



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

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No. CEA/PCD/PTCC/MP-453/592-94

Date 23.09.2020

**Subject: Induced Voltage calculation in respect of PTCC proposal for 220 kV DCDS line from Rewa (UMSP) 400 kV Grid S/s to be constructed by PGCIL at Gurh to Rewa 220 kV S/s (Silpara) length – 32.362 kms.**

- Ref:** (i) MPPTCL letter no. 04-01/PTCC/2569/TR-I/11866 dated 04.02.2019  
(ii) BSNL letter no. IC/MBI/PTCC/MP-627 dated 01.10.2019  
(iii) West Central Railway letter no. WCR/N-HQ/120 PTCC-T-50-III Case-251 dated 18.07.2019  
(iv) Defense letter no. B/46937/Sigs 7(b)/1468 dated 19.03.2019

MPPTCL submitted the subject proposal vide above cited reference (i). The low frequency induction on BSNL and Railway Telecommunication circuits as per details furnished vide above cited references (ii) and (iii) respectively has been examined. The Soil Resistivity value has been taken as 7,500 Ohms-cm, as per data submitted by the Power Authority. Voltages likely to be induced on paralleling BSNL Telecom Cables and Railway Telecommunication circuits under single line to ground fault condition are enclosed at Annex-I&II respectively. The screening factors as applicable have been considered. Defense has accorded NOC vide above Ref.(iv) for the above line (a copy enclosed at Annex-III).

Taking above into consideration, take necessary action regarding issue of PTCC route approval.

Enclosures: As above.

(Upendra Kumar)  
Chief Engineer

To,  
Divisional Engineer (PTCC), Inspection Circle,  
Bharat Sanchar Nigam Limited (BSNL),  
3<sup>rd</sup> Floor, D-Wing, BSNL Admin Building  
Juhu Tara Road, Santacruz (West), Mumbai-400054

M/C

**Copy to:**

1. GM(S&T), West Central Railway, S&T Deptt., 1<sup>st</sup> Floor, Annex II Building, Platform No. 6, Jabalpur - 482001 (with Annexure-II).
2. Chief Engineer (Procurement), MPPTCL, Block No. 3, Shakti Bhawan, Rampur, Jabalpur (M.P.) - 482008

CEA Office Case No.: <b>MP-453</b>	Map Scale: 1:50,000
DET (PTCC) Office Case No.: IC/MBI/PTCC/MP-627	Route Length: 32.362 Kms
Railway Office Case No.:	Average SR Value: <b>7500</b> Ohm cms

Name of Power Line: **220KV DCDS line from Rewa (UMPS) 400KV Grid S/s to be created by PGCIL at (Gurh) to Rewa 220KV S/s (Silpara).**

S. No.	Name of Telecom Line/ Cable	Length of Parallelism in Kms.	Mutual Coupling in Ohms	Fault Current in Amps	Induce Voltage in Volts
	REWA SSA				
	SDOT Rewa				
	Gurh T/Exchange				
(1)	Gurh Exch to Bus Stand (A-C) - 50 Pair	}	}	}	}
(2)	Gurh Exch to Thana (A-B) - 5 Pair				
(3)	OFC (Armored) - Silpara PGCIL (Control Room) to Main OFC Joint Near Canal (Overhead) - 6 Fibre				
			<b>LESS THAN</b>	<b>430V</b>	

*Tanuj*

**तनुज / TANUJ**  
 सहायक निदेशक-II / Asstt. Director II  
 केन्द्रीय विद्युत प्राधिकरण / C.E.A.  
 विद्युत मंत्रालय / Ministry of Power  
 भारत सरकार / Govt. of India  
 नई दिल्ली / New Delhi-66

## ANNEXURE - II

Case No.: MP-453

Name of the Power line: 220 kV DCDS line from Rewa (UMSP)  
400 kV Grid S/s to be constructed by PGCIL at Gurh to Rewa 220  
kV S/s (Silpara)

Map Scale : 1cm=500mts

Total Length : 32.362 km

S.R. Value : 7,500 Ohms-cm

S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.
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## WEST CENTRAL RAILWAY

letter no. WCR/N-HQ/120 PTCC-T-50-III Case-251 dated 18.07.2019

Affected Blocks & Telcom Circuits Details

1.	Rewa - Silpara	0.85	0.000644	10000	6.44
2.	Silpara - Govindgarh	1.5	0.000314	9700	3.04
3.	Govindgarh - Baghwar	Outside IV consideration zone			0
4.	Baghwar - Rampur Naikin				0
5.	Rampur Naikin - Churhat				0

TANUJ/TANUJ

असिस्टेंट डायरेक्टर-II / Asstt. Director-II  
 केन्द्रीय विद्युत प्राधिकरण / C.E.A.  
 विद्युत मंत्रालय / Ministry of Power  
 भारत सरकार / Govt. of India  
 नई दिल्ली / New Delhi-60

Tele : 23019746

MF-53

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

B/46937/Sigs 7(b)/1468/

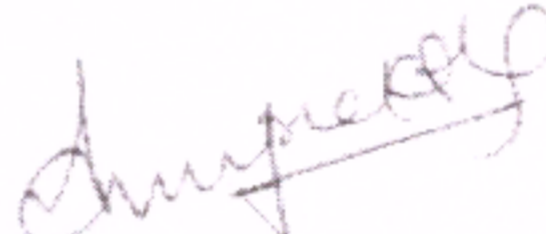
15 Mar 2019

Chief Engineer (Procurement)  
Madhya Pradesh Power Transmission Co. Ltd.  
Block No. 3, Shakti Bhawan, Rampur,  
Jabalpur(M.P.)482008

**PTCC ROUTE APPROVAL FOR CONSTRUCTION OF 220KV DCDS LINE FROM  
REWA (UMSP) 400KV GRID S/S TO BE CREATED BY PGCIL AT (GURH) TO REWA  
220KV S/S (SILPRA)**

1. Ref your letter No 04-01/PTCC/2569/TR-I/11866 dt 04 Feb 2019 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheet received under your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.

364  
28/3/2019

  
(A Rawat)  
Maj  
GSO 1 (Comn)  
for SO-in-C

Enclosures : As above

Copy to :-

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

for information.

25/3/19  
28/3/19  
29/3/19  
29/3