



सत्यमेव जयते

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/BHR-155/1151-1152

Date :05.12.2019

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

**Subject:** Induced voltage calculation in respect of LILO of 400 kV D/C Nabinagar-Gaya at Chandauti

**Ref. :** (i) PGCIL Ref. No. ER-I/PAT/ENGG/PTCC/LILO Gaya Dated: 29.05.2019  
(ii) BSNL Ref. No. DE/PTCC/ER/EJH040620192458/01 Dated: 02.09.2019  
(iii) East Central Railway, Ref.no. ECR/S&T/PTCC/134,Pt.III/550 Dated: 01.07.2019  
(iv) Defense Ref. No. B/46937/Sigs 7(b)/1680/ Dated: 31.07.2019

The PTCC proposal submitted vide ref. (i) has been examined. The low frequency induction on BSNL cables as per details furnished vide ref. (ii) has been examined. The Soil Resistivity value has been taken as 5,000 Ohms-cm, as per data submitted by Power Authority. Voltages likely to be induced on paralleling BSNL cables under single line to ground fault condition are enclosed at Annex-I. The screening factors as applicable have been considered. Vide ref. (iii) above; East Central Railway has intimated that no railway line comes within 8 km of proposed transmission line. Therefore, Induced voltage calculation is not required for Railway. Defense has accorded 'No objection Certificate' (NOC) vide above ref. (iv) for this line (a copy enclosed at Annex-II).

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

**Encl.:** As above.

उपेन्द्र कुमार

(Upendra Kumar)  
Chief Engineer, PCD

**Copy to:**

1. Sr. General Manager (Engg), PGCIL, Board Colony, Shastri Nagar, Patna-800023.

M/C

**Particulars details of parallel Telecom alignment proforma (ANNEXURE-1)**

Case no.		Name of the power line : LILO OF 400 KV D/C (QUAD) NABINAGAR II- GAYA AT CHANDAUTI		Map scale : 1" = 1 Mile / 1 cm = 500MIS.			
Sl.no.		Telecom circuits		Total length :- 2.969 KM			
		Average S.R. value :		page			
1	2	4	5	6	7	8	9
1	SHERGHATI EXCHANGE	SHRX					
I	SHERGHATI xge-----Pillar (P) ( 400 pr U/G copper cable, distance=0.1 km)	SHRX ---- P					
II	P----- (a) ( 400 pr U/G copper cable, distance=1.1 km)	P----- a					
III	P----- (b) ( 20 pr U/G copper cable, distance=0.5 km)	P----- b	} Outside IV consideration				
IV	P----- (c) ( 20 pr U/G copper cable, distance=0.5 km)	P----- c					
V	P----- (d) ( 200+100 pr U/G copper cable, distance=1.5 km)	P----- d		} Range			
VI	(d)----- (e) ( 20 pr U/G copper cable, distance=0.5 km)	d----- e					
VII	P----- (f) ( 200 pr U/G copper cable, distance=0.8 km)	P----- f					
VIII	(f)----- (g) ( 50 pr U/G copper cable, distance=0.7 km)	f----- g					
IX	(f)----- (h) ( 20 pr U/G copper cable, distance=0.7 km)	f----- h					
2	KHANDEL EXCHANGE	KHX					
I	KHANDEL exchange ----- (a) (20 pr U/G copper cable, distance=0.3 km)	Cx----- a	} Outside IV consideration				

*34-5-2015*

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

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)/1680/

31 Jul 2019

Sr. General Manager (Engg)  
Power Grid Corporation of India Limited  
Eastern Region-I RHQ, Board Colony  
Shastri Nagar, Patna-800023 (Bihar)

**PROPOSAL FOR PTCC APPROVAL FOR CONSTRUCTION OF LOOP IN & LOOP OUT (LILO)  
OF 400KV D/C NABINAGAR-GAYA TRANSMISSION LINE AT 400/220/132KV CHANDAUTI  
SUB-STATION (NEW), ASSOCIATED WITH ERSS-XXI UNDER TARIFF BASED COMPETITIVE  
BIDDING (TBCB) PROJECTS**

1. Ref your letter No ER-I/PAT/ENGG/PTCC/LILO Gaya dt 29 May 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.



(Anurag Mishra)  
Lt Col  
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.