

## 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

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| CEA Case No.: KNK-1057   |   |            |  |  |  |
|--|---|------------|--|--|--|
| Induced Voltage (IV) Calculation for PTCC proposal of 220 kV SC line on DC towers from the proposed 400/220 kV SS at Gulaguli village to the proposed 200 MW Solar PSS at Balagod village, Gadag (Length: 12.054 km) |   |            |  |  |  |
| S. No  | Reference No.   | Dated      |  |  |  |
| (i)  | SRIPL/TD/400/220KV/MISCELLANEOUS/01/11  | 28.11.2023 |  |  |  |
| (ii)   | SRIPL E-mail:   | 29.04.2024 |  |  |  |
| (iii)  | BSNL: SR-PTCC/SKT5771/02  | 25.04.2024 |  |  |  |
| (iv)   | South Western Railway: SG/SWR/PTCC/SERENTICA/2662                               | 29.02.2024 |  |  |  |
| (v)  | Defense: B/46937/Sigs7(b)/3646 (received on e-mail dated 29.04.2024 from SRIPL) | 12.03.2024 |  |  |  |

The PTCC proposal submitted vide reference (i) and (ii) has been examined. The LF induction on communication circuits of BSNL with respect to details furnished vide above references (iii) has been computed. The voltage likely to be induced on paralleling communication cables of BSNL under Single Line to Ground fault condition are enclosed at Annexure-I. The screening factors as applicable have been considered. PCSTE, South Western Railway vide above reference (iv) and DG Signals, MoD vide above reference (v) (enclosed as Annexure-II) have issued their No Objection Certificate (NOC) for charging of the line.

EPR Zones for proposed substations are mentioned below:

| Li R Zones for proposed substations are mentioned below. |           |          |            |         |          |         |         |
|--|-----------|----------|------------|---------|----------|---------|---------|
| Name of the  | Half      | Fault    | Resistance | d (mts) | d (mts)  | d (mts) | d (mts) |
| proposed SS  | Diagonal  | Current, | of         | at 430  | at 650 V | at 7 kV | at 10   |
|  | Distance, | I (kA)   | earthmat,  | V       |          |         | kV      |
|  | D/2 (mts) |          | R (Ohms)   |         |          |         |         |
| 400/220 kV SS,   | 116       | 47.88    | 0.11403    | 1357    | 858      | NA      | NA      |
| Gulaguli village,  |           |          |            |         |          |         |         |
| Gadag  |           |          |            |         |          |         |         |
| 220 kV 200 MW  | 104.125   | 50       | 0.019      | 126     | 48       | NA      | NA      |
| Solar PSS,   |           |          |            |         |          |         |         |
| Balagod village  |           |          |            |         |          |         |         |

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

Taking the 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 | O/o CGM, QA & Inspection circle, 2 <sup>nd</sup>                                |                      |
|----|---------------------|---|----------------------|
|    | (PTCC)              | Floor, Sanchar complex, WMS compound,   |                      |
|    |                     | Jayanagar, 5 <sup>th</sup> block, 9 <sup>th</sup> main, 47 <sup>th</sup> cross, |                      |
|    |                     | Bengaluru- 560 041  |                      |
|    |                     | Serentica Renewables India Private  |                      |
|    |                     | Limited, DLF Cyber Park, Block-B, 9th   |                      |
| 2. | AVP-Projects        | Floor, Udyog Vihar, Phase-III, Sector-20,                                       | Copy for information |
|    |                     | Gurugram-122008   |                      |
|    |                     |   |                      |

### ANNEXURE-I

| CEA Case No.: KNK-1057  Name of the Power line: 220 kV SC line on DC towers from the proposed 400/220 kV SS at Gulaguli village to the proposed 200 MW Solar PSS at Balagod village, Gadag |                              |                               | Map Scale : 1 cm= 500 m  Total Length : 12.054 km  S.R. Value : 30000 Ohm-cm |                                  |                     |
|--|------------------------------|-------------------------------|--|----------------------------------|---------------------|
| S.No.  | Telecom. Details             | Length of Parallelis m in Km. | Mutual<br>Coupling<br>in Ohms.   | Effective Fault current in Amps. | I.V<br>in<br>Volts. |
|  | BSNL Letter No SR-PTCC/S     | KT5771/02 Da                  | ate: 25.04.2024  |                                  |                     |
| I  | Hanumanal Telephone Exchange |                               |  |                                  |                     |
| 1  | Exchange to Hanumanal Local  |                               |  |                                  |                     |
| 2  | Exchange to Jaya Durgur      | Out of parallelism            |  |                                  |                     |
| 3  | Exchange to Malagitti        |                               |  |                                  |                     |

CEA-PS-17-11(14)/82/2023-PCD Division

1/3976

E-mail: webstar@nic.in

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

B/46937/Sigs 7(b)/3646

12 Mar 2024

Serentica Renewables India Private Limited Regd Office: DLF Cyber Park,,Block B, 9th Floor Udyog Vihar, Phase-III, Sector-20 Gurugram-122008, Haryana, India

# PROPOSAL FOR PTCC ROUTE APPROVAL OF PROPOSED 220KV SC LINE ON DC TOWERS USING GETCO DESIGN TOWERS WITH ACSS 378 HTLS CONDUCTOR FROM THE PROPOSED 400/220KV S/S AT GULAGULI VILLAGE TO THE PROPOSED 200MW SOLAR PSS AT BALAGOD VILLAGE IN GADAG DISTRICT, KARNATAKA

- Refer your letter No SRIPL/TD/400/220KV/MISCELLANEOUS/01/11 dt 28 Nov 2023 (copy att).
- No Objection Certificate (NOC) is accorded based on inputs provided as per Map sheets received vide your letter mentioned above.
- 3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.

(Puneet Lakhanpal)
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

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

for information