

I/30954/2023



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

| CEA Case No. : MP-460 | | |
|--|--|------------|
| Induced Voltage (IV) calculation in respect of PTCC proposal for LILO of 400 kV DCDS Nagda – Rajgarh line at proposed 400 kV S/s Badnawar (Ckt-I – 3.977 km & Ckt-II – 4.186 km) - regd. | | |
| S. No | Reference No. | Dated |
| (i) | MPPTCL: 04-01/PTCC/2327/TR-I/2716 | 26.02.2019 |
| (ii) | MPPTCL: 04-02/PTCC/1202/2083 | 14.09.2023 |
| (iii) | BSNL: PTCC/WR/2021-22/MP-609 | 29.10.2021 |
| (iv) | Western Railway: SG.158/28/10 (L-206) received via MPPTCL email dated 17.05.2023 | 19.09.2019 |
| (v) | Defense: B/46937/Sigs 7(b)/1510 | 11.04.2019 |

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on communication circuits of BSNL with respect to details furnished vide above reference (iii) respectively have been computed. The voltages likely to be induced on paralleling communication cables of BSNL under Single Line to Ground fault conditions are enclosed at Annexure-I. The screening factors as applicable have been considered. Vide reference (iv) above, Western Railway have issued NOC. Vide reference (v) above, Defense have issued NOC (enclosed as Annexure-II).

EPR details for the proposed substations are given below:

| Name of the proposed SS | Half Diagonal Distance, D/2 (mts) | Fault Current, I (kA) | Resistance of earthmat, R (Ohms) | d (mts) at 430 V | d (mts) at 650 V | d (mts) at 7 kV | d (mts) at 10 kV |
|-------------------------|-----------------------------------|-----------------------|----------------------------------|------------------|------------------|-----------------|------------------|
| 400 kV Badnawar S/s | 183.2 | 14.45 | 0.10 | 432.8 | 223.8 | NIL | NIL |

As per the details submitted by BSNL, no telecom exchanges are falling within the EPR zone of the proposed substation.

Taking above into consideration, necessary action for issuance of PTCC route approval may be taken under intimation to this office.

Encl.: As above

emf
 (म.ब.जी.नं.ब.)
 13.10.2023
 Director

To,

| | | | |
|----|--|---|----------------------|
| 1. | Divisional Engineer (PTCC), Western Zone | QA & Inspection circle, 1 st floor, D- wing, BSNL Admin Bldg., Junu Tara Road, Santacruz (West), Mumbai-400054 | |
| 2. | Chief Engineer (Plg. & Design) | MPPTCL, Block No. 3, Shakti Bhawan, Rampur, Jabalpur – 482008 | Copy for information |

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ANNEXURE-I

| CEA Case No.: MP-460 | | Map Scale : 1 cm= 500 m | | Total Length : Ckt-I – 3.977 km & Ckt-II – 4.186 km | |
|--|-------------------------------|------------------------------|--------------------------|---|---------------|
| Name of the Power line: LILO of 400 kV DCDS Nagda – Rajgarh line at proposed 400 kV S/s Badnawar | | S.R. Value : 25000 Ohm-cm | | | |
| S.No. | Telecom. Details | Length of Parallelism in Km. | Mutual Coupling in Ohms. | Effective Fault current in Amps. | I.V in Volts. |
| BSNL Letter No: PTCC/WR/2021-22/MP-609 Date: 29.10.2021 | | | | | |
| 1 | Badnawar Main Exchange | | | | |
| 1 | A (1600 pair, 500 mt) | | | IV less than 430 V | |
| 2 | B (400 pair, 2 km) | | | | |
| 3 | C (400 pair, 2 km) | | | | |
| 4 | D (200 pair, 4 km) | | | | |
| 5 | E (200 pair, 4 km) | | | | |
| 2 | Multhan Exchange | | | | |
| 1 | F (200 pair, 1.5 km) | | | IV less than 430 V | |
| 2 | G (200 pair, 1.5 km) | | | | |
| 3 | Tilgera Exchange | | | | |
| 1 | H (200 pair, 2 km) | | | IV less than 430 V | |
| 2 | I (200 pair, 2 km) | | | | |

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Tele : 23019746

MP-460

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

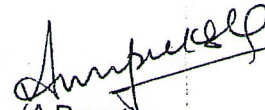
11 Apr 2019

B/46937/Sigs 7(b)/1510/

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

**CONSTRUCTION OF LILO OF 400KV DCDS NAGDA-RAJGARH LINE AT PROPOSED 400KV
S/S BADNAWAR - PTCC ROUTE APPROVAL**

1. Ref your letter No 04-01/PTCC/2327/TR-I/12716 dt 26 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.

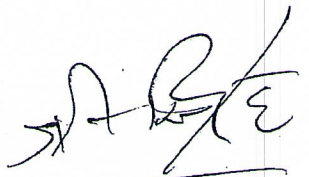


(A Rawat)
Maj
GSO 1 (Comn)
for SO-in-C

Enclosures : As above

458
22/11
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.



22/11

श्री अशोक कुमार
अधीक्षक प्रलय सिस्टम
22.04.19