



डेटा वर्गीकरण : प्रतिबंधित/RESTRICTED

सेंट्रल ट्रांसमिशन यूटिलिटी ऑफ इंडिया लिमिटेड
(पावर ग्रिड कारपोरेशन ऑफ इण्डिया लिमिटेड के स्वामित्व में)

(भारत सरकार का उद्यम)

CENTRAL TRANSMISSION UTILITY OF INDIA LTD.

(A wholly Owned Subsidiary of Power Grid Corporation of India Limited)

(A Government of India Enterprise)

Ref: CC/CTU/COMM/CPM/ER/8

Date: 07.10.2025

Subject: Minutes of 8th Eastern Region ISTS Communication Planning Meeting (ER-CPM) held in virtual mode (MS-Teams) on 3rd September 2025.

Dear Sir/Madam,

Please find enclosed the Minutes of the 8th Eastern Region ISTS Communication Planning Meeting (ER-CPM) held on 03rd September 2025 through virtual mode.

Thanking you,

Yours faithfully,

(Nutan Mishra)
Sr. GM ,CTUIL

Minutes for 8th Meeting for Planning of Communication system for Inter-State Transmission system (ISTS) of Eastern Region held in virtual mode (MS-Teams) on 3rd September 2025.

The Meeting started with opening remarks from Sr. DGM (CTU) and brief introduction of participants. He welcomed all the participants to the 8th communication planning meeting of Eastern region.

List of participants is attached at **Annexure IV**.

A: New Agenda items

1. Installation of OPGW on the existing lines of ISTS and STU: CTUIL

1.1 CEA has intimated vide letter dtd.22.05.2024 (attached at **Annexure-I**) that all the transmission lines of 110kV and above shall have Optical Ground Wire (OPGW) along with necessary terminal equipment for speech transmission, line protection, and data channels. Further primary path for tele-protection shall be on point-to-point Optical Ground Wire and alternative path shall be either on Power Line Carrier Communication or predefined physically diversified Optical Ground Wire paths. Subsequently CEA vide their letter dtd. 22.11.24 (attached at **Annexure-II**) communicated that all the upcoming lines shall be provided with 48 Fiber OPGW to cater for broadband and internet requirements in the rural areas and hinterlands to provide reliable Telecom connectivity.

1.2 In the present scenario of increased RE penetration, frequent system expansion and strengthening, many of the existing lines are proposed for LILO frequently during transmission planning. However, it has been observed many times during planning/execution of these LILO systems that main line is not having OPGW, which leads to issues such as compromising on the alternate path/ redundancy/ protection. Further installation of OPGW on the existing lines being LILOed leads to time mismatch. Moreover, these OPGW laying schemes take even more time than execution of planned TBCB/RTM schemes as Live Line installation of OPGW require PTW from respective RLDCs and also involve ROW for OPGW laying.

As per para 1.2 above:

(b) POWERGRID Transmission lines under RTM without OPGW: Tentative figure is given Below:

S.No	Region	Total Transmission Length (Kms)
1	NR	4091

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2	WR	5200
3	SR	644
4	ER	2754
5	NER	127
	Grand Total	12816

(b) POWERLINKS (Joint Venture of POWERGRID & TATA Power) Transmission lines without OPGW:

S.No	Region	Total Transmission Length (kms)
1	ER	309
2	NR	742
	Total	1051

(c) Private TBCB Transmission Lines without OPGW:

S.No	TSP Name	Region	Total Transmission Length (kms)
1	Indigrid	ER	162
2	Adani	WR	1892
		Total	2669

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Grand Total for the Transmission Lines without OPGW – 16,555 Kms (Pan-India).

In ER Region, a total length 3,446 km of ISTS transmission lines doesn't have OPGW.

It is requested that all TSPs i.e. POWERGRID, Adani, Indigrid, Sterlite/Resonia, TATA Power, Aparaaava etc. and RLDC may also check and intimate if any lines without OPGW is not mentioned here so that same may be included. Further, detail of required FOTE may also be checked and confirmed by respective TSPs.

1.3 State lines without OPGW

- a) Many STU lines also got LILOed on the ISTS substations, for which OPGW installation in the main line is to be taken care by respective State Utilities. STUs are also requested to identify and list out such lines for planning OPGW installation.
- b) As a proactive approach, all the Central and State Sector utilities prioritize the implementation of the 48F-OPGW laying across the transmission network to ensure compliance with regulatory requirements and directive as mentioned above.
- c) Accordingly, it's proposed that:
 - 1. For ISTS lines CTU has prepared the schemes of implementation of OPGW on existing transmission lines of voltage 132kV and above, on which OPGW is not available, along with estimated cost which could be taken up as follows:
 - a. For TBCB projects, the scheme would be implemented by respective TSP under Change in Law / RTM
 - b. For RTM projects, the scheme would be implemented by respective TSP under RTM
 - 2. The tentative cost of OPGW laying scheme is Rs. 909.48 Crores for PAN India basis. For ER, the tentative cost of scheme is Rs 189.5 Crores. Details of Non-OPGW lines is enclosed as **Annexure-III**.
 - 3. For intra state projects, it is suggested that STUs shall formulate the scheme of implementation of OPGW on existing system for their respective states.

OPGW laying on Binaguri-Bongaigaon line was deliberated in the 8th NER CPM held on 28.07.2025 since it is an inter- regional link. The mentioned agenda has been put up for deliberations in 32nd NETeST meeting.

Deliberation:

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CTU explained the agenda to the forum and further stated that CEA advised CTUIL to prepare a comprehensive scheme for installation of OPGW on all those transmission lines of 110kV and above which don't have OPGW on pan-India basis. Further, NPC suggested that the agenda may be deliberated in the respective RPC meetings.

CTU asked the forum to confirm the OPGW availability on the lines mentioned in the **Annexure-III**

DVC enquired regarding the cost implications for laying the OPGW CTUIL said that implementation of OPGW installation shall be according to CERC Tariff sharing Regulations

DVC enquired regarding Maithon -Mejia line ownership. POWERGRID confirmed that ownership of the said line belongs to POWERGRID.

POWERGRID raised the concern regarding laying of OPGW on Birpara- Malabase in the Indian portion without OPGW on the Bhutan portion will be unfruitful. Similar case will be with Tala-Binaguri line to be LILOed at NIP. CTUIL suggested that same will be discussed with RPC & CEA.

Forum confirmed that TATA DVC in the lines list has been changed to TISCO.

ERLDC stated that Talcher- Meramundali line has OPGW and data is being reported. POWERGRID stated that OPGW doesn't exist on the mentioned line. The line about which ERLDC referring is different transmission line that belongs to OPTCL.

ERLDC asked whether list mentioned include STU lines. CTUIL confirmed that only ISTS lines are considered. Further, CTU suggested to the state constituents to consider laying of OPGW on all the state transmission lines of 132kV and above.

CTUIL asked the OPGW availability on the 400kV Siliguri- Kishanganj line. POWERLINKS stated that line length is 93km and 24F OPGW exists on Circuit-1 (Laid by POWERGRID). POWERLINKS further stated that they propose laying of 48F OPGW on the second circuit. CTUIL stated that similar agenda has been deliberated in 8th NER CPM held recently for installation of OPGW on second peak of 400 KV D/c Bongaigaon - Nangalbibra Line where CEA suggested the TSP to approach CERC as it may lead to complications in sharing of revenue. Accordingly, the same shall be followed.

POWERGRID confirmed that main line Binaguri-Purnea got LILOed at Kishanganj for which LILO part was done by POWERGRID (5km). POWERLINK suggested that OPGW laying on the Kishanganj -Purnea shall be given to POWERLINKS as most part belongs to POWERLINKS. POWERGRID also agreed that it will ease the OPGW laying on the mentioned line.

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POWERGRID stated that wherever end stations belong to state constituents power supply and space shall be provided by the states for installation of FOTE.

ERLDC enquired the OPGW availability on Talcher-Angul line. POWERGRID confirmed that no OPGW exists on the mentioned line.

POWERGRID suggested to plan redundant communication for 132 kV Labong (WBSETCL) (Darjeeling) substation as frequent landslides lead leading to fibre break. POWERGRID stated this station is critical as ISTS links such as 132 kV Siliguri-Kashieng, 132kV Rangpo -New Melli are having crossings with the above mentioned station.

CTUIL requested POWERGRID to provide the detailed connectivity diagram for further planning of redundant path.

POWERGRID stated that 160 towers of the (Dehri-Kudra) transmission line belongs to POWERGRID and remaining portion belongs to BSPTCL.

POWERGRID stated that PLCC is very unstable on the (Bongaigaon-Alipurduar-Siliguri) because of many crossings as line length is about 220km. CTUIL stated that OPGW laying on the said line is already under consideration.

INDIGRID stated that OPGW on line New Ranchi-New PPSP only 7 fibers out of 24 are healthy. CTUIL suggested to provide the details/OTDR/LSPM report and further suggested to rectify the remaining fibers in order to decrease the losses.

CTU requested all the TSPs/State constituents/NMT to confirm the OPGW, Port availability, FOTE requirement, SPV details of the lines mentioned at the **Annexure-III** through UNMS also. POWERGRID stated that they will provide the same in a week's time.

CTU suggested that port availability and FOTE requirement may be generated through UNMS and the same may be provided at the earliest.

2. Furnishing of inputs for maintaining database of fiber uses as per Fiber sharing guidelines: CTUIL

CEA has issued "Comprehensive guidelines for the usage and sharing of fiber cores of Optical Ground Wire (OPGW)/ Under Ground Fiber Optic (UGFO) Cable for power system applications" 2025. As per clause no. 7 of said guidelines, CTU for ISTS/ STUs for InSTS shall maintain a comprehensive database of fibers of OPGW installed on transmission lines. Accordingly, it is suggested that all the entities shall provide the fiber

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sharing information as per the format attached at **Annexure-IV**. Only Resonia has provided the data, all other TSPs are requested to expedite.

Further, the Database for transmission lines with and without OPGW was also sought as per the enclosed database. Indigrid, Sterlite, TATA Power, Adani, POWERGRID has provided the data. However, data provided by POWERGRID consists of transmission lines that do not have OPGW. It is requested to provide the data in the required format attached as **Annexure-V**.

Deliberation:

CTU stated that CEA has issued "Comprehensive guidelines for the usage and sharing of fiber cores of Optical Ground Wire (OPGW)/ Under Ground Fiber Optic (UGFO) Cable for power system applications". CTU and STU is to maintain a database of fibers of OPGW installed on transmission lines. Accordingly, a fibre sharing format was formulated and circulated with all the constituents. CTU explained the fibre sharing format and OPGW format to the forum in detail.

CTU requested all the constituents to provide the fibre sharing details as per the format at the earliest. Forum agreed for the same.

CTU stated the data will also be available for planning purposes for STUs.

CTU suggested POWERGRID to provide the data as Fibre sharing details is part of the outage management included in N-UNMS.

INDIGRID stated that they will provide the data in a week's time.

Vide email dated 26.09.2025, Indigrid has provided their inputs regarding fiber sharing in the OPGW links owned by them.

3. Nomination of STU Nodal Officers for State UNMS for coordination with Regional Network Monitoring Team of UNMS: CTUIL

For efficient monitoring and supervision of transmission communication system NMS for ER region has been commissioned in December 2023.

As per clause 4.1.1 of procedure for maintenance and testing of communication system issued by CERC

Quote

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Communication system owner/user shall identify Nodal officer(s) who shall be responsible for maintenance of the communication system in their respective area/ system. The Nodal officer shall be single point coordinator, responsible for maintenance of communication system and co-ordination with national/ regional NMT team of CTU. Details of Nodal Officer (name, designation, company name, address, contact details email, mobile no.) to be given to NMT team of CTU.

Unquote

At present UNMS vendor has provided manpower for maintenance of the UNMS system at STU/SLDC where UNMS console for state is placed. However, for efficient supervision and monitoring of communication system and better redundancy for transmission of data, VoIP, PMU etc, all ER state entities are required to nominate Nodal officer(s) for NMT from respective states.

Deliberation:

CTUIL stated that CERC guidelines on procedure for maintenance and testing of communication system mandates that Communication system owner/user shall identify Nodal officer(s) for coordination with NMT. Accordingly, CTU requested all the ER stakeholders (RLDC, STU, TSP) to nominate and provide the details of the Nodal officers on priority from the respective states for coordination with NMT team for efficient supervision and monitoring of communication system. Forum agreed for the same.

CTU stated that all SLDCs, RLDCs and NLDC to start real time fault reporting through UNMS and to nominate their nodal officers for UNMS to coordinate with NMT.

DVC stated to provide the correspondence through mail addressing to Executive director (DVC) for the same. CTU requested to provide the Mail ID & stated that MoM of meeting shall be mailed accordingly.

All SLDCs, RLDCs and NLDCs to start real time fault reporting through UNMS and to nominate their nodal officers for UNMS to coordinate with NMT.

4. Inclusion of inter-regional/cross border/ missing links in dashboard of UNMS: CTUIL

UNMS for ER region has been commissioned in Dec'23. It has been noticed that inter regional/cross-border links and some of the links/nodes of the communication system are not incorporated in the UNMS. Accordingly, ULDC and NMT are requested to provide the details of all those nodes/links which aren't incorporated in the UNMS and integrate them into UNMS for better visibility and supervision. A separate dashboard maybe incorporated in the UNMS for inter-regional and cross border links for specific monitoring.

Deliberation:

POWERGRID stated that they have already incorporated the links through VNE (Virtual Network Element). CTUIL suggested POWERGRID/NMT for a separate dashboard for inter-regional and Cross-Border links. POWERGRID stated that they will make sure the same shall be implemented after discussing with NMS Works.

5. Training to RLDCs including stake holders on communication system and practices: ERLDC

Training on communication system is required to be imparted to RLDC and stake holders regarding various makers of communication system suppliers viz. Tejas, ECI, Coriant, ABB, RAD etc. and on VOIP system and RTU /SAS for proper planning, maintenance to enhance the availability, reliability and security of data and voice to ERLDC as discussed in the various Test Meeting and CPM meetings.

Deliberation:

POWERGRID asked regarding cost implications for the training.

CTUIL suggested to include the training in the upcoming Pan India OPGW laying on the existing ISTS lines scheme. POWERGRID agreed for the same.

6. Integration of missing communication nodes in UNMS: ERLDC

It is observed that few of ISTS communication nodes are not integrated with the UNMS system in ER, hence we are unable said nodes, and it is leading to delay in the restoration of concerned SCADA data.

The list of nodes is brought below for necessary action.		
SL NO.	STATION NAME	Concerned Utility / PG Region
1	SEL_400	STERLITE / POWERGRID Orissa Projects
2	DHANBAD NKTL_400	NRTL / PG ER -I
3	HEL_400	HEL / PG ER -II
4	PVUNL	PVUNL / PG ER -I
5	JSPL_400	JSPL / POWERGRID Orissa Projects
6	TSL KALINGANAGAR	TSL / PG ER -II
7	JITPL_400	JITPL / POWERGRID Orissa Projects
8	GMR_400	GMR / POWERGRID Orissa Projects
9	IND BHARAT_400	Ind Bharat / POWERGRID Orissa Projects

Deliberation:

OPTCL stated that JITPL & GMR node integration is pending because of FIBCOM NMS issue and further stated that will be integrated in a week's time.

POWERGRID stated that all the remaining nodes belongs to different TSPs and further mentioned that they have already communicated to provide the NBI (North Bound Interface) credentials for integration into UNMS.

CTUIL suggested POWERGRID/NMT to convene a separate meeting with the owners of the above mentioned IPPs.

Forum agreed for the same.

7. Assessment of the communication system in lieu of proposed large number of Meters in AMR system. (Agenda of NPC meeting): ERLDC

At Present in Eastern region Meters with serial interface connected to DCU and DCU with layer 2 Ethernet interface connected to layer 2 ethernet interface of communication equipment (along with other time critical real time applications viz. RTU, PMU, VOIP, Video conferencing and some protection applications. However, in the recent past (For last few years) it was observed that communication system is crashed due to layer-2 broadcasting and affecting other real time applications also. Since all the applications are connected on layer2 LAN segment, it was anticipated that it was due to AMR system, accordingly Layer 3/Layer 4 segregation is implemented for AMR system per state sector wise, accordingly said issue is minimized and troubleshooting capability of system is enhanced.

Now due to market trend, it comes to known that all upcoming meters are coming with L2 ethernet interface hence number of ethernet internet interfaces connected to communication system will be increased due to integration of proposed new meters and due to replacement of old meters.

Hence, it is proposed that proper assessment needs to be done to integrate such large number meters into the communications system and accordingly proactive action is to be taken so that other real time critical application should not be affected.

Deliberation:

ERLDC submitted the following:

- ERLDC mentioned that in an instance when WBSETCL data was not reporting to ERLDC. WBSETCL have shut down their AMR data reporting and problem has been solved.
- COMTEL segregated the AMR data state wise and the effectiveness of the problem has been decreased.
- Since AMR communicates on the ethernet protocol and AMR is being planned to be implemented on the Pan-India basis proper assessment is needed for the present communication system to avoid further disruptions in data reporting.

POWERGRID stated the following:

- According to CEA TS/Cyber security guidelines, GPRS isn't allowed. Meter data reporting shall be done only through Ethernet/LAN.
- Since Layer 3/Layer 4 segregation is already implemented for AMR system since then no issue has been reported.

CTU suggested that ERLDC in coordination with NMT shall submit a detailed report regarding outages of AMR data reporting.

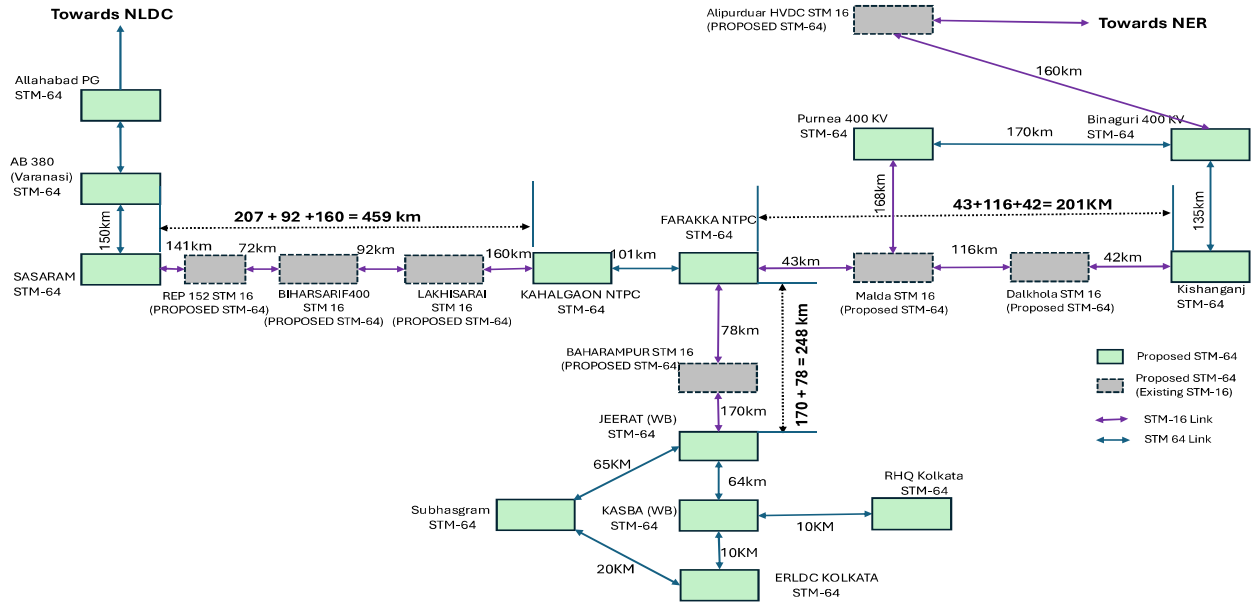
CTU said that existing meters shall be replaced with 5 min IEMs compliant with JC TS be replaced and as such no significant addition of new meter location will be done into system.

8. Proposal for additional FOTE (STM-64 SDH) at various ISTS Stations for strengthening bandwidth capacity with NR and NER: POWERGRID

The Project – “Requirement of additional FOTE at various ISTS nodes in ER due to exhaustion of existing capacity” has been approved on 25.11.2024 in NCT and the same is under implementation by POWERGRID. The scheduled completion time is 24.11.2025.

Under this scheme, STM-16 SDH will be replaced with STM-64 SDH at various location. The network scheme has been prepared after detail survey and engineering which is as below:

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It is found that around 7 nodes (grey colour) will remain with lesser capacity in the backbone with NR and ER. The 07 locations coloured in grey as follows:

1. Behrampore
2. Malda
3. Dalkhola
4. Alipurduar
5. Lakhisarai
6. Biharsharif
7. Repeater 152 (As distance between Lakhisarai to Sasaram is more than 175km, for STM-64 solution upto 175km only)

Hence, it is proposed to consider for additional FOTE (STM-64) at 07 locations for making a strong backbone network with NR and NER. Major benefit and reason are summarised below:

1. Strong communication backbone network with NR and NER regions with higher bandwidth capacity. Generally, backbone is designed with equipment of same make and size.
2. NLDC located in NR, hence there is always high bandwidth consumption in NR-ER corridor. Day by day there is increasing trend of services and applications and hence more channels. There is also increase in redundancy communication links such as dual redundancy for RTU, ICCP link between RLDC and NLDC, International ICCP links, redundancy in AGC, upcoming AMR scheme all over India, etc.
3. As the upcoming Backup ERLDC is coming up at NER (Guwahati), hence it is quite necessary to upgrade the FOTE in NER direction including bandwidth upgradation.

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Also, redundant connectivity with Bhutan will be done through Alipurduar towards NR & NER.

The cost implication for proposed additional 7 no. FOTE (STM-64) is approx. 4 Cr. and a timeline of 12 months will be required for implementation.

Deliberation:

POWERGRID submitted that the Installation of STM-64 at congestion node (Green nodes) has already been in process & Installation of STM-64 at the in between nodes (Grey nodes) will make the complete backbone (NR-ER-NER) become STM-64.

CTUIL stated that as per JC report MPLS-TP is under consideration for implementation so installation of STM-64 at this point of time might lead to replacement again while implementing MPLS-TP.

CTUIL enquired regarding existence of Baharampur node. POWERGRID stated that the Baharampur node exists between Jeerat (WB) and Farakka.

CTUIL asked regarding the FOTE equipment at Alipurduar node. POWERGRID stated that STM-16(Tejas) and STM-4(Coriant) exists at the Alipurduar station.

DVC informed that MPLS-TP (100Gbps) implementation in entire communication network of DVC is under approval. Separate networks for OT(MPLS-TP) and IT(MPLS-IP) networks.

B: Status updation agenda

1. Intimation to all SLDCs of ER constituents regarding adoption of MPLS technology (by ERLDC)

NPC vide letter ref. CEA-GO-15-14/1/2021-NPC Division/256-277 dtd. 14.09.2023 constituted a Joint-Committee to assess Feasibility, Integration & Roll-out of MPLS in ISTS Communication System. CEA has nominated personnel for the Joint-Committee from CEA, all RPCs, CTU, GRID-INDIA, POWERGRID, CSPTCL-Chhattisgarh, KSEB-Kerala, RVPNL-Rajasthan and WBSETCL-West Bengal. In the last 7th MPLS Joint Committee Meeting scheduled on 20.12.2024, 10:30 AM on Virtual Mode Draft Report on Introduction of MPLS technology in ISTS Communication System was deliberated by CTU for information and discussion with all members.

It is very much essential that said issue is to be deliberated in depth in Test meeting regarding integration issues especially since all SLDC data and voice is to be reported to concerned RLDC via ISTS communication network.

Members may deliberate.

7th CPM Deliberation dated 17.01.2025:

ERLDC suggested all the states should be informed regarding MPLS technology and deliberations should be held regarding integration of MPLS technology with existing ISTS technology.

CTU stated that at present roll out of MPLS technology for ISTS power system is under discussion with Joint committee.

CEA stated Rollout plan/committee report for MPLS technology will be rolled out soon and once final committee report is published then deliberation for integration of MPLS technology may be carried out with state utility.

CTUIL status Update in 8th CPM meeting:

CTUIL organized the requisite MPLS workshop on 15th July 2025 in virtual mode attended by ERPC, ERLDC and all ER state constituents.

OEM vendor GE Vernova has demonstrated about MPLS technology and its introduction and integration into existing ISTS Communication network.

2. Training to RLDCs including stake holders on communication system

Training on communication system is required to be imparted to RLDC and stake holders regarding various makes of communication system suppliers viz. Tejas, ECI, Corient, ABB , RAD etc. and cyber security for communication system and on VOIP system etc

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for proper planning , maintenance to enhance the availability , reliability and security of data and voice to ERLDC.

15th TeST decision:

a) Test committee opined that detailed training on said equipment and cyber security for communication system is essential i.r.o RLDC/SLDCs/CTU/POWERGRID/IPP/ISGS and other stake holders for proper planning as well as maintenance of Communication system.

b) Accordingly Test committee advised CTU and POWERGRID to finalize schedule and make necessary arrangements for imparting comprehensive training to all stake holders on various makes of communication system equipment from OEMs like Tejas, ECI, Coriant, ABB, RAD etc. as well as on cyber security for communication system, VOIP system etc.

c)Active participation from all stakeholders was advised and the training may be imparted in phase-wise manner.

Deliberation in 6th CPM:

ERLDC stated that as per regulations, training should be held with proper module so that proper testing and maintenance may be done by the manpower.

CTU stated that POWERGRID may explore the possibility if employees from RLDCs, ERPC, CTU can also be included in such trainings along with training of their officials.

POWERGRID stated that for such provisions of training they will discuss with their higher management and concerned vendor and confirm the same.

7th CPM Deliberation dated 17.01.2025:

POWERGRID stated to provide the information of modules on which training should be held. CTU requested ERLDC and participants to provide the same.

ERLDC vide email dated 20.01.2025 has updated the various training modules as mentioned below:

- a. Various Multiplexing technologies TDM, FDM, PDH, SDH, MPLS, OTN, SDN, etc.
- b. Various modes of communication technologies Fiber Optic, MW, VSAT, GPS, etc
- c. Various types of FO cabling

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- d. Various vendor equipment makes models Viz. Coriant, ECI, Tejas , ABB, RAD, Fibcom, loop , Valient etc.
- e. Configuring management and monitoring of various Communication Equipment in the NMS / UNMS system
- f. Traffic Management / Utilization of ports
- g. Viewing alarms /events in the NMS/UNMS system
- h. Issue of ticketing, Availability of channels monitoring and Measurement
- i. Root cause analysis and Troubleshooting of faults
- j. Administration, Backup, and Restoration procedures
- k. Cyber security and auditing of communication systems.
- l. DCPS systems supplied at ERLDC/ SLDC

However, the said training may be arranged in a phased manner based on the availability of vendors/trainers, participants, etc.

Deliberation:

This agenda has already been discussed at Agenda item no 5.

3. Status of Eastern Region Communication Schemes awarded to TSPs.

Following communication projects have been awarded to various TSPs after approval in NCT.

S I N O .	Project Name	Award Date	Implemen ting Agency	Implement ation Time	Status update by TSP as per 7 th CPM held on 17.01.2025
1	Scheme for OPGW laying in 400kV BokaroA- Kodarma line.	11.03. 2024	POWERG RID	18 months	Supply has been done and installation is under process work will be done by MARCH 2025
2	Scheme for Requirement of Additional FOTE for redundancy at AGC locations in ER.	11.03. 2024	POWERG RID	06 months	Out of 8 locations Teesta V location suggested for deletion
3	Requirement of Additional FOTE at various ISTS nodes in ER due to	22.11.2 024	POWERG RID	12 months	Under tendering

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	exhaustion of existing capacity				
4	Deployment of FOTE (SDH Equipment) and amplifier solutions at Alipurduar S/s end for OPGW based communication and Teleprotection for 400kV lines from PHEP-II, PHEP-I and Jigmeling of Bhutan to Alipurduar, India	22.11.2024	POWERGRID	06 months	Under tendering
5	Eastern Region Expansion Scheme-44: Supply and installation of OPGW along with terminal equipment at both ends of Siliguri (POWERGRID) – Kishanganj (POWERGRID) 220 kV D/c (HTLS) line (108 km).	22.11.2024	POWERGRID	18 months	Under process as it is part of Eastern Region Expansion Scheme-44

Status updation by POWERGRID:

S I N O	Project Name	Award Date	Implementing Agency	Implementation Time	Status update by TSP as per 8 th CPM held on 03.09.2025
1	Scheme for OPGW laying in 400kV BokaroA- Kodarma line.	11.03.2024	POWERGRID	18 months	Line has been commissioned
2	Scheme for Requirement of Additional FOTE for redundancy at AGC locations in ER.	11.03.2024	POWERGRID	06 months	Completed

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3	Requirement of Additional FOTE at various ISTS nodes in ER due to exhaustion of existing capacity	22.11.2024	POWERGRID	12 months	Will be completed in 3 months
4	Deployment of FOTE (SDH Equipment) and amplifier solutions at Alipurduar S/s end for OPGW based communication and Teleprotection for 400kV lines from PHEP-II, PHEP-I and Jigmeling of Bhutan to Alipurduar, India	22.11.2024	POWERGRID	06 months	Commissioned on 29.08.2025
5	Eastern Region Expansion Scheme-44: Supply and installation of OPGW along with terminal equipment at both ends of Siliguri (POWERGRID) – Kishanganj (POWERGRID) 220 kV D/c (HTLS) line (108 km).	22.11.2024	POWERGRID	18 months	Scheme has been awarded and survey will start in 2-3 days



Annexure-I.

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

सेवा में / To

As per list enclosed

विषय/ Subject: Compliance with CEA (Technical Standards for Construction of Electric Plants and Lines), 2022 – Installation of Optical Ground Wire on Transmission Lines - reg

This is to bring to the attention, the crucial requirement outlined in the Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022, pertaining to the installation of Optical Ground Wire (OPGW) on transmission lines of 110 kV and above voltage level.

The aforementioned CEA standard **under Chapter IV, PART-A “SUBSTATIONS AND SWITCHYARDS (66 kV AND ABOVE)” Clause 48, sub clause (5)**, mandates the provision of Optical Ground Wire, along with necessary terminal equipment, on transmission lines of voltage rating 110 kV and above for speech transmission, line protection, and data channels. Additionally, it specifies that the primary path for tele-protection should be on point-to-point Optical Ground Wire, with an alternative path on either Power Line Carrier Communication or predefined physically diversified Optical Ground Wire paths.

The use of Optical Ground Wire facilitates speech transmission, data channels and also plays a crucial role in enhancing line protection. Ensuring compliance with these standards is paramount for the efficient and reliable operation of grid.

Therefore, as directed by Chairperson, CEA in the 19th meeting of National Committee on Transmission, it is requested that all the Central and State Sector utilities prioritize the implementation of the OPGW laying across its transmission network to ensure compliance with regulatory requirements.

Transmission utilities are requested to furnish the monthly progress report pertaining to OPGW installation.

Powergrid and CTU are requested to identify all such ISTS links wherein the OPGW implementation is still to be done and take up its implementation.

Signed by Suman Kumar भट्टदीय,
Maharana

Date: 22-05-2024 17:25:28

(एस.के.महाराणा / S. K. Maharana)
मुख्य अभियन्ता /Chief Engineer

Annexure-II


सत्यमेव जयते
भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत संचार विकास प्रभाग
Power Communication Development Division

CEA-PS-17-24/1/2024-PCD Division/ **Date: 22-11-2024**

To,

(As per the attached list)

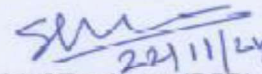
Subject: Facilitating Broadband expansion by allowing leasing of fiber on OPGW - regd.

This has reference to the DO letter dated 11th November 2024(No. 5-5/NBM-2024/PGCIL-OPGW) addressed to Secretary (MoP) from Department of Telecommunications, Ministry of Communications. Wherein MoP has been requested to consider laying at least 48F (48 Fibres) OPGW (Optical Ground Wire) in future transmission projects making provision for leasing of additional fibers for the use of telecom licensees i.e TSP (Telecom Service Provider)/ ISP (Internet Service Provider)/ IP (Internet Protocol)-I etc.

During a review meeting of NER (North Eastern Region) Telecom projects, Hon'ble Minister for Communication had directed to facilitate broadband expansion by allowing leasing of fibers on OPGW of POWERGRID in place of leasing of bandwidth, so that rural areas and hinterlands can get good and reliable telecom connectivity.

In view of this, CTU (Central Transmission Utility), POWERGRID, STUs (State Transmission Utilities) and all the TSPs (Transmission Service Providers) are requested to incorporate the necessary provisions in the technical specifications of their future transmission schemes supporting the laying of at least 48F OPGW instead of 24F OPGW for the upcoming TRCB (Tariff based Competitive Bidding)/RTM (Regulated Tariff Mechanism) schemes. It is further advised that the schemes which are presently in bidding stage may also be modified accordingly by the BPCs (Bid Process Coordinators) wherever applicable.

This issues with the approval of Chairperson, CEA.


22/11/24
Chief Engineer (PCD)

Annexure- III

List of ISTS lines without OPGW in ER Region

SI No	Voltage level	Name of the Line	TSP	Length (km)
1	132	ARA-ARA -1	POWERGRID	1.70
2	132	ARA-DUMRAON -1	POWERGRID	1.70
3	220	ARA-NADOKHAR(LILO)	POWERGRID	112.20
5	400	BIHARSHARIF VARANASI	POWERGRID	321.00
6	132	DEHRI-KUDRA -1	POWERGRID	62.00
7	220	DEHRI-SASARAM -1(LILO)	POWERGRID	4.88
8	765	GAYA BALIA -1	POWERGRID	237.70
9	220	GAYA-BODHGAYA -2(LILO PART.)	POWERGRID	12.70
11	220	GAYA-DEHRI -2(LILO PART.)	POWERGRID	11.00
12	400	GAYA-MAITHON	POWERGRID	276.00
13	400	JAMSHEDPUR-TATA DVC-2	POWERGRID	32.71
14	400	KODERMA-GAYA	POWERGRID	125.00
15	132	KUDRA-SASARAM	POWERGRID	10.84
16	132	MOHANIA-KARMANASHA	POWERGRID	16.74
17	132	PURNEA -DALKHOLA LILO part	POWERGRID	0.50
18	132	PURNEA-PURNEA(BSEB)-1LILO part	POWERGRID	0.50
19	400	RANCHI-RAGHUNATHPUR-1 (LILO of Maithon-Ranchi -II at Raghunathpur)	POWERGRID	155.79
21	220	SASARAM-ARA-1	POWERGRID	112.14
22	132	SASARAM-MOHANIA	POWERGRID	13.26
23	220	SASARAM-NADOKHAR (LILO)	POWERGRID	1.75
24	220	SASARAM-SAHUPURI-1	POWERGRID	4.88
25	400	TATA DVC-BARIPADA-2	POWERGRID	140.28
26	400	TALCHER -MERAMUNDALI-2	POWERGRID	51.00
27	400	ANDAL-JAMSHEDPUR	POWERGRID	156.76
28	220	BIRPARA-MALBASE-3	POWERGRID	38.00
29	220	BTPS-SALAKATI	POWERGRID	3.00
30	400	KISHANGANJ-PURNEA-1 LILO	POWERGRID	5.00
31	400	MAITHON -MEJIA-1	POWERGRID	59.18
32	400	MAITHON-MEJIA-3	POWERGRID	83.74
33	66	MELLI-RABANGLA-1(up to LILO)	POWERGRID	36.00

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34	400	MERAMUNDALI-ANGUL-1	POWERGRID	25.34
35	132	RANGIT-KERSEONG-1 (up to LILO)	POWERGRID	61.20
36	66	RANGIT-RABANGLA-1(up to LILO)	POWERGRID	1.00
37	132	Gangtok-Chuzachen-1	POWERGRID	28.06
38	400	MAITHON -JAMSHEDPUR-2	POWERGRID	153.00
39	400	MEJIA-JAMSHEDPUR (LILO MTN-JSR-I)	POWERGRID	167.74
40	132	RANGIT-RAMMAM-1	POWERGRID	27.15
41	400	BARIPADA -KHARAGPUR-1(LILO)	POWERGRID	18.74
42	400	TALA-BINAGURI-4	POWERGRID	115.55
43	400	TALCHAR-ANGUL-2	POWERGRID	68.35
44	400	Bongaigaon -Alipurduar- Siliguri	INDIGRID	218.78
45	400	Kharagpur - Chaibasa	INDIGRID	161.67
46	400	Kishanganj-Purnea	POWERLINKS	71
47	400	Purnea-Muzaffarpur	POWERLINKS	238
Total Length (Km)				3446
Total cost (5.5 lakhs/Km)				189.5 Crs

Note:

The above data has been provided from the TSPs. It is requested to confirm the above-mentioned data regarding availability of OPGW on the lines.

The above cost estimate has been calculated without considering the FOTE at the nodes. It is suggested that the respective TSPs may confirm the requirement of FOTE at the mentioned locations.

Annexure IV

[illegible]

[illegible][illegible]

Annexure VI

CTUIL

- | | | |
|----|-----------------------|--------|
| 1. | Sh Shiv Kumar Gupta | Sr.DGM |
| 2. | Sh Kaushal Suman | Ch.Mgr |
| 3. | Sh Mandyam Dinesh Sai | ET |

ERLDC

- | | | |
|----|---------------------|--------|
| 1. | Sh L.Murali Krishna | Sr.DGM |
|----|---------------------|--------|

POWERGRID

- | | | |
|----|----------------------|------------|
| 1. | Sh Gaurav Awal | DGM |
| 2. | Sh Santanu Rudrapal | DGM |
| 3. | Sh Partha Gosh | DGM |
| 4. | Sh Hansraj Prasad | DGM |
| 5. | Ms Sanskriti Gupta | Dy. Mgr |
| 6. | Ms Bedashruthi Das | Mgr (ULDC) |
| 7. | Sh Sunit Kumar Singh | JE |

OPTCL

- | | | |
|----|-----------------|----------|
| 1. | Sh Allu Sanjaya | Asst Mgr |
|----|-----------------|----------|

DVC

- | | | |
|----|-------------------------|-------|
| 1. | Sh Jayanta Banerjee | Sr.GM |
| 2. | Sh Pradhan Soren | DGM |
| 3. | Sh Partha Sarathi Hazra | Sr DE |
| 4. | Sh Chandan | |
| 5. | Sh Manoj Kumar | |

JUSNL

- | | | |
|----|-------------------|--------|
| 1. | Sh Basudeo Mahato | Sr.Mgr |
|----|-------------------|--------|

WBSETCL

- | | | |
|----|-------------------|--------------|
| 1. | Sh Biswajit Madhu | Addl Ch.Engr |
|----|-------------------|--------------|

INDIGRID

- | | | |
|----|----------------------|--|
| 1. | Sh Vivek Karthikeyan | |
|----|----------------------|--|

POWERLINKS

- | | | |
|----|-------------------|--|
| 1. | Sh Sandeep Shukla | |
|----|-------------------|--|

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