



भारत सरकार  
Government of India  
विद्युत मंत्रालय  
Ministry of Power  
केन्द्रीय विद्युत प्राधिकरण  
Central Electricity Authority  
पावर कम्युनिकेशन डवलपमेंट प्रभाग  
Power Communication Development Division

No. CEA/PCD/ PTCC/HRA-226/145-147

Date: 24.02.2020

DET (PTCC), Northern Zone,  
Bharat Sanchar Nigam Limited (BSNL),  
O/o PGM(N), Inspection Circle,  
CTS Compound, Netaji Nagar,  
New Delhi - 110023

**Subject: Induced Voltage calculation in respect of PTCC proposal of 220 kV D/C line from 800 kV HVDC PGCIL, Bhadson to 220 kV S/S Salempur**

- Ref:** (i) Xen TS Division, , HVPNL, letter no. CH-5/PTCC dated 03.09.2019  
(ii) BSNL letter no. DET/PTCC/ND/DV-9648/HR-849/2019-2020 dated 17.12.2019  
(iii) Northern Railway letter no. 342-SIG/1/PTCC/2019-20/12/02 dated 10.12.2019  
(iv) Defense letter no. B/46937/Sigs 7(b)/1799 dated 31.10.2019

The PTCC case submitted vide reference (i) has been examined. 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 15000 Ohms-cm, as per data submitted by 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 vide above Ref.(iv) has accorded NOC for the line. (A copy enclosed at Annex-III).

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

**Encl.:** As above

*Upendra Kumar*  
24.2.2020  
(Upendra Kumar)  
Chief Engineer

**Copy to:**

- 1) GM(S&T), Northern Railway, Headquarter Office, Baroda House, New Delhi.(Only Annex-II)
- 2) Xen, TS Division, HVPNL, 220 kV S/S HVPNL, Madanpur, Panchkula, Sector - 26, PIN-134116.

*MIC*

Case No. : HRA-226

Name of the Power Line: 220 KV D/C Line from 800 KV HVDC,  
PGCIL, Bhadson to 220 KV Salempur

Annexure I

Toposheet Scale : 1cm=500mts  
Total Length : 6.657 Kms  
S.R Value : 15600 Ohm-cm

Sl. No.	Name of Telecom Line	LOP in Kms	MC in Ohms	Fault Current (Amps)	IV in Volts
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BSNL					
Reference No. DET/PTCC/ND/DV-9643/HR-849/ Date: 17.12.19 2019-2020					
BSNL Details					
1	Bhadson Exge. To Udana ( 100 Pr.)				
2	Bhadson Exge. To Haibatpura( 100 Pr.)				
3	Bhadson Exge. To Bairsal ( 100 Pr.)				
4	Bhadson Exge. To Bhadson Village ( 100 Pr.)				
5	Bhadson Exge. To Jhimheri ( 20 Pr.)				
6	Bhadson Exge. To Bairsal ( 20 Pr.)				IV less than 430V
7	Bhadson Exge. To Swarn Majra ( 20 Pr.)				
8	Bhadson Exge. To Rampur ( 20 Pr.)				
9	Bhadson Exge. To Royal Khana ( 50 Pr.)				
10	Kheri Juttan To Swarn Majra ( 20 Pr.)				

Urc  
24.12.2019  
मुख्य अभियंता/Chief Engineer  
केन्द्रीय विद्युत प्राधिकरण/C.E.A.  
विद्युत मंत्रालय/Ministry of Power  
भारत सरकार/Govt. of India  
नई दिल्ली/New Delhi



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


B/46937/Sigs 7(b)/1799/

31 Oct 2019

O/o Executive Engineer,  
TS Division  
Haryana Vidyut Prasaran Nigam Limited  
220kV Sub-Station HVPNL, Madanpur  
Panchkula, Sector-26, PIN-134116

**PTCC APPROVAL FOR 220KV D/C LINE FROM 800KV HVDC, PGCIL, BHADSON TO 220KV  
S/STN SALEMPUR**

1. Ref your Memo No Nil dt Nil (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.

  
(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

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

for information