



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 Division

| | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------|
| CEA Case No. : AND-753 | | |
| Induced Voltage (IV) Calculation for PTCC proposal of 33 kV (Feeder No. 16) D/C line (AL59 Panther) on RSJ Poles from proposed 400/33 kV 675 MW Solar Pooling Substation of M/S AM Green Energy Private Ltd. at Krishnapuram Village, Kurnool to proposed 33/0.6 kV IDT S/s of M/s AM Green Energy Pvt. Ltd., Oriano LCR#2 at Kandikayapalle Village, Nandyal (Length: 1.35 kms) | | |
| S. No | Reference No. | Dated |
| (i) | AMGEPL/PTCC-SOLAR/2023-24/00C | 30.01.2024 |
| (ii) | AMGEPL E-mail: | 22.03.2024 |
| (iii) | AMGEPL E-mail: | 14.05.2024 |
| (iv) | AMGEPL E-mail: | 21.06.2024 |
| (v) | BSNL: SR-PTCC/SAP5858/6 | 21.05.2024 |
| (vi) | South Central Railway: SG.85/4/3/PTCC/SCR/2023-24/AP 42 RTD | 26.03.2024 |

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

DET, PTCC, BSNL (Southern Zone) vide reference (v) has issued their No Objection Certificate (NOC).

EPR Zones for proposed substations are mentioned 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 |
|------------------------------------------------------------------------|-----------------------------------|-----------------------|----------------------------------|------------------|------------------|-----------------|------------------|
| 400/33 kV 675 MW Solar Pooling Substation of M/s AMGEPL | 78 | 24 | 0.3 | 1228 | 786 | 2 | NA |
| 33/0.6 kV IDT S/s of M/s AMGEPL, Oriano LCR#2 | 7.1 | 15 | 0.694 | 165 | 107 | 3 | NA |

As per the details submitted by BSNL vide reference (v) above, no telephone exchange is falling in the EPR zone of the proposed substations.

Telecommunication details from DG Signals, MoD are awaited however, vide reference (vi) above, M/s AMGEPL have informed that all construction related work of the transmission line has completed and the line is awaiting charging due to want of PTCC approval. So as to charge the subject cited transmission line as per schedule, M/s AMGEPL has requested for issuance of provisional PTCC clearance and has submitted an undertaking that in case of any impact on telecom asset/ personnel of Defense due to charging of this transmission line, M/s AMGEPL shall take all remedial action.

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.

Encl.: As above

Chief Engineer

To,

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|----|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 1. | Divisional Engineer (PTCC) | O/o CGM, QA & Inspection circle, 2 nd Floor, Sanchar complex, WMS compound, Jayanagar, 5 th block, 9 th main, 47 th cross, Bengaluru- 560 041 | |
| 2. | Principal Chief Signal & Telecom Engineer | South Central Railway, 7 th floor, Rail Nilayam, Secunderabad – 500 025 | |
| 3. | M/s AM Green Energy Private Limited | A-74, Nizamuddin East, Humayun Tomb, New Delhi – 110 013 | Copy for information |

ANNEXURE-I

| CEA Case No.: AND-753 | | | Map Scale : 1 cm= 500 m | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------------|----------------------|
| Name of the Power line: 33 kV (Feeder No. 16) D/C line (AL59 Panther) on RSJ Poles from proposed 400/33 kV 675 MW Solar Pooling Substation of M/S AM Green Energy Private Ltd. at Krishnapuram Village, Kurnool to proposed 33/0.6 kV IDT S/s of M/s AM Green Energy Pvt. Ltd., Oriano LCR#2 at Kandikayapalle Village, Nandyal | | | Total Length : 1.35 km | | |
| | | | S.R. Value : 100000 Ohm-cm | | |
| S.No. | Telecom. Details | Length of Parallelism in Km. | Mutual Coupling in Ohms. | Effective Fault current in Amps. | I.V in Volts. |
| South Central Railway: SG.85/4/3/PTCC/SCR/2023-24/AP 42 RTD Date: 26.03.2024 | | | | | |
| 1 | Panyam (PNM) to Krishnammakona (KEF) | 0.6 | 0.001242 | 11880 | 15 |
| 2 | Krishnammakona (KEF) to Bugganipalli (BEY) | 0.65 | 0.00198 | 10253 | 21 |
| 3 | Bugganipalli (BEY) to Betamcherla (BMH) | Out of parallelism | | | |