



सत्यमेव जयते

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत प्रणाली संचार विकास प्रभाग
Power System Communication Development

| | | |
|--|--|--------------|
| CEA Case No. : KNK-1054 | | |
| Induced Voltage (IV) calculation in respect of PTCC proposal for UG LILO of 220KV Peenya – Subramanyapura SC line at proposed 220/66/11KV Nagarabhavi SS (2.475 km)-regd. | | |
| S. No | Reference No. | Dated |
| (i) | KPTCL: CEE/SLDC/PTCC/F-3652/6354-63 | 02.11.2023 |
| (ii) | BSNL: SR-PTCC/SKT 5907/02 | 21.06.2024 |
| (iii) | South Western Railway: SG/SWR/PTCC/F-3652/2620 | 19.12.2023 |
| (iv) | Defense: B/46937/Sigs 7(b)/3599 | 31.01.2024 |

The PTCC proposal submitted vide reference (i) has been examined. The LF induction on Block and Telecom circuits of BSNL and South Western Railway with respect to details furnished vide above reference (ii) and (iii) respectively has been computed. The voltage likely to be induced on paralleling Block and Telecom circuits of BSNL and South Western Railway under Single Line to Ground fault condition are enclosed at Annexure-I and Annexure-II respectively. The screening factors as applicable have been considered.

DG Signals, MoD has issued No Objection Certificate (NOC) vide reference (iv) (attached as Annexure –III).

EPR Zones for proposed substations are mentioned below.

| Name of the proposed SS | Half Diagonal Distance, D/2 (mts) | Fault Current, I (k A) | 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 |
|----------------------------|-----------------------------------|------------------------|----------------------------------|------------------|------------------|-----------------|------------------|
| 220/66/11kV Nagarabhavi SS | 143.55 | 28 | 0.09 | 698 | 413 | NA | NA |

As per the details submitted by BSNL vide reference (ii) above, no telephone exchanges are falling in 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

Chief Engineer,

To,

| | | | |
|----|---|--|----------------------|
| 1. | Divisional Engineer (PTCC), Southern Zone | BSNL, Inspection Circle, 2 nd Floor, Sanchar Complex, WMS Compound, Jayanagar 5 th Block, 9 th Main, 47 th Cross, Bangalore-560041 | |
| 2. | PCSTE/SWR | Principal Chief Signal & Telecom Engineer, Rail Soudha, Gadag Road, Hubballi-580020 | |
| 3. | Member(Power), KPTCL | Chief Engineer Electricity, SLDC #28, Race Course Road, Bengaluru-560009 | Copy for information |

ANNEXURE-I

| CEA Case No.: KNK-1054 Name of the Power line: UG LILO of 220KV Peenya – Subramanyapura SC line at proposed 220/66/11KV Nagarabhavi SS | | | Map Scale : 1 cm= 500 m Total Length : 2.475 km 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: SR-PTCC/SKT 5907/02 **Dated** 21.06.2024

CHANDRA LAYOUT TE(C)

| | | |
|------|---|-------------------|
| C-C1 | CHANDRA LAYOUT TE TO JYOTHINAGAR | IV less than 430V |
| C-C2 | CHANDRA LAYOUT TE TO GARDEN VILLAS | |
| C-C3 | CHANDRA LAYOUT TE TO NAGARBHAVI CIRCLE | |
| C-C4 | CHANDRA LAYOUT TE TO MANSA NAGAR | |
| C-C5 | CHANDRA LAYOUT TE TO NGEF L/O | |
| C-C6 | CHANDRA LAYOUT TE TO CANARA BANK COLONY | |
| C-C7 | CHANDRA LAYOUT TE TO BYRAVESHWARA NAGAR | |

NAGARBHAVI TE(N)

| | | |
|------|------------------------------------|-------------------|
| N-N1 | NAGARBHAVI TE TO MALLATHALLI | IV less than 430V |
| N-N2 | NAGARBHAVI TE TO GANAJYOTHI NAGAR | |
| N-N3 | NAGARBHAVI TE TO NAGARBHAVI GUDDA | |
| N-N4 | NAGARBHAVI TE TO PAPAREDDYPALYA | |
| N-N5 | NAGARBHAVI TE TO SRIGANDADAKAVALLU | |

ANNEXURE-II

| CEA Case No.: KNK-1054 Name of the Power line: UG LILO of 220KV Peenya – Subramanyapura SC line at proposed 220/66/11KV Nagarabhavi SS | | | Map Scale : 1 cm= 500 m Total Length : 2.475 km 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. |

| SWR Letter No: SG/SWR/PTCC/F-3652/2620 Dated 19.12.2023 | | | | | |
|---|---|-------------------------------|----------|-------|-----|
| 1. | KSR Bengaluru - Yesvantpur | Outside IV Consideration zone | | | |
| 2. | Yesvantpur- Chikka Banawara | | | | |
| 3. | Yesvantpur - Lottegolahalli | | | | |
| 4. | Lottegolahalli - Yelahanka | | | | |
| 5. | Lottegolahalli - Hebbal | | | | |
| 6. | Hebbal - Banaswadi | | | | |
| 7. | KSR Bengaluru – Bengaluru Cantonment RS | Out of Parallelism | | | |
| 8. | Bengaluru Cantonment – Bengaluru East | Outside IV Consideration zone | | | |
| 9. | KSR Bengaluru - Nayandahalli | 1.2 | 0.0001 | 23063 | 2 |
| 10. | Nayandahalli - Kengeri | 0.25 | 0.000008 | 22445 | 0.2 |
| 11. | Kengeri - Hejjala | Out of Parallelism | | | |

E-mail: webstar@nic.in

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

KNK-1054

B/46937/Sigs 7(b)/3599

31 Jan 2024

Office of the Chief Engineer Electricity,
 Karnataka Power Transmission Corporation Limited
 State Load Despatch Centre,
 #28, R.C. Cross Road,
 Bengaluru - 560 009

**PTCC PROPOSAL FOR PROPOSED 220KV 1200SQMM LILO UG CABLE FROM
 EXISTING 220KV PEENYA-SUBRAMANYAPURA SC LINE TO PROPOSED
 220/66/11KV NAGARABHAVI SS (UNDER CONSTRUCTION) IN BENGALURU
 URBAN DISTRICT**

1. Refer your letter No CEE/SLDC/PTCC/F-3652/6354-63 dt 02 Nov 2023 (copy att).
2. **No Objection Certificate (NOC) is accorded** based on inputs provided as per Map sheet received vide your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.

(Puneet Lakhnarpal)
 Lieutenant Colonel
 General Staff Officer Grade 1 (Communication)
 for Additional Director General (Telecommunication)

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

The DET(PTCC), Northern Zone
 Bharat Sanchar Nigam Limited
 O/o PGM (North), QA & Inspection Circle,
 D-Tax Building, Eastern Court, Janpath
 New Delhi-110001

sh. Aradhya (DD)
 08/2

PPU. 27/01/24
 18/02

sh. Parmen