



सत्यमेव जयते

भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

उत्तर क्षेत्रीय विद्युत समिति

Northern Regional Power Committee

Dated: 25 July, 2024

सेवा में/ To,

संलग्न सूची के अनुसार/ As per list attached

विषय: दूरसंचार, स्काडा और टेलीमेट्री उपसमिति की 25 वीं बैठक।

Subject: 25<sup>th</sup> meeting of Telecommunication, SCADA & Telemetry Sub Committee-reg.

उत्तर क्षेत्रीय विद्युत समिति की दूरसंचार, स्काडा और टेलीमेट्री (टेस्ट) उप-समिति की 25 वीं बैठक दिनांक 25.06.2024 को 11:00 बजे सम्मेलन कक्ष, एन.आर.एल.डी.सी, नई दिल्ली में आयोजित की गई। बैठक में कार्यवृत्त इस पत्र के साथ संलग्न है। यह उत्तर क्षेत्रीय विद्युत समिति की वेबसाइट ([Northern Regional Power Committee](#)) पर भी उपलब्ध हैं।

25<sup>th</sup> meeting of Telecommunication, SCADA & Telemetry (TeST) Sub-committee of NRPC was held on 25.06.2024 at 11:00 am in conference room, NRLDC, New Delhi. Minutes of the meeting are enclosed herewith. The same are available on NRPC website at [Northern Regional Power Committee](#).

भवदीय

Yours faithfully,

Signed by Anzum Parwej

Date: 25-07-2024 12:12:49

(अंजुम परवेज)/ (Anzum Parwej)

अधीक्षण अभियंता /Superintending Engineer

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## **Minutes of 25<sup>th</sup> Meeting of Telecommunication, SCADA & Telemetry (TeST) Sub- Committee**

### **1. Confirmation of Minutes**

- 1.1. 24<sup>th</sup> meeting of TeST sub-committee was held on 09.02.2024 and the minutes were issued on 27.05.2024. No comments have been received so far.

#### **Decision of the forum:**

- 1.2. Sub-committee confirmed the minutes.

### **2. Optic Fiber connectivity for New Building of NLDC located at "Grand Rue" Ayur Vigyan Nagar, August Kranti Marg, New Delhi (Agenda by CTU)**

- 2.1. CTU explained the agenda for Fibre Optic Communication requirement for NLDC new building.
- 2.2. POWERGRID stated that they have given inputs considering one cable trench and two duct for 2x24F arrangement and one duct for 1x48F arrangement. In the forum, views were taken from all the members and it was agreed that in place of 2x24F UGFO, 1x48F UGFO can be installed as cable trench is single and two trench will cause huge RoW charges.
- 2.3. NRLDC representative informed that from DTL, UGFO is already available from Tughlakabad to Masjid Mod that can be used for optimizing the cost. DTL representative agreed that fibers are available, however, sharing of this fibre will be subject to approval from higher management.
- 2.4. NRLDC also informed about requirement of optical connectivity to New Building by October and requested POWERGRID/CTUIL for optic fibre connectivity by October 2024.

#### **Decision of the forum:**

- 2.5. POWERGRID will submit revised cost estimate to CTU considering sharing of Tughlakabad-Masjid Mod DTL fiber and 1x48F UGFO.
- 2.6. DTL will confirm whether it will share 12 nos. of Fiber from their two nos. of Tughlakabad-Masjid Mod UGFO for NLDC connectivity.
- 2.7. Scheme will be taken up by CTU in upcoming NRPC meeting for approval with the scope of 3 FOTE, 26 kms UGFO (1X48 Fiber). The scheme will subject to sharing of aforesaid DTL fibre. Otherwise, CTU shall put up the revised scope with 35kms of fibres for approval in upcoming NRPC meeting.
- 2.8. POWERGRID confirmed that required DCPS equipment, SDH equipment and interim fibre connectivity through telecom and one of the above paths shall be arranged by November 2024.

### **3. Dual reporting of SCADA Channels (RTU/SAS) to NRLDC and Back up NRLDC (Agenda by CTU)**

- 3.1. CTU explained the agenda that based on RLDC's requirement and that worked out in earlier meetings, CTU is working on the schemes for providing dual reporting of SCADA Channels (RTU/SAS) to NRLDC and Back up NRLDC.
- 3.2. CTU stated that POWERGRID has provided list of RTM substations where SAS / RTU replacement is required since present SAS system cannot be upgraded to increase ports. CTU stated that as per new CERC tariff regulation 2024-29, useful life of SCADA/IT system is 7 years, therefore views of members are required that this replacement work can be done in add-cap or under new RTM scheme.

- 3.3. POWERGRID informed that they will review the replacement requirement and submit a detailed report for upgradation/replacement at each sub-station. The same may be submitted to CTUIL within 15 days.
- 3.4. CTU further stated that SAS gateway upgradation comes under transmission system therefore CTU Engineering team is working to optimize the requirement of SAS/Gateway upgradation for additional 1+1 ports requirement for RLDC communication.
- 3.5. They also stated that as deliberated in the 72<sup>nd</sup> NRPC meeting, CTU has obtained the information from the Private TSPs also, viz. Sterlite, Indigrid, Adani, Apraava. As per inputs received from Sterlite, there is cost implications for SAS ports enhancement. Representative of Indigrid stated that they shall convey all the inputs to CTU within one week. As per inputs from Adani, additional spare ports are available to meet 2+2 channels requirement of RLDC.
- 3.6. CTU stated that after getting inputs from the CTU Engineering Team they shall prepare the schemes and put up in the next TeST meeting for deliberations.

**Decision of the forum:**

- 3.7. CTU will internally finalize the draft scheme and take up in the next TeST meeting for deliberations.
- 3.8. NRLDC shall coordinate and convene a meeting with generators and RPC/CTU/ POWERGRID to be invited for the same.

**4. Modalities for Replacement of existing Communication System ISTS Elements (Agenda by CTU)**

- 4.1. CTU explained the agenda. RLDC suggested that a subgroup may be formed to analyze the requirement of fiber and 3<sup>rd</sup> party audit may be done to check healthiness of fiber.
- 4.2. MS, NRPC stated that forming subcommittee / Group may not resolve the issue since there is need of regulatory provisions. POWERGRID stated that links referred by CTU are installed by POWERTEL and used for ULDC so it should be replaced considering as ISTS asset.
- 4.3. MS NRPC stated that SOP for communication audit has been finalized by NPC and it will be implemented from this FY. He suggested that RLA of OPGW may be taken up along with communication audit. Need for replacement of existing fiber on case-to-case basis can be discussed in CPM/ TeST meetings. After deliberations in CPM/ TeST meetings, scheme may be taken up in RPC meeting for its approval.

**Decision of the forum:**

- 4.4. 3<sup>rd</sup> party audit to check the healthiness shall be carried out and same shall be submitted to audit committee and based on the third party audit report, RLA of OPGW will be taken up as part of the annual communication audit. A copy of the communication audit report where RLA has been conducted will be shared with CTU by NRPC secretariat. CTU will assess need for replacement of existing fiber on case-to-case basis and take up scheme for deliberation in CPM/ TeST meetings and subsequently in NRPC meeting for approval.

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

- 5.1 NRLDC informed forum regarding non-availability of telemetry from J&K stations and requested J&K to update the status.

5.2 J&K confirmed that almost 48 links out of 76 has been commissioned and 27 RTUs can be integrated with Control Centre.

5.3 J&K further informed that they have taken proposal from M/s Siemens for RTU commissioning and forwarded the same for approval of Management.

5.4 Regarding OPGW Connectivity, J&K informed that approx. 34 crore pending payment needs to be released, so that remaining activities for commissioning of OPGW can be started. J&K have initiated proposal for requisition of necessary funding.

**Decision of the forum:**

5.5 Forum requested J&K to expedite the process.

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

6.1 Representative from NRLDC informed about non-availability of redundant communication from stations/generating-stations given above. Following points were discussed in the meeting.

S No.	Name of RTU	
1.	Kishanganga	POWERGRID informed that there is some issue in communication link and it is expected that link will be restored in 7 days
2.	Parbati-2/ Parbati-3	POWERGRID informed that secondary link can be commissioned after commissioning of OPGW on Parbati-Koldam line. CTU informed that same link has already been approved in NCT and it is expected that OPGW link of Parbati-Koldam will be commissioned in 18 months
3.	Bhiwadi HVDC	POWERGRID informed that Bhiwadi HVDC upgradation was approved in RPC Meeting. However, OEM of SCADA system at Bhiwadi HVDC is not responding for gateway upgradation and has informed that the same can be upgraded after complete SAS upgradation. After detailed deliberations, it was decided that POWERGRID shall take up for rectification of existing points from Ballia/Bhiwadi HVDC along with reporting of data on redundant channels.
4.	Karcham- Wangtoo/AD- Hydro	Representative from Karcham Wangtoo and AD Hydro were not available in the meeting.

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

7.1 As discussed in Agenda 3

## **8. PMU integration of RRVPNL stations supplied under STNAMS (Agenda by NRLDC)**

- 8.1 NRLDC informed that integration of STNAMS PMU is URDTSM PDC is pending for a long time and requested RRVPNL to update the status.
- 8.2 RRVPNL informed that Cyber Security issue has been resolved and informed that communication between STNAMS PDC and Rajasthan URTDSM PDC has been established. PMU data will start reporting within next 7 days.

## **9. Redundant Communication from Sub-stations/Generating Stations (Agenda by NRLDC)**

- 9.1 NRLDC requested CTU to inform the status of redundant communication of the sub-stations as mentioned in agenda. CTU informed that issue regarding fiber sharing was discussed in 72<sup>nd</sup> NRPC Meeting and in the meeting, it was decided that sub-group has been formed to finalize fiber sharing philosophy and decision on fiber sharing can be finalized after approval of fiber sharing philosophy.
- 9.2 NRLDC requested that redundant communication is essential and requested CTU/POWERGRID to arrange for redundant communication.

### **Decision of the forum:**

- 9.3 CTU to re-work on the detailed requirement of redundant communication.

## **10. Upgradation of Hot Line Speech Communication System implemented by M/s ORANGE (Agenda by NRLDC)**

- 10.1 Representative from NRLDC requested CTU to update the status for replacement/Upgradation of Hotline Exchange. They further informed that as per information received from POWERGRID, AMC of existing Exchange is valid till July 2025 and it is essential that exchange shall be replaced/upgraded prior to expiry of the AMC.
- 10.2 CTU informed that they had convened CPM at all India level on 12<sup>th</sup> June 2024 and based on inputs received from all, they have finalized the requirements for Hotline Exchange. They would bring the proposal in RPC meetings for all regions for approval and also put up the agenda in upcoming NPC meeting which is scheduled in August/ September 2024.
- 10.3 Further, POWERGRID was requested to expedite the filing of true up petition for existing communication exchange. POWERGRID informed that as per CERC (terms & conditions of tariff) Regulation'2024, CERC has declared useful life for communication system as 7 years and depreciation schedule for Telephone and Telephone lines as also considered as 15%, therefore replacement/upgradation of existing EPABX system along with VOIP/Analog phones are due. Further, he informed that balance cost shall be recovered through true up petition under accelerated depreciation after approval of new scheme. He also informed that required data has been shared with corporate commercial and they will file the petition within next 1-2 months. However, upgradation / replacement of can be carried out parallelly.

### **Decision of the forum:**

- 10.4 CTU to expedite the process of Upgradation of Hotline Exchange System and POWERGRID to expedite the filing of revised tariff petition for existing exchange.

## **11. Non-availability of Real-Time data from PTCUL (Agenda by NRLDC)**

- 11.1 Representative from NRLDC informed non-availability of data from many stations from PTCUL and requested PTCUL to update the status of RTU /OPGW procurement as committed in previous TeST Meetings.
- 11.2 Representative from PTCUL informed that the project is stuck due to non-availability of funding from PSDF.
- 11.3 MS NRPC expressed serious concern about non-availability of data and requested PTCUL to explore alternate arrangements for project funding such as its own funds or state PSDF and complete RTU /OPGW procurement.

**Decision of the forum:** PTCUL to explore alternate arrangements for project funding such as its own funds or state PSDF and complete RTU /OPGW procurement.

## **12 OPGW connectivity of 220/33KV GIS Phojal (HPPTCL) with AD-Hydro Nalagarh (PGCIL) Transmission line (Agenda by HPPTCL)**

- 12.1 Representative from HPPTCL apprised the matter of OPGW connectivity of 220/33KV GIS Phojal (HPPTCL) with AD-Hydro Nalagarh (PGCIL) Transmission line in the forum.
- 12.2 He requested POWERGRID to provide consent for sharing 3 Nos. OPGW fibre pairs each on AD Hydro-Phojal and Phojal- Nalagarh links with 2 Nos. STM-1/4 optical ports in SDH equipment installed at AD Hydro and Nalagarh Sub-Station (PGCIL) strictly for telemetry purpose of Phojal Sub-Station.
- 12.3 POWERGRID agreed to provide 6 nos. of fibres for grid operation purpose only on AD-Hydro Nalagarh Line.

### **Decision of the forum:**

- 12.4 POWERGRID will share 6 nos. of fibres on AD-Hydro Nalagarh Line for grid operation purpose only. Joint box at Phojal LILO point will be provided by POWERGRID, if already not available. However, optical SFP/amplifiers shall be provided by HPPTCL for both the directions i.e., Phojal to Nalagarh and Phojal to AD-Hydro.

## **13 Replacement of End-of-Life internal firewall of SCADA system and renewal of subscription of external firewall & Antivirus (Agenda by UPSLDC)**

- 13.1 POWERGRID informed that being a propriety item, proposal for procurement of EOL and renewal of subscription of external firewall & Antivirus is delayed. However, he stated that order shall be placed within a month time.
- 13.2 BBMB stated that same commitment was also made in the last TeST meeting.
- 13.3 POWERGRID further informed that joint meeting was held between POWERGRID, Siemens and all constituents of northern region wherein make and model of firewalls has already been finalized and all constituents have also already agreed for replacement through centralized procurement by POWERGRID.
- 13.4 HP requested for timely replacement as they have already allotted fund for replacement of firewalls and if timely order will not be placed, fund will be forfeited.

### **Decision of the forum:**



13.5 POWERGRID to expedite procurement of EOL and renewal of subscription of external firewall & Antivirus as this has already been delayed.

**14 Extension of ULDC Phase –II AMC with M/S Siemens (Agenda by UPSLDC)**

- 14.1 POWERGRID informed that they along with NRLDC have requested Siemens to submit offer for AMC extension for further two years with quarterly payment clause.
- 14.2 He also mentioned that if, during this AMC extension (of further 2 years), new SCADA is replaced, then extension of AMC (of further 2 years) shall be terminated on quarterly basis.

**15 Replacement of End-of-Life firewall of URTDSM system (Agenda by UPSLDC)**

- 15.1 POWERGRID informed that after rigorous persuasion and intervention from its management, GE has finally agreed to replace EoL/ EoS firewalls. He further informed that order for internal firewalls (pair) has been placed by GE and material shall be delivered by 20<sup>th</sup> July 2024. For external firewall, GE will place order shortly.

**16 Regarding end of life of Internal Firewall and antivirus (Agenda by BBMB)**

As discussed in Agenda 13

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

- 17.1 POWERGRID informed that financial bid has been opened and under approval. Work is likely to be awarded within 10 days.

**18 Regarding EOL of Firewalls for URTDSM Project (Agenda by BBMB)**

As discussed in Agenda 15

**19 Regarding SOC and NOC of Protected System (Agenda by BBMB)**

- 19.1 POWERGRID informed that they have discussed the matter with ED (GA&C) and they informed that POWERGRID has implemented NOC and SOC in NTAMC. BBMB or any other constituents who are willing to visit at NTAMC office and they can have separate meeting at ED(GA&C) for further course of action.

**20 A. Replacement of S-900 RTU's of ULDC-Phase-I Scheme and Integration of 61850 compliant Numerical Relays with HMI Servers for providing functionality of Event logger (Agenda by BBMB)**

- 20.1 POWERGRID informed that this project was awarded in 2019 and all works were completed in 2021 for all northern region constituents including BBMB except integration of 61850 compliant Numerical Relays with HMI Servers. This integration could not be done due to non-providing of details of ICD/SCD files to M/S Synergy team.

- 20.2 He further informed that a meeting was held between POWERGRID, BBMB (SLDC, PR and protection team) and M/S Synergy in which it was agreed that Synergy team will visit one of the BBMB substations where POWERGRID along with protection team of BBMB will be available. This visit has been carried out at 220 kV Ballabgarh S/S which is recently upgraded to SAS Substation. Synergy has collected the input files of relays and is analyzing the data for integration.
- 20.3 Further, POWERGRID informed that data (SCD/ICD files) for other conventional Substations have to be arranged by BBMB. BBMB agreed for providing data to Synergy once they visit the site.

**B. Regarding multiple HDD failure of SAN storage of SCADA system installed at SLDC Complex, BBMB, Chandigarh (Agenda by BBMB)**

- 20.4 BBMB informed that Siemens has supplied the SAN, now issue has been resolved.

**21 Inclusion of FOTE devices in AMC with M/s Powergrid (Agenda by DTL).**

- 21.1 POWERGRID informed that they generally do the AMC for ULDC project equipment.
- 21.2 DTL requested to cover equipment AMC for equipment supplied under Substation package.
- 21.3 POWERGRID further informed that DTL may provide the details of equipment make and model so that they may take approval from corporate office for incorporation in AMC.

**22 Regarding implementation of ULDC Phase-III scheme (Agenda by BBMB)**

As discussed in Agenda 17

**23 EOL/EOS for firewalls supplied under URTDSM Project (Agenda by NRLDC)**

As discussed in Agenda 15

**24 Display of DC/Schedule of Generating Stations in SCADA Display (Agenda by NRLDC)**

- 24.1 Representative from NRLDC informed that integration of DC and Schedule is pending since long from many states. After detailed deliberations timelines as given by various utilities is as follows:

Sl.	State	Status	Timelines
1	Punjab	Available	Script Automation shall be done in months' time
2	Haryana	Available	Script Automation shall be done in months' time
3	Uttarakhand	Not Available	Integration work is in process, will be done in months' time
4	Rajasthan	Not Available	Would be completed in 7 days
5	Jammu & Kashmir	Not Available	J &K will discuss and revert

## **25 Upgradation of DCPS supplied under ULDC (Agenda by NRLDC)**

- 25.1 Representative from NRLDC informed that replacement of DCPS installed under ULDC was agreed by POWERGRID in previous TeST Meetings and POWERGRID has informed that they would replace the DCPS by December 2023. However, DCPS is yet to be replaced and requested POWERGRID to expedite the process.
- 25.2 POWERGRID informed that DCPS could be procured due to high capacity required at NRLDC and there is some difficulty in procurement of such DCPS. They further suggested that instead of single DCPS, they would install 2 nos. of DCPS to meet DC Power requirement at NRLDC. He further informed that site survey for the same will be carried out within next 15 days and DCPS shall be replaced within 3 months.

## **26 Implementation of U-NMS Project (Agenda by NRLDC)**

- 26.1 Representative from NRLDC informed that many Network Equipment are yet to be integrated with U-NMS and requested POWERGRID/CTU to update the status.
- 26.2 Representative from POWERGRID informed that 948 nodes out of 1268 nodes have been integrated with U-NMS.

### **Decision of the forum:**

- 26.3 CTU in coordination with POWERGRID shall take up with all concerned for integration of pending Network Equipment.
- 26.4 CTU to convene a special meeting within 15 days with all stakeholders-SLDCs, TBCB projects/ REGS/ RLDC/ RPC/ POWERGRID to resolve integration challenges.

## **27 Ticketing/Complain portal provided under UNMS (Agenda by NRLDC)**

- 27.1 Representative from NRLDC informed that POWERGRID has commissioned U-NMS in Dec 2023. However, many functionalities are not working properly. He requested CTU for the deployment of NMT and operationalization of ticketing portal.
- 27.2 CTU informed that there are some teething issues which they are taking up with vendor resolution and assured that the issues will be addressed within two months and after that all link creation / availability reports could be done through U-NMS.  
  
CTU informed that they have taken up the issue with POWERGRID regarding deployment of NMT and confirmed that manpower will be deployed within one month.
- 27.3 CTU informed that ticketing facility is available in U-NMS remote console and requested all users to utilize this feature available in UNMS.  
  
Further, CTU is in process of development of Web portal in UNMS in compliance of CERC procedure on "Centralized supervision for quick fault detection and restoration". However, there are some challenges regarding Cyber Security for which POWERGRID is in discussions with their ISD team. Web portal will be available within two months.
- 27.4 NRLDC requested CTU to share the detailed timelines to the forum. CTU informed that they will share timelines within 15 days.

### **Decision of the forum:**

- 27.5 NMT will be deployed by CTU within one month.

27.6 Whereas, ticketing portal is available in U-NMS remote console, specific detailed timelines for deployment of a web ticketing portal for UNMS will be apprised by CTU to all stakeholders within 15 days.

**28 Data Collection Point (DCP) in the connection agreement in view of STUs element connectivity with ISTS stations/ lines**

- 28.1 CTU explained the agenda. PSTCL stated that all their lines coming in future will have OPGW also. NRLDC stated that data of STUs station shall report to SLDC first and then to RLDC through ICCP. NRLDC further stated that data of bays at ISTS station routed to RLDC and data of STU station shall route to SLDC therefore same philosophy will be ok and it is up to CTU to decide DCP as RLDCs concern is only about receiving data.
- 28.2 MS NRPC suggested to conduct a workshop at RPC level to sensitize STUs regarding requirement and policies related to communication system. Representative from CEA-PCD inform that they have also written a letter to CTU for requirement of OPGW in the new line in view of CEA regulation “Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022”. Further, they stated that a workshop may be arrange to sensitize the requirement of fiber among STUs.
- 28.3 CTU stated that STU shall also plan OPGW and FOTE during construction of new lines and substations to facilitate data communication through SLDCs and RLDCs, forum agreed for the same.

**29 Northern Region OPGW Strengthening Scheme (NROSS) (Table Agenda by POWERGRID)**

29.1 POWERGRID informed that 8 no. of OPGW links as mentioned in agenda have been commissioned successfully, under Northern Region OPGW Strengthening Scheme (NROSS) for information of all members.

Sl.	Link Name	Route Length (km)	Remarks
1	765kV Meerut - Bhiwani	175.049	For Narela Connectivity
2	765kV Meerut - Koteshwar, CKT-II	174.964	For AGC redundancy
3	400kV Tehri (THDC) - Tehri P.S., CKT-III	13.580	For AGC redundancy
4	220kV Anta NTPC - RAPP-C (NPCIL)	87.218	For AGC redundancy
5	220kV D/C Anta (NTPC) – Bhilwara (RVPN)	186.893	For AGC redundancy
6	220kV Pong - Jalandhar	98.192	For AGC redundancy
7	132kV Sewa II - Kathua	51.763	For AGC redundancy
8	Dadri NTPC – Dadri Gas	1.00	For AGC redundancy
<b>Total Length (in Kms)</b>		<b>788.659</b>	

29.2 Accordingly concerned Generators/ NLDC may plan their AGC implementation.

### **30 Implementation of SCADA Phase-III (Table Agenda by POWERGRID)**

- 30.1 POWERGRID informed that in ULDC Phase-III Scheme (upgradation /replacement of SCADA) in Northern Region for NRLDC and all SLDCs of NR, award of Contract is in final stage of approval and formal letter may be issued within 10-15 days.
- 30.2 POWERGRID also requested that in view of challenges faced during execution of Phase-II project, all constituents are requested to have site readiness (which is in the scope of States) particularly in following aspects;
- i. Readiness of new Control Centres/availability of space at existing control centres.
  - ii. Readiness of UPS and Battery room along with cable trench.
  - iii. Readiness / space availability of DG room.
  - iv. Dedicated manpower deployment by respective States at their main and back up control centres for smooth execution of the project, after implementation of the project, can be utilised for operations of SCADA system which is very vital for grid operations.
- 30.3 POWERGRID also requested Member Secretary to conduct TeST meetings on Monthly/ Bimonthly basis for smooth and timely execution of SCADA Phase-III Project.

#### **Decision of the forum**

- 30.4 TeST sub-committee meetings will be convened Bi-monthly or as and when required.

### **31 Annual Maintenance of Fiberhome make Communication Equipment (Table Agenda by POWERGRID)**

- 31.1 POWERGRID informed that they have implemented Microwave Replacement Project wherein OPGW along with Fibrehome make communication equipment were installed during 2012 to 2014. Annual maintenance of Fiberhome make Communication Equipment has been carried out from 2014 to 2021 in line with contractual provisions of 1+6 years AMC and then Annual Maintenance Contract has been extended for 2+1 year (up to 15.04.2025) through separate AMC contract.

These Fibrehome devices had STM1/STM4 capacities and several technical limitations, such as supporting only two optical directions and using optical cards instead of an SFP solution. They also had a limitation of four Ethernet ports. Being equipment from a neighbouring country, they lacked OEM support and had cybersecurity compliance issues in accordance with recent Indian Government guidelines for border-sharing countries. There is a plan for migration.

POWERGRID further informed that due to above limitations and more bandwidth requirement for grid operation, they have almost upgraded STM4/STM16 capacity equipment which are of latest technology / compliance of IEEE standards (SFP solutions) and also provides higher bandwidth with minimum 5 direction connectivity, however most of the states are still utilising these Fibrehome make equipment and they are fully dependent for sub-station telemetry data reporting.

Here it may be mentioned that microwave project was implemented in unison and centre sector equipment were interlinked with state equipment for ease of connectivity along with reduction in overall where cost was very high for OPGW and communication equipment due to import of materials from other countries.

In present scenario, maintenance cost of these equipment is very high and availability of spares is also challenging. In view of these challenges, POWERGRID have upgraded their network, however due to inter-connectivity with other states, we are not able to stop AMC of these equipment even we have additional / redundant communication equipment available at sub-stations.

31.2 UPPTCL has informed that they are also facing challenges in operations of these equipment and cost of AMC is very high, they have plan in place to replace these equipment. PSTCL also mentioned that they are replacing some of the equipment in their Reliable communication scheme project.

31.3 POWERGRID further mentioned that AMC of these equipment is going to expire by April 2025 and so all constituents are requested to expedite replacement of these equipment on priority otherwise new AMC has to be planned before expiry of the existing contract or state may change their network topology in such a manner, so that POWERGRID's fibrehome make equipment can be powered off without affecting State communication network.

He further requested CTU and State Constituents to prepare a roadmap to replace this obsolete technology equipment with emergence technology equipment. Planning for replacement of these fibrehome make equipment may be taken up in upcoming Test sub-committee or CPM meetings.

#### **Decision of the forum**

31.4 CTU and STUs to prepare a roadmap to replace this obsolete technology equipment with emergence technology equipment.

Meeting ended with a vote of thanks to the Chair.

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