



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/PNB-364/627-29

Date: 09.10.2020

**Subject: - Induced voltage calculation in respect of 400 kV DC line from the proposed 400 kV switching Station at Village Behman Jassa Singh to 400 kV S/S in the premises of HPCL, Mittal Energy Ltd.-Reg.**

**Reference: -**

- (i) PSTCL, Patiala Endst. No. 880 dated: 17.10.2019 and Ref. No. 2096 dated 14.09.2020 containing EPR details.
- (ii) BSNL Ref. No. DET/PTCC/ND/DV-9623/PB-917/2019-2020 dated: 16.01.2020
- (iii) North Western Railway Ref. No. SG/158/NWR/PTCC/758 Rcd. dated 27.07.2020
- (iv) Defense Ref. No. B/46937/Sigs 7(b)/1879 dated 20.01.2020.

The PTCC proposal submitted vide ref. (i) has been examined. The low frequency induction on BSNL telecom Lines and Railway Block and Communication circuits as per details furnished vide above cited references (ii) and (iii) respectively has been examined. The Average Soil Resistivity value has been taken as 12,500 Ohms-cm, as per data submitted by Power Authority. Voltages likely to be induced on paralleling BSNL Telecom Lines and North Western Railway Block and Communication circuits under single line to ground fault condition are enclosed at Annex-I and Annex-II respectively. The screening factors as applicable have been considered. In addition, Defense has accorded NOC vide above ref. (iv) for this line (a copy enclosed at Annex-III).

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

Encl.: As above.

उपेन्द्र कुमार

(Upendra Kumar)  
Chief Engineer

09.10.2020

To,  
The DET (PTCC), BSNL, Northern Zone,  
O/o PGM (N), QA & Inspection Circle,  
D-Tax Building, Eastern Court  
Janpath, New Delhi 110001.

M/C

Contd.



## ANNEXURE - II

Case No.: PNB-364			Map Scale : 1cm=500mts		
Name of the Power line: 400 kV DC line from the proposed 400 kV switching Station at Village Behman Jassa Singh to 400 kV S/S in the premises of HPCL, Mittal Energy Ltd.			Total Length : 17.255 Km.		
			S.R. Value : 12.500 Ohms-cm		
S.No.	Telecom. Details	Length of Parallelism in Km.	Mutual Coupling in Ohms.	Effective Fault current in Amps.	I.V in Volts.

NORTH WESTERN RAILWAY					
Ref. No: SG/158/NWR/PTCC/758 DATED: 18-12-2019 (As per topomap received on 27/07/2020)					
<u>Affected Blocks &amp; Telecom Circuits Details</u>					
1	Shergarh to Raman	0.6	0.0002	13265	03
2	Raman to Ratangarh Kanakwal	2.6	0.0013	14131	18
3	Ratangarh Kanakwal to Kalanwali	1.1	0.0003	11084	3

*Janraj*

ANUJ  
Asst. Director-II  
C.E.A.  
Ministry of Power  
Govt. of India  
Delhi

Tele : 23019746

(Annexure -III)

Diary No. 273 JSPSITS  
Dated 18/2/2020

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

B/46937/Sigs 7(b)/1879/

Office of Engineer-in-Chief/Transmission System  
Punjab State Transmission Corporation Limited  
3<sup>rd</sup> Floor, Shakti Sadan, Patiala-147001

20 Jan, 2020 By: CEL  
AC/TS  
Sr. PS  
SE/TS

PTCC CASE FOR 400KV LINE FROM AT PROPOSED 400KV SWITCHING STATION AT VILLAGE BEHMAN JASSA SINGH TO 400KV S/S IN THE PREMISES OF HPCL, MITTAL ENERGY LTD.

Dy C...  
Addl. S...  
P...  
18/2/2020

- 1 Ref your Endsl. No 876 dt 17 Oct 2019 (copy att).
- 2 No Objection Certificate (NOC) is accorded based on inputs received under your letter mentioned above.
- 3 Documents alongwith map sheets (in original) are returned herewith for your further necessary action

(A Rawal)  
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

Divisional Engineer Telegraph (PTCC)  
O/o GM (North), BSNL, QA & Inspection Circle,  
CTS Compound, Africa Avenue Road,  
Najaf Nagar, New Delhi-110023

} for information