सत्यमेव जयते

भारत सरकार
Government of India
वद्युत मंत्रालय
Ministry of Power
उत्तर क्षेत्रीय वद्युत स मति
Northern Regional Power Committee

सं. उक्षेविस/ प्रचालन/108/04/2022/7922-7956 दिनांक: 01.09.2022

सेवा में / To,
संलग्न सूची के अनुसार/As per list attached

विषय: दूरसंचार, स्काडा और टेलीमेटरी उप समिति की बीसवीं बैठक की कार्यसूची ।

Subject: 20th meeting of Telecommunication, SCADA & Telemetry Sub Committee-Agenda of the meeting-reg.

इस कार्यालय के पत्र दिनांक 04.08.2022 के क्रम करते हुए यह सूचित किया जाता है कि उत्तर क्षेत्रीय विद्युत समिति की दूरसंचार,स्काडा और टेलीमेटरी (टेस्ट) उप-समिति की 20वीं बैठक दिनांक **07.09.2022** को **11:00** बजे से वेब-एक्स विडियो कोंफ्रेंसिंग के माध्यम से आयोजित की जाएगी । बैठक में सम्मिलित होने के लिए लिंक व आवश्यक जानकारी सदस्यों को ई-मेल द्वारा प्रदान करा दी जाएगी । बैठक की कार्यसूची आपकी सूचना एवं आवश्यक कार्यवाही हेतु संलग्न है । कृपया बैठक में भाग लेने की कृपा करें ।

In continuation to NRPC letter of even no. dated 04.08.2022, it is intimated that the 20th meeting of Telecommunication, SCADA & Telemetry (TeST) Sub-committee of NRPC will be held on **07.09.2022** at 11:00 AM via WebEx video conferencing. The link and necessary information to attend the meeting would be provided to the members via e-mail. The agenda for the meeting is enclosed herewith for your information and necessary action. Kindly make it convenient to attend the meeting.

01/09/2022.

(सौमित्र मजूमदार)
अधीक्षण अभियंता

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Contents

I. Confirmation of Minute

1. Confirmation of Minutes

1.1. The 19th meeting of TeST sub-committee was held on 07.03.2022 and the minutes were issued on 20.05.2022. Minutes of the meeting are available at NRPC website (http://164.100.60.165). No comment has been received on the Minutes so far.

1.2. Members kindly confirm the Minutes.

II. Telecommunication and Telemetry issues

2. CTUIL Agenda

2.1. Following agenda points were also discussed in the 2nd ISTS Communication Planning Meeting held on 25.07.2022.

2.2. As per the CEA communication planning manual clause 4.1.2, the radial ISTS nodes are required to be connected on redundant paths. In this regard, as per the study carried out by CTU and feedback provided by NRLDC, following stations are proposed for dual redundant connectivity as under:

2.3. **Redundant communication for Budhil (GreenCo) & Chamera-III (NHPC)**

Presently Chamera – III & Budhil connected on single fiber path.

Redundant path to these stations can be provided through HPPTCL lines viz. Budhil – Lahal – Chamera PS coming up with OPGW.

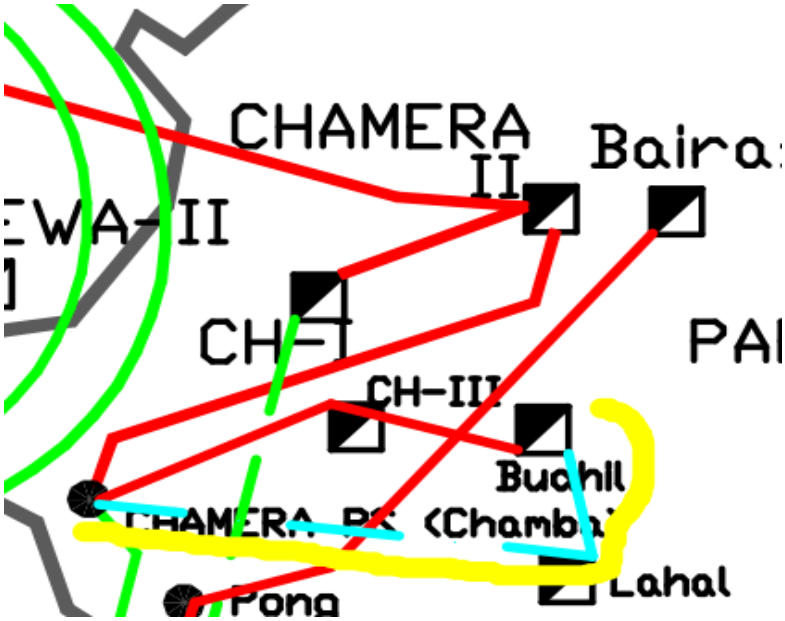


Fig-1

Proposals: To create redundant path to Budhil & Chamera-III**,** 3 pairs of Fibres to be shared from 220kV Lahal – Budhil (GreenCo) & 400kV Chamera Pooling (PGCIL)-Lahal (HPPTCL) HPPTCL lines along with additional FOTE (STM-16) at Lahal & Chamera (PS).

Lahal – Chamera (PS) line is under construction with completion schedule of Sep-22, Lahal – Budhil (Greenco) line is commissioned.

Members may kindly deliberate.

2.4. **Redundant communication for Pithoragarh (PG) & Sitarganj (PG)**

(i) Pithoragarh (PG) station is connected on single fibre path to ISTS wideband communication network. Second path can be created through Pithoragarh (PG) - Pithoragarh-Almora-Haldwani-Kashipur-Roorkee (PG) PTCUL links. However, on the above PTCUL path, OPGW is available except on Pithoragarh-Almora line. As per PTCUL, OPGW on this line is already under tendering stage.

(ii) Sitarganj (PG) is also on single fibre path, second path can be created through Sitarganj (PTCUL) – Kiccha – Rudrapur-Pantnagar- Kashipur (existing PTCUL STM-1 links upgradable to STM-4).

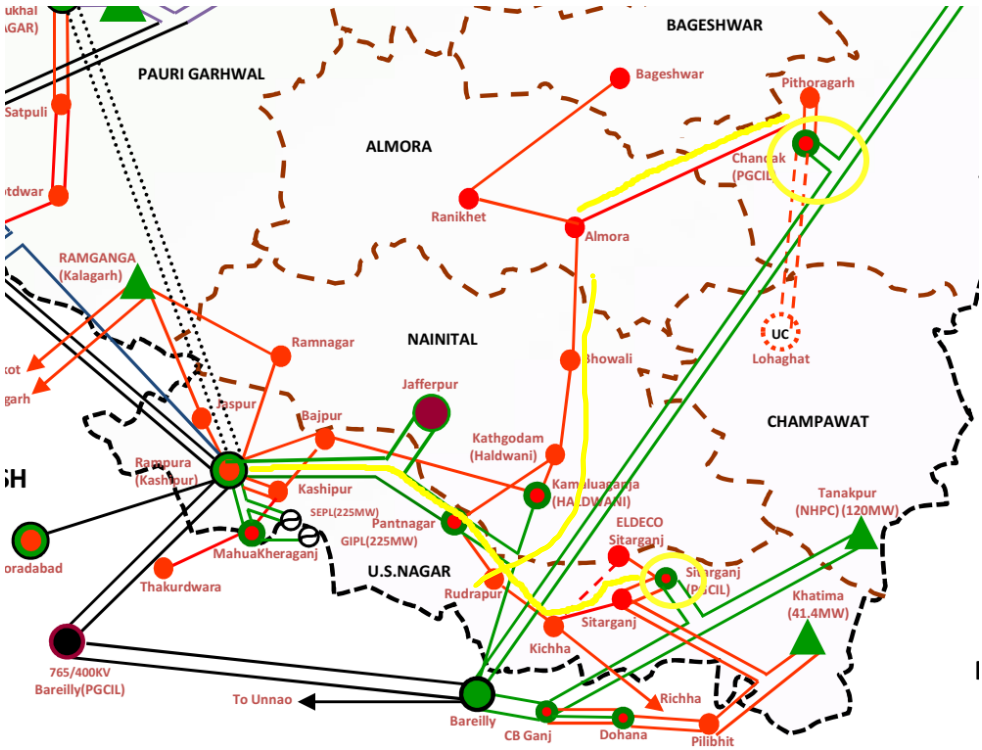


Fig-2

Proposal:

(i) Additional FOTE & sharing of 3-pairs fibres of PTCUL links on Pithoragarh (PG) - Pithoragarh-Almora-Haldwani-Kashipur-Roorkee (PG) path is required for redundant path of Pithoragarh (PG).

(ii) Additional FOTE & sharing of 3-pairs fibres of PTCUL links on Sitarganj (PG)-Sitarganj (PTCUL)- Kiccha- Rudrapur- Pantnagar- Kashipur path is required for redundant path of Sitarganj (PG).

Members may kindly deliberate.

2.5. **Redundant communication for Faridabad (NTPC) & Jhajhar (NTPC)**

(ii) **Faridabad (NTPC)** - Faridabad – Palla line is LILOed at Sector-78, Faridabad (HVPNL). It is understood that HVPNL is installing OPGW over Faridabad-Palla line & LILO portion up to Sector-78, FBD. Further, new line is coming up from Sec-78, FBD to Sohna Road with OPGW. Redundant path can be created for Faridabad (NTPC) via HVPNL network upto Sohna Road.

(iii) **Jhajhar (NTPC)-** Presently one path available over Jhajhar – Mundaka line, another path over Jhajhar – Daulatabad (HVPNL) – Gurgaon (PG) can be created.

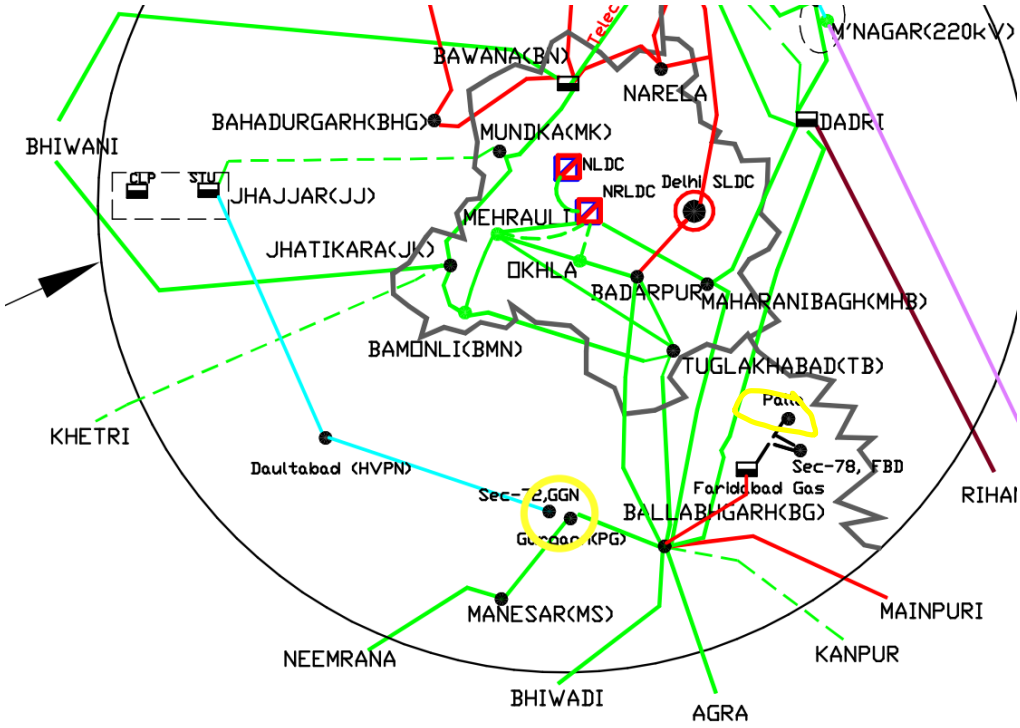


Fig-3

Proposal:

(i) **Faridabad (NTPC):** Additional FOTE & sharing of 3-pairs fibres of HVPNL links on Faridabad (NTPC)- Sector-78, Faridabad-Sohna Road (ISTS) path is required for redundant path of Faridabad (NTPC).

(ii) **Jhajhar (NTPC):** Additional FOTE & sharing of 3-pairs fibres of HVPNL link on Jhajhar – Daultabad – Sec-72, Gurgaon (HVPNL)- Gurgaon (PG) path is required for redundant path of Jhajhar (NTPC).

Members may kindly deliberate.

2.6. **Redundant communication for Fatehgarh PS (Adani), Mohindergarh (Adani) & Mundra (Adani) stations.**

From Fatehgarh PS only one fibre path is available, second path may be proposed over leased line.

Presently, data of Mohindergarh (Adani) & Mundra (Adani) stations reach RLDC through leased line, despite the OPGW available on following lines:

(i) Mohindergarh – Mundra HVDC line (Adani)

(ii) Mohindergarh – Bhiwani (PG) line (Adani)

(iii) Mohindergarh – Dhanoda line (HVPNL)

(iv) Dhanoda – Neemrana line (HVPNL)

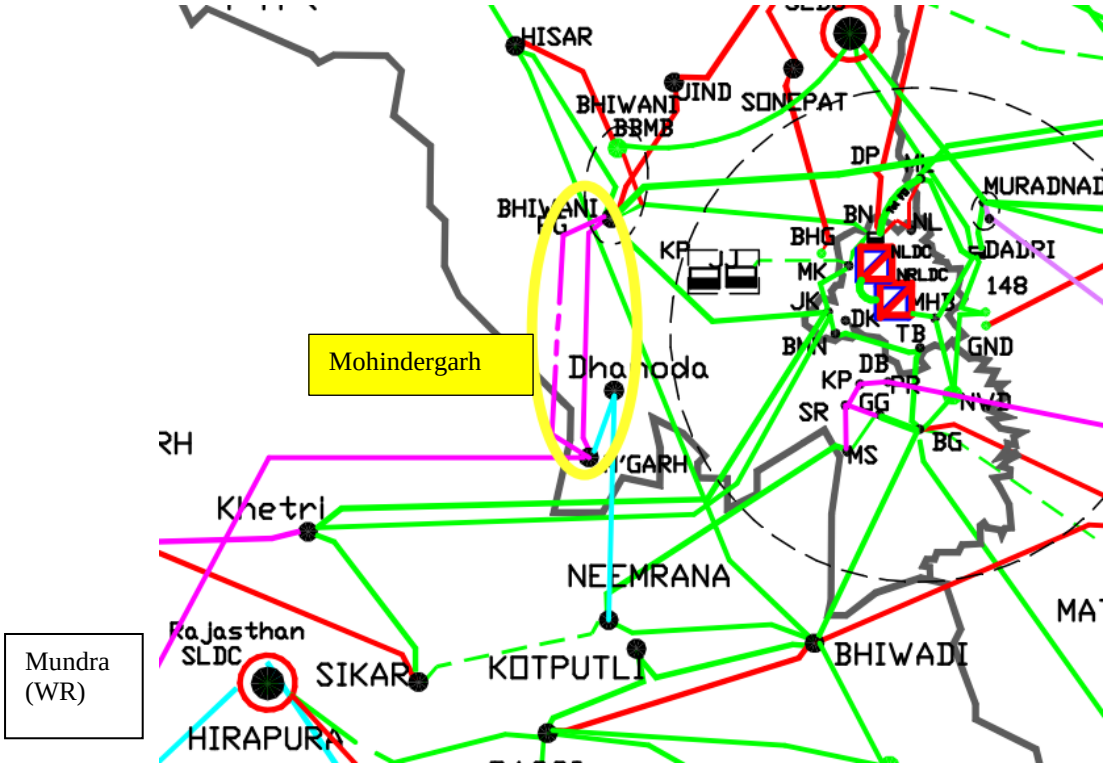


Fig-4

Proposal:

(i) **Fatehgarh PS (Adani):** Adani may provide second path connectivity of Fatehgarh PS over leased as station is critical in view of larger RE generator connected with this station.

(ii) **Mohindergarh (Adani):** FOTE of POWERGRID shall be integrated with Adani FOTE at Bhiwani (PG). Further as a redundant path instead of leased line via Mohindergarh (Adani)-Dhanoda(HVPNL)-Neemrana (PG) may also be utilised by suitable integration and sharing.

(iii) **Mundra (Adani):** Fibre on Mohindergarh – Mundra HVDC line may be utilised for ULDC data communication as main path and leased line as redundant path.

Members may kindly deliberate.

2.7. **Redundant communication for Narora (NAPP) (NPCIL)**

Presently NAPP is connected with NAPP – Khurja UP network. Second path may be proposed by installing OPGW over 220kV NAPP – Atruali UP line (38 kms.), from where onwards fibre network is available upto RLDC via NAPP-Atrauli-Aligarh-Sihandrabad-Kasganj-Etah-Mainpuri (UP)-Mainpuri (PG).

Proposal:

(i) OPGW may be installed over 220kV NAPP – Atruali UP line (38 kms.)

(ii) Additional FOTE & sharing of 3-pairs fibres of PTCUL links on Napp-Atrauli-Aligarh-Sihandrabad-Kasganj-Etah-Mainpuri (UP)-Mainpuri (PG) path is required for redundant path of NAPP.

Members may kindly deliberate.

2.8. **Redundant communication for Samba (PG)**

Presently Samba (PG) is connected with Kishenpur. Second path may be created by following lines where OPGW is available:

(i) Amargarh – Samba (Indigrid line)

(ii) Samba – Jallandhar (Indigrid line)

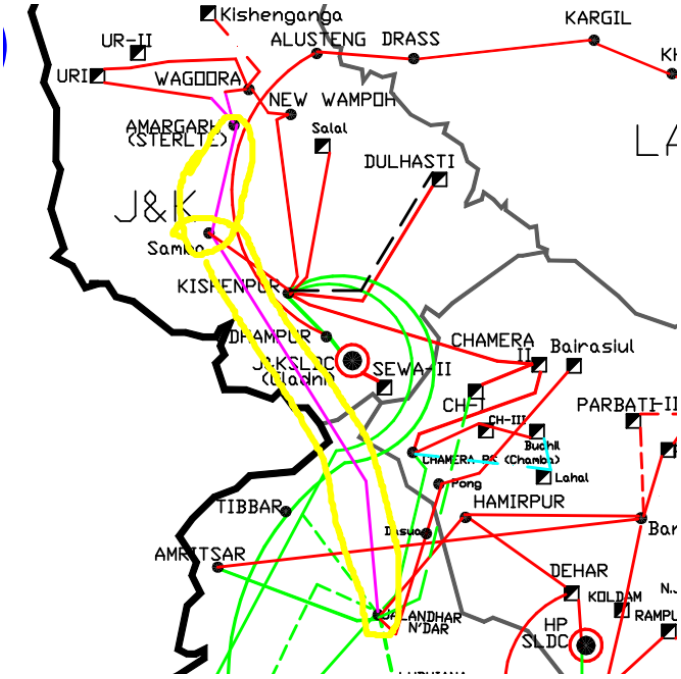


Fig-5

Proposal: FOTE of POWERGRID and Indigrid to be integrated at Samba (PG), Amargarh (Indigrid) & Jallandhar (PG).

Members may kindly deliberate.

2.9. **Redundant communication for Bhinmal (PG) & Kankroli (PG) S/s**

Bhinmal station is presently connected with Kankroli and Zerda S/s. However, OPGW on Zerda-Ranchhodpura line is under implementation. From this line second path will be commissioned through WR network.

As Bhinmal is also connected with RVPNL power network and OPGW is available on the following RVPNL lines:

(i) Bhinmal (PG) – Barmer

(ii) Barmer - Jaisalmer -II

(iii) Jaisalmer -II – Jodhpur (Kankani)

(iv) Jodhpur (Kankani) – Jodhpur (Surpura)

The paths

(a) Bhinmal (PG) – Barmer- Jaisalmer-II- Jodhpur (Kankani)- Jodhpur (Surpura) – Merta- Ratangarh-Sikar

(b) Merta-Beawar- Bhilwara- Chittorgarh (RVPNL)- CHittorgarh (PG)

if integrated with ISTS network, additional paths may be created through RVPNL network for better redundancy.

Moreover, agenda for redundancy of Kankroli has been sent to NCT after seeking views of NRPC by CTU vide which OPGW is proposed on 400kV Kankroli – Jodhpur (Sura) S/c line.

Further, RVPNL suggested that at following stations existing FOTE are saturated and new STM-16 equipment shall be proposed:

(i) Jodhpur (220)

(ii) Beawar

(iii) Ratangarh

(iv) Merta

(v) Ratangarh SLDC

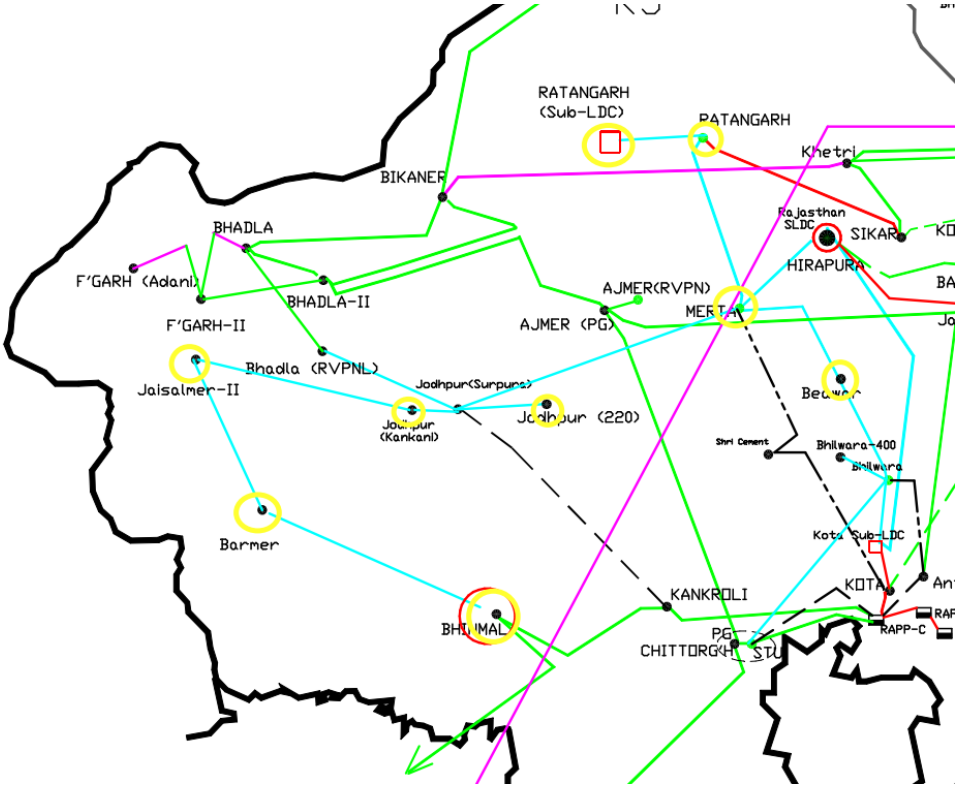


Fig-6

Proposal:

STM-16 FOTE may be provided as additional FOTE at below mentioned RVPNL locations to create redundant path for Bhinmal and Kankroli. It will also create additional ring protection for NR and WR, which will not only strengthen the ISTS network but also will provide redundant paths to RVPNL network:

i. Bhinmal (PG)

ii. Barmer

iii. Jaisalmer -II

iv. Jodhpur (Kankani)

v. Jodhpur (220)

vi. Merta

vii. Ratangarh

viii. Ratangarh SLDC

ix. Beawar

It is mentioned that Jodhpur (220) & Ratangarh- Sub LDC are radially connected to Jodhpur (Surpura) & Ratangarh respectively. RPVNL may confirm the connectivity of these two nodes with the existing and proposed FOTE at Jodhpur (Surpura) & Ratangarh.

In addition to above, 3 pairs of Fibre from existing OPGW links RVPNL are to be shared on following:

(a) Bhinmal (PG) – Barmer- Jaisalmer-II- Jodhpur (Kankani)- Jodhpur (Surpura) – Merta- Ratangarh-Sikar

(b) Merta-Beawar- Bhilwara- Chittorgarh (RVPNL)- CHittorgarh (PG)

Members may kindly deliberate.

3. Issue with SDH (FIBCOM make) equipment installed under Package-IV(a) & IV(c) in Himachal Pradesh during transmission of real time data (Agenda by HPSEB)

3.1. Under Package-IV(a) & IV(c), 24 nos. SDH equipment (FIBCOM Make) has been installed under Establishment of Fibre Optic Communication System in Northern Region for State Sector by PGCIL vide LAO NO: CC-CS/439-NR1/CommEqp-3236/3/G5/CA-I/5765 at various sub-stations in HP. These SDH equipment installed/commissioned during year 2018. However, the real time data communication started from March, 2022. Only two RTU stations are presently communicating through these SDH equipment.

In this regard it is submitted that latency being observed through these SDH equipment. Initially latency occurs low. However, with the passage of time latency increases and frequency of real time data decreases and after 40-45 days link stops sending data from RTU station. The matter already taken up with the vendors to rectify the problem but no seamless communication maintained through these SDH equipment. Therefore, PGCIL may be requested to direct the vendor i.e., M/s FIBCOM to rectify the problem in these equipment. It is further intimated that Remote Terminal Units (RTUs) have already been installed by HPSEBL at the locations where FIBCOM make SDH equipment has been installed and validation of these RTUs with

HPSLDC is in process and difficulties are being faced due to the communication problem through FIBCOM make SDH equipment.

4. ICCP redundancy (Agenda by PSTCL)

4.1. PSTCL is trying to establish double connectivity in redundant configuration between SLDC Ablowal and 2 no. Sub-LDCs i.e., Lalton Kalan and Jamsher (Sub-LDCs being data aggregation points at regional/ area level). For this purpose, 2 nos. Ethernet channels are available through 2 nos. SDH Networks. However, it is apprehended that upon simultaneous connection 2 no. ICCP streams at a Sub-LDC, a loop shall for form due to IP Conflict.

4.2. Thus, it is requested to suggest a few examples where such ICCP redundancy is achieved by PGCIL or any other State Utility so that the same can be applied in PSTCL. Details of 2 nos. of networks for this purpose are given below:

Fibcom Routes

ALDC Jamsher --> Goraya --> Jadla --> RTP --> Mohali --> PGCIL Patiala --> SLDC Ablowal

ALDC Lalton Kalan --> Sahnewal --> Kohara --> Gaunsgarh/Ghulal --> RTP --> Mohali --> PGCIL Patiala --> Ablowal.

Fiberhome Routes

ALDC Jamsher --> Kotla Janga --> Kartarpur --> PG Kartarpur --> PG Lalton --> PG Maler Kotla --> MalerKotla --> Amloh --> GG-1 --> Ablowal

ALDC Lalton Kalan --> PG Lalton --> PG Maler Kotla --> MalerKotla --> Amloh --> GG-1 --> Ablowal

5. Issue of OPGW between 220kV GNDTP Bathinda to 220kV Malout (Katorewala) with LILO at 220kV Badal substation under Package-1a. (Agenda by PSTCL)

5.1. Under Package-I(a), 24 core OPGW has been laid at 220 kV GNDTP (Bathinda)- Muktsar (Ckt-1 & 2) D/C on D/C towers and 48 core OPGW was laid on LILO of 220 kV GNDTP Bathinda- Muktsar (Ckt- 3) D/C on D/C tower at Badal and Malout (**As per Annexure-I**). Thus, optical connectivity could not be established for Badal and Malout Stations with Muktsar/ Bathinda Stations.

5.2. In view of this, PSTCL proposes that OPGW may be laid from LILO T- point. to nearest station on the main line 3rd Ckt (which happens to be GNDTP Bathinda) so that 2 nos. LILO section stations can achieve connectivity with mainstream network.

6. Establishment of OPGW connectivity for ANTA NTPC for Telemetry data and Voice (Agenda by PGCIL)

6.1. In 48th NRPC, installation of OPGW on 400kV Anta-Kota line (90km approx.) was approved for AGC. During survey, it was observed the said line is originating from Anta (RVPNL), not Anta (NTPC). This matter was informed during 2nd ISTS Communication Planning Committee Meeting for NR by CTUIL held on 25.07.2020. Following were the key points discussed:

(i) POSOCO emphasized on urgent need for Reliable & redundant connectivity of Anta (NTPC).

(ii) Two alternate transmission lines are available for OPGW planning:

(a) 220kV S/C Anta NTPC – RAPP 'C' & RAPP 'B' (Length: 87.5 km)

(b) 220kV D/C Anta NTPC- Bhilwara (Length: 187km)

(iii) It was agreed to consider 220kV S/C Anta NTPC – RAPP 'C' (Length: 87 km) in lieu of Anta-Kota line. This line is approx. same line length in comparison to existing Anta-Kota line (90km) as per NRPC approval.

(iv) Presently, Anta (NTPC) is reporting to NRLDC/NLDC over leased circuits taken from Telecom via OPGW on 220kV Anta-Bassi line. Spare fibres are not available for catering to AGC as useful life of 15 years of Anta-Bassi is also over and this transmission line got multiple LILOed and Link Budget allowed upto 61.38dB & presently losses are in range of 99dB as being observed by Telecom. Existing OPGW requires replacement, however there are certain constraints in taking up OPGW replacement on 220kV Anta-Bassi link:

(a) There is single peak. Entire Communication link will be down during replacement

(b) Long Length of Anta-Bassi i.e., 243km. This line is further LILOed at 03 RVPNL locations: Lalsot, Sawai Madhopur & Dausa, however ROW belongs to RRVPNL and they also raised ROW issues during their OPGW network planning, execution and requested POWERGRD to surrender the fibres/ROW for establishment of RRVPNL OPGW network for 220 & 132 KV stations. Further, this will require additional three nos of STM-16 equipment at these LILO sub-stations.

In view of constraints in replacing existing telecom OPGW on Anta-Bassi, it would be efficient to consider OPGW on alternate line i.e. 220kV D/C Anta (NTPC)-Bhilwara. This is also smaller in Line Length i.e. 187km compared to 220kV Anta-Bassi line along with all three LILOs stations.

Provisioning of OPGW on this line meets the requirements emphasized in Hon'ble CERC order 319/RC/2018 dated 28.08.2019 at point 36 para (iii) i.e.

"…. *communication availability from NLDC/ RLDCs to the nearest wide band node/ switchyard for the generating stations in a redundant and alternate path ensuring route diversity and dual communication*."

6.2. In view of above, it is proposed that following lines may be installed with OPGW for Anta (NTPC):

(i) 220kV Anta (NTPC) - RAPP 'C' (87.5km) in lieu of 400kV Anta (RVPN)-Kota(90km).

Additionally, for redundant & reliable connectivity for Anta (NTPC) as per CERC requirements, members may agree for following line:

(ii) 220kV Anta (NTPC) - Bhilwara (187km).

6.3. Proposed communication network for Anta (NTPC) may be considered as part of AGC network (NROSS scheme). The scheme shall become part of existing Commercial Agreement signed for ULDC Project.

6.4. ***Members may deliberate***.

7. Urgent Replacement of old OPGW cable in Northern Region (Agenda by PGCIL)

7.1. 400kV Agra - Ballabhgarh Line (181km)

(i) OPGW on Agra-Ballabhgarh line is the most significant link for Northern Region as well inter-regional data traffic coming from WR, SR, ER, NER to NR onwards to NLDC/NRLDC. Agra-Ballabhgarh OPGW link was commissioned in 2004 & has completed useful life of 15 years as per CERC norms.

(ii) The said link is passing through industrial corridor in Agra-Mathura-Delhi NCR region. Higher contamination & deposition of pollutants has caused rusting of OPGW & hardware fittings, vibration dampers and so on causing severe damages to OPGW system. Breaking of OPGW due to failure of ACS strands due to corrosion, failure of hardware fittings such as suspension clamps, etc. exposing the fiber optic tube which is prone to water ingress has already increase the attenuation in fiber. Site Photographs are enclosed for ready reference.

Fault on OPGW Cable in Agra- Ballabhgarh Link

Fault on OPGW Cable in Agra- Ballabhgarh Link

(iii) POWERGRID has made efforts for mitigating link outage by provisioning of booster-repeater station/amplifier at Mathura, however, it is not sufficient.

Data availability has deteriorated and any further outage will impact operation for ULDC & grid operation capabilities of Power System. Any further outage of old OPGW in Agra-Ballabhgarh may lead to non-availability of major chunk of NR data & inter-regional data traffic at NLDC/NRLDC & Backup NLDC. Further, some in sections of link, OPGW re-splicing works have been carried out multiple times and is further beyond repair in case of any contingencies.

In view of above constraints and critical nature of the link, it is proposed to replace the old OPGW on 400kV Agra-Ballabhgarh line with a new OPGW.

7.2. **400kV Kishenpur - Wagoora Line (183km)**

(i) OPGW on 400kV Kishenpur-Wagoora Line (183km approx.) provides the backbone connectivity between NLDC & NRLDC to important hydro stations& several sub-station stations on UT of J&K such as Uri-1, Uri-2, Kishenganga HEP, Baglihar HEP, Amargarh, Wagoora Ramban, New Wanpoh, Alsuteng-Leh Transmission system & also important for SLDC-RLDC connectivity i.e., Bemina SLDC & upcoming SLDC at Ladakh with NRLDC. Kishenpur-Wagoora OPGW link was commissioned in 2005 & has completed useful life of 15 years as per CERC norms. During installation of OPGW link, Link Budget (Design Attenuation) was <=45.91dB (~0.21db/km) considered, however measured attenuation at end of useful life is >=80dB (~0.4dB/km).

(ii) OPGW is also installed on 400kV Kishenpur-New Wanhpoh line as redundant route, however this line is passing through heavy snow zone area and OPGW is prone to break during winter season due to heavy snowfall (upto 50mm ice thickness) in the Pir-Panjal range of *The Himalayas*. Rectification works in affected sections is not possible due to unapproachable site conditions. During link outage for long durations during winter, the OPGW on Kishenpur-Wagoora (later LILOed at New Wanpoh) serves as redundant path.

(iii) In view of above constraints and critical nature of the link, it is proposed to replace the old OPGW on 400kV Kihenpur-Wagoora line with new OPGW.

(iv) It is proposed that works for replacement of old OPGW links approx. 364km (i.e., 183km+181km) on 400kV Kishenpur-Wagoora & 400kV Agra-Ballabhgarh line in Northern Region may be approved on urgent basis. The same shall be implemented in any running or upcoming packages for fast track execution. The scheme shall be implemented on tariff route as per CERC notification and shall become part of existing Commercial Agreement signed for ULDC Project.

7.3. Members may deliberate and approve the timely replacement of above OPGW links to avoid any major outage in telemetry data reporting.

8. Issue regarding Non-Availability of Shutdown on 220kV ADHEPL – Phozal & 220kV Phozal - Nalagarh line for aviation Globule removal to carry out the OPGW stringing work on 220KV ADHEPL-Nalagarh link under Reliable Communication Scheme (Agenda by PGCIL)

8.1. The 'Reliable communication Scheme' envisages establishment of 7248Kms of OPGW Network for reliable fiber optic connectivity for Central sector station including IPPs wherein transmission lines 220 kV D/C ADHEPL-Nalagarh is part of the scheme. The OPGW links are being implemented under Package-B: Communication System for Central sector under Northern region-II (Reliable Scheme) awarded to M/s APAR Industries Ltd, Vadodara. Till date, 23 out of 28 links have been commissioned under the said package.

8.2. It is to mention that shutdown/PTW is not being issued on 220kV ADHEPL – Phozal & 220kV Phozal - Nalagarh for the carrying out the work on 220KV ADHEPL-Nalagarh link. It is to mention that since December'2021, installation of only 25.865 km OPGW against 177 km (removal of 31 out of 138 nos. Aviation Globule) has been carried out due to irregular shutdown & PTW issuance from HPPTCL.

As the remaining aviation globules (107 nos.) are to be removed first before stringing of OPGW, ten (10) days shutdown is required for the carrying out the work. Further, 10-12 days shut down shall be required for reinstallation of aviation globules.

8.3. Also, Contractor had deployed the team on site in Feb-Mar'2022 on getting approval for shutdown/PTW in OCC forum, however, their team worked for only 04 days from 17.02.2022 to 20.02.2022 as the consent to issue PTW/shutdown was denied for rest of the approved period. As a result, the team deployed by Contractor had been idle for several days causing financial implications to the agency as conveyed vide their letter dt. 11.04.2022 due to irregular issue of shutdown/PTW. Further vide letter ref. no. ADHPL/PGCIL/2022-23/207-209 dt. 22.04.2022, M/s AD-Hydro has conveyed that the shutdown is to be further consented by HPSLDC/HPPTCL as the line is connected to Phozal substation of HPPTCL. The letter is enclosed at **Annexure-II.**

POWERGRID has repeatedly followed up for the issuance of PTW/shutdown with M/s HPPTCL and HPSLDC. However, the consent regarding shutdown/outage has not been granted despite having approval in OCC.

8.4. NRPC is requested to intervene for providing shutdown/PTW for OPGW installation works in the above-mentioned link.

9. Issues in OPGW laying in HPSEBL (Agenda by PGCIL)

9.1. As discussed in 15th, 16th, 17th, 18th &19th TeST Sub-committee of NRPC meeting wherein it was deliberated that live line OPGW installation is not possible in 66kV lines, consist of rail pole structure (8 links approx. 155km). It is mentioned that strengthening and re-conductoring work in 66 kV Gumma-Jutog line has not been completed till now. It is to inform that OPGW installation work has been completed in 5 out of 8 links.

9.2. OPGW stringing work stopped on 66kV Jeory- Nogli line due non-availability of shutdown and gang was idle for many days causing financial implications. Contractor has demobilized the gang.

9.3. OPGW stringing work could not be started/completed in following links due non-availability shutdown.

1- Gumma - Jutog

2- Kumarsain - Nogli

10. Regarding confirmation of commissioned OPGW links of PSTCL under Package 1(a) (Agenda by PGCIL)

10.1. POWERGRID put their best efforts and commissioning of OPGW links on various transmission lines of PSTCL under Package 1(a) has almost completed. As of now, all links has already been commissioned and needs to be capitalized. As per procedure, POWERGRID applied for commissioning certificate to NRLDC, they need confirmation from respective state constituents for state sector lines, in this case confirmation from PSTCL is pending since quite some time and POWERGRID is not able to declare DOCO for the said links.

10.2. PSTCL is requested to kindly confirm the commissioning of balance links.

11. Non-availability of Reliable / Redundant Communication System for PTCUL, SLDC (Agenda by NRLDC)

11.1. UK-SLDC is connected to NRLDC through radial network from Roorkee-Dehradun and all services like ICCP, PMU/PDC and VOIP are working on this. Any issue in link leads to outage of Voice and Data communication between SLDC Uttarakhand and NRLDC.

11.2. Matter of reliable communication to NRLDC was also discussed in Special Meeting with PTCUL on 07th July 2020 conducted by NRPC, 45th TCC/ 48th NRPC Meeting where PTCUL/ POWERGRID assured that reliable communication link would be available in 6 months. Issue was also discussed in 47th TCC/49th NRPC Meeting where PTCUL representative informed that they are in the process of tendering of RTU and OPGW Installation work and it is expected to be completed in 6 months.

11.3. During 52nd NRPC meeting, PTCUL informed that they are on the verge of finalizing the OPGW project and order will be placed in one-month duration. It proposed that lease line may be used to connect NRLDC. Since, Kashipur SLDC is already connected with Dehradun SLDC. Therefore, lease line from Dehradun to Kashipur SLDC may be used.

11.4. This is to inform that there is negligible improvement in telemetry from PTCUL.

PTCUL/POWERGRID may update.

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

12.1. 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.

12.2. The reliability of communication channel to NRLDC was discussed in various TeST Meeting since November 2016 (8th TeST Meeting). It is to inform that 14 nos. of RTUs are still reporting to NRLDC on single channel.

12.3. 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.

12.4. Thus, it is requested that reliability of redundant channel may also be ensured.

12.5. List of RTUs with single channel is given below:

S. No.	Name of RTU	Comments	Timeline
1	KISHANGANGA	NHPC	
2	PARBATI-2	NHPC	
3	Kala Amb	POWERGRID	Second gateway Faulty
4	BUDHIL	IPP	
5	KARCHAM WANGTOO	IPP	
6	MEERUT	POWERGRID	Second gateway Faulty
7	PARBATI-3	NHPC	
8	AD Hydro	AD Hydro	
9	Bhiwadi HVDC	POWERGRID	Second gateway Faulty
10	DRASS	POWERGRID	Second gateway not configured
11	KARGIL	POWERGRID	Second gateway not configured
12	LEH	POWERGRID	Second gateway not configured

S. No.	Name of RTU	Comments	Timeline
13	KHALSTI	POWERGRID	Second gateway not configured
14	Gurgaon	POWERGRID	Second Gateway faulty

POWERGRID/Utilities are requested to please update the status.

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

13.1. As per details submitted by PTCUL, out of 58 Sub-Station/Generating Stations data from only 26 Sub-stations are integrated at SLDC. Also, many feeders are not integrated even at the locations where RTUs are installed.

13.2. The same issue was also informed to PTCUL vide letter No. NRLDC/SL-II/2019-20 dt. 05.03.20.

13.3. Issue was discussed in Special Meeting with PTCUL held in July 2020 and December 2020. Subsequently issue was discussed in 17th, 18th & 19th Test Meeting and 45th TCC-48th NRPC and 47th TCC-49th NRPC.

(i) During 47th TCC - 49th NRPC, 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. Further, representative from PTCUL informed that faulty CMRs/Transducers replacement work is in progress and same would be completed within 3 months.

(ii) During 58th 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. MoU has been signed with POWERGRID for SCADA upgradation. Tender has been floated for RTU. MFT replacement is being done and will be completed in two months.

13.4. It is to inform that there is no significant improvement in this regard.

PTCUL may update the status.

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

14.1. 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. Network applications in Energy management system (EMS) such as State Estimator (SE), Real Time Contingency Analysis (RTCA) also necessitate reliable and accurate real time

analog and digital data. Data communication has to be made through redundant and alternate path communication channel.

14.2. Real-Time data availability from Jammu and Kashmir is very poor. There is zero visibility of data in J&K stations. With poor monitoring of data, it is very difficult to monitor grid in efficient manner.

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

14.4. Brief details are as follows:

(i) Under SCADA upgrade project 66 RTUs were installed by M/s Siemens at all 400KV / 220 KV and 132 KV sub-stations/generating Stations of J&K PDD.

(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.

14.5. 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.

14.6. 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.

14.7. During 19th TeST Meeting J&K representative informed that all 70 RTUs will be integrated with SLDC by 31st December 2022.

14.8. This is to inform that there is no improvement in this regard.

J&K may update the status.

15. Telemetry Issues from Powergrid Stations (Agenda by NRLDC)

15.1. 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).

15.2. Since proper telemetry is not available from many POWERGRID 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.

15.3. In this regard, letter regarding Telecommunication, SCADA & Telemetry issues from POWERGRID Sub-stations were given by NRLDC vide NRLDC/Telemetry/ dated 15 Dec 2021. Although there is improvement with respect to issues raised but data from many sub-stations is still unreliable.

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

15.5. During 19th TeST Meeting POWERGRID informed that issues of Balia and Bhiwadi HVDC is in process of award for integration works at Balia and Bhiwadi HVDC and informed the work will be completed within 1-2 months.

PGCIL to update the status.

16. Reliable Telemetry from State Sub-Stations (Agenda by NRLDC)

16.1. Telemetry status updated till 31.07.2021 is given below:

	Northern Region summary sheet and details of current status of implementation of telemetry system												
										Updated Till:		30.06.2022	
Sl. No.	User Name	Total Nos of Stations		Telemetry not Provided				Telemetry Intemittent				Total non-availability of data in %	
				Total nos of		Non-availability		Total nos of		Non-availability			
		GS	SS	GS	SS	GS	SS	GS	SS	GS	SS	GS	SS
1	Punjab	17	173	0	21	0.00%	######	1	17	**6%**	**10%**	6%	22%
2	Haryana	5	271	-	54	-	20%	0%	13	0%	5%	0%	25%
3	Rajasthan	20	231	0	0	0.00%	0.00%	2	13	10%	6%	10%	6%
4	Delhi	**6**	**45**	**---**	**---**	**0%**	**0%**	**1**	**7**	**17%**	**16.0%**	**17%**	**16.0%**
5	UP	24	306	0	0	0%	0%	12	93	50%	30%	50%	30%
6	Uttarakhand	14	44	3	29	21%	66%	1	3	7%	7%	29%	73%
7	HP	13	33	0	11	0.00%	33.33%	0	3	0%	9%	0%	42%
8	JK	4	66	2	64	50%	97%	2	2	50%	3%	100%	100%
9	POWERGRID	-	90	-	-	-	-	-	17	-	19%	-	19%
10	NTPC	15	-	-	-	-	-	4	-	27%	-	27%	-
11	NHPC	14	-	-	-	-	-	6	-	43%	-	43%	-
12	NPCIL	5	-	-	-	-	-	0	-	0%	-	0%	-
13	NJPC	2	-	-	-	-	-	0.00	-	0%	-	0%	-
14	THDC	2	-	-	-	-	-	1%	-	1%	-	1%	-
15	BBMB	6	14	-	-	-	-		0	0%	0%	0%	0%
16	IPP/JV/Patran	38	9		-	0%	-	31	2	82%	22%	82%	22%
	TOTAL	185	1282	5	179	3%	14%	60.01	170	32%	13%	35%	27%
	Total (over all)	1467		184		13%		230.01		16%		28%	

16.2. All constituents/ utilities are requested to submit timelines for correction/ rectification of telemetry.

16.3. During 19th TeST Meeting following update was given by various constituents:

(i) **PSTCL**: PSTCL informed that RTU installation work is in process and it is likely to be completed by 31st March 2022.

(ii) **Haryana**: Representative from Haryana informed that they are in process of RTU installation and same would be completed at the earliest.

(iii) **HPPTCL**: HPPTCL informed that RTU installation work is in progress, however it could not be completed due to supply of L3 switch and confirmed that RTU work would be completed by 15th April, 2022.

Constituents to kindly update the status.

III. Issues related to Unified Load Dispatch & Communication scheme of NR

17. Issues being faced by HARYANA SLDC in ULDC Phase-II

17.1. Non-displaying of Dynamic Values on SLDC Haryana Website:

Earlier, this issue remained unresolved for about 1.5 years and was later resolved in April, 2022. Thereafter in May 2022, the issue has re-appeared. It seems that this time M/s Siemens has not taken notice of it as they have not shared any update on it till date.

Therefore, M/s Siemens may be asked to update the progress and resolve this issue at the earliest.

17.2. E-DNA data points not updating in e-DNA software automatically:

For last three months, updation of newly created points in e-DNA software have been stopped due to which no historical trend/data is available for these points. This office has taken up the matter several times but neither problem resolved nor any progress/timeline shared. It is pertinent to mention that, during resolving one issue in e-DNA software in the past, complete data of historian had been lost of two months i.e., Jan-Feb 2020 by M/s Siemens and till date, that data also couldn't be restored.

Therefore, M/s Siemens may be asked to resolve this issue at the earliest.

17.3. Dependency of Site Engineer on one or two engineer deputed at NRLDC and Regarding Contractual obligation (qualification) of Site engineer:

It has been observed that the local site engineer relies heavily on NRLDC or other site engineer even for minor issues resulting in delay in resolution of the issues. The issue was raised in the last several meetings and each time it was ensured by M/s Siemens that proper training would be arranged for the local site engineers. But site engineers are not given any such training.

Further as per conditions of contract "*The support engineer so deployed shall be qualified personnel having at least 5 years of experience in the delivered SCADA/EMS System*". But neither such conditions are obliged nor the regular training is being provided to the site engineers otherwise they could resolve the matter themselves. Apart from this, site engineers are regularly changed. In last four months, 3 site engineer have been changed and replacement engineer have not been provided basic training before deploying the sites.

Therefore, M/s Siemens may be asked to oblige conditions of contract and deployment of qualified and well-trained engineer only.

17.4. Issue regarding functionality of IMM: Transfer failed in Graphic Job: (Error: SVG POP Error):

During the activation of a display job in IMM, most of the jobs getting transfer failed. In the last several meetings, it was assured by M/s Siemens that they will resolve the issue as and when it is raised. However, there is no permanent solution given by M/s Siemens so far.

M/s Siemens may be asked to resolve the issue permanently.

17.5. Compatibility of Siemens web-server:

Web-server is not compatible with TLS V1.2 or higher. Due to this, the website is not available on different updated browsers. M/s Siemens has assured in the 19th test meeting that some solution will definitely be worked out but no solution has been given till now.

M/s Siemens may be asked to update the progress and resolve this issue at the earliest.

17.6. Image Backup of servers:

M/s Siemens was asked several times to certify that the image backups of all the servers have been taken. But they haven't given certificate on it yet. In this context, M/s Siemens says that they are purchasing hard disk as there is not enough space available in the system.

The statement of M/s Siemens regarding non-availability of space in the tape library is not correct as HVPNL has at least 5 such tape drives and the same has not been used since commissioning of the project.

M/s Siemens may be asked to give undertaking that all image backup have been taken in the tape drives.

17.7. IMM in PDS console not working:

IMM in PDS console was working for approx. 1 month in the year 2020, however, it stopped working. This issue is pending since 2018. The matter was discussed several times but a new deadline was given by M/s Siemens every time for its resolution. The last deadline given in 19th test meetings was March 31, 2022.

M/s Siemens may be asked to apprise that what action has been taken on this so far and how much more time it will take to resolve this.

17.8. Cyber Security Audit and Compliance of Cyber Security Audit Report

Presently, as per existing AMC contract with M/s Siemens, SCADA system is being audited annually by CERT-IN empaneled agency. Last security audit was conducted by M/s Siemens in June 2021. Now, more than one year is already completed but next cyber security audit is not being conducted. Further, as per recent CERT-GO/CERT-In guidelines, Cyber Security audit is to be done bi-annually. Therefore, Information Security Management Office (ISMO) Govt. of Haryana (GoH) (CERT-IN Empaneled department) was

contacted for Cyber security audit and Cyber Security audit was done in June-2022 by ISMO, GoH. During this activity, multiple vulnerabilities were observed and are required to be addressed by SLDC immediately. So, the cyber security audit report was submitted to M/s Siemens in July 2022. Now, approx. one month is already completed, but no compliance has been made. In this regard, multiple reminders were already sent, but no progress has been made. So, M/s Siemens may be requested to conduct the yearly cyber security audit at earliest and submit the compliance report on earlier found vulnerabilities in cyber security audit.

18. Issues being faced by UP SLDC

18.1. SCADA/ EMS upgradation project of SLDCs of Northern Region ULDC phase-III

PGCIL to share final DPR and final estimated cost of project under ULDC phase-III, in order to seek administrative and financial approval from management/ BoD.

18.2. Cyber Security Audit of SCADA/ EMS System:

Clarification regarding frequency of VAPT of OT (SCADA) System: As per excerpts of 5th Empowered Committee held on 25.04.2022, it was decided that VAPT of OT System to be done annually (Necessary amendments are awaited by statutory authority accordingly).

18.3. URTSDM Project-

i. Proposed Shifting of PMU by PGCIL is requested, the PMUs which are installed at 220 KV substation Khara and 220 KV Obra-A to 400 KV Greater Noida Substation (UP) and 765 KV Fatehabad (Agra) for better visualization and situational awareness.

ii. Status of implementation of proposed phase-2 of URTDSM project. PGCIL to share the names of substation/generating station which are to be covered under the proposed URTDSM phase-2 Scheme. As in URTDSM phase -1 scheme only 16 stations of UP were covered. The proposed phase –II of URTDSM project may take some time, meanwhile it is to be deliberated whether under any regulatory provisions the installation of PMUs by respective generating or transmission entity.

19. Issues being faced by Punjab SLDC

19.1. **Implementation of ADMS in ULDC PH-III:** DISCOM of Punjab i.e. PSPCL is frequently requesting Pb-SLDC (PSTCL) to implement ADMS at 66 KV Voltage level. ADMS implementation at 66 KV level requires additional hardware/software which may be implemented by M/s Siemens or any other vendor through open tender. However, it is not sure whether the new ADMS

System shall be compatible with the new SCADA system under ULDC PH-III, which may be provided by another vendor. In view of above, it seems that it may be covered under ULDC PH-III only, rather than taking it as a standalone project.

Hence, the same needs to be discussed in the forum for kind inputs please.

19.2. **SEM-SCADA difference:**

i. As SCADA data is not completely reliable and there is always a mismatch in SEM and SCADA data due to various issues such as RTU, Communication, SCADA. SEM data is most of the times correct as data is downloaded from meters.

ii. As billing is done on basis of SEM data and control is done on basis of SCADA, mismatch of data always comes up and sign change violations are also different for SCADA data as compared to SEM, based on which financial implications are imposed.

iii. Hence, provision should be made to directly make ABT data available into control room so as to avoid these unwanted charges, as SCADA data's reliability is very difficult to be maintained at 100%.

19.3. **Intermittency of Real-Time SCADA data of All RTU's –** Various times, it has been observed that All RTU's starts fluctuating/ switching on/off at odd times, even though no changes in system are carried out at that time. Owing to this, it becomes a major problem for Power controllers in managing the grid. As under knowledge of Pb-SLDC, this issue occurs with other states as well. Hence, it is requested to find some permanent solution for this problem.

19.4. **Double Route Status in SCADA:**

The provision of redundant & reliable communication is must for 24x7 availability of real-time data.

As such, data is configured with two different communication channels for bringing redundancy into the system and increase reliability of data to NRLDC/ RLDC.

Under FOTE reliable communication project, all stations are to be reported on double route. As such, all RTU data stations reporting at ALDC's Punjab namely Jamsher & Lalton-Kalan have now been made available on double route through M/s FIBCOM & M/s FibreHome network.

However, when both of the above networks are connected to SCADA system simultaneously to achieve redundancy, all SCADA data starts fluctuating probably due to looping issue and data communication becomes intermittent leading to a major problem for dispatchers.

Matter was looked into by SCADA office along with M/s Siemens, however no permanent solution has been found out yet. Matter has been also been conveyed to communication wing to do the needful at Communication network end, if possible.

Hence, it is requested to help us out in finding a viable solution for the same.

19.5. **Antivirus Signatures update**: It is kindly requested to guide us with the suggested schedule of updating Antivirus signatures so as to maintain the robustness of SCADA system.

19.6. **Refund of advance amount against MOU for replacement of 9 Nos of old Alstom make S-900 RTUs:**

Advance amount of ₹1,36,31,977/- was paid to PGCIL dated 04.09.2018 on account of supply and service and consultancy charges in respect of replacement of 9 nos. old Alstom make RTUs, out of which amount of ₹1,26,83,015/- was adjusted as per SAT report of 9 nos. RTUs. The SAT of last RTU for PSTCL was completed on 15.03.2021. As per the MoU with PGCIL dated 12.02.2018, the adjustment/ reconciliation of accounts was to be completed after completion of project works. As such, amount of ₹9,48,962/- plus any other refund amount like LD, refund on consultancy charge as per actual as per MoU, is yet to be refunded by PGCIL.

19.7. **Mock Drill Exercises:** It is often asked by central cyber security agencies like CERT-In, NCIIPC to conduct frequent mock drills for cyber security. Hence, it is requested to guide us in regards to same.

19.8. **Compliance of Cyber Audit Reports:** Cyber audits of SCADA system installed at Pb-SLDC have been conducted by M/s AKS. Compliance of the same is done by M/s Siemens. However, it has been observed that vulnerabilities already closed by M/s Siemens are coming up again and again. Thus, cyber audit of SCADA System was subsequently conducted by DGR office, Govt. of Punjab. Most of the vulnerabilities reported vide DGR office report were same as reported by M/s AKS. M/s Siemens was requested to resolve all the vulnerabilities and to submit the compliance along with suitable documentary proof so that any vulnerability may not occur again. However, the firm replied that the same is not in the scope of the firm.

As above, it is requested to discuss the same and intervene to get the cyber vulnerabilities resolved, please.

20. Issues being faced by DTL

20.1. **AMC invoice pending since January 22 to March 22 quarter**

Siemens has not given the original duly signed invoice for the Jan'22- Mar'22 quarter. It is claiming labour charge difference under Price adjustment claimed

in line with Appendix 2 of "*Maintenance Contract Agreement*". Power grid is requested to address the issue on the Test platform so that a common consensus among all the state can be achieved regarding payment.

20.2. **Compliance of cyber security suggestions/ recommendations given by various state agencies**

There is no proper function defined regarding cyber threats compliances in ongoing ULDC Phase-2 project. Most of the time Siemens either denies or delay in providing compliance to the suggestions/ recommendations received from various state agencies. So, it is requested that Siemens should develop a team of skilled personnel dedicated in maintaining a strong cyber security ecosystem so that timely compliance of the inputs received can be done.

Status of AMC of Auxiliary Power Supply may be provided.

21. Upgradation of DC Power Supply supplied under ULDC

21.1. Presently 60A DCPS is installed at NRLDC. DCPS was installed under ULDC Phase-I and is working at full load. Being obsolete, spare parts of DCPS are not difficult to arrange. Any issue in DCPS may lead to failure of DC Supply to communication equipment.

21.2. POWERGRID/ CTU may take necessary action for replacement /upgradation of DC power supply at the earliest.

21.3. During 19th TeST Meeting POWERGRID informed that DCPS at NRLDC was missed under reliable scheme and confirmed they will procure/replace DCPS at NRLDC under upcoming project.

POWERGRID to update the status.

IV. OTHER AGENDA

22. Deputation of Permanent Engineer at SLDC Patiala (NMS) and PGCIL Jalandhar (NMS) by M/s Fibcom (Agenda by PSTCL)

22.1. Recently the OPGW Package-1(a) has been completed in PSTCL. SDH network make Fibcom under the project is being maintained by M/s Primatel. The maintenance firm has deputed 1 no. engineer in Punjab region.

22.2. In this regard, due to the recent completion of works under the project, a lot of services are pending to be set-up in the new network. In addition, uninterrupted support from NMS end is also crucial in order to effectively take care of maintenance duties. Due to deputation of only 1 no. engineer, there is severe issue in servicing of field sites and simultaneously manning the NMS.

It is pertinent to mention that 1 no. position of NMS Engineer at PGCIL Jalandhar site is lying vacant as of date.

22.3. In view of above, PSTCL requests PGCIL to depute 1 no. additional engineer in Punjab.

23. Permission to work for Installation of DCPS & Battery and Maintenance activity of existing communication equipment at Manimajra UT sub-station under ULDC scheme (Chandigarh -Panchkula link) (Agenda by Powergrid)

23.1. The matter was raised in 19th TeST Committee meeting but agenda point was not deliberated as representative of UT Chandīgarh was not present in the meeting and issue remain unresolved

23.2. NRPC is requested to intervene for providing entry permission from UT Chandigarh for DCPS, OPGW installation and maintenance works.

24. Input for database development system for UNMS Project (Agenda by Powergrid)

24.1. For commissioning of UNMS Project, basic database development is required which need details of existing NMS of centre sector / state sector/ IPPs / Solar developer/ other transmission licensee and independent nodes which are reporting data for grid operation. In various ULDC schemes, POWERGRID has commissioned communication equipment/ NMS for managing equipment, that information has been collected from OEMs and provided to UNMS vendor (M/s Sterlite Technology), however details from state sector/ IPPs / other transmission licensee are still not been provided to UNMS vendor, which will delay the works for data development. Here details of GE Equipment (PTCUL/ HPPTCL/UPPTCL), ABB FOTE (most of IPPs), Fibcom (UPPTCL), Keymile make (Velocis service provider) are major concern as these OEMs are managing several nodes in communication network for Centre sector (IPPs) and state constituents.

24.2. The issue of providing data for database development was discussed in earlier meetings, however details are still not provided to Sterlite for database development. It may also be updated that two communication equipment i.e. Nokia and Fibrehome make communication Equipment which was installed in ULDC phase-I and MW replacement project respectively, data for the same is not available with service providers as well as OEM is also not supporting. Replacement for Nokia is already been approved and over the time period, all equipment shall be replaced under centre sector / state sector projects. However, fibrehome equipment (Chinese make) was installed in Microwave Replacement scheme in 2012 to 2014, asset life is still not completed, however technology wise, supplied NMS software is not supporting and OEM

is also not turned up due to ongoing border sharing guidelines by Govt. of India. It is understood that that both Nokia and Fibrehome equipment integration in UNMS Project may not be possible in these conditions.

24.3. Further, all constituents, IPPs and other transmission licensees, etc are once again requested to provide details of their communication equipment and individual NMS for integration in UNMS Project otherwise POWERGRID will integrate only those Equipment for which details are readily available with us.

25. Delay in Payment (Agenda by Powergrid)

25.1. POWERGRID is providing consultancy services on RTU/APS/ Wideband/ OPGW maintenance to constituents on overhead charges basis as per MOU signed with respective Constituents. Constituents are paying on quarterly or yearly basis with advance payment. Most of the constituents informed that they have made payment but payment details are not shared by constituents in most of the cases. In some cases, data is not provided by constituents since 3-4 years and POWERGRID's management is very serious against these outstanding payments. Auditors has raised serious issues for non-settlement of payment in SAP/ POWERGRID books.

25.2. After last meeting, DTL, RRVPNL, PSTCL, HPSEBL and BBMB has provided details, however PTCUL and J&K PDD has still not shared payment details or we are not able to identified receipt of payments from available data provided by them. POWERGRID have no other option but to deduct the overhead charges from advance 1% deposited with us and cancellation of AMC with immediate effects. All constituents are once again requested to deposit payment and details may also be provided for payment as well as TDS (within 15 days). As on date major outstanding amount is Rs 0.79 crores as per POWERGRID finance.

Sr. No.	Constituent's Name	Amount
1	JKPDD	Rs 35 Lacs
2	PTCUL	Rs 27 Lacs
3	UPPTCL	Rs 17 Lacs
	Total	**Rs 79 Lacs**

26. Settlement of issue of MW tower (Asset of HVPNL) installed at 400KV S/S, Bawana (Agenda by HVPNL)

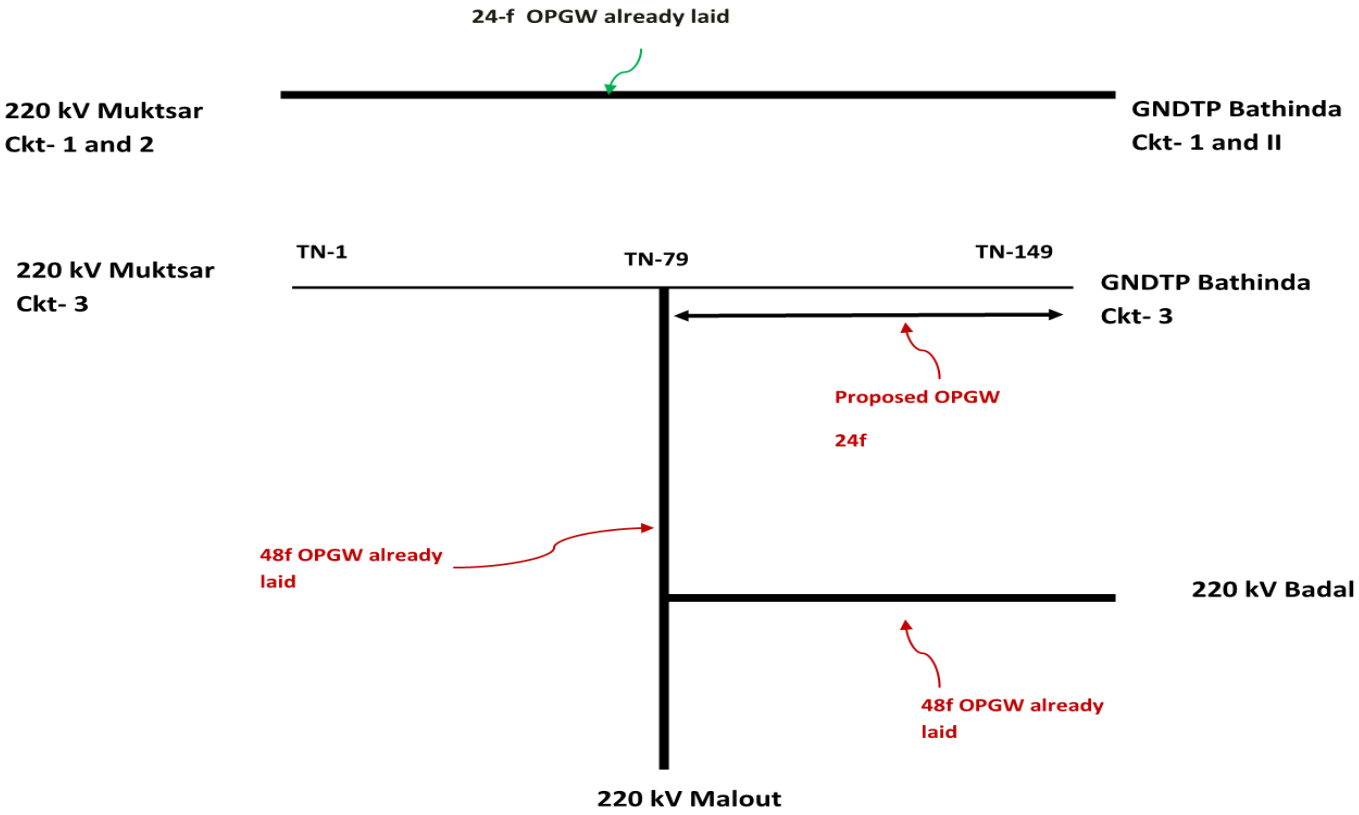
26.1. In 18th TeST meeting, an agenda was put up for consideration of NRPC, upon which it was suggested by Member Secretary / NRPC to HVPNL & DTL to sort out this bilateral issue mutually. HVPNL management had approved the proposal of DTL regarding usages of MW tower and conveyed to DTL during

December-2021. The copy of MOM with & letter regarding approval of HVPNL management is placed at **Annexure-III.**

26.2. During 19th TeST meeting held on dated 07.03.2022, the agenda was again put up and it was requested to DTL to expedite the settlement the issue of MW tower installed at 400kV Substation, Bawana. It was assured by representative of DTL that NOC given by HVPNL is under the consideration of DTL Management and the issue will be resolved by next month. It has been more than 5 months since then but DTL has not handed over the equivalent iron scrap of weight 66.8 MT and the issue is still unresolved.

26.3. Therefore, DTL may be emphasized to get resolve the long pending issue as the vendor M/s Maa Chintpurni Traders, Patiala is pressing very hard for collection of MW tower material standing at 400KV S/Stn, Bawana and any further delay may result into legal issue.

Annexure-I


24-f OPGW already laid
220 kV Muktsar
Ckt- 1 and 2
GNDTP Bathinda
Ckt- 1 and II
220 kV Muktsar
Ckt- 3
TN-1
TN-79
TN-149
GNDTP Bathinda
Ckt- 3
Proposed OPGW
24f
48f OPGW already
laid
220 kV Badal
48f OPGW already
laid
220 kV Malout

Annexure-II

adhpl
AD HYDRO POWER LIMITED

BHILWARA GROUP
PROUD TO BE INDIAN
PRIVILEGED TO BE GLOBAL

No.: -ADHPL/PGCIL/2022-23/ 207-209 Dated: - 22.04.2022

To

The Chief General Manager (AM),
Power Grid Corporation of India Limited,
B-9, Qutab Institutional Area, Katwaria Sarai,
New Delhi-110016

Subject: - **Regarding delay in stringing of OPGW & dismantling/reinstallation of aviation globules in 220 kV AD Hydro-Nalagarh line due to non-issuance of shutdown by M/S AD Hydro.**

Dear Sir,

With reference to your letter No. NR-2/ULDC/OPGW/Reliable Pkg-B dated 21.04.2022, it informed that ADHPL has always given its consent for shutdown for stringing of OPGW & dismantling/reinstallation of aviation globules in 220 kV ADHPL –Nalagarh Lines as and when requested by PGCIL. We had even informed the representative of M/S APAR telephonically to avail the shutdown when the 220 kV Phozal-Nalagarh circuit got damaged on 19.03.2022 and we availed shutdown of both the circuits on daily basis for its restoration from 24.03.2022 to 27.03.2022.

Since M/S KPCPL & HPSEBL are also connected to the AD Hydro Dedicated 220 kV Transmission System through HPPTCL's 100 MVA, 220/33 kV Sub Station Phozal and injecting/drawing power, therefore, the shutdown was further to be consented to by HP-SLDC. It is, therefore, requested to take up the matter of denial of consent with HP-SLDC.

It is also informed that the generation from ADHPL is gradually increasing day by day due to increase in water inflows and since we have a limited water storage capacity in the reservoir, therefore, we may not be able to give our consent for the shutdown of both the lines from 1st May, 2022 till the start of the lean season.

Thanking you.

For AD Hydro Power Limited.

Kapoor 22/04/2022

Pankaj Kapoor, VP – O&M
C.C.: -

1. The Member Secretary, Member Secretary Northern Regional Power Committee 18A Shaheedjit Singh Marg Katwaria Sarai New Delhi-110016.

2. The Executive Director, NR-II, Power Grid Corporation of India Limited, B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016.

Annexure-III

Minutes of meeting on microwave tower at Bawana held in the office of DGM (SLDC) / DTL, Minto Road, New Delhi on 01/10/2021

Following executives attended the meeting:

Delhi Transco Limited:

1. Shri Sarada Prasanna Routray – Manager (Communication)
2. Shri S. K. Tyagi – Assistant Manager (Communication)

HVPNL:

1. Shri Rajesh Sharma – Asst. Executive Engg.

M/s Maa Chintpurni Patiala

1. Sh. Yogesh Goel (Authorized representative)

Following points were deliberated in the meeting:

1. The Microwave tower standing tall at Bawana belongs to HVPNL. HVPNL has sold the above said tower to M/s Maa Chintpurni, Patiala at scrap value of Rs. 11,88,859/- (including taxes) in e-auction dated 24.07.2020 for tower weight of 66.8MT.
2. DTL requested HVPNL to spare the microwave tower in the present condition (no dismantling) as it is being used by DTL.
3. An arrangement has been drawn out to settle the matter mutually as per deliberation in the 18th meeting of TeSt Sub-Committee (copy enclosed at cp side), where upon NRPC directed both the utilities to resolve the matter bilaterally as per point 3.2.6. The proposed arrangement is to swap DTL's similar quantity scrap as per lifting order.
4. DTL will arrange similar qty of scrap as per lifting order for said purpose from its sites.
5. MW antennas, RF Cables etc on Tower belongs to HVPNL will be dismantled and handed over to SLDC Panipat office of HVPNL by M/s Maa Chintpurni, Patiala.
6. M/s Maa Chintpurni Patiala is in agreement to the above discussed solution/arrangement to settle the matter.
7. HVPNL will put the case to its management for final decision with respect to this arrangement, as proposed by DTL & agreed by auctioner i.e., Maa Chintpurni Patiala.
8. If HVPNL Management agrees to this arrangement, then the said asset of MW Tower (Bawana) will transferred to DTL for all the intents & purposes.

Yogesh Goyal
1-10-2021
M/s Maa Chintpurni Patiala

01/10/2021
DTL

01/10/2021
HVPNL

HVPN

HARYANA VIDYUT PRASARAN NIGAM LIMITED
Regd. Office, Shakti Bhawan, Plot No. C-4, Sector-6, Panchkula, 134109
Corporate Identity Number U40101HR1997SGC033683
Website www.hvpn.org.in Email ID. xensldcrtumtc@hvpn.org.in,
Phone No. 0180-2664852

To

The Manager (Technical) Communication,
SLDC, Minto Road, New Delhi
Email: *connectdtl@gmail.com*

Kind Attention
Sh. S.P.Rautaray

Memo No. - Ch- 3 / GC Ro/Vol II Dated - 10.12.2021

Subject: **Dismantlement of Microwave Radio Tower asset of HVPNL from 400KV DTL, Bawana.**

It is to inform that the request of DTL regarding utilization of asset of HVPNL of MW Tower installed at 400KV DTL, Bawana has been considered by HVPNL management on following terms & conditions as under.

1. *In principal approval for providing equal iron scrap of **weight 66.8 MT (MW tower weight** of Bawana site) by DTL to M/s Maa Chintapurni Traders Patiala from DTL site / stores.*
2. *Transferring of assets of MW Tower installed at 400KV S/Stn, Bawana to DTL for all intents & purposes.*

Therefore it is requested to take up the matter accordingly to provide the scrap equal to weight of MW Tower (66.8 MT) to M/s Maa Chintapurni Traders Patiala in presence of HVPNL representative & take over the asset of MW Tower of 400KV S/Stn Bawana.

Executive Engineer,
SLDC Const. -cum- Mtc. Division,
HVPNL, Sewah (Panipat)

CC to -
1. The CE/SO & Comml. HVPNL, Panchkula.
2. The SE / SLDC D&C Circle, HVPNL, Sewah (Panipat).
3. Chief Manager / PGCIL, Katwaria Sarai, New Delhi for information & necessary action.

HARYANA VIDYUT PRASARAN NIGAM LIMITED
Regd. Office, Shakti Bhawan, Plot No. C-4, Sector-6, Panchkula, 134109.
Corporate Identity Number:U40101HR1997SGC033683
Website: www.hvpn.org.in Email ID: xensldcrtumtc@hvpn.org.in,
Phone No.: 0180-2664852
HVPN

Reminder-VIII

To

The Manager (Technical) Communication,
SLDC, Minto Road, New Delhi.
Email: connectdtl@gmail.com

Kind Attention
Sh. S.P.Rautaray

Memo No.:- Ch- 230 /GC-30/Vol.-II

Dated: - 12.08.2022

Subject: **Dismentlement of Microwave Radio Tower asset of HVPNL from 400KV DTL, Bawana.**

Please refer to SE / SLDC D&C Circle, HVPNL, Sewah (Panipat) office Memo No. Ch-355/GC-30 cated 02.02.2021 & this office Memo No. Ch-104/GC-30/Vol.-II dated 18.02.2022, Ch-3/GC-30/Vol.-II dated 10.12.2021, Ch-343/GC-30 dated 25.01.2021, Ch-337/GC-30 dated 11.01.2021, Ch-320/GC-30 dated 28.12.2020, Memo No. Ch-295/GC-30 dated 12.11.2020, Ch-235/GC-30 dated 22.09.2020 & Ch-175/GC-30 dated 07.08.2020 and SDO / M W& FO Mtc. Sub Division, HVPNL, Sewah (Panipat) office Memo No. Ch-2422/G-1 dated 10.08.2022 regarding subject – cited above.

Regarding the subject – cited matter above, it is intimated that this MW Radio Tower is an asset of HVPNL. It is pertinent to mention here that PGCIL has already conveyed to survey off / dispose off of ULDC equipment at own level by constituents State vide Ref. No. NR / ULDC Phase-I/Assets Transfer-6581 dated 07.12.2018 to all constituents. Therefore MW towers were e-acuticned to M/s Maa Chintpurni Traders, Patiala by HVPNL.

It is mentioned here that out of 7 no. MW towers in Haryana, 6 no. MW towers has already been dismantled & only the subject – cited MW tower is pending & DTL has intended to use this tower for data communication of DTL through VHF. A joint meeting between firm representative / HVPNL / DTL was held at DTL office, Minto Road, New Delhi on 01.10.2021.

As per MOM of the above mentioned meeting, the case was put up to the HVPNL Management on request of DTL regarding utilization of asset of HVPNL of MW Tower installed at 400KV DTL, Bawana has been considered by HVPNL management on following terms & conditions as under:

1. *In principal approval for providing equal iron scrap of weight 66.8 MT (MW tower weight of Bawana site) by DTL to M/s Maa Chintapurni Traders Patiala from DTL site / stores.*
2. *Transferring of assets of MW Tower installed at 400KV S/Stn, Bawana to DTL for all intents & purposes.*

Further it is informed that this MW tower has been sold out to M/s Maa Chintpurni Traders, Patiala and the approval of HVPNL management as mentioned above was taken as per your request to retain the MW tower but even after long duration, the issue is not closed at your end. The legal complications may arise later on if contract is not fulfilled timely & also there is an AMC of aviation lights on this MW tower, which is to be ensured to avoid any accident in case of non maintenance of aviation lights.

XEN /SLDC Const. -cum- Mtc. Division,
HVPNL, Sewah (Panipat)

CC to:

1. The CE / P&M, HVPNL, Panchkula.
2. The SE / SLDC D&C Circle, HVPNL. Panchkula.
3. The Chief Manager / PGCIL, Katwaria Sarai, New Delhi for information & necessary action.
4. SDO / MW & FO Mtc. Sub Division, HVPNL, Sewah (Panipat).