



भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
उत्तर क्षेत्रीय विद्युत समिति
Northern Regional Power Committee

दिनांक 20.11.2025

सेवा में/ To,

संलग्न सूची के अनुसार/As per list attached

विषय: दूरसंचार, स्काडा और टेलीमेटरी उपसमिति की 29 वीं बैठक।

Subject: 29th meeting of Telecommunication, SCADA & Telemetry Sub Committee

इस कार्यालय के पत्र दिनांक 24.10.2025 के क्रम करते हुए यह सूचित किया जाता है कि उत्तर क्षेत्रीय विद्युत समिति की दूरसंचार, स्काडा और टेलीमेटरी (टेस्ट) उप-समिति की 29 वीं बैठक दिनांक 27.11.2025 को 11:00 बजे सम्मेलन कक्ष, एन.आर.पी.सी, नई दिल्ली में आयोजित की जाएगी। बैठक की कार्यसूची आपकी सूचना एवं आवश्यक कार्यवाही हेतु संलग्न है।

In continuation to NRPC letter dated 24.10.2025, it is to be intimated that the 29th meeting of Telecommunication, SCADA & Telemetry (TeST) Sub-committee of NRPC will be held at conference room in NRPC, New Delhi on 27.11.2025 at 11:00 AM. The agenda for the meeting is enclosed herewith for your information and necessary action.

अनुलग्नक- यथोपरि।

भवदीय,

Signed by Anzum Parwej

Date: 20-11-2025 22:01:41

(अंजुम परवेज)

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29th Telecommunication, SCADA & Telemetry (TeST) Sub-Committee Meeting of NRPC Agenda

1. Confirmation of Minutes

The minutes of 28th meeting of TeST sub-committee held on 23rd July, 2025 were issued on 28th August, 2025. No comments have been received so far. The Minutes are available at NRPC website:

https://nrpc.gov.in/meetings/TEST/TEST28/TEST28_MN.pdf.

Members may kindly confirm the minutes.

2. J&K Telemetry Issues (Agenda by NRLDC)

- 2.1. Reliability and accuracy of SCADA data and its associated communication system is essential for monitoring and coordinating operations of a large electricity grid. It helps in visualization and management of the critical grid element failure/grid incident in real time and minimizes the possibility of any untoward incidences/disturbances.
- 2.2. Real-Time data availability from Jammu and Kashmir is very poor. There is zero visibility of data in J&K stations at J&K and NRLDC. With poor monitoring of data, it is very difficult to monitor grid in efficient manner.
- 2.3. The matter has been discussed in various TCC and TeST Meetings but there is no improvement of the same.
- 2.4. Brief details are as follows:
 - i. Under SCADA upgrade project M/s Siemens at all 400KV / 220 KV and 132 KV sub-stations/generating Stations of J&K PDD installed 66 RTUs.
 - ii. RTUs were not integrated with Control centre due to non-availability of communication network.
 - iii. RTUs were tested locally and commissioned without data availability at Control Centre.
 - iv. **Due to non-availability of data, JK PDD is not able to monitor its drawal from grid and its generation.** It is dependent of Central sector data for monitoring of drawal.
- 2.5. Matter was also discussed in Special Meeting with J&K on 28.07.2020 where in Representative of J&K informed that they have given consultancy work to POWERGRID for installation of OPGW in J&K. However, due to funding issue OPGW work has been stalled by POWERGRID. According to J&K almost 95% of the work is complete and once funding issue is resolved non-availability of telemetry issue will be resolved.
- 2.6. Further, it was informed that payment issues were resolved and many communication links were commissioned and pending link would be commissioned by December 2022.

- 2.7. Matter was also discussed in 47th TCC-49th NRPC Meeting, J&K confirmed that they will resolve the issues mutually with POWERGRID so that data starts reporting to SLDC/ NRLDC.
- 2.8. During 19th TeST Meeting dated 07.03.2022, J & K representative informed that by 31st December 2022 all 70 RTUs will be integrated with SLDC.
- 2.9. During 20th TeST Meeting held on 09.09.2022 it was discussed that J&K informed that although some of the links have been commissioned but data reporting is yet to start due to disconnection of CT/PT cables at site / other integration issues of the RTU. Further it was informed that they are in process of rectification of RTU issues and joint visit is planned with M/s Siemens.
- 2.10. During 64th NRPC Meeting held on 24th March 2023 it was informed that joint visit could not be conducted and after discussions it was decided that a joint meeting shall be conducted comprising members from Siemens, POWERGRID, J&K and NRLDC to resolve the RTU integration issues.
- 2.11. During 68th NRPC Meeting held on 18th Aug 2023 Representative from J&K informed that there is no improvement in regard to telemetry and they are taking up with POWERGRID and Siemens.
- 2.12. Issue was also discussed in 23rd TeST Meeting on 21st Sep 2023 and Special Meeting with J&K on 12th Oct 2023 where in J&K confirmed they will start the process of RTU integration with the support of Vendor. However, till date there is no improvement in data reporting from J&K Sub-stations.
- 2.13. Issue was also discussed in 24th TeST Meeting on 09th Feb 2024.
- 2.14. Further Issues was discussed in 50th TCC- 74th NRPC held on 28th/29th June 2024 where J&K representative informed that they are in discussion with OEM i.e. M/s Siemens for integration of RTUs. Further, they are arranging fund of approx. 34crore, so that communication links can be commissioned.
- 2.15. Issue was also discussed in 26th TeST Meeting on 19th Nov 2024.
- 2.16. During 77th TCC meeting held on 27.12.2024, POWERGRID representative informed the forum that under the PMRP-2004 scheme for the PDD, J&K, the plan included commissioning 76 RTUs and laying 1,781 km of OPGW. As of 2024, 1,280 km of OPGW has been laid, and 41 RTUs have been commissioned. However, no funds have been disbursed by J&K since September 2022, despite multiple meetings, including the most recent one on 31.05.2024 with the Secretary of Power, J&K Government. Consequently, the work has stalled due to the non-payment of funds. POWERGRID's last demand for ₹34 crores, raised in September 2022, remains unpaid. The representative further stated that under the ULDC Phase-3 scheme, 76 RTUs in J&K are to be replaced, which will address both the commissioned and uncommissioned RTUs from the earlier scheme. However, an additional 501 km of OPGW still needs to be laid, for which funds from J&K are essential.
- 2.17. During J&K Special meeting held on 06.02.2025, representative from JKPTCL informed the Ministry of Power (MoP) sanctioned funds for J&K on January 9, 2025. The POWERGRID

representative stated that 501 km of pending OPGW work would commence upon receipt of payment from J&K. Additionally, 76 RTUs (commissioned and un-commissioned) are to be replaced. POWERGRID formally communicated this to J&K through a letter dated January 15, 2025, urging immediate payment to start the work. It was emphasized that RTU commissioning and OPGW laying must be synchronized to meet ULDC Phase-3 timelines. Concern was also raised over TOC approvals, as seven TOCs from Jammu have been pending since June 2024, while Kashmir's TOCs have been received.

- 2.18. In 27th TeST meeting, NRLDC representative pointed out the ongoing issue of telemetry data not being available from J&K stations and requested the concerned authorities to kindly expedite the integration of RTUs at SLDCs. It was also noted that representatives from J&K were not present during the meeting. The Member Secretary, NRPC, expressed concern regarding the continued unavailability of the data and emphasized the importance of resolving the issue at the earliest.
- 2.19. During 28th TeST meeting, NRLDC representative highlighted that real-time telemetry data from Jammu & Kashmir remains unavailable at both J&K-SLDC and NRLDC. Representative from POWERGRID informed that earlier there were some funds issues at state-level but recently an amount of 25 Cr. (approx.) out of ₹34 Cr. (approx.) has been received by POWERGRID through a Central scheme fund. Pending work of OPGW (35 out of 76) will commence in August 2025 and same has been tied up with TCIL and other associated vendors by POWERGRID. Also, RTUs delivery has started under the ULDC Phase-III project in which 1st lot has been dispatched and 2nd lot is under inspection. MS NRPC stressed upon the criticality of real-time telemetry from J&K region and suggested POWERGRID to hold a bilateral meeting with J&K to ensure better coordination, plan and expedite funds utilization, synchronize OPGW and RTU integration activities, and resolve pending issues in a time-bound manner.

J&K/POWERGRID to update the status.

3. Redundant RTU Communication for Main / Backup RLDC (Agenda by NRLDC)

- 3.1. Presently SCADA data channels are reporting in main and backup mode (1+1) with 1 main channel to RLDC and 1 backup channel to Backup RLDC. As deliberated in the meetings held among POWERGRID, Grid-India, CTU and CEA dated 09.05.2023 and 27.06.2023, it has been finalized that to increase the redundancy in the system, 2 main and 2 backup channels should report to RLDCs as well as back up RLDCs considering the criticality of real time grid operations by the RLDCs.
- 3.2. It may also be mentioned that CERC has issued Guidelines on "Interface Requirements" under the CERC (Communication System for inter-State transmission of Electricity) Regulations, 2017: "The interfaces shall be designed to operate under single contingency failure condition. Equipment should support interfaces with multiple ports, cards, gateways etc. and configured in redundant mode so that failure of single hardware element, i.e. communication port, card, gateway etc. of the users shall not lead to failure of data communication."
- 3.3. For new ISTS stations, CTU is already including this requirement in the RfP inputs for TBCB projects. For existing ISTS sub stations, requirement for additional ethernet ports in

RTU/SAS and FOTE were deliberated in various meetings. POWERGRID has provided the region wise data of additional requirement for equipment/port etc in respective SAS Gateway/RTU along with cost estimate for the implementation of dual redundancy to RLDCs & Backup RLDCs. Scheme for requirement of additional FOTE/ cards for dual redundancy in the existing POWERGRID stations has already been reviewed in 69th, 70th, 71st NRPC meetings and approved in 19th NCT meeting.

- 3.4. This scheme was also deliberated in the 72nd NRPC for northern region, where forum has the view that a comprehensive scheme shall be prepared considering the Private TSPs also.
- 3.5. Issue was also discussed in 25th TeST Meeting held on 25.06.2024, during discussion it was finalised that CTUIL shall internally finalize the draft scheme and take up in the next TeST meeting for deliberations.
- 3.6. Issue was also discussed in 26th TeST Meeting held on 19th Nov 2024, where it was decided that matter would be discussed with CEA as similar proposal for funding of firewall installation at Sub-station is in progress. CTU also clarified that, as CTU typically does not form element level schemes, SAS upgrades for RTM sub-stations could be carried out under Add Cap, while upgrades for TBCB sub-stations may fall under the Change in Law provision
- 3.7. Matter was also discussed during the 27th TeST Meeting wherein, it was decided that sub-committee will decide on the matter considering decision taken by NPC in 16th NPC meeting on cost-recovery mechanism of new Firewall (NGFW) at existing 273 nos. substations.
- 3.8. During 28th TeST Meeting, following was discussed :
 - a. Representative from POWERGRID informed the forum that several RTUs/SAS installed at substations do not have sufficient free ports to accommodate the additional communication channels, therefore upgradation of these RTUs/SAS is necessary. It was also deliberated that inter-operability issues such as SDH, MPLS, etc. needs to be taken up gradually and will take time for getting its stability.
 - b. IndiGrid expressed concerns about compatibility of legacy equipment with Next Generation Firewalls (NGFWs) and the potential need for hardware upgrades and need to define cost recovery mechanism for TBCB substations.
 - c. MS, NRPC stated that inter-operability issues may arise, and planning has to be done accordingly, and these things need to be taken care at implementation level.
 - d. Indigrid further stated that as per regulations, expenditures under “Change in Law” can be absorbed in tariff if the cost impact is less than 1% of annual transmission charges.
 - e. Indigrid requested that irrespective of this 1% limit, the additional scope in TBCB projects should be covered under “change in law” as currently there is no provision of “change of scope” under TBCB projects. MS NRPC suggested that regarding cost recovery under Change in Law, respective entities may approach to CERC.

- f. SE, NRPC advised CTUIL to make a consolidated scheme for all TSPs. All TSPs may go differently but the scheme should be commonly prepared by CTUIL. For existing substations, since this is a new requirement, it may be done under ADD-CAP for RTM substations and under change in law for TBCB substations
- g. CTUIL mentioned that add-cap proposals do not go to NCT; hence, making schemes related to RTU-level devices does not come under its jurisdiction as only RPC approval is sufficient for it. MS-NRPC conveyed that CTUIL should prepare a consolidated scheme to bring out uniformity in this area.

Members may please review and provide their observations on the agenda.

4. Display of DC/Schedule of Generating Stations in SCADA Display (Agenda by NRLDC)

- 4.1. In high-demand period there is requirement of monitoring Declared Capacity & Schedule of all Generating Stations so that reserves can be monitored for real-time grid operation. Schedule & DC of Central sector is being integrated with NRLDC SCADA system and same is being monitored by Control Room.
- 4.2. However, DC & Schedule of Punjab, Haryana Uttarakhand and J&K State generator is not integrated with their SCADA system. It was requested that all states take up for integration of state generator in their SCADA system for further integration with NRLDC.
- 4.3. Issue was discussed in 23rd TeST Meeting held on 21.09.2023 & 24th Test Meeting held on 09.02.2024. Present Integration from J&K, Uttarakhand and Rajasthan is still pending. Considering high-demand crunch period, it is very critical to monitor all the generators and corresponding reserves. In this regard, it is requested to please take for integration of Schedule / DC of generators in SCADA.
- 4.4. Issue was also discussed in 73rd NRPC Meeting held on 21.05.2024 where Rajasthan SLDC representative stated that the work is being carried out in association with L&T and would be completed within next one-two week. Uttarakhand SLDC representative stated that DC declaration portal is under M/S Secure and SCADA system under M/S GE compatibility issues are being noticed. The work would possibly be completed after SCADA upgradation system. NRLDC requested Uttarakhand SLDC to take up the matter with Secure and GE and resolve the issue.
- 4.5. Issue was also discussed in 25th TeST Meeting and 50th TCC- 74th NRPC Meetings. After discussion timelines shared by states.
- 4.6. Issue was also discussed in 26th TeST Meeting held on 19th Nov 2024 and after discussion timelines shared by states is as below:

Sl. No.	State	Status	Timelines
1	Punjab	NHPC	Script Automation shall be done in months' time
2	Haryana	NHPC	They will integrate schedule through SAMAST within 2 months.

3	Uttarakhand	NHPC	Integration work is in process, considering Cyber security requirement procurement of firewall is in process will be done in 3 months' time
4	Jammu & Kashmir	NHPC	J &K will discuss and revert

4.7. Matter was discussed during the 27th TeST Meeting held, the representative from Punjab informed that the automation will be carried out shortly. Representatives from Haryana and J&K were not present in the meeting. The representative from Uttarakhand mentioned that the integration is expected to be completed within the next two months.

4.8. Issue was deliberated in 28th TeST Meeting held on 23rd July 2025 and after discussion timelines shared by states is as below:

Sl. No.	State	Status	Remarks & Timelines
1	Punjab	Available	Has been taken up with IT team and script-based automation is expected to take another 2-3 weeks.
2	Haryana	Available	SAMAST is getting delayed; "schedule-data" is expected to get integrated within next 2 months.
3	Uttarakhand	Not Available	Integration over secure ICCP is being planned and expected to be completed within 2- 3 months' timeframe.
4	Jammu & Kashmir	Not Available	J&K member was not present in the meeting.

All concerned are requested to update the status please.

5. Non-availability of Real-Time data from PTCUL (Agenda by NRLDC)

- 5.1. As per details submitted by PTCUL out of 58 Sub-Station/Generating Stations data from only 26 Sub-stations are integrated at SLDC.
- 5.2. The same issue was also informed to PTCUL vide letter (Ref: - NRLDC/SLII/2019-20) dated: - 05.03.2020 38.3. Issue was discussed in Special Meeting with PTCUL held in July 2020 and December 2020. Subsequently issue was also discussed in 17th, 18th & 19th Test Meeting and 45th TCC-48th NRPC and 47th TCC-49th NRPC, 64th NRPC.
- 5.3. During 47th TCC -49th NRPC dated 27.12.2021, representative from PTCUL informed that they are in the process of tendering of RTU and OPGW Installation work and informed that they would expedite the installation works and is expected to be completed in 6 months.
- 5.4. During 52nd NRPC Meeting dated 31.12.2022 NRPC Meeting PTCUL informed that PTCUL representative informed that they are on the verge of finalizing the OPGW project and order will be placed in one-month duration. Tender has been floated for RTU.
- 5.5. During 22nd TeST Meeting representative from PTCUL informed that last tender was cancelled due to higher rates than estimate; there was approximate 39% more than estimate. Further, it was informed that they have prepared fresh DPR for RTU & OPGW installation and they would submit the proposal within next 7-10 days. After approval, PTCUL will initiate tendering process and try to expedite the work.

- 5.6. It may be noted that SCADA upgradation project is also in progress, PTCUL is requested to please match the timelines with SCADA project, so that RTU can be integrated along with new SCADA commissioned.
- 5.7. During 25th TeST Meeting, representative from PTCUL informed that the project is stuck due to non-availability of funding from PSDF. After detailed discussion forum suggested PTCUL to explore alternate arrangements for project funding such as its own funds or state PSDF and complete RTU /OPGW procurement.
- 5.8. Matter was discussed in 26th TeST Meeting & After detailed discussion forum suggested PTCUL to explore alternative funding mechanisms, including utilizing State PSDF or their own funds, to ensure the timely execution of the project. PTCUL agreed to the suggestion and confirmed that they would resubmit the proposal for approval by their management.
- 5.9. During 27th TeST Meeting, the representative from PTCUL informed that, in addition to seeking PSDF funding, they will also explore alternative funding options. They further mentioned that a proposal will be submitted for approval by their management to ensure timely execution of the project.
- 5.10. During 28th TeST Meeting, representative from PTCUL stated that the project for RTU and OPGW installation is still pending due to non-availability of funds, and they are pursuing funding through PSDF and exploring alternative funding options. Member Secretary, NRPC, expressed serious concern over the prolonged delay, and stated that PTCUL must not remain dependent on PSDF, and advised that the project should be executed using internal resources. And, further suggested PTCUL to identify locations with where OPGW is already laid but RTUs/SAS are not installed, the integration work may be taken up under the ULDC Phase-III scheme being executed by M/s GE Vernova under consultancy contract with POWERGRID.

PTCUL to please update the status.

6. Non-Reliable Telemetry from RRVPN Sub-stations (Agenda by NRLDC)

- 6.1. Telemetry is not available from many RRVPNL substations, RRVPNL/NRLDC control room engineers take the decisions based on real-time SCADA data available to Control room. Hence, good quality SCADA input data of all the grid substations/generators is prerequisite for all time monitoring & Control of integrated grid. Unavailability of data may have far-reaching implications for decision-making processes during real time grid operation
- 6.2. Further, it has impact on successful running of state estimator. Correct telemetry is essential for running State Estimator/ Contingency Analysis in EMS, Better SE output will aid in situational awareness of the system operators of NRLDC.
- 6.3. RRVPNL/Rajasthan SLDC is requested to please take up for resolution of the issue at the earliest.

- 6.4. Matter was also discussed in 24th TeST Meeting held on 09th Feb 2024, where representative from Rajasthan SLDC informed that they have already taken up with matter with STU. However, resolution is still pending from STU.
- 6.5. Further issue was discussed in 50th TCC /74th NRPC held in Raipur on 29th-30th June 2024. During the meeting RRVPNL informed the following:
- i. Estimate of upgradation 22 SAS stations (2 no.- 765kV, 8 no.- 400kV, 5 no- 220 kV, 7 no. 132kV) is finalised and it is expected that NIT shall be floated by August 2024.
 - ii. Further, they are in the process of replacement of 132 number of obsolete RTUs and estimate has been finalized, and its NIT is also likely to floated by August 2024.
- 6.6. Matter was also discussed in 26th TeST Meeting held on 19th Nov 2024, where Representative from RRVPNL informed that there was delay in tendering due to some approval. However, they confirmed that tendering for RTU/SAS upgradation would be carried out by December 2024.
- 6.7. During 27th TeST Meeting, the representative from RRVPN informed that the approval for 22 SAS has been obtained, and the tender document for the replacement of 132 obsolete RTUs is currently under the approval process.
- 6.8. During 28th TeST Meeting, Representative from RRVPNL informed the forum that bidding for the 22 SAS stations is currently in progress and work related to replacement of 132 obsolete RTUs is expected to be completed by August 2025. Member Secretary, NRPC, emphasized the need for strict adherence to timelines, given the long-standing nature of the issue.

RRVPNL may update the status.

7. Non-availability of Telemetry from HVPNL Sub-stations (Agenda by NRLDC)

- 7.1. Telemetry is not available from many HVPNL substations (including 400kV also), HVPNL/NRLDC control room engineers take the decisions based on real-time SCADA data available to Control room. Therefore, for continuous monitoring and control of the integrated grid, good-quality SCADA input data from all grid substations and generators is required. Unavailability of data may have far-reaching implications for decision-making processes during real time grid operation
- 7.2. Further, it has impact on successful running of state estimator. Correct telemetry is essential for running State Estimator/ Contingency Analysis in EMS, Better SE output will aid in situational awareness of the system operators of NRLDC.
- 7.3. Most importantly, telemetry of many substations isn't available, which serves as Drawl point for other end Drawl calculations.
- 7.4. Matter was discussed during the 27th TeST Meeting, where Representative from NRLDC informed about non-availability of telemetry data from HVPNL stations and requested

concerned to expedite the process for integration of RTUs at SLDCs. Representatives from HVPNL were not available in the meeting. Member Secretary NRPC expressed serious concern regarding non-availability of data.

- 7.5. During 28th TeST meeting, representative from HVPNL informed the forum that telemetry issues for most of the affected substations have been resolved, and the remaining issues are expected to be rectified within 1 month timeframe by follow-up with field staff. Some stations have SAS-related issues which are being taken up with SAS engineers.
- 7.6. Representative from NRLDC pointed out that data related issues of several 400kV stations have been resolved; but same is pending for many 220kV stations (around 13 in nos.) which are important for drawl calculations.
- 7.7. Member Secretary, NRPC, asked NRLDC to share the updated list of non-reporting substations with HVPNL for swift action. A hard copy of the updated list was handed over to the HVPNL representative at the end of the meeting for immediate reference and follow-up.

HVPNL may update the status.

8. Communication channel redundancy/ Telemetry Issues to NRLDC (Agenda by NRLDC)

- 8.1. The provision of redundant & reliable communication was discussed in various TeST Meetings. Redundant communication is to ensure that at least two ports at RTU end are configured for RLDC. Also, data is configured with two different communication channels for bringing redundancy into the system and increase reliability of data to NRLDC/RLDC.
- 8.2. The reliability of communication channel to NRLDC was discussed in various TeST Meeting since November 2016 (8th TeST Meeting).
- 8.3. It is to inform that many RTUs are still reporting to NRLDC on single channel. It is to note that stations where second is down since long is considered as single channel only. Thus, it is requested that reliability of redundant channel may also be ensured.
- 8.4. List of RTUs with single channel is given below:

Sl. No.	Name of RTU	Owner	Remarks
1	DHAULIGANGA	NHPC	
2	KISHANGANGA	NHPC	
3	PARBATI-2	NHPC	
4	PARBATI-3	NHPC	
5	SEWA-2	NHPC	
6	SALAL	NHPC	Create loop in communication system
7	URI-2	NHPC	
8	BUDHIL	IPP	
9	KARCHAM WANGTOO	IPP	
10	AD Hydro	AD Hydro	

11	Bhiwadi HVDC	POWERGRID	Second gateway Faulty
12	KalaAmb	POWERGRID	
13	CHAMBA	POWERGRID	
14	Lucknow 400	POWERGRID	Wrong analog data
15	KOTPUTLI	POWERGRID	
16	SOHAWAL	POWERGRID	
17	SAHAJAHANPUR	POWERGRID	
18	PATIALA	POWERGRID	Second gateway Faulty
19	Raibareilly	POWERGRID	
20	Fatehabad	POWERGRID	
21	Jhajjar	IPP	Communication link issue (Jhajjar to Hisar)
22	Prithla	Indigrid	Second gateway Faulty
23	SINGRAULI	NTPC	Main Gateway issue

8.5. It is requested to please take up for rectification of data on priority basis and confirm the dates of resolution of the points.

8.6. During the 27th TeST Meeting, Representatives from various entities provided updates on the status of the RTUs and following are still pending.

Sl. No.	Name of RTU	Owner	Remarks/Updates
1	KISHANGANGA	NHPC	NHPC will check
2	PARBATI-2	NHPC	OPGW cable to be layed by INDIGRID by Aug'25.
3	PARBATI-3	NHPC	OPGW cable to be layed by INDIGRID by Aug'25.
4	SALAL	NHPC	Create loop in communication system
5	URI-2	NHPC	Needed to be Address
6	BUDHIL	IPP	Informed to GreenCO
7	AD Hydro	AD Hydro	Informed to AD hydro
8	Bhiwadi HVDC	POWERGRID	Second gateway Faulty-Upgradation Required
9	CHAMBA	POWERGRID	Communication Equipment issue
10	Lucknow 400	POWERGRID	Wrong analog data
11	Raibareilly	POWERGRID	Converter issue at site end
12	Fatehabad	POWERGRID	Rectified
13	Jhajjar	IPP	Communication link issue (Jhajjar to Hisar)
14	Kankroli	POWERGRID	Main gateway Faulty
15	Shree Cement	Shree Cement	Standby link/Gateway Faulty
16	Chamera 3	NHPC	Available through main only

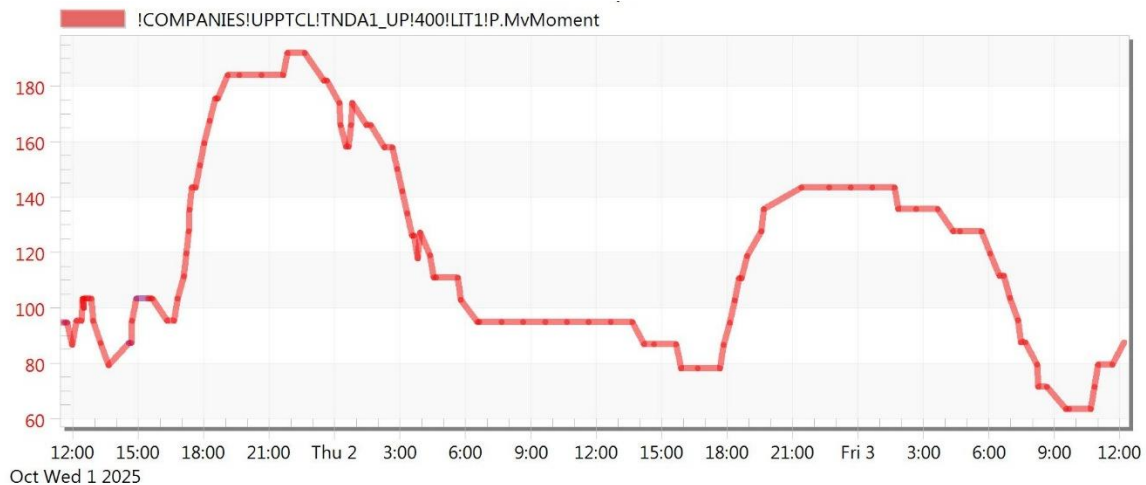
8.7. During the 27th TeST Meeting, Representatives from various entities provided updates on the status of RTUs and following are still pending.

Sl. No.	Name of RTU	Owner	Remarks/Updates
1	KISHANGANGA	NHPC	Issue of changeover which leads to “hang” state. Being taken up with BHEL and expected to be resolved within a week.
2	PARBATI-2	NHPC	Parbati-Koldam section of around 68 kms. to be done in hilly terrain on live-line conditions. Basic issue being faced is identification of vendors for which independent competitive bidding needs to be done before filing expenditure in CERC. To be completed by Indgrid by Jan’26.
3	PARBATI-3	NHPC	Basic issue being faced is identification of vendors for which independent competitive bidding needs to be done before filing expenditure in CERC. To be completed by Indgrid by Jan’26.
4	SALAL	NHPC	Creation of “communication loop” being faced. Can be issue related to Fibre to Ethernet Converter. Will be checked and rectified by NHPC with the help of POWERGRID.
5	Budhil	IPP	Had been informed to GreenCO.
6	Bhiwadi HVDC	POWERGRID	Second gateway Faulty for which upgradation required through M/s Siemens (Germany) as the same is a proprietary system. Matter has been escalated at senior management level for price negotiations by POWERGRID.
7	Bhiwadi 400 101	POWERGRID	Communication Equipment issue
8	Patiala	POWERGRID	Main Gateway/RTU is faulty
9	Jhajjar	IPP	Gateway of NTPC not configured. Communication engineer of POWERGRID will visit site next week.
10	Shree Cement	Shree Cement	Standby link/Gateway faulty.
14	Chamera 3	NHPC	Due to some faulty adaptor which will be rectified within a week.

Concerned Utilities may update the status.

9. Inconsistent Real-Time Data from Tanda NTPC Station (Agenda by UPSLDC)

- 9.1. Real-time data from Tanda NTPC station is not being updated consistently. The data updation frequency varies from minutes to hours (refer to attached graph).
- 9.2. It is requested to carry out a root cause analysis and take corrective measures to ensure continuous data flow.



Members may deliberate

10. Intermittent Telemetry Data from ICTs at Meerut (PG) Substation (Agenda by UPSLDC)

- 10.1. Intermittency in real-time telemetry data of ICTs at Meerut (PG) substation has been observed for a prolonged duration.
- 10.2. Necessary action may be taken to identify and rectify the cause to ensure reliable telemetry data availability.

Members may deliberate

11. Requirement for Additional VOIP SIP Numbers (Agenda by NRLDC)

- 11.1. The existing SIP numbers at NRLDC have been fully utilized, making it impossible to configure any new substations or plants.
- 11.2. We request POWERGRID to coordinate with M/s Orange for the allocation of additional SIP extension numbers to ensure seamless VOIP communication.
- 11.3. During 27th TeST meeting, the representative from POWERGRID informed that the RRVPN Orange Exchange will be utilized, which was also confirmed by the RRVPN representative. A configuration issue persists in integrating the SIP number via the SLDC Rajasthan Orange server. It is requested to escalate the matter to M/s Orange for necessary rectification
- 11.4. During 28th TeST meeting, the representative from NRLDC informed about the configuration issue in integrating the SIP number via the SLDC Rajasthan Orange server. POWERGRID representative informed the forum that a visit of M/s Orange personnel to NRLDC will be scheduled shortly to explore through RRVPN or NLDC Orange Exchange and resolve configuration issues. POWERGRID further informed that tender for new VOIP scheme has been floated after taking approval from NCT.
- 11.5. Member Secretary, NRPC, advised POWERGRID to quickly explore all possibilities, including configuration resolution or additional license procurement, to ensure seamless VoIP communication.

POWERGRID to please update the status.

12. GE N60 model PMUs in the Phasor Data Concentrators (PDCs) is causing multiple operational challenges. (Agenda by NRLDC)

12.1. The major issues identified are as follows:

- a. A single PMU is utilizing different TCP ports for communication with two PDCs.
- b. The reporting configuration has been set to both CFG2 and CFG3, instead of exclusively using CFG3.
- c. The connection type is configured as TCP and cannot be changed to Spontaneous UDP.
- d. Whenever the PMU is restarted for troubleshooting purposes, it fails to resume reporting to the originally configured data stream. To restore reporting, the existing stream must be deleted, and a new stream needs to be created.
- e. The default values for the Phasor Measurement Window Length and Phasor Measurement Group Delay are inconsistent.
- f. In some instances, data is not being reported simultaneously to all three data aggregators.

12.2. Sikar-2 Powergrid Substation has installed an N60 PMU; however, it is currently not compatible with the URTDSM system.

12.3. In view of the above issues, it is advised not to integrate the N60 PMU with the GRID until the configuration discrepancies are resolved.

Members may deliberate.

13. Furnishing of inputs for maintaining database of fiber uses as Fiber sharing guidelines (Agenda by CTU)

13.1. 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 In-STS shall maintain a comprehensive database of fibers of OPGW installed on transmission lines. Accordingly, it is requested that all entities provide fiber sharing information as per the format attached at **Annexure-I**.

13.2. This agenda was deliberated in the 28th TeST meeting held on 23.07.2025 and 9th NR CPM meeting held on 19.08.2025 where members agreed to provide the details as per the format shared by CTU.

13.3. Only Resonia (erstwhile Sterlite Power) and Indigrid has provided the data, and all other TSPs are requested to expedite.

13.4. CTU to develop a portal for the fibre database management in the N-UNMS project as finalized in the 15th NPC and 27th NCT held on 14.11.24 and 06.02.2025 respectively. In this database, STU fibres database also to be included. STUs can also view and manage their fibre database through this portal. In view of this, STUs are requested to provide the

fibre database in the format attached at **Annexure-I** so that same can be included in the fibre database portal.

Members may deliberate

14. Nomination of Nodal officers for coordination with Regional Network Monitoring Team of UNMS (Agenda by CTU)

- 14.1. For efficient monitoring and supervision of transmission communication system, UNMS for Northern Region has been commissioned in November 2023. U-NMS project has been implemented by POWERGRID in the Northern Region through M/s Sterlite, has been in place for over a year since its commissioning.
- 14.2. As per clause 4.1.1 of procedure for maintenance and testing of communication system issued by CERC

Quote

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

- 14.3. In the 27th, 28th TeST meetings of NRPC and 9th NR CPM meeting, all entities (including RLDC/SLDCs/TSPs/Gencos) were requested to send the details of the nodal officers for coordination with NMT of NR UNMS.
- 14.4. UPPTCL, RRVNPL, HPPTCL, DTL and NRLDC have provided details of nodal officers to NMT. All other Communication system owner/user are requested to send the details of the nodal officers to NMT.

Members may deliberate

15. Latest Power maps (132 kV and above) and Fiber Optic maps of STU network (Agenda by CTU)

- 15.1. In the planning process of ISTS Communication Schemes, many times STUs fiber network and power maps need to be referred. Further at the time of connection agreement preparation, this information is required at CTU end. In the absence of data it takes time to provide input and coordinate with the concerned utilities.
- 15.2. In the 9th NR CPM meeting, CTU requested all the STUs to share the latest power maps and fiber optic maps.
- 15.3. All the STUs are once again requested to share the latest Power maps (132 kV and above) and Fiber Optic maps of their respective STU network.

Members may deliberate

16. Updated Status of schemes approved in various NCT (Agenda by CTU)

- 16.1. In the 26th NRPC TeST Meeting, Status of various ISTS communication schemes approved in NCT were deliberated. Forum suggested that this monitoring could be held under the NRPC level.
- 16.2. In the 27th TeST meeting POWERGRID was requested to provide the status of links commissioned under different projects other than NCT approved Category – B schemes e.g. Reliable schemes / Expansion Schemes etc. as agenda in the TeST meeting henceforth.

- 16.3. Status of various communication schemes as provided in the 28th TeST and 9th NR CPM meeting is attached at **Annexure-II**.
- 16.4. Respective Implementing Agency/TSP is requested to provide current status of these schemes.

Members may deliberate

17. Establishment of Redundant Communication Network for Centre Sector and RRVPNL (Agenda by POWERGRID)

- 17.1. For establishment of redundant Communication Network for Central Sector and RRVPNL in Rajasthan, a scheme was approved in 58th NRPC meeting wherein 3 pairs of OPGW fibres are to be spared from existing RRVPNL network for establishment of redundant communication network for RTU/PMU/SCADA applications data reporting at Jaipur SLDC and NRLDC/NLDC.
- 17.2. For establishment of the said network, a contract has been awarded to M/s DeeJay System Consultants Private Limited in Sept'2024. Site survey was carried out under supervision of RRVPNL personnel and accordingly based on site survey and detailed engineering, network diagram has been prepared.
- 17.3. Further, in 27th TeST meeting, said communication network was discussed along with the requirement of shifting of existing communication equipment from the Ratangarh repeater of the Khetri-Bikaner link (currently installed at a tower location) to the 400kV Ratangarh with laying of approx. 5kms of 48F OPGW on 400kV S/C Ratangarh-Suratgarh line by POWERGRID. RRVPNL has in-principally agreed for the proposal.
- 17.4. Subsequently, POWERGRID requested for 48F OPGW laying permissions on 400kV S/C Ratangarh-Suratgarh line, however permissions are still awaited. POWERGRID, then requested to provide 3 pairs of spare fibers for commissioning and establishment of networks, however spare fibers yet to be allocated.
- 17.5. Presently, all the communication equipment as envisaged for the establishment of subject redundant communication have been installed at site. For commissioning / establishment of network, spare fibers are required and for shifting of Ratangarh repeater OPGW laying works are to be carried out on Ratangarh-Suratgarh line.
- 17.6. For establishment of mentioned network, RRVPNL is requested to allow laying of 48Fibre OPGW on any of 400kV Ratangarh-Suratgarh Circuit-I or 400kV Ratangarh-Suratgarh Circuit-II and to provide spare fibers on following links –
 - 1) Bhinmal (PGCIL) - Barmer (RRVPNL)
 - 2) Barmer (RRVPNL) - Jaisalmer-II (RRVPNL)
 - 3) Jaisalmer-II (RRVPNL) - 400KV Jodhpur RRVPNL (Kakani)
 - 4) Jodhpur RRVPNL (Kakani) - Jodhpur RRVPNL (Surpura)
 - 5) Jodhpur RRVPNL (Surpura) – 220kV Jodhpur (Basni)
 - 6) 400KV Jodhpur (RRVPNL) - Bhadla (RRVPNL)
 - 7) Bhadla (RRVPNL) - Bikaner (RRVPNL)
 - 8) Merta (RRVPNL) – Ratangarh (RRVPNL)
 - 9) Merta (RRVPNL) - 400KV Jodhpur RRVPNL (Kakani)
 - 10) Merta (RRVPNL) - Jodhpur RRVPNL (Surpura)
 - 11) Merta (RRVPNL) - Beawer (RRVPNL)
 - 12) Merta (RRVPNL) – Heerapura 400kV (RRVPNL)
 - 13) Ratangarh RRVPNL (400kV) - Ratangarh SLDC (220kV)
 - 14) Sikar (PGCIL) - Bikaner (RRVPNL) – TBCB scheme
 - 15) Beawar (RRVPNL) - Bhilwara SLDC (220kV)

- 16) Bhilwara SLDC (220kV) - Bhilwara RRVPNL (400kV)
- 17) KTPS - Kota SLDC
- 18) KTPS - Kota PGCIL
- 19) Phagi (RRVPNL) – Heerapura (RRVPNL)

Members may deliberate

18. Scope of the Communication System Audit – when equipment is not owned by substation owner (Agenda by POWERGRID)

- 18.1. Standard Operating Procedure (SOP) for Communication Audit of Substations as issued by NPC in accordance with the Central Electricity Regulatory Commission (Communication System for Inter-State Transmission of Electricity) Regulations, 2017.
- 18.2. In this regard, scope of Communication System Audit need further deliberation:
 - A generation plant having communication equipment owned by POWERGRID / ULDC and DC Power Supply, earthing etc are maintained by generation plant.
 - A large substation like Bhadla, Fatehgarh having multiple communication equipment in kiosks or control room, owned by different entities.
 - Further, when OPGW owner is different from equipment owner due to involvement of LILO portion (Fatehgarh-I – Bhadla-I LILOed at Fatehgarh-II).
- 18.3. In these cases, who will be the auditee as assets are maintained by respective owners and records are maintained accordingly by themselves.

Members may deliberate

19. Non-availability of Space, Building infrastructure, input power supply source for upgradation of SCADA/EMS Project (ULDC Phase- III) and Reliable communication network (Agenda by POWERGRID)

- 19.1. SCADA/EMS Upgradation Project (ULDC Phase-III) for Northern Region SLDCs and RLDC is being executed by POWERGRID through M/s GE Vernova. Currently, Integrated FAT is going and likely to be completed by Nov' 2025 end. Simplified FAT for HPSLDC and HVPNL has been completed and materials are ready for dispatch at respective SLDCs.
- 19.2. Under the said project, UPS, Battery Bank. VPS have been supplied. In J&K PTCUL and DTL, 48 V DCPCs system are also in the scope. However, during installation it has been observed that at few of the sites namely – Minto Road (DTL, Main SLDC), Bamnauli (DTL, Backup SLDC) and PTCUL main control centre, RRVPNL's sub-LDC are not ready. Detailed issues are being raised with respective control centre at time to time, however major space constraint issues are being faced and may delay the project further. In DTL's Minto Road and Bamnauli control centre, 48V DCPS system is also not available, due to which establishment of redundant communication network for SLDCs and Backup SLDCs could not be achieved after supply of communication equipment after 4 months.

Members may deliberate

20. Issues being faced by NMT Team for smooth operation of UNMS system (Agenda by POWERGRID)

S. No.	Issue/Challenge	Details/Remarks	Action Required
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1	Pending Integration of Network Elements (NEs)	All NEs still not integrated due to lack of support from States/IPPs/ISTS owners and OEMs.	Due to it no consolidated data on total vs. integrated equipment in UNMS. States to update latest status and IPPs/TSPs to coordinate with OEMs and support integration.
2	Lack of Updated Network Details	No updated data on total vs. integrated equipment after new packages were awarded.	States to provide updated equipment/node data.
3	Nodal Officer Nomination	Need for a single point of contact from each State/IPPs/ISTS for coordination.	States to nominate nodal officers (DTL/ UP/ HP/ RVPNL have shared nodal persons)
4	JKPTCL Communication System Integration	Temporary setup (laptop with NMS) is unreliable and often goes offline.	Permanent integration solution needed.
5	Power Supply Issue at Kashipur	UNMS system remains powered off due to unresolved power issues.	PTCUL to resolve power supply issue. Pending from long Time
6	Escalation Matrix for IPPS/TSPs	No escalation matrix available for outage resolution.	Still Pending

Members may deliberate

21. Supply and installation Redundant Communication for Parbati Pooling (Banala) (PG), Parbati-II (NHPC) & Parbati-III (NHPC) – Status Review and Early Pursuance (Agenda by NHPC)

Background (as per previous TeST Minutes)

- 21.1. In the minutes of 26th TeST (Agenda Point No. 31) Dt 23.12.24, it was noted that under the 72nd NRPC meeting, the supply and installation of 24 Fibre OPGW and FOTE for establishing redundant communication for Parbati Pooling (Banala) (POWERGRID), Parbati-II (NHPC) and Parbati-III (NHPC) stations would be implemented under the “NR Reliable Scheme” with a tentative completion period of 18 months from the date of allocation.
- 21.2. It was further recorded in Minutes of 27th TeST Dt 22.05.25 that the OPGW laying for PARBATI-II & PARBATI-III (NHPC) on the concerned transmission section is to be undertaken by INDIGRID with an expected completion by August 2025.
- 21.3. In the Minutes of 28th TeST Dt 28.08.25, it was mentioned that the Supply & installation of 24-Fibre OPGW (88.635 km) on PKTCL lines, for providing redundant communication to Parbati Pooling (Banala) (PG), Parbati-II (NHPC) & Parbati-III (NHPC) with financial implication of Rs. 5.31 Cr by PKTCL under schemes approved in 20th NCT, has been awarded vide OM dated 15.07.2024, with 18-month implementation timeframe i.e. Jan 2026 from the date of allocation.

Current Submission / Agenda for 29th TeST by NHPC

- 21.4. In view of the fact that the implementation of the redundant communication scheme for Parbati Pooling (Banala), Parbati-II and Parbati-III has already been delayed by nearly one

year, the committee may consider urging all implementing agencies—POWERGRID, INDIGRID and PKTCL—to expedite the balance works on priority.

- 21.5. Given the severe geological constraints, frequent landslides, and recurring flood conditions in the Parbati valley, uninterrupted and reliable dual-source data transmission is critical for maintaining continuous telemetry and ensuring secure grid operation. The importance of OPGW telemetry and communication link was very much felt during heavy rains/flash floods in Parbati/Himachal region during Late Aug-2025 when other communication channels were constrained.
- 21.6. Therefore, the Committee may emphasize the need for accelerated execution and a definite timeline to ensure early commissioning of the redundant communication paths for these strategically important stations.

Members may deliberate

22. Delay in Execution of ULDC Phase-III Project (Agenda by UPSLDC)

- 22.1. Execution of ULDC Phase-III is significantly delayed from the scheduled timeline. Further delay may necessitate extension of SCADA Phase-II AMC beyond 31 March 2026.
- 22.2. Discussion is required to review the current status and explore measures for timely completion.

Members may deliberate

23. Non-displaying of Dynamic Values on SLDC Haryana Website (related to ULDC Phase-II) (Agenda by HVPNL)

- 23.1. Any newly created data points in the SCADA system (analog values) either do not reflect on the website or display random/incorrect values. This issue has been highlighted to M/s Siemens multiple times. However, no solution has been provided so far, nor has the cause of the issue been provided by M/s Siemens.
- 23.2. Therefore, M/s Siemens may kindly be requested to look into this issue sincerely and provide a proper resolution at the earliest.

Members may deliberate

24. Expediate of ULDC Phase-III project (Agenda by HVPNL)

- 24.1. The commissioning of the ULDC Phase-III project is lagging by at least 5-6 months against the L2 schedule, while SLDCs are incurring very high costs for maintaining the AMC of the existing SCADA system.
- 24.2. Further, during the last PRM meeting, it was decided that M/s GE would deploy engineers at site and system dispatch would commence by July 2025 onwards. However, till date, only the VPS and auxiliary supply system have been dispatched.
- 24.3. Considering the project timelines and the higher cost associated with continuing the AMC of the existing SCADA system, it is requested that PowerGrid may kindly asked to M/s GE to expedite the pending activities and ensure commissioning of the project at the earliest.
- 24.4. Furthermore, all types of FAT (Factory Acceptance Tests) may also be completed in a timely manner.

Members may deliberate

25. Issuance of MoM regarding IP confliction in ULDC Phase-III and IP detail for CFE server for BCC (Agenda by HVPNL)

- 25.1. Under ULDC Phase-III, HPSLDC and Haryana are establishing their own dedicated Backup Control Centres (BCCs). Due to the shared BCC setup in ULDC Phase-II, the CFE (Communication Front End) server IPs of both states are conflicting in the current Phase-III implementation.
- 25.2. A VC meeting was held on 21.05.2025 in which a common consensus was reached. It was decided that M/s PowerGrid would issue the Minutes of Meeting (MoM) and share the finalized CFE IP details for configuration in the upcoming RTU/SAS systems.
- 25.3. In the last TeST meeting PowerGrid has ensured to issue MoM on the matter which is still pending.
- 25.4. M/s PowerGrid is therefore again requested to issue the MoM along with the CFE server IP details for BCCs at the earliest, so that the matter may be apprised to senior officers of HVPNL.

Members may deliberate

26. Regarding information in respect of ULDC Phase-III scheme (Agenda by BBMB)

- 26.1. In respect to ULDC Phase-III Scheme, it is intimated that Simplified FAT of all the material has been completed by M/s GE Vernova T&D India Pvt. Ltd. In co-ordination with PowerGrid.
- 26.2. In this context, BBMB requested during FAT to provide SOP's of the FAT procedure of all the equipment being purchased in ULDC Phase-III. Also, BBMB vide letter No. 4500-02 dated 19.09.2025 requested to provide SOP for configuration management in compliance to Point No. 6 of Section 2.3.6 of standard scope of Cyber Security Audit shared by CSIRT-Power. As such, it is requested to provide the SOP's for FAT procedure of all equipment's being purchased in ULDC Phase-II Scheme.

Members may deliberate

27. Regarding storage of Logs of URTDSM System (Agenda by BBMB)

- 27.1. In the 28th TeST Meeting Minutes, it was informed by PowerGrid that the agenda has already been approved in the 54th TCC/79th NRPC meeting and they will award the Contract. However, keeping in view the guidelines of CERT-In, it is requested to provide the current status of the implementation of Contract for storage of logs of URTDSM system.

Members may deliberate

28. Communication System Audit (Agenda by NRPC)

- 28.1. Communication Audit of Meerut Substation was carried out by audit team comprising of NRPC, NRLDC and PTCUL as per the SOP of NPC and CERC Communication Regulations, 2017. Audit observations were issued to POWERGRID; compliance is still awaited.
- 28.2. Communication Audit Sub-Group, in its second meeting, scheduled further audits at Tehri PSP and AD Hydro during November and December, respectively.

For information of members

29. Communication Outage Planning (Agenda by NRPC)

- 29.1. NRPC Secretariat has initiated monthly communication outage planning from October 2025 as per the approved SOP.
- 29.2. No outage requests or deviation reports have been received so far; NRLDC may confirm if any outages occurred during this period.
- 29.3. Utilities are advised to send data regarding outage and deviation data (whenever applicable) as per approved format to ensure compliance.

Members may deliberate

Annexure - I

डाटा वर्गीकरण प्रतिबंधित / RESTRICTED

[illegible]

Annexure-II

Status of communication schemes agreed in various NCT

S. No.	Name of the Scheme	Implementing Agency	Implementation schedule	FOTE (No.)	OPGW (Km.)	Cost (Cr.)	Constraint Faced	Status update by TSP
Schemes approved in 33rd NCT, awarded through OM Letter dtd. 26.09.2025								
1	Redundant communication for Narora Atomic Power Plant (NPCIL) (NAPP)	POWERGRID	24 months from date of allocation	2	88	6.45		
2	Redundant communication for Saharanpur S/s (PG)	POWERGRID	12 months from date of allocation	5		2.1		
3	Redundant communication for Manesar S/s	POWERGRID	24 months from date of allocation		30	2.1		
Schemes approved in 30th NCT, awarded through OM Letter dtd. 25.06.2025								
4	OPGW installation on existing 400 kV Sikar (PG) - Agra (PG) D/c line (owned by PG) which is proposed to be LILOed at 400 kV GSS Kumher (RRVPN)	POWERGRID	Matching time frame with transmission scheme of "LILO of one circuit of 400kV Sikar - Agra D/c (Quad Moose) line at 400 kV GSS Kumher	3	386	26.49		

			(6.5 ckm) along with 80 MVAR, 420 kV switchable line reactor at Kumher end of Sikar - Kumher 400 kV section"					
5	OPGW installation on existing 220 kV Chittorgarh (RVPN)-RAPP B (NPCIL) D/c Line (owned by PG) which is proposed to be LILOed at RVPNs 220 kV GSS Begun (Chittorgarh)	POWERGRID	Matching time frame with transmission scheme of "LILO of 220 kV Chittorgarh-RAPP B D/c Lines at RVPNs proposed 220 kV GSS Begun (Chittorgarh)"	2	130	8.55		
Schemes approved in 27th NCT, awarded through OM Letter dtd. 24.02.2025								
6	OPGW installation on existing 765 kV Fatehpur-Varanasi S/c & 765 kV Fatehpur-Sasaram S/c Lines which are proposed to be LILO at New Prayagraj (ISTS)	POWERGRID	24 months from the date of allocation or with matching timeframe of the transmission project "Interregional (NR-WR) Transmission System	2	579	33.24		Awarded to M/s Advait, Design and BOQ approval in progress

			strengthening to relieve the loading of 765 kV Vindhyachal-Varanasi D/c line" whichever is earlier					
Schemes approved in 26th NCT, awarded through OM Letter dtd. 30.01.2025								
7	Redundant Communication for Salal (NHPC) station	POWERGRID	18 months from the date of allocation		62	3.41		Awarded to M/s Advait, Design and BOQ approval in progress.
Schemes approved in 22nd NCT, awarded through OM Letter dtd. 02.09.2024								
8	Optical fiber connectivity for NLDC new building August Kranti Marg, New Delhi	POWERGRID	02.03.2026 (Revised in 26th NCT)	3	35	7.2		For Interim arrangement, fibre laid, Equipment and 48V DCPS supplied, however NLDC building is still not ready for installation of Communication

								equipment and 48V DCPS. For final OFC arrangement, contract has been awarded, ROW charges to CPWD deposited, however site inspection by CPWD team is awaited due to Monsoon season.
Schemes approved in 20th NCT, awarded through OM letter dtd. 15.07.2024								
9	Supply and installation of 24 Fibre OPGW on PKTCL lines for providing redundant communication for Parbati Pooling (Banala) (PG) S/s, Parbati-II (NHPC) & Parbati-III (NHPC) stations	PKTCL	18 months from the date of allocation		88.635	5.31		Under award because limited participation from vendor

10	Supply and installation of 24 Fibre OPGW & FOTE to providing redundant communication for Parbati Pooling (Banala) (PG) S/s, Parbati-II (NHPC) & Parbati-III (NHPC) stations	POWERGRID	18 months from the date of allocation (with matching schedule with Scheme 4)	4	0.783	1.24		Work order issued, shall be completed as per the time schedule.
11	Redundant Communication for Chamera-III (NHPC) & Budhil (GreenCo) using 3 pairs of fibers sharing from HPPTCL network.	POWERGRID	18 months from the date of allocation	1	0	0.3		Work order issued, shall be completed as per the time schedule.
Schemes approved in 19th NCT, awarded through OM letter dtd. 29.05.2024								
12	OPGW installation on existing 400 kV Kota - Merta line which is LILOed at Shri Cement & proposed to be LILOed at 765/400 kV Beawar (ISTS) S/s	POWERGRID	24 months from the date of allocation	3	311	18.5		Work order issued. It will be completed as per the time schedule.
13	Supply and Installation of 12 nos. FOTE and additional ethernet (125 nos.) cards for existing FOTE in view of resource disjoint and critical	POWERGRID	12 months from the date of allocation	12	0	5.2		All works completed except one equipment Power on at

	locations.							DTL, SLDC due to non-availability of 48V DCPS.
14	Supply and Installation of 11 nos. FOTE Equipment at Backup SLDCs in NR & Backup NRLDC.	POWERGRID	12 months from the date of allocation	11	0	3.3		All works completed except Two equipment installation at DTL, Bamnauli control centre due to ongoing renovation works.
15	Supply and installation of OPGW on 400kV Fatehgarh I (Adani) - Fatehgarh-II (PG) line (6.5 kms), (Fatehgarh-I (Adani) - Bhadla(PG) line LILoed at Fatehgarh-II) as redundant communication for Fatehgarh-I (Adani)	Adani Transmission Ltd.	18 months from the date of allocation	0	6.5	0.325		OPGW work complete on 400kV Fatehgarh I (Adani) - Fatehgarh-II (PG) line (6.5 kms)
16	OPGW installation on 765kV Agra (PG) -Fatehpur (PG)D/c	POWERGRID	24 months from the date of allocation	2	335	16.5		Work order issued. It will

	line may be considered as a separate scheme in matching timeframe of Ph-IV (Part-4:3.5GW) scheme							be completed as per the time schedule.
17	OPGW installation on existing 400 kV Kurukshetra - Malerkotla line. Part-A	NRSSXXI (B) Transmission Ltd (Sekura)	18 months from the date of allocation		140	9		As on 31 st Aug 25, Work complete and ready to commission.
18	Communication Equipment (FOTE) installation on existing 400 kV Kurukshetra - Malerkotla line at both ends. Part-B	POWERGRID	18 months from the date of allocation (with matching time frame of OPGW on 400 kV Kurukshetra - Malerkotla transmission line)	2		0.6		Work order issued. It will be completed as per the time schedule.
Schemes Modified/approved in 16th NCT, awarded through OM letter dtd. 03.01.2024								
19	Supply and Installation of OPGW on 400kV Kishenpur-Wagoora line.	POWERGRID	21.11.2026 (Revised in 26th NCT)	2	183	9.15		Work order issued, It will be completed as per the time schedule.
20	Supply and Installation of OPGW on 400kV Agra-Ballabgarh line.	POWERGRID	21.05.2026 (Revised in 26th	2	181	9.05		OPGW installation

			NCT)					works completed for 125 Kms out of 183 Kms. Target by Nov' 2025.
Schemes approved in 11th NCT, awarded through OM letter dtd. 16.02.2023								
21	OPGW installation on existing 400 kV Jallandhar (PG) - Kurukshetra (PG) line which is to be LILOed at 400 kV Dhanansu (PSTCL)	POWERGRID	10.01.2027 (Revised in 26th NCT)	2	229	10.3		Work order issued, It will be completed as per the time schedule
22	Supply and Installation of OPGW on existing 400 kV Koldam-Ludhiana (PG) line which is to be LILOed at 400 kV Ropar (PSTCL)	Indigrid	implementation timeframe of 18 months	2	150	6.7		Work completed.
23	Redundant communication System for Bhinmal (PG) and Kankroli (PG) ISTS stations	POWERGRID	21.05.2026 (Revised in 26th NCT)	8	5	2.55		Work order issued, It will be completed as per the time schedule
24	OPGW installation on 220 kV Anta (NTPC) - Bhilwara Line	POWERGRID	implementation timeframe of 18	2	187	9.35		Work completed.

			months					
Schemes approved in 9th NCT, awarded through OM letter dtd. 15.11.2022								
25	Transmission lines which are to be provided with OPGW alongwith necessary accessories and FOTE are mentioned as under • 765kV S/c Jaipur (Phagi) (RVPNL) - Gwalior line (312 km) (Ckt-1 is proposed) (to be LILOed at Dausa) • 400kV D/c Agra - Jaipur (South) (PG) line (254 km) (to be LILOed at Dausa)	POWERGRID	21.11.2026 (Revised in 26 th NCT)		312		28.5	OPGW installation works going on 142 out of 310 Kms (Phagi-Gwalior line). 108 out of 254 Kms (Jaipur south-Agra line). Target by June'2026