



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/MRA-1154/496-98

Date: 03.09.2020

**Subject: Induced Voltage calculation in respect of PTCC proposal of 220 kV D/C Line LILO on 220 kV Ambazari – Amravati S/C Line for proposed 220 kV Hetikundi (Karanja) Substation.**

- Ref:** (i) MSETCL letter no. MSETCL/CO/PS/S-I/PTCC/B-563/01111 dated 04.02.2019  
(ii) BSNL letter no. IC/MBI/PTCC/MRA-2408/05 dated 11.03.2019  
(iii) Western Railway letter no. N.153/PTCC/220kV/MAH-718 dated 13.02.2019  
(iv) Defense letter no. B/46937/Sigs 7(b)/1464 dated 19.03.2019

MSETCL submitted the subject proposal vide above cited reference (i). The low frequency induction on BSNL circuits as per details furnished vide above cited reference (ii) has been examined. The Soil Resistivity value has been taken as 1,00,000 Ohms-cm, as per data submitted by Power Authority. Voltages likely to be induced on paralleling BSNL Telecom Cables under single line to ground fault condition are enclosed at Annex-I. The screening factors as applicable have been considered. Central Railway and Defense have accorded NOC vide above reference (iii) and (iv) respectively for the above line (Copies enclosed at Annexure – II and Annexure – III respectively).

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

Enclosures: As above.

*Upendra Kumar*  
03.09.2020

(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

*MIC*

**Copy to:**

1. GM(S&T), Central Railway, CSMT Mumbai, Headquarters Office, S&T Branch, 3rd Floor, Annex Bldg, Mumbai CST, Mumbai-400001 (with Annexure-II).
2. Chief Engineer(Project Schemes), MSETCL, Plot No. C-19, E-Block, Prakashganga, Bandra-Kurla Complex, Bandra (East), Mumbai – 400051.



CEA office case No. - <u>MRA-1154</u>	Map scale - 1 cm = 500 meter
DEI (PTCC) office case No - <u>MRA 2408</u>	Route length - 1.605 kms.
Railway office case no. -	Soil resistivity - 1,00,000 $\Omega$ -cm
Name of the power line	220KV DC Line, LTLO. on 220KV Ambazari-Ampavath sc line for proposed 220KV Helikundli (Karanja) STS

Sr. No.	Name of the Telecom line / cable	Length of Parallelism in Kms.	Mutual Coupling in Ohms	Fault Current in Amps	Induced Voltage in Volts
A	Thaneगाव Exchange				
1	Exchange to Bank of India 10 pair	400mts	}		< 430V
2	Exchange to Grampanchayat Thaneगाव 5 pair	300mts			
3					
4					
5					
6					
B	Kannamwargam Exchange				
7	Exchange to PTC 20 pairs	700mts	- OUT OF PARALLELISM		
8	Exchange to Bank of Maharashtra 10 pairs	300mts	}		< 430V
9	Exchange to Afandho 20 pairs	2 kms			
10					
11					
12					

फराज/FARAZ  
 उप निदेशक/Deputy Director  
 केन्द्रीय विद्युत प्राधिकरण/C.E.A.  
 विद्युत मंत्रालय/Min. of Power  
 भारत सरकार/Govt. of India  
 नई दिल्ली/New Delhi-66



MRA-1154

## CENTRAL RAILWAY



Headquarters Office  
S&T Branch,  
3<sup>rd</sup> Floor, Annex Bldg,  
Mumbai CSMT.

No:- N.153/PTCC/220kV/MAH-718

Date: 13<sup>th</sup> February 2019

DET (PTCC),  
3<sup>rd</sup> Floor, "D" Wing,  
Admin Bldg., BSNL Complex  
Santacruz(W),  
Mumbai - 400 054.

Sub. PTCC proposal for 220kV DC line, LILo on 220kV Ambazari - Amravati SC line for proposed 220kV Hetikundi (Karanja) SS.

Ref: MSETCL Office L. No. MSETCL/CO/PS/S-I/PTCC/B-563/1111 dated 04.02.2019.

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Based on the route map & Performa -II the proposed power line is 18km from the nearest existing railway station Katol.

Hence, this office hereby issues NOC subject to the condition that any adverse effect observed on Signal & Telecom Circuits of Central Railway after charging the proposed power line & substation, the power authority will bear the cost of damages to Central Railway assets.

( Vijay S Mohad )

ESTE / Network / HQ

For GM (S&amp;T)

Central Railway, CST Mumbai

Copy to: Chief Engineer (Projects Schemes),  
MSETCL, Prakashganga,  
Plot No. C-19, 'E' Block, BKC,  
Bandra (East),  
Mumbai - 400 051.



MRA - 1154

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)/1464/

19 Mar 2019

Office of the Chief Engineer,  
Projects Schemes Department  
Maharashtra State Electricity Transmission Co. Ltd  
"Prakashganga", Plot No C-19, 'E' Block,  
Bandra - Kurla Complex, Bandra (East),  
Mumbai-400051

**PTCC PROPOSAL FOR 220KV DC LINE, LILO ON 220KV AMBAZARI-AMRAVATI SC LINE FOR PROPOSED 220KV HETIKUNDI (KARANJA) S/S, LENGTH=1.605KMS**

1. Ref your letter No MSETCL/CO/PS/S-I/PTCC/B-563/No 01111 dt 04 Feb 2019 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheets received under your letter mentioned above.
3. Documents alongwith map sheets (in original) are forwarded herewith for your further 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

for information.

Handwritten notes and signatures in Hindi, including dates like 28.02.19 and 28/3/19.

