

S.E.(Design & Estt.)

S.O.

- Refer your letter No 04-02/PTCC/2553/PS/2560 dt 10 Nov 2021
(copy att.)
- No Objection Certificate (NOC) is accorded based on inputs provided as per Map sheet received vide your letter mentioned above.
 - 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 aboveCopy 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

EE PS-PTCC
20/12

Smr Khan
me