



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. : TN-717 | | |
|--|---|------------|
| Induced Voltage (IV) calculation in respect of PTCC proposal for 400kV D/C Kanarpatti – Abisekapatti line (14.838 km)- regd. | | |
| S. No | Reference No. | Dated |
| (i) | TANTRANSCO: Lr. No.016344/SE/TR-I/EE/TSM/AEE/F.PTCC | 29.11.2022 |
| (ii) | TANTRANSCO: Email | 09.07.2024 |
| (iii) | BSNL: SR-PTCC/STN 4479/06 | 28.04.2023 |
| (iv) | Southern Railway: W.384/3/2/1226 | 30.11.2022 |
| (v) | Defense: B/46937/Sigs 7(b)/3155/ | 15.02.2023 |

The PTCC proposal submitted vide reference (i) and (ii) has been examined. The LF induction on communication circuits of BSNL and Southern Railway with respect to details furnished vide above reference (iii) and (iv) respectively have been computed. The voltage likely to be induced on paralleling communication cables of BSNL and Southern 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.

Vide reference (v) above, DG Signals, MoD has issued No Objection Certificate (NOC) (enclosed as Annexure-III).

As both substations are existing therefore, EPR calculations is not warranted.

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, 1st Floor, Raj Bhavan Exchange No. 26, Sardar Patel Road, Guindy, Chennai-600032 |
| 2. | General Manager (S&T) | Southern Railway, Head Quarters Office, S&T Branch, Chennai - 600003 |
| 3. | Superintending Engineer/Transmission-I | TANTRANSCO, 5th floor, TANTRANSCO HQ, 144, Anna Salai, Chennai - 600002 |

ANNEXURE-I

| CEA Case No.: TN-717 | | | Map Scale : 1 cm= 500 m | | |
|---|-------------------------|-------------------------------------|----------------------------------|---|----------------------|
| Name of the Power line: : 400kV D/C Kanarpatti – Abisekapatti line | | | Total Length : 14.838 km | | |
| | | | S.R. Value : 15000 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/STN 4479/06

Date: 28.04.2023

| I | TIRUNELVELI MAIN TELEPHONE EXCHANGE | | | | |
|----------|--|--|--|--|--|
| 1. | Exge to P.33.Gandhinagar to DP.3354 | | | | |
| 2. | Exge to P.33.Gandhinagar to DP.3340 | | | | |
| 3. | Exge to P.33.Gandhinagar to DP.3399 | | | | |
| 4. | Exge to P.33.Gandhinagar to DP.3357 | | | | |
| 5. | Exge to P.33.Gandhinagar to DP.3390 | | | | |
| 6. | Exge to P.33.Gandhinagar to DP.3308 | | | | |
| 7. | Exge to P.33.Gandhinagar to DP.3351 | | | | |
| 8. | Exge to P.33.Gandhinagar to DP.3396 | | | | |
| 9. | Exge to P.33.Gandhinagar to DP.3385 | | | | |
| 10. | Exge to P.33.Gandhinagar to DP.3307 | | | | |
| 11. | Exge to P.33.Gandhinagar to DP.3397 | | | | |
| 12. | Exge to P.33.Gandhinagar to DP.3305 | | | | |
| 13. | Exge to P.33.Gandhinagar to DP.3398 | | | | |
| 14. | Exge to P.33.Gandhinagar to DP.3389 | | | | |
| 15. | Exge to P.36.Palayapettai to DP.3606 | | | | |
| 16. | Exge to P.36.Palayapettai to DP.3642 | | | | |
| 17. | Exge to P.36.Palayapettai to DP.3696 | | | | |
| 18. | Exge to P.36.Palayapettai to DP.3607 | | | | |
| 19. | Exge to P.36.Palayapettai to DP.3685 | | | | |

Out of Parallelism

| | |
|-----|---------------------------------------|
| 20. | Exge to P.36.Palayapettai to DP.3692 |
| 21. | Exge to P.36.Palayapettai to DP.3614 |
| 22. | Exge to P.36.Palayapettai to DP.3687 |
| 23. | Exge to P.36.Palayapettai to DP.3646 |
| 24. | Exge to P.36.Palayapettai to DP.3613 |
| 25. | Exge to P.36.Palayapettai to DP.3648 |
| 26. | Exge to P.36.Palayapettai to DP.3617 |
| 27. | Exge to P.60.Ramayampatti to DP.6096 |
| 28. | Exge to P,60.Ramayampatti to DP.6089 |
| 29. | Exge to P,60,Ramayampatti to DP.6042 |
| 30. | Exge to P,60, Ramayampatti to DP.6083 |
| 31. | Exge to P,60, Ramayampatti to DP.6059 |
| 32. | Exge to P,60,Ramayampatti to DP.6043 |
| 33. | Exge to P.60,Ramayaampatti to DP.6011 |
| 34. | Exge to P,60,Ramayampatti to DP.6090 |
| 35. | Exge to P,60.Ramayampatti to DP.6081 |
| 36. | Exge to P.60.Ramayampatti to DP.6018 |
| 37. | Exge to P.60.Ramayampatti to DP.6010 |
| 38. | Exge to P.60.Ramayampatti to DP.6097 |
| 39. | Exge to P.60.Ramayampatti to DP.6050 |
| 40. | Exge to P.60.Ramayampatti to DP.6045 |
| 41. | Exge to P.60.Ramayampatti to DP.6092 |
| 42. | Exge to P.60.Ramayampatti to DP.6086 |
| 43. | Exge to P.60.Ramayampatti to DP.6099 |
| 44. | Exge to P.60.Ramayampatti to DP.6041 |
| 45. | Exge to P.60.Ramayampatti to DP.6049 |
| 46. | Exge to P.60.Ramayampatti to DP.6098 |
| 47. | Exge to P.60.Ramayampatti to DP.6000 |
| 48. | Exge to P.60.Ramayampatti to DP.6084 |
| 49. | Exge to P.60.Ramayampatti to DP.6055 |

Out of Parallelism

| | | |
|-----------|---|--------------------|
| 50. | Exge to P.60.Ramayampatti to DP.6057 | Out of Parallelism |
| 51. | Exge to P.58.Sethurayanputhur to DP.5803 | IV less than 430V |
| 52. | Exge to P.58.Sethurayanputhur to DP.5804 | |
| 53. | Exge to P.58.Sethurayanputhur to DP.5808 | |
| II | PETTAI TELEPHONE EXCHANGE | |
| 1. | Exge to P.54.VVK Street to DP.5406 | Out of Parallelism |
| 2. | Exge to P.54.VVK Street to DP.5447 | |
| 3. | Exge to P.54.VVK Street to DP.5407 | |
| 4. | Exge to P.54.VVK Street to DP.5480 | |
| 5. | Exge to P.54.VVK Street to DP.5486 | |
| 6. | Exge to P.54.VVK Street to DP.5402 | |
| 7. | Exge to P.54.VVK Street to DP.5444 | |
| 8. | Exge to P.54.VVK Street to DP.5448 | |
| 9. | Exge to P.47.MSP Pallivasal Street to DP.4718 | IV less than 430V |
| 10. | Exge to P.47.MSP Pallivasal Street to DP.4713 | |
| 11. | Exge to P.47.MSP Pallivasal Street to DP.4714 | |
| 12. | Exge to P.47.MSP Pallivasal Street to DP.4787 | |
| 13. | Exge to P.47.MSP Pallivasal Street to DP.4706 | |
| 14. | Exge to P.47.MSP Pallivasal Street to DP.4775 | |
| 15. | Exge to P.47.MSP Pallivasal Street to DP.4767 | |
| 16. | Exge to P.47.MSP Pallivasal Street to DP.4782 | |
| 17. | Exge to P.47.MSP Pallivasal Street to DP.4779 | |
| 18. | Exge to P.47.MSP Pallivasal Street to DP.4734 | |
| 19. | Exge to P.47.MSP Pallivasal Street to DP.4731 | |
| 20. | Exge to P.47.MSP Pallivasal Street to DP.4785 | |
| 21. | Exge to P.47.MSP Pallivasal Street to DP.4720 | |
| 22. | Exge to P.47,MSP Pallivasal Street to DP.4784 | |
| 23. | Exge to P.47.MSP Pallivasal Street to DP.4735 | |
| 24. | Exge to P,49,Veerabagunagar to DP.4980 | Out of Parallelism |
| 25. | Exge to P.49.Veerabagunagar to DP.4960 | |

| | |
|-----|--|
| 26. | Exge to P.49.Veerabagunagar to DP.4987 |
| 27. | Exge to P.49,Veerabagunagar to DP.4915 |
| 28. | Exge to P.49.Veerabagunagar to DP.4946 |
| 29. | Exge to P.49.Veerabagunagar to DP.4914 |
| 30. | Exge to P.49.Veerabagunagar to DP.4981 |
| 31. | Exge to P.49.Veerabagunagar to DP.4986 |
| 32. | Exge to P.49.Veerabagunagar to DP.4989 |
| 33. | Exge to P.44.Hindu College to DP.4409 |
| 34. | Exge to P.44.Hindu College to DP.4489 |
| 35. | Exge to P.44.Hindu College to DP.4401 |
| 36. | Exge to P.44.Hindu College to DP.4440 |
| 37. | Exge to P.44.Hindu College to DP.4448 |
| 38. | Exge to P.44.Hindu College to DP.4405 |
| 39. | Exge to P.44.Hindu College to DP.4480 |
| 40. | Exge to P.44.Hindu College to DP.4468 |
| 41. | Exge to P.56.Narasinghanallur to DP.5603 |
| 42. | Exge to P.56.Narasinghanallur to DP.5604 |
| 43. | Exge to P.56.Narasinghanallur to DP.5605 |
| 44. | Exge to P.56.Narasinghanallur to DP.5609 |
| 45. | Exge to P.56.Narasinghanallur to DP.5611 |
| 46. | Exge to P.56.Narasinghanallur to DP.5608 |
| 47. | Exge to P.41.MGP Church Street to DP.4166 |
| 48. | Exge to P.41.MGP Church Street to DP.4163 |
| 49. | Exge to P.41.MGP Church Street to DP.4143 |
| 50. | Exge to P.41.MGP Church Street to DP.4100 |
| 51. | Exge to P.41.MGP Church Street to DP.4168 |
| 52. | Exge to P.41.MGP Church Street to DP.4167 |
| 53. | Exge to P.41.MGP Church Street to DP.4105 |
| 54. | Exge to P.52.Suthamalli Post Office to DP.5204 |
| 55. | Exge to P.52.Suthamalli Post Office to DP.5200 |

Out of Parallelism

| | | | |
|-----|--|--------------------|--------------------|
| 56. | Exge to P.52.Suthamalli Post Office to DP.5219 | Out of Parallelism | |
| 57. | Exge to P.52.Suthamalli Post Office to DP.5238 | | |
| 58. | Exge to P.52.Suthamalli Post Office to DP.5228 | | |
| 59. | Exge to P.51.Kondanagaram to DP.5112 | IV less than 430V | |
| 60. | Exge to P.51. Kondanagaram to DP.5107 | | |
| 61. | Exge to P.51. Kondanagaram to DP.5109 | | |
| 62. | Exge to P.55.MNP 2nd Street to DP.5552 | | |
| 63. | Exge to P.55.MNP 2nd Street to DP.5553 | | |
| 64. | Exge to P.55.MNP 2nd Street to DP.5550 | | |
| 65. | Exge to P.53.Teacher Colony to DP.5350 | | |
| 66. | Exge to P.53.Teacher Colony to DP.5301 | | |
| 67. | Exge to P.53.Teacher Colony to DP.5348 | | |
| 68. | Exge to P.53.Teacher Colony to DP.5346 | | |
| 69. | Exge to P.53.Teacher Colony to DP.5344 | | |
| 70. | Exge to P.53,Teacher Colony to DP.5309 | | |
| 71. | Exge to P.50.ITI to DP.5030 | | Out of Parallelism |
| 72. | Exge to P.50.ITI to DP.5026 | | |
| 73. | Exge to P.50.ITI to DP.5010 | | |
| 74. | Exge to P.50.ITI to DP.5010 | | |
| 75. | Exge to P.50.ITI to DP,5027 | | |
| 76. | Exge to P.50.ITI to DP.5025 | | |
| 77. | Exge to P.50.ITI to DP.5067 | | |
| 78. | Exge to P.50.ITI to DP.5004 | | |
| 79. | Exge to P,50.ITI to DP.5011 | | |
| 80. | Exge to P.50.ITI to DP.5031 | | |
| 81. | Exge to P.50.ITI to DP.5000 | | |
| 82. | Exge to P.50.ITI to DP.5068 | | |
| 83. | Exge to P.50.ITI to DP.5021 | | |
| 84. | Exge to P.50.ITI to DP.5006 | | |
| 85. | Exge to P.50.ITI to DP.5020 | | |

| | | | |
|------------|--|--------------------|-------------------|
| 86. | Exge to P.50.ITI to DP.5065 | Out of Parallelism | |
| 87. | Exge to P.50.ITI to DP.5002 | | |
| 88. | Exge to P.46.Periyar Street to DP.4615 | | |
| 89. | Exge to P.46.Periyar Street to DP.4640 | | |
| 90. | Exge to P.46.Periyar Street to DP.4647 | | |
| 91. | Exge to P.46.Periyar Street to DP.4615 | | |
| 92. | Exge to P.46.Periyar Street to DP.4642 | | |
| 93. | Exge to P.46.Periyar Street to DP.4617 | | |
| 94. | Exge to P.46.Periyar Street to DP.4655 | | |
| 95. | Exge to P.46.Periyar Street to DP.4618 | | |
| III | MANUR TELEPHONE EXCHANGE | | IV less than 430V |
| 1. | Exge to P.OO to 0081(INNER ZONE) | | |
| 2. | Exge to P.OO to 0014(INNER ZONE) | | |
| 3. | Exge to P.OO to 0058(INNER ZONE) | | |
| 4. | Exge to P.OO to 0036(INNER ZONE) | | |
| 5. | Exge to P.OO to 0064(INNER ZONE) | | |
| 6. | Exge to P.OO to 0034(INNER ZONE) | | |
| 7. | Exge to P.OO to 0079(INNER ZONE) | | |
| 8. | Exge to P.OO to 0045(INNER ZONE) | | |
| 9. | Exge to P.OO to 0031(INNER ZONE) | | |
| 10. | Exge to P.OO to OOII(INNER ZONE) | | |
| 11. | Exge to P.OO to 0063(INNER ZONE) | | |
| 12. | Exge to P.OO to 0061(INNER ZONE) | | |
| 13. | Exge to P.OO to 0040(INNER ZONE) | | |
| 14. | Exge to P.OO to 0037(INNER ZONE) | | |
| 15. | Exge to P,22 to DP.2212 | | |
| 16. | Exge to P.22 to DP.2216 | | |
| 17. | Exge to P.21 to DP.2104 | | |
| 18. | Exge to P.21 to DP.2105 | | |
| 19. | Exge to P,21 to DP.2111 | | |

| | | |
|-----|-------------------------|-------------------|
| 20. | Exge to P.22 to DP.2207 | IV less than 430V |
| 21. | Exge to P.22 to DP.2206 | |
| 22. | Exge to MINIPILLAR23 | |

ANNEXURE-II

| CEA Case No.: TN-717 | | Map Scale : 1 cm= 500 m | | | |
|---|------------------------------|-------------------------------------|---------------------------------|---|----------------------|
| Name of the Power line: : 400kV D/C Kanarpatti – Abisekapatti line | | Total Length : 14.838 km | | | |
| | | S.R. Value : 15000 Ohm-cm | | | |
| S.No. | Telecom. Details | Length of Parallelism in Km. | Mutual Coupling in Ohms. | Effective Fault current in Amps. | I.V in Volts. |
| Southern Railway Letter No.- W.384/3/2/1226 | | Date: 30.11.2022 | | | |
| 1. | Talaiyuthu- Tirunelveli | Out of Parallelism | | | |
| 2. | Tirunelveli - Cheranmahadevi | 1.09 | 0.0001 | 2339 | 0.2 |

Tele : 23019746

Annexure III

TN-717

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


B/46937/Sigs 7(b)/3155/

15 Feb 2023

Superintending Engineer/Transmission-I &
Secretary/Power, SLPTCC
TamilNadu Transmission Corporation
5th Floor, TANTRANSCO HQ,
144, Anna Salai, Chennai-600 002

**PTCC ROUTE APPROVAL FOR THE FREE ARM STRINGING OF 400KV LINE
ON DC TOWERS WITH QUAD MOOSE CONDUCTOR FROM KANARPATTI
400KV SS TO ABISEKAPATTI (PGCIL) 400KV SS-REG**

1. Refer your letter No 016344/SE/TR I/EE/TSM/AEE/F.PTCC/ dt 29 Nov 2022 (copy att).
2. **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.


(SK Sharma)
Lt Col
GSO 1 (Comn)
for Offg ADG T

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

AD

WF

