



भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority

पावर कम्युनिकेशन डवलपमेंट प्रभाग

Power Communication Development Division



No.: CEA/PCD/PTCC/JHR-45 & WB-130

Date: 20.12.2019

1229-1232

DET (PTCC), Eastern Zone,
Inspection & QA Circle, BSNL
Q.A. Bhawan, EP-GP Block, Sector-V,
Salt Lake, Kolkata - 700091

Subject: PTCC Route Approval for 765 kV D/C Ranchi - Medinipur Transmission line

Reference: (i) CM, PGCIL, ER-II letter no. ER-II/TBCB/PMJTL/GBT/PTCC-RMTL/227 dated 11.06.18
(ii) CM, PGCIL, ER-I letter no. ER-I/TBCB/PMJTL/W-18/113 dated 10.05.18
(iii) BSNL letter no. DE/PTCC/ER/EJH201520182125/02 dated 24.12.18 &
DE/PTCC/ER/EWB220620182137/01 dated 05.01.19
(iv) South Eastern Railway no.S&T/T/176/Pt.X/751 dated 19.03.19
(v) Defense letter no. B/46937/Sigs 7(b)/1395 dated 29.08.19 & B/46937/Sigs 7(b)/1230 dated
10.09.18

The PTCC proposal submitted vide above ref(i) and ref(ii) has been examined. The low frequency induction on BSNL and Railway Telecommunication circuits as per details furnished vide above references (iii) and (iv) respectively has been examined. The Soil Resistivity value has been taken as 50,000/1,00,000 Ohms-cm, as per data submitted by Power Authority. Voltages likely to be induced on paralleling BSNL Telecom Cables and Railway Telecommunication circuits under single line to ground fault condition are enclosed at Annex-I(A&B) & II respectively. The screening factors as applicable have been considered. Defense has accorded NOC vide above Ref.(v) for the line (a copy enclosed at Annex-III (A&B)).

Taking above into consideration, kindly take necessary action for PTCC route approval

Encl.: As above

उपेन्द्र कुमार
20/12/2019
Upendra Kumar
Chief Engineer

मुख्य अभियंता/Chief Engineer
केन्द्रीय विद्युत प्राधिकरण/C.E.A.
विद्युत मंत्रालय/Ministry of Power
भारत सरकार/Govt. of India
नई दिल्ली/N: v: D: :

Copy to:

- 1) Pr. CSTE, South Eastern Railway, Garden Reach, Kolkata - 700043 (Only Annex-II)
- 2) Ch. Manager, PGCIL, ER-II, CF-17, Action Area 1C, New Town, Rajarhat, Kolkata - 700156
- 3) Ch. Manager, PGCIL, ER-I, House No.360A, Mamta Bhawan, Ranchi - 834002

M/C

ANNEXURE - I-A

| Case No.: JHR-45 Name of the Power line: 765 KV D/C RANCHI TO MEDINIPUR TRANSMISSION LINE (JHARKHAND PORTION) | | Map Scale : 1cm=500mts Total Length : 118.427Km. S.R. Value : 50,000 & 1,00,000 Ohms-cm | | | |
|--|------------------|--|--------------------------|----------------------------------|---------------|
| S.No. | Telecom. Details | Length of Parallelism in Km. | Mutual Coupling in Ohms. | Effective Fault current in Amps. | I.V in Volts. |

| | | | | | |
|--|------------------------------|------------------------------|-------------------------------|--|--|
| BSNL DETAIL | | | | | |
| Ref. No: DE / PTCC / ER / EJH210520182125 / 02 | | DATED: 24-12-2018 | | | |
| Affected Blocks & Telcom Circuits Details | | | | | |
| Iex | ITKI EXCHANGE | | | | |
| a | ITKI exch. To Pillar P | } | ----- IV less than 430V ----- | | |
| b | Pillar P to Pillar A | | | | |
| c | Pillar P to Pillar B | | | | |
| BEx | BERO EXCHANGE | | | | |
| a | Bero Exchange to pillar P | } | -----IV less than 430V----- | | |
| b | Pillar P to A | | | | |
| c | Pillar P to B | | | | |
| d | Pillar P to C | | | | |
| BUx | BUNDU EXCHANGE | | | | |
| a | BUNDU Exchange to Pillar P | } | -----IV less than 430V ----- | | |
| b | Pillar P to C | | | | |
| c | Pillar P to A | | | | |
| d | Pillar P to B | | | | |
| e | Pillar P to D | | | | |
| S(ecx) | SONAHATU EXCHANGE | | | | |
| | SONAHATU Exchange to A | -----IV less than 430V ----- | | | |
| Nex | NIMDIH EXCHANGE | | | | |
| | Nim dih Exchange to pillar A | -----IV less than 430V ----- | | | |
| | Nim dih Exchange to pillar B | | | | |

30/12/2018
 20/12/2018
 मुख्य अभियंता / Chief Engineer
 केन्द्रीय विद्युत प्राधिकरण / C.E.A.
 विद्युत मंत्रालय / Ministry of Power
 भारत सरकार / Govt. of India
 नई दिल्ली / New Delhi

ANNEXURE - I-B

| Case No.: WB - 130 | | | | Map Scale : 1cm=500mts | |
|--|------------------|------------------------------|--------------------------|--|---------------|
| Name of the Power line: 765 KV D/C RANCHI TO MEDINIPUR TRANSMISSION LINE (WEST BENGAL PORTION) | | | | Total Length : 151.671 Km. | |
| | | | | S.R. Value : 50,000 & 1,00,000 Ohms-cm | |
| S.No. | Telecom. Details | Length of Parallelism in Km. | Mutual Coupling in Ohms. | Effective Fault current in Amps. | I.V in Volts. |

| BSNL DETAIL | | | | | |
|--|-----------------------------------|-------------------|-----------------------------|-------|-----|
| Ref. No: DE / PTCC / ER / EWB220620182137 / 01 | | DATED: 05-01-2019 | | | |
| Affected Blocks & Telcom Circuits Details | | | | | |
| A | SATBANKURA EXCHANGE | | | | |
| a | Satbankura exchange to pillar a | } | -----IV LESS THAN 430V----- | | |
| b | Satbankura exchange to pillar b | | | | |
| c | Satbankura exchange to pillar c | | | | |
| B | HOOMGARH EXCHANGE | | | | |
| a | Hoomgarh Exchange to pillar a | } | -----IV LESS THAN 430V----- | | |
| b | Hoomgarh Exchange to pillar b | | | | |
| c | Hoomgarh Exchange to pillar c | | | | |
| C | AMLASULI EXCHANGE | | | | |
| a | Amlasuli Exchange to a | } | -----IV LESS THAN 430V----- | | |
| b | Amlasuli Exchange to b | | | | |
| c | Amlasuli Exchange to c | | | | |
| D | SIMLAPAL EXCHANGE | | | | |
| a | Simlapal exchange to pillar a | } | -----IV LESS THAN 430V----- | | |
| b | Simlapal exchange to pillar b | | | | |
| c | Simlapal exchange to pillar c | | | | |
| E | LAKSHMISAGAR EXCHANGE | | | | |
| a | Lakshmisagar Exchange to pillar a | 1.5 | 0.0452 | 14200 | 641 |
| b | Lakshmisagar Exchange to pillar b | } | -----IV LESS THAN 430V----- | | |
| c | Lakshmisagar Exchange to pillar c | | | | |
| F | KHATRA EXCHANGE | | | | |
| a | Khatra Exchange to a | } | -----IV LESS THAN 430V----- | | |
| b | Khatra Exchange to b | | | | |
| c | Khatra Exchange to c | | | | |

(1/2)

अभिषेक
20/12/2019

मुख्य अभियंता / Chief Engineer
केन्द्रीय विद्युत प्राधिकरण / C.E.A.
विद्युत मंत्रालय / Ministry of Power
भारत सरकार / Govt. of India
नई दिल्ली / New Delhi

ANNEXURE - I-B

| Case No.: WB - 130 | | | | | |
|---|------------------|------------------------------|--------------------------|---|---------------|
| Name of the Power line: 765 KV D/C RANCHI TO MEDINIPUR TRANSMISSION LINE (WEST BENGAL PORTION) | | | | Map Scale : 1cm=500mts | |
| | | | | Total Length : 151.671 Km. | |
| | | | | S.R. Value : 50,000 & 1,00,000 Ohms-cm | |
| S.No. | Telecom. Details | Length of Parallelism in Km. | Mutual Coupling in Ohms. | Effective Fault current in Amps. | I.V in Volts. |

| | | | | | |
|----------|---|---|-----------------------------|--|--|
| | | | | | |
| d | Khatra Exchange to d | } | -----IV LESS THAN 430V----- | | |
| e | Khatra Exchange to e | | | | |
| G | MALIAN EXCHANGE | | | | |
| a | Malian Exchange to a | } | -----IV LESS THAN 430V----- | | |
| b | Malian Exchange to b | | | | |
| c | Malian Exchange to c | | | | |
| H | MANBAZAR EXCHANGE | | | | |
| a | Manbazar exchange to pillar a (200 pr.U/G cable, dist. 1 km) | } | -----IV LESS THAN 430V----- | | |
| b | Manbazar exchange to pillar b (100 pr.U/G cable, dist. 1.5 km) | | | | |
| c | Manbazar exchange to pillar c (400 pr.U/G cable, dist. 1.0 km) | | | | |
| I | GOPALNAGAR EXCHANGE | | | | |
| a | Gopalnagar Exchange to pillar a (100 pr U/G cable, dist.1.5 km) | } | -----IV LESS THAN 430V----- | | |
| b | Gopalnagar Exchange to pillar b (200 pr U/G cable, dist. 1.0 km) | | | | |
| J | BARABAZAR EXCHANGE | | | | |
| a | BARABAZAR Exchange to a (200 pr U/G cable,dist. 1.5 km) | } | -----IV LESS THAN 430V----- | | |
| b | BARABAZAR Exchange to b (100 pr U/G cable,dist. 1.0 km) | | | | |
| c | BARABAZAR Exchange to c (100 pr U/G cable,dist. 2.0 km) | | | | |
| K | RANGADIH EXCHANGE | | | | |
| a | Rangadih Exchange to a (200 pr U/G cable,dist. 1.0 km) | } | -----IV LESS THAN 430V----- | | |
| b | Rangadih Exchange to b (100 pr U/G cable,dist. 1.5 km) | | | | |
| c | Rangadih Exchange to c (100 pr U/G cable,dist. 1.0 km) | | | | |
| | | | | | |

उपेन्द्र कुमार

20/12/2019

(2/2)

मुख्य अभियंता/Chief Engineer
 केन्द्रीय विद्युत प्राधिकरण/C.E.A.
 विद्युत मंत्रालय/Ministry of Power
 भारत सरकार/Govt. of India
 नई दिल्ली/New Delhi

ANNEXURE - II

| Case No.: WB -130 & JHR-45 Name of the Power line: 765 KV D/C RANCHI TO MEDINIPUR TRANSMISSION LINE (JHARKHAND & WEST BENGAL PORTION) | | Map Scale : 1cm=500mts Total Length : 270.098 Km. S.R. Value : 50,000 & 1,00,000 Ohms-cm | | | |
|---|------------------|---|--------------------------|----------------------------------|---------------|
| S.No. | Telecom. Details | Length of Parallelism in Km. | Mutual Coupling in Ohms. | Effective Fault current in Amps. | I.V in Volts. |

| SOUTH EASTERN RAILWAY | | | | | |
|--|---------------------|-----|--------|-------|-----|
| Ref. No: S&T/T/176/Pt.X/751 DATED: 19-03-2019 | | | | | |
| Affected Blocks & Telcom Circuits Details | | | | | |
| 1 | Hatia - Balsiring | 1 | 0.0005 | 17000 | 9 |
| 2 | Balsiring - Lodhma | 5 | 0.0099 | 18100 | 178 |
| 3 | Lodhma - Karra | 1.5 | 0.0007 | 18350 | 13 |
| 4 | Gundabihar - Jhimri | 3 | 0.0032 | 11470 | 37 |
| 5 | Jhimri - Latemdah | 9 | 0.0238 | 12200 | 290 |
| 6 | Latemdah - Tiruldih | 7 | 0.0226 | 12600 | 285 |
| 7 | Tiruldih - Suisa | 1 | 0.0005 | 12900 | 6 |
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39/3/2019
 20/12/2019
 प्रमुख अधिकारी
 केंद्रीय विद्युत प्राधिकरण/C.E.A.
 विद्युत मंत्रालय/Ministry of Power
 भारत सरकार/Govt. of India
 नई दिल्ली/New Delhi

JHR-45
Annex - III A

Tele : 23019746

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

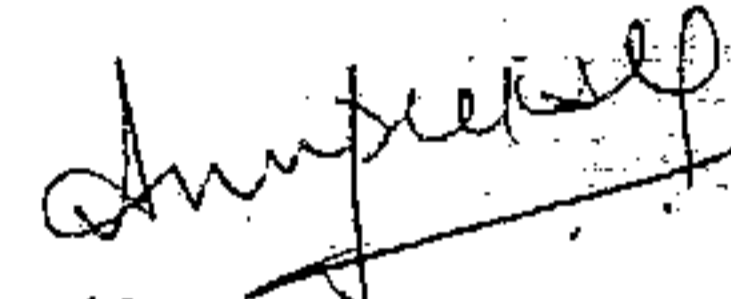
B/46937/Sigs 7(b)/1230/

10 Sep 2018

Chief Manager (TBCB)
PowerGrid Medinipur-Jeerat Transmission Limited
ERTS-I, House No. 360A, Mamta Bhawan,
Road No. 4B, Ashok Nagar
Ranchi (Jharkhand)-834002

PROPOSAL FOR PTCC APPROVAL OF 765 KV D/C (HEXA ZEBRA) RANCHI-MEDINIPUR T/L (JHARKHAND PORTION)

1. Ref your letter No. ER-1/TBCB/PMJTL/W-18/113 dt 10 May 2018 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheets received under your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.



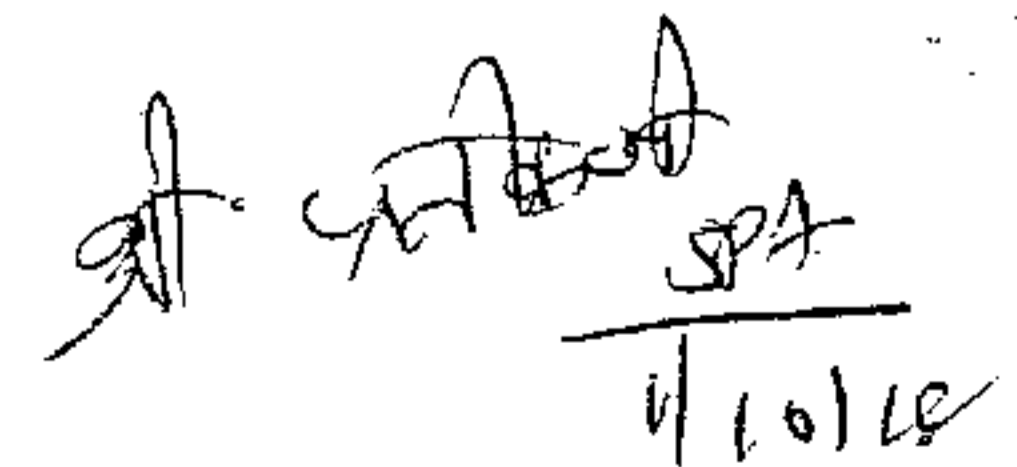
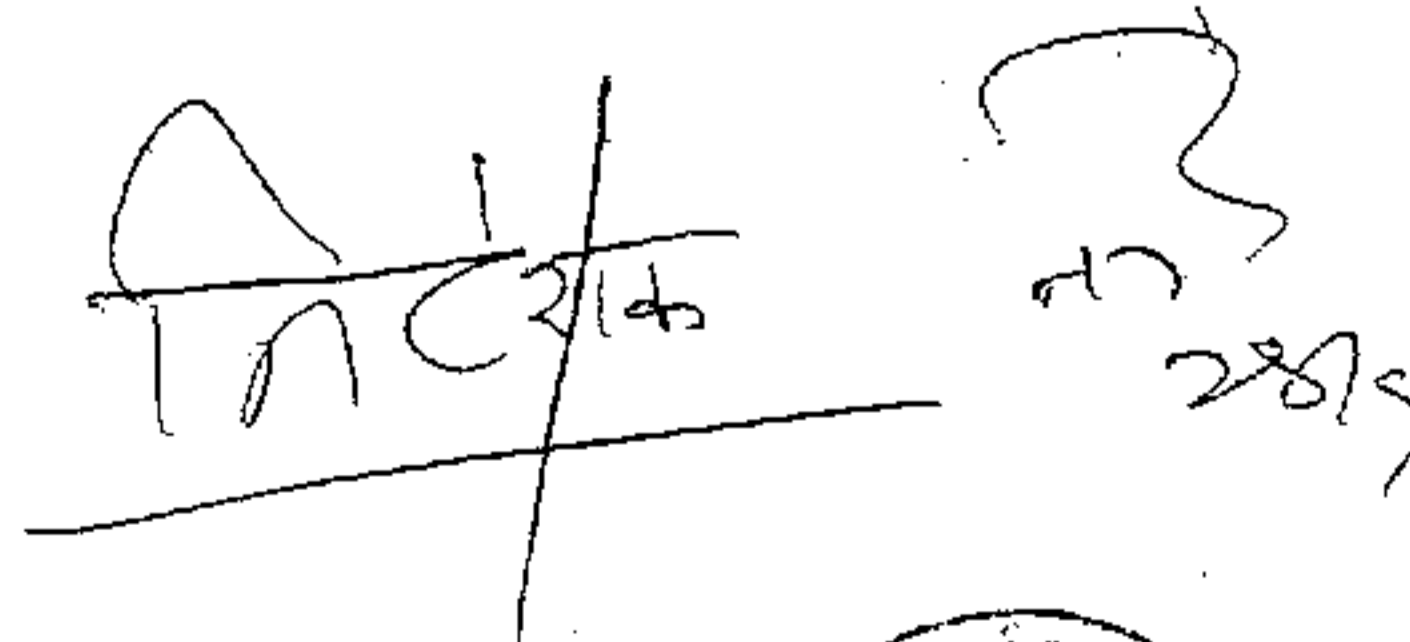
(A Rawat)
Maj
GSO 1 (Comn)
for SO-in-C

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.



Tele : 23019746

WB-130

Annex-III B

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

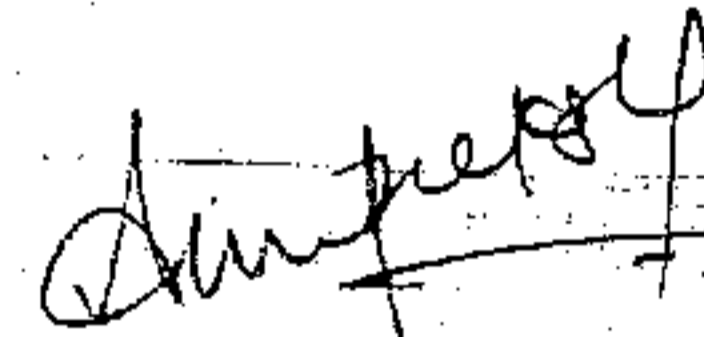
B/46937/Sigs 7(b)/1395/

29 May 2019

Chief Manager (TBCB)
Power Grid Medinipur-Jeerat Transmission Limited
Powergrid, Tiger House (Near Gitanjali Lodge)
Chandrakona Road, P.O.-Satbankura,
Dist.-Paschim Medinipur, PIN-721253, West Bengal

PROPOSAL FOR PTCC APPROVAL OF 765 KV D/C HEXA ZEBRA RANCHI- MEDINIPUR TRANSMISSION LINE (WEST BENGAL PORTION)

1. Ref your letter No. ER-II/TBCB/PMJTL/GBT/PTCC-RMTL/1864 dt 13 May 2019 (copy att).
2. No Objection Certificate (NOC) is accorded based on inputs provided vide Map sheet received under your letter mentioned above.
3. Documents alongwith map sheets (in original) are returned herewith for your further necessary action.



(A Rawat)
Maj
GSO 1 (Comn)
for SO-in-C

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.

श्री गजानन - ए.न.
अध्यक्ष, ए.न.ए.
18.06.19
P C
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17/6

