

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 Division

| CEA Case No. : MRA-1286 | | | | |
|---|---|------------|--|--|
| Induced Voltage (IV) calculation for 220 kV UG cable from proposed 220 kV Jyoti Ghatodi | | | | |
| GSS (100 MW Solar Power project of M/s Cyclic Energy Power Pvt. Ltd in Yavatmal district) to existing 220 kV Ghatodi S/s [Length-0.3 km]- Regd. | | | | |
| S. No | Reference No. | Dated | | |
| (i) | CEA/PTCC/CEEPL-100MW/220 kV-UG/01/11/2024 | 11.11.2024 | | |
| (ii) | CEPPL E-Mail | 21.01.2025 | | |
| (iii) | Central Railway: N.705/T/PTCC/220kV/MAH-931 | 14.01.2025 | | |

The PTCC proposal submitted vide reference (i) has been examined. GM (S&T), Central Railway vide reference (iii) has issued No Objection Certificate (NOC) for charging of the line.

As per Point No. C-17 of 107^{th} CLPTCC meeting minutes (Attached at Annexure-I), Telecom details from BSNL is not required for U/G Cables of 66 kV and above and having length less than 800 m.

EPR zone for proposed 220 kV S/S is mentioned below:

| Name of the proposed Substation | Half diagonal distance , D/2 (mts) | Fault Current I (KA) | Resistance of Earth Mat, R (ohms) | d (mts) at 430 V | d (mts) at 650 V | d (mts) at 7kV | d (mts) at 10kV |
|--|--|----------------------------|---|------------------------|------------------------|-------------------|-----------------------|
| 220 kV Jyoti Ghatodi GSS, Yavatmal | 57.04 | 40 | 0.369 | 1901 | 1238 | 63 | 27 |

Telecommunication details from DG Signals, MoD are awaited however, vide reference (ii) above, M/s CEPPL have informed that all construction work of the solar plant, Grid Substation and connecting EHV underground cable has been completed and the line is awaiting charging due to want of PTCC approval. So as to charge the subject cited transmission line at the earliest, M/s CEPPL has requested for issuance of provisional PTCC clearance and has given an undertaking that "In case of any impact on the Telecom assets/ personnel of Defense due to charging of this transmission line, M/s Cyclic Energy Power Private Limited will take all necessary action for its remediation and no other utility/ organization shall be held liable for this."

Taking above into consideration, necessary action for issuance of provisional PTCC route approval may be taken under intimation to this office. LF induction on telecommunication circuits of Defense, will be communicated after the receipt of details from DG Signals, MoD.

Chief Engineer

To,

| 1. | Divisional | QA & Inspection circle, 1st floor, D- wing, | |
|----|---------------------|--|----------------------------|
| | Engineer (PTCC), | BSNL Admin Bldg., | |
| | Western Zone | Junu Tara Road, Santacruz (West), | |
| | | Mumbai-400054 | |
| 2. | Director General of | General Staff Branch, Integrated HQ, MoD | With a request to provide |
| | Signals | (army), Sena Bhawan, DHQ, PO, New | details of Telecom assets/ |
| | | Delhi- 110 105 | NOC at the earliest for IV |
| | | | calculation and issuance |
| | | | of final RAC. |
| | M/s Cyclic Energy | 2 nd floor, Square One Mall, Saket Business | |
| 3. | Power Private | District, Court Chowk, Pushp Vihar, New | Copy for information. |
| | Limited | Delhi – 110 017 | |

Annexure-III

Option -2

Physical verification of soil resistivity shall be carried out.

Option -3

To shift Telecom cable or power line at safe separation distance even if the IV goes beyond 2000 volts as per Option-1& 2

It would be at the discretion of IV calculation authority to decide among option I and option 2.

C.14 PTCC cases having induced voltages greater than 650 Volts

CEA vide letter dated 9/8/18, has asked BSNL to confirm whether the power utilities where IV was more than 650 V have deposited the required amount for protection of telecom circuits. BSNL may furnish the status indicating details like name of PTCC proposal, date on which demand note issued, amount deposited by power utility, etc. for the period 1/1/18 - 31/10/18. The current status is enclosed at **Annexure-XXIII**.

CLPTCC forum decided that each case involving induced voltages greater than 650 Volts and payment made by power utilities should be discussed in every SLPTCC meeting.

Action: By BSNL & Power utilities.

C.15 Marking of telecom cables in respect of closed telephone exchanges

DET, SR, BSNL formed a committee to verify the Soil Resistivity(SR) of 765kV Chilakalurpeta-Kadapa T/L, for which CEA has computed IV more than 2000 V for three cables. While verifying Soil Resistivity in connection to telecom cable namely Edara Exchange to Umamaheshwarapuram, it was found that Edara Exchange was already closed and its telecom cables were not in service anymore. CEA vide letter dated 5/10/18 (a copy enclosed at Annexure -XXIV) has informed BSNL about the same. It is a serious matter where same SDE, BSNL who has marked the telecom circuits informed during physical verification that these circuits do not exist.

BSNL informed that no demand note has been raised for the protection in respect of telecom cable namely Edara Exchange to Umamaheshwarapuram. Further BSNL assured that the modifications if any done immediately after submission of Telecom detail will be intimated to DE (PTCC).

Item closed

C.16 Limit of length of BSNL cable for which marking is not required

SDE, BSNL, Bhopal, in case of 765kV D/C Vindhyachal Pooling-Jabalpur transmission line of PGCIL intimated that marking of underground BSNL cables within 1.4 to 2 KM radius is not possible on route maps due to short length. CEA has communicated the same vide letter dated 19/9/18 (a copy enclosed at **Annexure -XXV**). BSNL may confirm.

CLPTCC forum decided that all telecom cables, irrespective of length, within 8 Kms distance on either side of the proposed power line to be marked on the topo map for IV calculation.

Action: By BSNL

C.17 PTCC proposal for UG Power Cable of length less than 0.8 KM

In the PTCC Manual, at Page-172, it is stated that for power cable of length less than 0.8 KM, BSNL telecom details are not required to be marked. It in turn means that RAC would be issued on the basis of inputs received from Railways and Defense.

PTCO It is to inform that on account of screening factor, the calculated IV for BSNL telecom circuits would be greater than Railways and Defense telecom circuits. Therefore, it is proposed that telecom details

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from Railways and Defense may also not be sought. It in turn means that there may not be any requirement of PTCC for power cables of length less than 0.8 KM.

CLPTCC forum decided that,

- 1. Proposal for UG Power Cable of capacity 66 KV and above and of length less than 0.8 KM will be referred for PTCC clearance.
- 2. BSNL TD need not be called for.
- 3. RAC will be issued by DE (PTCC) incorporating the NOC received from Railways and Defence.

Action: By BSNL

C.18 PTCC cases pending for more than 2 years

BSNL vide letter dated 10/10/18 (a copy enclosed at **Annexure -XXVI**) has informed KPTCL that cases pending for more than 2 years for want of pending clarifications are closed and fresh proposal are required to be submitted. KPTCL vide letter dated 25/10/18 (a copy enclosed at **Annexure -XXVII**) took cognizance of it.

Already covered in Item C.11. Item closed

C.19 Guidelines for issuing PTCC RAC for cases where IV is more than 650 V

BSNL vide letter dated 30/07/2018 (a copy enclosed at **Annexure -XVII**) formulated guidelines for issuing PTCC RAC for cases where IV is more than 650 V.

Already covered in Item B.18 (case-II). Item closed

C.20 Uploading of IV by CEA

It is to inform that CEA has started uploading month-wise calculated IV at its website (www.cea.nic.in) since August, 18. The path for the same is: Homepage/Wings/Power System/PCD/"Reports for IV calculation for PTCC Route Approval". This uploading activity would be in addition to ongoing practice of sending the IVs by post. It would ease out the issues related to delay / not receiving the IVs.

It is proposed that similar action may be taken by BSNL for RACs at its website: www.tnd.bsnl.co.in till computerization of PTCC becomes fully operational.

BSNL informed that Route Approval Certificates for EHT cases are being uploaded in the PTCC portal www.ptcc.bsnl.co.in by DE(PTCC) , which can be downloaded by the concerned Power utilities.

Item may closed

C.21 Revised 'Time Limit' for various steps involved in PTCC clearance for line/cable having length less than 5 KM

In the last meeting, following time limits were finalised for Renewable generations and Traction circuits for all future cases.

For 33 kV D/C and above up to 132 kV Power Lines (Central Cases)

| Furnishing telecom details by P&T/Railway/Army | 3 weeks |
|---|----------|
| Scrutinizing the details, preparing copies & forwarding to concerned | l week |
| Electricity Board by DET PTCC | |
| Furnishing I.V. calculations by Electricity Board and endorsing copies to all concerned | 3 weeks |
| Furnishing recommendations by Railway /Army | 2 weeks |
| Final examination & Issue of certificate | 1 weeks |
| Total | 10 weeks |

from 1. K. Jan' 4,2.19



Date: 20.01.2025

Ref: CEA/PTCC/CEEPL-100MW/220 KV- UG /20 /01 /2025

To,

The Chief Engineer,
PSCD Division,
Room No. 702 (North Wing),
Central Electricity Authority
Sewa Bhawan, R K Puram, Sector 1, New Delhi 110066

Sub: Request for providing provisional PTCC approval for 220kV Under Ground Cable i/r of Evacuation arrangement from 100 MW Solar Power Plant developed by M/s. Cyclic Energy Power Private Ltd. at Pusad, Tal: Pusad, Dist: Yavatmal to existing 220/132/33kV Ghatodi Substation.

Reference: 1. Application by Cyclic Energy Power Private Ltd dated 11.11.2024

2. CEA registration reference no. CEA/PTCC/CEEPL-100MW/220 kV-

UG/01/11/2024 dated 11.11.24.

Dear Sir,

In context to the above subject, M/s Cyclic Energy Power Private Ltd had submitted PTCC proposal vide letter no. CEA/PTCC/CEEPL-100MW/220 KV- UG /01 /11 /2024 dated 11-11-2024, for 220kV Underground EHV cable from proposed 220 kV Pusad Gen Substation (100MW Solar Power project of M/s. Cyclic Energy Power Private Ltd) to existing existing 220/132/33kV Ghatodi Substation, Dist. Yavatmal.

We would also like to inform you that at present all construction work of the solar plant, Grid Substation and connecting EHV underground cable has been completed and ready for commissioning. M/s. Cyclic Energy Power Private Ltd had submitted PTCC proposal vide letter no. CEA/PTCC/CEEPL-100MW/220 KV- UG /01 /11 /2024 dated 11-11-2024 to all concern departments and got NOC from Railway Department on 14-01-2025 vide letter no. N.705/T/PTCC/220KV/MAH-931 and approval from Directorate General of Signals (MOD) is awaited.

In view of the above submission, we hereby request your kind office to provide recommendation for issuing provisional PTCC approval for said 220kV Under Ground Cable so that we can able to commission the said project with schedule time.

CYCLIC ENERGY POWER PRIVATE LIMITED



Your Faithfully,

For, M/s. Cyclic Energy Power Private Ltd.

Power Siliage Lining

Authorized Signatory

M/s Cyclic Energy Power Pvt. Ltd.

(Mail Id: vineet.singh@o2power.in / M: 9829015321)

Enclose:

- 1. CEA registration letter
- 2. NOC from Central Railway



Date: 21.01.2025

UNDERTAKING

In case of any impact on the telecom assets/ personnel of Defense due to charging of this transmission line M/s Cyclic Energy Power Private Ltd will take all necessary actions for it's remediation and no other utility/ organization shall be held liable for this

Your Faithfully,

For, M/s. Cyclic Energy Power Private Ltd.

Authorized Signatory

M/s Cyclic Energy Power Pvt. Ltd.

(Mail Id: vineet.singh@o2power.in / M: 9829015321)