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

सेवा में/To,

संलग्न सूची के अनुसार/ As per list attached

विषय: दूरसंचार, स्काडा और टेलीमेटरी उपसमिति की 24 वीं बैठक।

Subject: 24th meeting of Telecommunication, SCADA & Telemetry Sub Committee.

इस कार्यालय के पत्र दिनांक 13.12.2023 के क्रम करते हुए यह सूचित किया जाता है कि उत्तर क्षेत्रीय विद्युत समिति की दूरसंचार, स्काडा और टेलीमेटरी (टेस्ट) उप-समिति की 24 वीं बैठक दिनांक **09.02.2024** 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 13.12.2023, it is to be intimated that the 24th meeting of Telecommunication, SCADA & Telemetry (TeST) Sub-committee of NRPC will be **held at conference room in NRPC, New Delhi on 09.02.2024 at 11:00 AM**. The agenda for the meeting is enclosed herewith for your information and necessary action.

भवदीय
Yours faithfully,

(अंजुम परवेज/ Anzum Parwej)
(अधी. अभि. & सदस्य संयोजक टेस्ट उपसमिति)
SE & Member Convener TeST sub-committee

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**24th Telecommunication, SCADA & Telemetry (TeST) Sub-committee meeting-
Agenda**

1. Confirmation of Minutes

The minutes of 23rd meeting of TeST sub-committee held on 21.09.2023 were issued on 23.10.2023. Minutes are available at NRPC website (<http://164.100.60.165>). No comments have been received till date.

Members may kindly confirm the minutes.

2. Fibre Sharing on STU links for redundant communication to ISTS Nodes (Agenda by CTU)

2.1 As per MOM of 23rd NRPC TeST Meeting CTUIL was advised to write letters to PTCUL, HPPTCL, JKPTCL & UPPTCL to provide redundant communication for below mentioned ISTS nodes (copy of letters sent by CTUIL attached at Annexure-I):

2.2 Narora (NPCIL), Saharanpur (PG), Pithoragarh (PG), Sitarganj (PG), Chamera-III (NHPC), Budhil (GreenCo), Alusteng (PG), Drass (PG), Kargil (PG), Khalasti (PG), Leh (PG)

State utility wise link details where fibre sharing is required are given below:

UPPTCL:

A. Links/Paths where fibre Sharing is required for NAPP (NPCIL):

1. Simbhavali (UP) - Shatabdi Nagar (UP)
2. Shatabdi Nagar (UP) - Modipuram (UP)-having ISTS FOTE

B. Links/Paths where fibre Sharing is required for Saharanpur (PG):

1. Saharanpur (PG)- Deoband (UP)
2. Deoband (UP)- Saharanpur (UP)
3. Saharanpur (UP) -Nanauta (UP)
4. Nanauta (UP)-Shamli (UP)
5. Shamli (UP) -Muradnagar (UP)-having ISTS FOTE

PTCUL:

A. Links/Paths where fibre Sharing is required for Pithoragarh (PG):

1. Pithoragarh (PG) – Pithoragarh (PTCUL)
2. Pithoragarh (PTCUL) – Almora (PTCUL)
3. Almora (PTCUL) -Bhawoli (PTCUL)
4. Bhawoli (PTCUL) -Haldwani (PTCUL)

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5. Haldwani (220kV) (PTCUL) Kamalwaganj (PTCUL)
6. 220kV Kamalwaganj (PTCUL) - Pantnagar (PTCUL)
7. Pantnagar (400kV) (PTCUL) Kashipur (PTCUL)

B. Links/Paths where fibre Sharing is required for Sitarganj (PG):

1. Sitarganj (PG) - Sitarganj (PTCUL)
2. Sitarganj (PTCUL) - Kiccha (PTCUL)
3. Kiccha (PTCUL) - Rudrapur (PTCUL)
4. Rudrapur (PTCUL) - Pantnagar (PTCUL)
5. Pantnagar (PTCUL) – Kashipur (PTCUL)

HPPTCL:

Links/Paths where fibre Sharing is required for Chamera-III (NHPC) & Budhil (GreenCo):

1. Budhil (GreenCo)(IPP) - Lahal (HPPTCL)
2. Lahal (HPPTCL) – Chamera PS (PG)

JKPTCL:

Links/Paths where fibre Sharing is required for Alusteng (PG), Drass (PG), Kargil (PG), Khalasti (PG), Leh(PG):

1. Alusteng (PG) - Zainakote (JKPTCL)
2. Zainakote (JKPTCL) - Wagoora (PG)

2.3 In response to letter of CTUIL, UPPTCL vide their letter dtd. 17.11.23 agreed to share the dark fibres as desired. However, they also raised concern about the regulations of sharing norms between STUs and CTU.

2.4 PTCUL vide their letter dtd. 21.11.23 agreed to provide ports/ bandwidth in place of dark fibers as desired as they shall be going to use all the fibres deployed. No response has been received from HPPTCL & JKPTCL till date.

2.5 CTUIL is of the view that for Grid Management purpose if the fibre sharing path has the capacity of STM-16 throughout, then the required bandwidth for ISTS data can be shared on this path. However, if the proposed paths are not having capacity of STM-16 in that case, the utilities shall allow to share dark fibres.

CERC Communication Regulation 2017, Clause 7.7 also states that

“7.7 Role of STUs

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- i. The STU shall be responsible for planning, coordination and development of reliable communication system for data communication within a State including appropriate protection path among State Load Despatch Centre, Area LDC, Sub-LDC and DISCOM LDC including Main and backup as applicable along with STU Substations, intra-State Generating Stations.
- ii. The STU shall also plan redundant communication system up to the nearest Inter-State Transmission System wideband communication node for integration with the inter-State communication system at appropriate nodes.
- iii. The STU shall discharge all functions of planning related to the State backbone communication system in consultation with Central Transmission Utility, State Government, generating companies and distribution companies in the State.
- iv. The STU shall also provide access to its wideband Network for grid management by all users.
- v. The STU shall extend the required support to Control Centres for integration of communication system at respective ends.”.

Members may deliberate.

3. Hot Line Speech Communication System for Northern Region Nodes (Agenda by CTU)

- 3.1 Hot Line Speech Communication System (VOIP based PABX system) operational in the ULDC network was conceptualized in 2012 subsequent to communication unavailability during grid disturbance. The system was planned, implemented & is being maintained PAN India by POWERGRID between NLDC, RLDCs, SLDCs, important state and ISTS substations and generators. Subsequently, Grid-India and CTU were carved out of POWERGRID. This implies that POWERGRID had implemented the Hotline Exchange on behalf of Grid-India similar to SCADA system implementation by POWERGRID for Grid-India.
- 3.2 Hotline exchange is housed in the RLDCs-Grid India and used by Grid-India for grid management in the similar way as SCADA system. As on date CTU, POWERGRID & Grid-India are separate entities therefore clarification is required for the planning/implementation/ownership of Hotline exchange system.
- 3.3 As advised by NRPC, CTU has gone ahead for planning of the VOIP based PABX system by interacting with various OEMs/service providers available and has also planned the system architecture after interacting with the users and the suppliers. Moreover, a tentative cost estimate for the regional system has also been obtained.
- 3.4 It is understood that during the execution of the said project, RPCs approval was sought in all regions and cost of the project was booked in the ongoing Communication System packages of the respective regions. Therefore, useful life of Hotline exchange is also considered as 15 years as per other communication packages as per CERC tariff regulation, however there is no explicitly mentioned about life of Hotline exchange in the CERC tariff regulation.
- 3.5 Hence POWERGRID was requested to revise the same for accelerated depreciation by CERC. In view of this, CTU can plan the system as desired by NRPC and send for its review as per MoP guidelines of ISTS communication planning 09.03.22. However, in ab-

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sence of CERC clarification regarding useful life of the existing system, CTU shall not be able to take up the agenda with NCT.

Members may deliberate.

4. Scheme for providing connectivity of STU node on fibre in view of AMR (Agenda by CTU)

- 4.1 The meter readings from several locations (mostly STU nodes) in each region are intermittent and having communication issues as the meters at the state nodes are not having secure & reliable communication links and are operational on public domain communication links like GPRS.
- 4.2 GRID-INDIA has identified a list of such nodes. The agenda for providing OPGW links for such nodes was discussed in the 2nd, 3rd, 4th ISTS Communication Planning Meeting (CPM) of NR, 21st, 22nd, 23rd TeST meeting of NRPC where STUs were requested to provide the data. PSTCL has informed in the previous meetings that they have already planned OPGW for such links, UPPTCL also provided data for their links. However, we have still not received data from other utilities viz. JKPTCL, HPPTCL, RVPNL, HVPNL, PTCUL, Chandigarh UT, BBMB, Central Sector stations, IPPs etc. after several reminders and requests made at NRPC forums. Moreover, NRLDC has also to update the same.
- 4.3 In view of above, it is proposed that the OPGW laying on the said links if any, shall be planned and implemented during the implementation of the regional AMR schemes finalized in NPC.

Members may deliberate.

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

- 5.1 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.
- 5.2 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.
- 5.3 The matter has been discussed in various TCC and TeST Meetings but there is no improvement of the same.

Brief details are as follows:

- Under SCADA upgrade project M/s Siemens at all 400KV / 220 KV and 132 KV substations/generating Stations of J&K PDD installed 66 RTUs.
- RTUs were not integrated with Control centre due to non-availability of communication network.
- RTUs were tested locally and commissioned without data availability at Control Centre.
- **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.
- *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.*

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- Further, it was informed that payment issues were resolved and many communication links were commissioned and pending link would be commissioned by December 2022.
- *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.
- 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.
- 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.
- 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.
- 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.
- 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.

J&K/Powergrid to update the status.

6. Communication plan for channel redundancy to NRLDC (Agenda by NRLDC)

- 6.1 The provision of redundant & reliable communication was discussed in various TeST Meetings. Redundant communication is to ensure that 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.
- 6.2 The reliability of communication channel to NRLDC was discussed in various TeST Meeting since November 2016(8th TeST Meeting). It is informing that still 7 RTUs are reporting to NRLDC on single channel.
- 6.3 It is requested to expedite the process of providing redundant channel for the remaining locations at the earliest. 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.

List of RTUs with single channel is given below:

S.NO.	Name of RTU	Comments	Timeline
1	KISHANGANGA	NHPC	
2	PARBATI-2	NHPC	
4	KARCHAM WANGTOO	IPP	
5	PARBATI-3	NHPC	

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6	AD Hydro	AD Hydro	
7	Bhiwadi HVDC	POWERGRID	Second gateway Faulty

Issue regarding Parbati-2, 3 and Kishanganga was discussed in detail in 23rd TeST Meeting held on 21.09.2023; still there is no improvement in this regarding. Data from existing links from these stations is highly unreliable. NHPC /POWERGRID to take urgent action in this regard.

Utility/ Powergrid to update the status.

7. Redundant communication to NRLDC (Agenda by NRLDC)

- 7.1 Additional fibre connectivity to NRLDC via Tughlakabad-NRLDC-R.K.Puram was approved in 19th TeST Meeting held on 07th March 2022. It may be noted that NLDC and NRLDC connectivity is very critical for real time monitoring, voice connectivity and grid operation point of view. After this connectivity, robust fiber connectivity shall be established along with existing optical paths for NLDC, RLDC and all their back up RLDCs System for grid operation.
- 7.2 In accordance with discussion fibre connectivity was established till NRLDC in Nov-Dec 2022. However, final commissioning is yet to be completed. NRLDC has requested POWERGRID to expedite the commissioning of this link vide letter **dated: 08th Dec 2022 and 18th April 2023.**
- 7.3 However, link is yet to be commissioned. POWERGRID is requested to please expedite the work as one of the existing communication link to NRLDC via Mahanranibagh is highly prone to cut and any outage of this links leads to radial connectivity to NRLDC/NLDC.
- 7.4 Issue was also discussed in 22nd TeST Meeting held on 24.05.2023 where POWERGRID informed that they are in process of commissioning of aforementioned link and it will be completed within one month.
- 7.5 During 23rd TeST Meeting held on 21.09.2023, POWERGRID confirmed that link will be commissioned by 15th Oct 2023. However, link commissioning is still pending. POWERGRID is requested to please expedite the commissioning of the link.

Powergrid to update the status.

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

- 8.1 Requirement of redundant communication channel / links from Sub-stations to NRLDC and Backup NRLDC was discussed in meeting held among CEA, CTUIL, POWERGRID and Grid-India on 28.06.2023 where it was discussed that as per communication channel redundant communication channels for RTUs shall be made available to NRLDC and Backup NRLDC.
- 8.2 In this regard it is inform that at present for most of the Sub-Stations 2 number of RTU ports are configured, one (1) for Main NRLDC and one (1) for backup-NRLDC. For some of the Sub-stations 3 number of RTU ports are configured two (2) for Main NRLDC and one (1) for Back-up NRLDC. Based on the final requirement all concerned are requested to make arrangements for RTU data transfer as per approved philosophy.
- 8.3 This is for information and necessary action of all concerned.

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9. EOL/EOS for firewalls supplied under URTDSM Project (Agenda by NRLDC)

- 9.1** Unified Real Time Dynamic State Measurement (URTDSM) project was implemented by POWERGRID through 70% PSDF grant and 30 % equity. Defect liability Period was completed in Dec 2019 and thereafter AMC for six years started from January 2020.
- 9.2** As per information received from M/s GE, System Integrator through which AMC of URTDSM is being executed; OEM of Internal & External Firewall & Firewall Management devices has declared End of Life/ end of Support of firewall versions supplied under URTDSM project and same needs to be replaced with newer version to continue subscriptions/ patches etc.
- 9.3** POWERGRID is requested to please take up with vendor for replacement of firewalls prior to EOL/EOS of the product.
- 9.4** Issue was also discussed in 22nd TeST Meeting held on 24.05.2023 where POWERGRID informed that they will take-up with vendor for replacement of firewalls within desired schedule. Licenses of the firewall are expiring in Oct'23. During 23rd TeST Meeting POWERGRID it was informed that all the licenses shall be updated by Oct'23.
- 9.5** However, till date license renewal is pending from M/s GEE. NRLDC vide letter ref: NRLDC/SCADA/2023 dated 06.11.2023 has requested POWERGRID to please take-up with vendor for replacement and renewal of firewall licenses.
It is requested to please update the status and expedite the necessary work considering Cyber Security Compliance.

Powergrid to update the status.

10. PMU integration of RRVPNL stations supplied under STNAMS (Agenda by NRLDC)

- 10.1** NRLDC representative stated that in reference to the discussion in 62nd NRPC Meeting held on 31.01.2023 & 63rd NRPC held on 24.02.2023, where representative of RRVPNL informed that around 8 PMU out total 25 PMUs under STNAMS project has been commissioned and data of same is updating at RRVPNL STNAMS control centre. Further, STNAMS PDC will be integrated with Rajasthan SLDC PDC upon completion of Cyber Security compliances at STNAMS system. It was also informed that there is a provision to integrate new Phasor data concentrator (PDC) with existing PDC installed at Rajasthan SLDC.
- 10.2** During the meetings RRVPNL representative was requested to expedite the PMU data for better visibility of Rajasthan area as it is very important from grid operation point of view considering recent events in Renewable pocket.
- 10.3** In this regard NRLDC has also requested RRVPNL and SLDC to expedite the integration process vide letter **NRLDC/SCADA/2023 dated 14.02.2023**.
- 10.4** In view of the above it was requested that RRVPNL shall advise the concern to take necessary actions so that integration of PMU data reporting at STNAMS control centre with Rajasthan SLDC PDC for onward transmission of data to NRLDC.
- 10.5** During 64th RPC Meeting RRVPNL representative stated that PMUs has started reporting at their control centres. However, prior to integration with Rajasthan PDC cybersecurity audit was to be completed. He further informed that Cyber security audit has been completed and they are in the process of closure of Cyber Security points. On closure of points Cyber Security points, they will start the process of integration of PDC. He confirmed that integration work would be completed by 30th April 2023.
- 10.6** During 68th NRPC Meeting held on 18th Aug 2023 Representative from RRVPNL informed that they are in process of integration of PMUs at SLDC.

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PMU Integration is still pending from RRVPL / Rajasthan SLDC end.

RRVPL/Rajasthan SLDC to please update the status.

11. Redundant Communication from Sub-stations/Generating Stations (Agenda by NRLDC)

11.1 As per CERC communication Regulations, 2017 redundant communication shall be provided from Sub-stations/Generating Stations to concerned Load Dispatch Centre. During 22nd TeST Meeting held on 24.05.2023 redundant communication paths from different Generating Stations/Sub-Stations were discussed. Details of various links is as given below:

S.No	Link	Discussion in 23 rd TeST Meeting
1.	Redundant communication for Alusteng, Drass, Kargil, Khalasti, Leh	<p>CTU informed that they redundant link can be commissioned through JK link of Alusteng – Ziankote-Wagoora and requested JK to share 3 pair for ULDC purpose. They further informed that two FOTE will be required at Alusteng and Ziankote.</p> <p>J&K informed that OPGW is available. However, they will confirm availability after confirmation from higher management.</p> <p>CTU was requested to put up the agenda in forthcoming NRPC meeting after receiving consent from J&K.</p>
2.	Redundant communication for Narora (NAPP) (NPCIL)	<p>CTU informed that they redundant link can be commissioned after commissioning OPGW link on NAPPS – Simbhaul and further utilizing UP links till Modipuram.</p> <p>UP informed that OPGW is available. However, they will confirm availability after confirmation from higher management.</p> <p>CTU was requested to put up the agenda in forthcoming NRPC meeting after receiving consent from UP.</p>
3.	Redundant communication for Sewa-II	<p>CTU informed that redundant link will be commissioned by laying 2Km UGFO cable between Sewa-2 and Chamera-II and additional SFPs at these locations.</p> <p>Considering small requirement and importance of these link POWERGRID was requested to carry out the work in O&M.</p>

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		POWERGRID agreed the same and confirmed it will be completed in one month period.
4.	Redundant Communication for Chamera-III (NHPC) & Budhil	<p>CTU informed that they redundant link can be commissioned through HPPTCL link of Budhil-Lahal-Chamba Pooling Stations and requested HPPTCL to share 3 pair for ULDC purpose. They further informed that two FOTE will be required at Lahal.</p> <p>HPPTCL informed that OPGW is available. However, they will confirm availability after confirmation from higher management.</p> <p>CTU was requested to put up the agenda in forthcoming NRPC meeting after receiving consent from HPPTCL.</p>
5.	Redundant Communication for Pithoragarh (PG) Sitarganj (PG) stations	<p>CTU informed that they redundant link can be commissioned through PTCUL and requested HPPTCL to share 3 pair for ULDC purpose.</p> <p>HPPTCL informed that tender for OPGW is going to be floated and technical approval is in process. However, they will confirm availability after confirmation from higher management and requested to give request letter to PTCUL higher management.</p> <p>CTU agreed to give request letter and after consent for PTCUL higher management they will put the agenda in NRPC for approval.</p>
6.	Redundant communication for Saharanpur (PG) S/s	<p>CTU informed that they redundant link can be commissioned through UPPTCL link of Saharanpur (PG)- Devband (UP)- Saharanpur (UP)-Nanauta (UP)-Shamli (UP) -Muradnagar (UP) and requested UPPTCL to share 3 pair for ULDC purpose. They further informed that two FOTE will be required at Shamli and Muradnagar.</p> <p>UPPTCL informed that one pair of OPGW is available and can be utilized. However, they will confirm availability for 3 pairs after confirmation from higher management.</p> <p>Further, UPPTCL was requested to integrate Deoband, Saharanpur (UP) and Nanuta equipment's for integration in NMS and better maintenance etc.</p>

	CTU was requested to put up the agenda in forthcoming NRPC meeting.
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CTU is requested to please update the status redundant communication for these Stations.

12. Implementation of U-NMS Project (Agenda by NRLDC)

12.1 U-NMS project is being implemented by POWERGRID in Northern Region through M/s Sterlite. As per information given by POWERGRID that FAT/SAT of the system is complete and System Availability test is going to start and final commissioning is expected in November 2023.

12.2 As discussed in 22nd TeST Meeting for commissioning of U-NMS Project, database is required of existing NMS of centre sector / state sector/ IPPs / Solar developer/ other transmission licensee and independent nodes which are reporting data for grid operation. Technical details/ information pertain to integration has been obtained for POWERGRID installed NMS system(s) which were part of ULDC schemes, whereas details from state sector/ IPPs / other transmission licensee are still not been available in full shape to UNMS vendor, which may further delay the works for database development and integration.

12.3 As it is essential that all NMS and Network Equipments are required to be integrated in the U-NMS for monitoring and configuration of elements in Northern Region.

12.4 However, till date any Network Equipments are yet to be integrated in U-NMS.

12.5 During 23rd TeST Meeting held on 21.09.2023 it was informed that out of 1300 equipments around 900. Equipments has been integrated in U-NMS and details of pending integration was shared as given below.

- a) Integration of ABB equipments from UPPTCL: POWERGRID informed due to limitation in ABB NMS they require separate link from individual ABB Equipments for its integration in U-NMS and requested UPPTCL provide the same. UPPTCL informed that they will check and provide within next 15 days.
- b) Regarding integration of Network Equipments from IPPs and TBCB, it was requested that CTU shall convene special meeting with IPPs and other transmission licensee for integration of the same.
- c) Integration of Tejas and Fibcom Equipment from UPPTCL: Representative from UPPTCL informed that Tejas project is under implementation and upon implementation of all Equipments NMS will be commissioned which in turn can be integrated with U-NMS. POWERGRID requested UPPTCL to expedite the commissioning of NMS first so that it can be integrated with U-NMS and as and when new equipments is commissioned it will be integrated with U-NMS automatically. UPPTCL agreed for the same.

Regarding Fibcom equipments, representative from UPPTCL informed that they resolve the issue within one month.

- d) Regarding integration of GE make equipments from HPPTCL POWERGRID requested HPPTCL to provide links for integration of the same. HPPTCL confirmed that they will provide the same in next 15 days.

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- e) Regarding integration of Keymile equipment, POWERGRID informed that HVPNL has given test equipment to POWERGRID for development of adapter for integration of Keymile equipment with U-NMS. Upon development of adapter they will take up for integration of equipments with Keymile.

CTU/POWERGRID is requested to please update the status.

13. Non-Availability / Reliability of Telemetry from RRVPNL sub-Stations (Agenda by NRLDC)

- 13.1 SCADA data is very important. Decisions in real-time are taken by Real-time engineers of NRLDC based on real-time data available to Control room. There is requirement of good quality input data for smooth grid monitoring & Control. Further, good telemetry is also essential of running of State Estimator/Energy Management System (EMS).
- 13.2 Since proper telemetry is not available from many RRVPNL substations, 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.
- 13.3 Telemetry from many Rajasthan Stations is not reliable. Details of stations where telemetry data is not reliable is given in Annexure-I. RRVPNL/Rajasthan SLDC is requested to please take up for resolution of the issue at the earliest.

RRVPNL to please update.

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

- 14.1 In high demand period and other there is requirement of monitoring Declared Capacity & Schedule of all Generating Stations in Northern Region. Schedule & DC of Central sector is being integrated with NRLDC SCADA system and same is being monitored by Control Room. However, DC & Schedule of State generator is not integrated with their SCADA system.
- 14.2 It is requested that all states that take up for integration of state generator in their SCADA system for further integration with NRLDC.
- 14.3 Issue was discussed in 23rd TeST Meeting held on 21.09.2023. Present Integration from J&K, Uttarakhand and Rajasthan is still pending. Considering shortage of Power, it is very critical to monitor all the generators. In this regard it is requested to please take for integration of Schedule / DC of generators in SCADA.

Members to Note and share timelines for integration.

15. Extension of AMC and Upgradation of Hot Line Speech Communication System implemented by M/s ORANGE (Agenda by NRLDC)

- 15.1 Hot Line Speech Communication System was implemented by POWERGRID in 2016 for PAN India basis wherein NLDC, RLDCs and all SLDCs are inter-connected through Alcatel Lucent make EPABX system, VOIP/Analog phones are also installed at power plants/sub-station/IPPs, etc over dedicated OPGW network of ULDC. This scheme was executed by M/s ORANGE with provision of AMC of 7 years as part of the contract and the same is expiring in July' 2023.
- 15.2 Based on the discussions held in previous TeST meeting, offer was requested from M/s Alcatel Lucent (OEM), however, they mentioned that EPABX system which was installed

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in 2016, has older version i.e., 11.0, however, at present 100.1 version is running and all new hardware which is available in market, are compatible to new version only. Therefore, to continue with comprehensive AMC, we need to first upgrade/migrate the system with the latest software version then Alcatel through their authorized channel partners, can further support for minimum 5 years of AMC.

- 15.3** The issue was deliberated in 3rd meeting of CTU-ISTS communication system planning for Northern Region held on 17.02.2023, then the issue was further discussed in CTU communication planning meeting for Pan India held on 05.04.2023.
- 15.4** Further the issue was also deliberated in 22nd TeST sub-committee meeting of NRPC held on 24.05.2023 and following points were deliberated and agreed upon – i) Extension of AMC support by M/s. Orange for at least 2 years through POWERGRID. ii) Meantime, CTU shall plan upgradation and implementation of existing Hot line speech communication or new EPABX system.
- 15.5** Matter was also discussed in 23rd TeST Meeting held on 21.09.2023 where CTU stated that they are already working for the planning of Hot Line Speech communication as advised by NRPC. However, it is understood that during the execution of the said project, RPCs approval was sought from all regions and cost of the project was booked in the ongoing Communication System packages of the respective regions. As per CERC tariff regulation, the useful life of the communication system is up to 15 years. In this regard, CTU requested POWERGRID to provide the revised depreciation order for the Hot Line Speech communication system, so that they can go for the planning and approval for new VOIP communication system.
- 15.6** During the meeting it was finalised that CTU to take up the planning and approval process in parallel as POWERGRID shall file petition to CERC in 2024. It was deliberated that as the AMC extension has been approved by POWERGRID for 2 years, meanwhile CERC order will be pursued during this time.
- 15.7** POWERGRID may please update the status of Replacement / Upgradation of Hotline Exchange and also status of revised tariff petition for Hotline Exchange.

Process of replacement / upgradation may be initiated considering timelines for procurement and implementation. As OEM has clearly stated that further AMC extension is not possible. Forum may please decide replacement / upgradation by July 2025.

POWERGRID/CTU to please update the status.

16. Calculation of actual drawl by states based on SLDC end SCADA data (Agenda by PSLDC)

- 16.1** It is informed that all points corresponding to Punjab Drawl have been telemetered. The said points are being used for comparison with the corresponding drawl points of PG-CIL w.r.t Punjab as Difference parameters have been created and limits have been implemented to alert the operator whenever any difference found between the PGCIL drawl points and corresponding Punjab PSTCL Points along with other drawl points with their corresponding other end values. A snapshot of main drawl points is placed below for reference.

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		PGCIL ICTs		CALC END		OTHER END		
	ADD	ICTs	MVA	MW	MW(kv/ kv-side)	PSTCL MW	PGCIL MW	MVA
12	400 KV PATIALA	ICT-1	315	59	-59			
13		ICT-2	315	60	-60			60
14		ICT-3	500	93	-92			61
15		ICT-4	500	93	-93	-0		94
		Total			305		-305	305
16	400 KV LUDHIANA	ICT-1	500	178	176			178
17		ICT-2	500	177	181	S		177
18		ICT-3	315	114	116		-4	114
19		ICT-4	500	166	166			166
		Total			635		S 630	641
20	400 KV AMRITSAR	ICT-1	315	93				96
21		ICT-2	315	90		R	11	96
22		ICT-3	500	153				161
23		ICT-4	500	171	171			179
		Total			506		R -406	S -131
24	400 KV MALER- KOTLA	ICT-1	315	86	87			96
25		ICT-2	315	85	84			93
26		ICT-3	500	133	135		5	146
		Total			304		299	305
27	400 KV MOGA	ICT-1	500	118	-118			125
28		ICT-2	500	125	-124			133
29		ICT-3	500	126	-124		31	134
30		ICT-4	315	82	-81			86
		Total			450		-419	449
31	400 KV JALANDHAR	ICT-1	315	80				85
32		ICT-2	315	88				93
33		ICT-3	500	134	-134		4	142
	Total			301		-297	315	

17. Expiration of insurance of Equipment supplied under ULDC Ph-II (Agenda by PSLDC)

17.1 It is again requested to POWERGRID that insurance of equipment under ULDC PH-II has not been done for this year yet. It is kindly requested to expedite the process please. *POWERGRID to update the status.*

18. Regarding reporting of RTU/SAS to backup SLDC during ULDC PH-III (Agenda by PSLDC)

18.1 It is requested that NRLDC, PGCIL may decide a strategy regarding reporting of each RTU/SAS to the respective Backup control centre on an independent communication link from RTU itself so that implementation of Backup control centre can be done successfully during ULDC PH-III scheme. *POWERGRID to update the status.*

19. Regarding end of life of Internal Firewall and antivirus (Agenda by BBMB)

19.1 The existing Fortigate Make Internal Firewalls installed for SCADA system of SLDC BBMB has reached its end of life and required to be replaced as already clarified by POWERGRID. In this regard, it is requested to expedite the procurement process and install the internal firewall and antivirus in timely manner in order to maintain the cyber security posture of the existing SCADA system.

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19.2 In addition, it is requested that since the 2 Nos. internal firewalls are being replaced so the buyback policy of the same may be included in the offer submitted for procurement of the same.

POWERGRID to update the status.

20. Existing SCADA/EMS System under ULDC Phase-II scheme and the upcoming ULDC Phase-III Scheme (Agenda by BBMB)

20.1 As per the DPR of upcoming ULDC Phase-II scheme circulated by POWERGRID, the ULDC Phase-III scheme is likely to be commissioned by November, 2025 and the existing SCADA system equipment AMC is valid till 08.06.2025. As such, the AMC Contract for the remaining time period w.e.f. 08.06.2025 to November, 2025 (or any extra time taken by the project to be installed/ commissioned) may be got extended from M/s Siemens till the commissioning of ULDC Phase-III Scheme at the same rates, terms and conditions.

20.2 In addition, it is informed that the Bank Guarantee the Original AMC Contract for BBMB has expired on 30.06.2023. As such, the revised Bank Guarantee for the extended AMC Contract may be got submitted from M/s Siemens at the earliest please.

Members may please deliberate.

21. Regarding EOL of Firewalls for URTDSM Project (Agenda by BBMB)

21.1 As discussed in the 23d TeST meeting that the firewalls under URTDSM will be replaced by 31.10.2023, in this regard, please update regarding the status of the same so that the existing system may be secured from the cyber security threats please.

Members may please deliberate.

22. Regarding SOC and NOC of Protected System (Agenda by BBMB)

22.1 As it is well aware that ULDC Scheme is commonly implemented for all the Northern Region constituents., As such, the NR SLDC's have been declared as Protected Systems which requires following the IT Rules, 2018. Now, as per the IT Rules, 2018, SOC and NOC has to be implemented for all the protected systems. As Such, it is requested to provide the status of the SOC and NOC implementation in Constituents of Northern Region Load Despatch Centres and the methodology followed by them so that the same may be used for implementation in BBMB as well.

22.2 Further, since UNMS Scheme has recently been implemented by POWERGRID for all the constituents and NMS for servers has already been installed for SCADA and URTDSM systems, whether these can act as NOC for the Protected Systems may be discussed.

Members may please deliberate.

23. Pending Payment of M/s Synergy against Annual Maintenance Contract (AMC) of 06 years post Defect Liability Period of Contract: "Replacement of S900 RTUS for Centre Sector and State Constituents for Package-B"(Agenda by BBMB)

23.1 BBMB has signed AMC agreement along with a supplementary agreement with M/s Synergy Systems and Solutions for Six (06) years w.e.f. 01.12.2022 to 30.11.2028through POWERGRID under ULDC Scheme. On the same lines, all the partner states of BBMB have also signed the same AMC agreement with M/s Synergy Systems and Solutions.

23.2 M/s Synergy Systems and Solutions has raised invoice for AMC for 02 quarters (For the period of 01.12.2022 to 31.05.2023). The same was verified by BBMB and forwarded

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to the partner states of BBMB on 11.09.2023 for timely payment. However, these payments are yet to be released to the firm. The matter needs to be deliberated in order to avoid any further delay.

Members may please deliberate.

24. End of life Internal Firewall replacement (Agenda by UPSLDC)

24.1 It is requested to PGCIL to expedite the process of finalization of Technical specification for the end-of-life Internal Firewall replacement and renewal of antivirus & external firewall subscriptions, so that cyber security of SCADA system can be enhanced.

POWERGRID to please update the status.

25. SCADA upgradation project of ULDC Phase-III (Agenda by UPSLDC)

25.1 It is requested to PGCIL to expedite the SCADA upgradation project ULDC phase-III so that the project may be completed before 02 years extension period of existing AMC of ULDC phase-II.

POWERGRID to please update the status.

26. End of Life/End of support for Internal firewall (Agenda by UPSLDC)

26.1 Internal firewall supplied under URTDSM project has reached End of Life/End of support since 23 Oct 2023. The matter was discussed in 22nd and 23rd TeST meeting and it was informed by PGCIL that firewall will be replaced by 31 Oct 2023. It is requested to PGCIL to expedite the replacement process, so that cyber security of URTDSM system can be enhanced.

POWERGRID to please update the status.

27. Mandatory Testing and Certification of Telecom Equipment (MTCTE) (Agenda by NRPC Secretariat)

27.1 Department of Telecom vide letter no. 6-6/2021-TC/TEC dated 17.10.2023 has requested to ensure that only MTCTE certified Telecom and Networking products are procured and connected in the Indian Telecom Network as mandated by Indian Telegraph (Amendment) Rules, 2017. It was also requested that regulatory requirement of obtaining MTCTE certification by OEMs/ Importers before sale of notified Telecom & Networking products may also be communicated to Manufacturers/ Sellers, who are supplying/ selling Telecom & Networking products.

27.2 In this regard, it was also informed that MTCTE certificate for 12 products being connected to Telecom Network/ used for data transfer (such as Router, LAN Switch, Smart Electricity Meters etc.) will become mandatory from 01.04.2024 and for remaining 32 products from 01.01.2024 (list enclosed).

27.3 In view of the above, members are requested to take all necessary measures in this regard so that the requirement for MTCTE certification can be made mandatory for OEMs/ Importers as per the stipulated timelines.

Members are requested to take necessary action.

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Annexure-I

STATION	DIGITAL	ANALOG
AAU	LINE ISO	1. BUS V AND FREQ 2. ICT P AND Q
ADANI KAWAI	ALL ISO	
AJMER 220	ISO	ALL ANALOG VALUE
AKAL	CB AND ISO	BUS VOLTAGE BR Q JODHPUR LINE P AND Q
ALWAR 400	OK	OK
AMARSAGAR 220	ISO AND CB	ICT HV SIDE ANALOG
BARMER	RAJWEST DIA DIGITAL	ICT HV SIDE ANALOG
BARSINSAR		BUS VOLATGE
BADDISID		BUS VOLATGE
BABAI 400		BUS2 V AND FREQ ICT ANALOG
BHILWARA		COMPLETE DATA
BHAINSARA 400		BUS V AND FREQ
	BARMER LINE DATA	BARMER LINE DATA
BHINMAL 220		ANALOG DATA
BIKANER 400	ISO	ICT HV SIDE
BHADLA	ALL DATA	ALL DATA
BHOPALGARH	ALL DATA	ALL DATA
CHIRAWA	ALL DATA	ALL DATA
CHITTORGARH 220	ALL DATA	ALL DATA
CHITTORGARH 400		ICT DATA HV AND LV
CHABBRA 400	DIGITAL DATA	ANALOG DATA
DHOLPUR 220	ALL DATA	ALL DATA
DUNI 220	ALL DATA	ALL DATA
HERAPURA 400	ALL DATA	ALL DATA
HINDAUN 400		ICT HV SIDE DATA
KAWAI 220		ICT ANALOG
KANKANI	ALL DATA	ALL DATA
KANKROLI 220		ANALOG DATA
PHAGI 765		LR Q VALUE
RAMGARH 400		ICT 1 ANALOG VALUE BUS 1 V AND FREQ
RATANGARH 400		ICT VALUE BUS1 FREQ

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RATANGARH 220	ISO	
SRI GANGANAGAR		ICT DATA
PRATAPGARH	ISO	
FALODI	ALL DATA	ALL DATA