



# Minutes of 4<sup>th</sup> TeST Meeting

**Date: 14.02.2020**  
**Eastern Regional Power Committee**  
**14, Golf Club Road, Tollygunge**  
**Kolkata: 700 033**

## **EASTERN REGIONAL POWER COMMITTEE**

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### **MINUTES OF 4<sup>TH</sup> TELECOMMUNICATION, SCADA AND TELEMETRY SUB-COMMITTEE MEETING HELD AT ERPC, KOLKATA ON 31.01.2020 (FRIDAY) AT 11:00 HOURS**

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List of participants is at **Annexure-A**.

#### **PART – A: CONFIRMATION OF MINUTES**

##### **ITEM NO. A.1: Confirmation of minutes of 3<sup>rd</sup> TeST Sub-committee meeting held on 20.12.2019**

The minutes of 3<sup>rd</sup> TeST Sub-committee meeting held on 20.12.2019 circulated vide letter dated 14.01.2020.

Members may confirm the minutes of 3<sup>rd</sup> TeST Sub-committee meeting.

##### **Deliberation in the meeting**

*Members confirmed the minutes of 3<sup>rd</sup> TeST meeting.*

#### **PART – B: ITEMS FOR DISCUSSION**

##### **ITEM NO. B.1: REPLACEMENT OF GPRS COMMUNICATION WITH OPTICAL FIBER FOR AMR**

In ER, approximately 80% meters are connected through Automated Meter Reading (AMR). At present the communication system used for data transfer from each location is GPRS. It has been observed that many locations are not communicating with AMR system due to poor/no GPRS signal. Many substations have their own optical fiber which is also used for the LAN network of respective stations. TCS has successfully connected 02 locations (Subhasgram-PG and Binaguri-PG) in ER-II with PGCIL intranet and these two locations are smoothly reporting to AMR system after connecting with PGCIL LAN. The proposed network will not only provide better communication but also reduce the cost of GSM.

In 40th CCM, POWERGRID requested all the constituents to share the available optical fiber network connectivity details for further configuration to Optical connectivity to avoid communication problems through GPRS and for much more reliable transmission of SEM data to ERLDC server.

List of stations having fibre connectivity for AMR data transfer as on 06-January-2020 is given at Annexure.

Members may update.

##### **Deliberation in the meeting**

*Powergrid informed that they require 2 Mbps Ethernet communication link from respective station to nearest Powergrid node. ERLDC informed that all the AMR data pertaining to geographical boundary of constituents has to be configured through a separate VLAN and the same would be extended up to ERLDC so that data from all AMR should be made available at ERLDC for further needful.*

*ERPC asked all constituents to make assessment of the works required i.e. distance of AMR meter from communication Mux for laying the LAN cable between them. All constituents agreed to provide the same within 20 days.*

*List of stations having fibre connectivity for AMR data transfer as on 06.01.2020 was given at **Annexure-B1**.*

## **ITEM NO. B.2: SCADA/EMS System Installed in Eastern Region:**

### **1. Software Related**

Eastern Regional Utilities are facing followings software related issue in their SCADA/EMS system installed in Eastern Region: -

- I. Improper modeling of TCSC, FSC & HVDC
- II. Incorporation of STATCOM modeling
- III. Non-functionality of STLF application since 13th April 2018
- IV. Integration with WAMS

Chemtrols informed vide their letter ref no: UEX130005/SBU5/POSOCO/002/2019 dated 13.06.19 that these points could not be addressed properly due to lack of necessary support from OSI.

### **2. Software Licenses Related**

Eastern Regional Utilities need getting the following licenses which are required to run the system smoothly: -

- I. Cost implication of three (3) nos SCADA software licenses at ERLDC system
- II. Cost implication of additional licenses of 8,000 analog & 12,000 status points in OPTCL SCADA system
- III. Necessity of OSI software license (key) in spare server available at all Eastern Regional Control Centres at different locations: could not able to build the system in case of any hardware failure and / or the backup restoration testing could not be completed due to non-availability of necessary software license in the spare server.

In 3<sup>rd</sup> TeST meeting, OSI informed that they would have a conference call with ERLDC shortly so that software related issues could be resolved at the earliest.

Regarding Software license issues, OSI informed that they would give the quotation for providing three (3) nos SCADA software licenses to ERLDC based on the discussion held in this meeting.

OSI further informed that for additional licenses in OPTCL SCADA system, they would

submit the quotation by 31<sup>st</sup> December, 2019 along with documentary evidence which consists of the amount they are charging to other customers for the same type of licenses.

Moreover, regarding software license in the spare server, ERLDC intimated that they would give the hardware stream to OSI by 23<sup>rd</sup> Dec. 2019. OSI informed that they would give the above license without any cost implication by 31<sup>st</sup> Dec. 2019 after receiving the hardware stream from ERLDC.

M/s Chemtrols, M/s OSI & Powergrid may update.

### **Deliberation in the meeting**

*OSI informed that they had a Webex meeting with ERLDC and Chemtrols on 23<sup>rd</sup> December 2019 in which modeling related issues were discussed.*

*OSI further informed that they would complete one model each of TCSC and FSC in a week's time. Further, OSI informed that they would start modelling HVDC once TCSC and FSC modelling is done and the same would take around two weeks' time.*

*ERLDC informed that progress on providing solution for software related issues is very slow and requested Chemtrols/OSI to give attention to these issues so that the same could be closed at the earliest.*

*ERPC asked OSI to send the individual target dates by which all the software related works would be completed.*

*Chemtrols informed that they have sent the quotation for providing 3 nos. of SCADA licenses at ERLDC system. ERLDC raised concern about getting quote from Chemtrols instead of OSI.*

*Chemtrols & OSI jointly confirmed that all differences between them have been sorted out.*

*Chemtrols submitted the quote of ₹ 2.48 Crores regarding additional 8000 analog and 12000 digital license points in OPTCL system. ERLDC informed that this price is quite high as compared with SCADA software license supplied under ER SCADA up-gradation package or NLDC up-gradation project. ERPC asked OSI to submit necessary justification to arrive at the cost of the same.*

*Further, OSI informed that they have provided software license key for one spare server to ERLDC and asked ERLDC to use above license in case of hardware failure and/or backup restoration testing only. ERLDC agreed and confirmed the same.*

### **ITEM NO. B.3: Establishment of State-of-the-Art Unified Centralized Network Management System U-NMS for ISTS and State Utility Communication Network in Eastern Region**

CERC notified Communication Regulation which envisages Centralized Supervision System for ISTS Communication.

As per the regulation clause no 7.2 (vii):

*“CTU shall be the Nodal Agency for supervision of communication system in respect of inter-State communication system and will implement centralized supervision for quick fault detection and restoration.”*

The issue was discussed in 24th SCADA O&M Meeting held at ERLDC on 14th August 2019, wherein Member Secretary, ERPC informed that a Committee is required to form for the assessment of technical requirements to facilitate monitoring of ISTS communication network in line with CERC regulation.

Accordingly, a Committee was formed and the Committee was met on 24th October 2019 at ERLDC, wherein POWERGRID made a detailed presentation on Unified Network Management System (U-NMS) Project to be implemented for managing Project for ISTS & State utilities communication network at State, Regional & National level.

Members discussed the technical aspects of U-NMS proposal and generally found it is feasible technically for the U-NMS proposal. All Constituents have given their consent for implementation of U-NMS Project for Central Sector as well as for the State Sector/Constituents.

Powergrid informed that the estimated cost for Eastern Region ISTS and state network U-NMS is **Rs. 99.93 Crs excluding AMC cost which is estimated as Rs. 2.6 Crs for 6 years after Warrantee period.** U-NMS Project implementation Schedule is considered as 24 months. Investment made by POWERGRID is proposed to be recovered through tariff as notified by CERC. Also it has been deliberated and agreed upon that AMC for U-NMS shall be carried out by POWERGRID itself for Central as well as State sector.

In 3<sup>rd</sup> TeST meeting, Powergrid asked members to furnish details regarding their NMS and sent the same to [uldcer2@powergrid.co.in](mailto:uldcer2@powergrid.co.in) latest by 31<sup>st</sup> December, 2019. Members agreed for the same.

ERPC asked Powergrid to collect above information and assess the cost implications of the same including the detailed cost breakup among different constituents. ERPC advised Powergrid to discuss the U-NMS project with each constituent in detail individually. Powergrid agreed for the same.

Powergrid has approached all constituents and presented & discussed the implementation of the UNMS in respective constituents. WBSETCL has also been informed for the same vide letter dated 17.01.2020, but the date is yet to be finalized.

Cost of implementation of UNMS in state sector as per data provided by constituents is estimated as below:

- 1) Regional U-NMS: ₹ 97.93 crores
- 2) State sector U-NMS: ₹ 2 crores
- 3) DVC: ₹ 0.40 crores
- 4) BSPTCL: ₹ 0.40 crores
- 5) WBSETCL: ₹ 0.40 crores
- 6) OPTCL: ₹ 0.40 crores
- 7) JUSNL: ₹ 0.40 crores

Based on the data provided by constituents, the details of NMS & NEs to be integrated in each constituent is enclosed in Annexure.

All constituents are requested to convey the implementation of the UNMS System in respective constituents.

Members may discuss.

### **Deliberation in the meeting**

*ERPC raised concern about the cost recovery from each constituent and hence, requested Powergrid to provide the detailed regional cost break up loading to each ER constituents. Powergrid agreed to provide the detailed presentation to ERPC within 10 days.*

### **ITEM NO. B.4: Status of implementation of AGC for ISGS stations**

The list of plants identified for AGC operation by NLDC in Eastern Region are as given below:

SI No	Station	Communication link status	AGC system installation status at Site	Target
1	Farakka STPS - I & II	Link established		
2	Kahalgao STPS - II	Link established		
3	Barh STPS	Link established	Installed	Running since August 2019
4	NPGC, Nabinagar	Not yet established.		
5	Maithon Power Limited	Link established		
6	Talcher STPS - I	Link established		
7	Kahalgao STPS - I	Link established		
8	Nabinagar Thermal Power Project - BRBCL	Sasaram Nabinagar OPGW installation is pending.		
9	Darlipalli STPS	Not yet established.		
10	Teesta - V	Link established		
11	Farakka STPS - III	Link established		
12	MTPS Stage - II	Link established		
13	Rangit HPS	Link established		

### **OPGW Installation status:**

SI No	Communication link	Status	Target Date
1	400kV Sasaram – BRBCL Nabinagar	NTPC may update	
2	400kV Barh Gorakhpur	Powergrid may update	

In 2<sup>nd</sup> Test Meeting, MS, ERPC raised concerns about the present reporting of AGC data signal from generating stations to NLDC and concerned RLDC is getting data through NLDC over ICCP protocol.

NLDC informed that, as a part of pilot project of AGC, all generating stations' AGC data would be directly reporting to NLDC for first 3 years and the same would be diverted to respective RLDCs after SCADA upgradation.

NTPC raised the concern about the bandwidth requirement, list of signals and cable requirement for implementation of AGC.

NLDC informed that all generating stations must make arrangement for extending the AGC data signals to the nearest POWERGRID node and POWERGRID shall make available two Ethernet ports (main & its redundant) so that AGC signal from generating stations should reach to NLDC.

NLDC further informed that requirement for AGC implementation like list of signals, bandwidth requirement, hardware, software & cable requirement etc. are made available at POSOCO website (<https://posoco.in/spinning-reserves/>).

ERLDC suggested that firewalls should be available at both end i.e. at Generator end as well as NLDC end. NLDC informed that they have a firewall at their end in their system.

All generating stations agreed to install adequate level of firewall at their end for extending the AGC signals.

ERLDC raised concern about AGC implementation of Nabinagar (BRBCL) as OPGW communication link from generating station to nearest POWERGRID S/S i.e. 400 kV Sasaram is not available.

ERPC advised NLDC to add NPGC, Nabinagar (2x660 MW) in AGC implementation list as this station is commissioned in November 2019. NLDC agreed for the same.

It was decided to take the above issue to the next TCC/ERPC meeting for further deliberation.

In 42<sup>nd</sup> TCC/ERPC meeting, NTPC and NHPC informed that they would place the order by March 2020 and implement the AGC by June 2020.

MPL informed that AGC would be implemented by February 2020.

Powergrid informed that only single communication connectivity is available at MPL, Teesta V and Rangit. Other generating stations are having dual communication connectivity.

TCC advised all generating stations to make arrangement for extending the AGC data signals to the nearest Powergrid node.

In 3<sup>rd</sup> TeST meeting, ERPC asked Powergrid to submit the communication route along with one redundant path from each of the above generating stations to NLDC latest by 31<sup>st</sup> December, 2019. Powergrid agreed for the same.

Status of OPGW installation, communication link establishment and AGC equipment installation at site are shown table above.

Members may discuss.

### **Deliberation in the meeting**

*NPGC, Nabinagar informed that OPGW is available but end equipment need to be procured and installed to establish communication link from their station to NLDC. NTPC further informed that they have place order for providing the end equipment.*

*Further, NTPC informed that they would send the latest status to ERPC regarding communication link availability from Nabinagar Thermal Power Project – BRBCL and Darlipalli STPS to nearest Powergrid node at the earliest.*

*NTPC confirmed that they would not be able to install AGC at Kahalgaon STPS – 1 so they are approaching CERC for exemption.*

*Powergrid informed that 400 kV Barh Gorakhpur communication link (via Motihari) would be completed by March, 2020. They informed they have completed laying of OPGW up to 180 km length of line out of total 355 km length of line till now.*

### **ITEM NO. B.5: Replacement of old RTU in Eastern Region for reporting of RTU / SAS to back-up Control Centre**

Present status of RTU/SAS replacement / up-gradation: -

<b>Utility</b>	<b>Status</b>	<b>Deliberation in the last TeST meeting</b>	<b>Target</b>
POWERGRID	Pending	POWERGRID intimated that process for placement of LoA has already been started and informed that NIT would be floated by December, 2019	
Maithon Right bank (MPL)	RTU/SAS Upgraded	ERLDC informed that SAS system at MPL is upgraded but reporting to ERLDC BCC is yet to be done and hence, requested MPL to call their vendor so that configuration at their end could be done properly for its dual reporting. MPL informed that they would consult M/s ABB and try to resolve the issue in consultation with ERLDC.	
New Farakka (Stage III)	Completed	Dual reporting has been completed at their end but testing is pending which will be done shortly.	
NTPC, Farakka (Stage I & II)	Pending	LoA for replacement of RTU would be placed by December, 2019.	

Talcher STPS	RTU Upgraded	NTPC Talcher informed that they have placed the LoA and the same would be completed within 3 months.	
Kahalgaon STPS	Pending	NTPC Kahalgaon informed that LoA have been placed to M/s GE and panels already installed. They have started configuring the signal cards and the same would be completed by December, 2019.	---
Chuzachen HEP	Pending	Chuzachen HEP informed that they have installed the panels and they would complete the work by February, 2020 but reporting of data over IEC 104 protocol would not be possible because of non-availability of OPGW network.  Powergrid informed that OPGW between Chuzachen-Rangpo would take 6-7 months more to complete.	With the availability of OPGW between Chuzachen - Rangpo.
JITPL	Pending	Powergrid informed that OPGW communication links from JITPL to nearest Powergrid S/s would be completed by May 2020.	May-2020
GMR	Pending	Powergrid informed that OPGW communication links from GMR to nearest Powergrid S/s would be completed by May 2020.	May-2020
JUSNL	Pending	JUSNL informed that their RTU replacement of 21 Nos. of RTU would be completed by March 2020.	March, 2020
OPTCL	Pending	OPTCL informed that LOA for replacement / up-gradation of old RTUs (78Nos) would be awarded by December, 2019.	November, 2020
WBSETCL	Pending	WBSETCL informed that they are going to place the order shortly with an implementation schedule of 2 years (1809 km OPGW laying works & 35 Nos. of RTU replacement works).	
NHPC (Teesta – V & Rangit)	Pending	Teesta-V informed via email that the technical bids for the above work have been opened and the bids are under evaluation stage. The Letter of Award for the work is likely to be placed in the month of December, 2019 and the work is likely to be completed by June, 2020.	June, 2020
DMTCL Motihari	Pending	DMTCL representative was absent during the discussion.	OPGW not available

BRBCL Nabinagar	Pending	DMTCL representative was absent during the discussion.	OPGW available	not
Teesta – III	Pending	Teesta III representative was absent during the discussion.	OPGW available	not
Dikchu	Pending	Dikchu representative was absent during the discussion.	OPGW available	not
Jorethang	Pending	Jorethang representative was absent during the discussion.	OPGW available	not
APNRL	Completed	---	---	
Barh	Completed	---	---	

Members may update the latest status.

### **Deliberation in the meeting**

*Members updated the latest status as given below: -*

<b>Utility</b>	<b>Status</b>	<b>Deliberation in the TeST meeting</b>	<b>Target</b>
POWERGRID	Pending	<i>POWERGRID informed that NIT would be floated by February, 2020.</i>	
Maithon Right bank (MPL)	RTU/SAS Upgraded	ERLDC informed that SAS system at MPL is upgraded but reporting to ERLDC BCC is yet to be done and hence, requested MPL to call their vendor so that configuration at their end could be done properly for its dual reporting. <i>MPL informed that they have taken remote support from M/s ABB to resolve the same.</i>	
New Farakka (Stage III)	Completed	Dual reporting has been completed at their end but testing is pending which will be done shortly. <i>NTPC informed they have completed the testing also.</i>	
NTPC, Farakka (Stage I & II)	Pending	<i>NTPC informed that they would complete the work by April, 2020.</i>	<i>April, 2020</i>
Talcher STPS	RTU Upgraded	<i>NTPC would further send the latest update to ERPC at the earliest.</i>	
Kahalgaon STPS	Pending	<i>NTPC Kahalgaon informed that they would complete the work by February, 2020.</i>	<i>February, 2020</i>
Chuzachen HEP	Pending	Chuzachen HEP informed that they have installed the panels and they would complete the work by February, 2020 but reporting of data over IEC 104 protocol would not be possible because of non-availability of OPGW network.	With the availability of OPGW between Chuzachen - Rangpo.

		Powergrid informed that OPGW between Chuzachen-Rangpo would take 6-7 months more to complete.	
JITPL	Pending	Powergrid informed that OPGW communication links from JITPL to nearest Powergrid S/s would be completed by May 2020.	May-2020
GMR	Pending	Powergrid informed that OPGW communication links from GMR to nearest Powergrid S/s would be completed by May 2020.	May-2020
JUSNL	Pending	JUSNL informed that their RTU replacement of 21 Nos. of RTU would be completed by March 2020.	March, 2020
OPTCL	Pending	OPTCL informed that LOA for replacement / up-gradation of old RTUs (78Nos) would be awarded by December, 2019.	January, 2021
WBSETCL	Pending	WBSETCL informed that they are going to place the order shortly with an implementation schedule of 2 years (1809 km OPGW laying works & 35 Nos. of RTU replacement works). <i>WBSETCL informed that tender for RTU would be given by February, 2020 and tender for OPGW is already given.</i>	
NHPC (Teesta – V & Rangit)	Pending	<i>Teesta-V informed that they are in process to finalize LoA.</i>	June, 2020
DMTCL Motihari	Pending		OPGW not available
BRBCL Nabinagar	Pending		OPGW not available
Teesta – III	Pending		OPGW not available
Dikchu	Pending		OPGW not available
Jorethang	Pending		OPGW not available
APNRL	Completed	---	---
Barh	Completed	---	---

**ITEM NO. B.6: Redundancy of communication links for ICCP between control centres**

Redundancy of ICCP communication links from all state control centre including their back-up to Main ERLDC are already implemented. Redundancy of ICCP communication

links from all state control centers except DVC-MCC (Andul Road) & WBSETCL-BCC (Abhikshan Bhawan) to back-up ERLDC located at NLDC, New Delhi is yet to be provided.

S. No.	Link Path	Deliberation in last TeST meeting	Latest Status
1.	<b>DVC MCC located at Andul Road to ERLDC BCC at New Delhi</b> - DVC requested to include underground OFC in Howrah (WB) to Howrah (DVC) under the scope of upcoming project – ‘Strengthening of Inter-regional & Intra-regional OPGW Communication Links for Strengthening of Eastern Region’ and also requested WBSETCL to provide necessary permission & space for laying of Underground OFC and terminal equipment.	Powergrid informed that provision for laying of OPGW communication link between DVC, Howrah and WBSETCL, Howrah is being created in upcoming project. Powergrid further informed that they require necessary help from WBSETCL to make provision of OPGW communication link up to WBSETCL, Abhikshan Bhawan. ERPC advised ERLDC to write a letter to WBSETCL mentioning about the requirement of the same. ERLDC agreed for the same.	
2.	<b>WBSETCL MCC Andul road to ERLDC BCC located at New Delhi</b>	Powergrid requested ERLDC to provide space for installation of ULDC equipment at Backup ERLDC (NLDC) so that link may be configured in ULDC network. ERLDC informed that the suitable space at ERLDC BCC located at NLDC, New Delhi would be ready within 2-3 months.	
3.	<b>Farakka to Jeerat</b> - Powergrid informed that presently, FO link connectivity is available between Farakka to Jeerat through Behrampur which doesn't have route diversity. Powergrid further informed that route diversity for redundancy would be available after commissioning of OPGW link from Farakka to Jeerat through Gokarna, Rajarhat & Subhashgram.	Powergrid reiterated that OPGW in Rajarhat-Farakka link would be completed along with the Gokarna-Rajarhat transmission line.	
4.	<b>Rourkela to Bhubaneswar SLDC</b> - Powergrid informed that presently, FO link connectivity between Rourkela to Bhubaneswar SLDC is available through TSTPS, Meeramundali & Mendhasal	OPTCL informed that Jagatsinghpur to Paradeep OPGW is pending due to Tower shifting work, which is the requirement of Indian Railways. Once the tower shifting work will be completed by Indian Railways, OPTCL will start their work.	

	which doesn't have route diversity.	OPTCL informed that 17 Nos. of towers are being diverted and same would expected to get completed by May, 2020.	
5.	<b>Ranchi 400 kV (PG) to JUSNL SLDC (Kushai Colony)</b> - Powergrid informed that presently, FO link connectivity between Ranchi 400 kV (PG) to JUSNL SLDC is available through Hatia 220 kV which doesn't have route diversity.	JUSNL informed that they have received approval for PSDF funding for providing protection channel for redundancy between Chandil to JUSNL SLDC (Kushai Colony) and have received the cabinet approval but could not proceed further due to model code of conduct due to state assembly elections in their state.	

Members may update the latest status.

### **Deliberation in the meeting**

*Members updated the latest status as given below: -*

<b>S. No.</b>	<b>Link Path</b>	<b>Deliberation in the last TeST meeting</b>	<b>Deliberation in the 4<sup>th</sup> TeST meeting</b>
1.	<b>DVC MCC located at Andul Road to ERLDC BCC at New Delhi</b> - DVC requested to include underground OFC in Howrah (WB) to Howrah (DVC) under the scope of upcoming project – 'Strengthening of Inter-regional & Intra-regional OPGW Communication Links for Strengthening of Eastern Region' and also requested WBSETCL to provide necessary permission & space for laying of Underground OFC and terminal equipment.	Powergrid informed that provision for laying of OPGW communication link between DVC, Howrah and WBSETCL, Howrah is being created in upcoming project. Powergrid further informed that they require necessary help from WBSETCL to make provision of OPGW communication link up to WBSETCL, Abhikshan Bhawan. ERPC advised ERLDC to write a letter to WBSETCL mentioning about the requirement of the same. ERLDC agreed for the same.	<i>WBSETCL informed that they replied via letter to ERLDC that they are unable to provide necessary help.</i>
2.	<b>WBSETCL MCC Andul road to ERLDC BCC located at New Delhi</b>	Powergrid requested ERLDC to provide space for installation of ULDC equipment at Backup ERLDC (NLDC) so that link may be configured in ULDC network. ERLDC informed that the	<i>ERLDC informed that necessary space has been provided and installation work is in progress.</i>

		suitable space at ERLDC BCC located at NLDC, New Delhi would be ready within 2-3 months.	
3.	<b>Farakka to Jeerat</b> - Powergrid informed that presently, FO link connectivity is available between Farakka to Jeerat through Behrampur which doesn't have route diversity. Powergrid further informed that route diversity for redundancy would be available after commissioning of OPGW link from Farakka to Jeerat through Gokarna, Rajarhat & Subhashgram.	Powergrid reiterated that OPGW in Rajarhat-Farakka link would be completed along with the Gokarna-Rajarhat transmission line.	Status –quo--
4.	<b>Rourkela to Bhubaneswar SLDC</b> - Powergrid informed that presently, FO link connectivity between Rourkela to Bhubaneswar SLDC is available through TSTPS, Meeramundali & Mendhasal which doesn't have route diversity.	OPTCL informed that Jagatsinghpur to Paradeep OPGW is pending due to Tower shifting work, which is the requirement of Indian Railways. Once the tower shifting work will be completed by Indian Railways, OPTCL will start their work. OPTCL informed that 17 Nos. of towers are being diverted and same would expected to get completed by May, 2020.	Status –quo--
5.	<b>Ranchi 400 kV (PG) to JUSNL SLDC (Kushai Colony)</b> - Powergrid informed that presently, FO link connectivity between Ranchi 400 kV (PG) to JUSNL SLDC is available through Hatia 220 kV which doesn't have route diversity.	JUSNL informed that they have received approval for PSDF funding for providing protection channel for redundancy between Chandil to JUSNL SLDC (Kushai Colony) and have received the cabinet approval but could not proceed further due to model code of conduct due to state assembly elections in their state.	<i>Not deliberated.</i>

**ITEM NO. B.7: URTDSM Project installed in Eastern Region**

## 1. Issues of ERLDC

The URTDSM project is installed and being used by ERLDC RTSD operators since January 2019. Few observations need to be attended for better utilization of the system: -

S. No.	Issue	Deliberation in last TeST meeting	Latest Status
1	<b>Powergrid analytics application</b> : Powergrid analytical application software, which was supposed to be installed under URTDSM project, is yet to be made functional at SLDCs.	ERLDC informed that Powergrid analytics application has been installed in only one server and requested to install in second server also to maintain redundancy. Powergrid agreed for the same.	
2	<b>Integration with SCADA over IEC 104</b> : Data export to SCADA from URTDSM system is not working properly.	Powergrid informed that they have configured the 1 second data export to SCADA from URTDSM as per data frame requirement and requested ERLDC to test for the same. ERLDC agreed for the same.	

Powergrid may update.

### Deliberation in the meeting

*Members updated the latest status as given below: -*

S. No.	Issue	Deliberation in last TeST meeting	Deliberation in 4 <sup>th</sup> TeST meeting
1	<b>Powergrid analytics application</b> : Powergrid analytical application software, which was supposed to be installed under URTDSM project, is yet to be made functional at SLDCs.	ERLDC informed that Powergrid analytics application has been installed in only one server and requested to install in second server also to maintain redundancy. Powergrid agreed for the same.	<i>ERLDC informed that one module is pending of the application and the rest is completed.</i>
2	<b>Integration with SCADA over IEC 104</b> : Data export to SCADA from URTDSM	Powergrid informed that they have configured the 1 second data export to SCADA from URTDSM as per data frame requirement and requested	<i>ERLDC informed that SCADA is integrated over IEC 104.</i>

system is not working properly.	ERLDC to test for the same. ERLDC agreed for the same.	
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## 2. URTDSM Data Summary:-

Under URTDSM project, 12 nos. PMUs could not be commissioned due to various reason as mentioned below:

- a. Bankruptcy/admin. issue : 2 PMUs ( IPPs - Monnet & IndBharat)
- b. Non-availability of communication link : 8 PMUs ( GMR IPP & JITPL IPP)  
: 2 PMUs at Tenughat
- c. Substation not ready : 3 PMU at Patratu

Powergrid requested to consider for short-closing of the contract with as-is-where-is basis (excluding erection cost, wherever applicable).

In 42<sup>nd</sup> TCC/ERPC meeting, followings were decided -

- Short closing of URTDSM project shall be allowed only after integration of PMUs including its data transfer at GMR, JITPL & Tenughat.
- Since Patratu substation is not yet ready, 3 nos. of PMUs at Patratu station shall be kept as spare.
- 2 nos. of PMUs meant for Monnet and IND Bharat can't be commissioned due to bankruptcy issue.

Further, Powergrid informed that integration of PMUs at Tenughat would be completed by December, 2019 and the same for GMR and JITPL would be completed by June 2020.

S. No.	PMU Issue	Deliberation in the last TeST meeting	Latest Status
1.	Kahalgaon STPS	Powergrid informed that M/s GE shall be deputing their team at NTPC Kahalgaon by 26.12.2019.	
2.	Talcher STPS	Powergrid informed that they are in touch with NTPC, Talcher for getting these PMUs installed at their end.	
3.	Sterlite	OPTCL informed that the issue related with Sterlite is pending with their construction wing and the communication link would be provided after getting the confirmation from them.	
4.	<b>Redundant communication link</b> - Considering the importance	Powergrid informed that the redundant communication link in URTDSM project has been	

	of PMUs data, Powergrid agreed to implement redundant communication link in URTDSM project in order to prevent PMUs data intermittency and repetitive failure between PDC-PDC communication between ERLDC and SLDCs.	provided with all constituents except DVC. The same would be completed at the earliest.	
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Powergrid, NTPC and OPTCL may update.

### **Deliberation in the meeting**

*Powergrid informed that validation is pending for one PMU at Tenughat and installation in progress for the second PMU at Tenughat.*

*Members updated the latest status as given below: -*

<b>S. No.</b>	<b>PMU Issue</b>	<b>Deliberation in the last TeST meeting</b>	<b>Deliberation in the 4<sup>th</sup> TeST meeting</b>
1.	Kahalgaon STPS	Powergrid informed that M/s GE shall be deputing their team at NTPC Kahalgaon by 26.12.2019.	<i>Powergrid informed that PMUs have been installed at Kahalgaon.</i>
2.	Talcher STPS	Powergrid informed that they are in touch with NTPC, Talcher for getting these PMUs installed at their end.	<i>Powergrid informed that PMUs have been installed at Talcher STPS.</i>
3.	Sterlite	OPTCL informed that the issue related with Sterlite is pending with their construction wing and the communication link would be provided after getting the confirmation from them.	<i>OPTCL informed that they have assigned M/s GE to establish communication link and they have configured Sterlite-Lapanga-Merumundali link. Further, OPTCL informed that above work would be completed by February, 2020.</i>
4.	<b>Redundant communication link</b> - Considering the importance of PMUs data, Powergrid agreed to implement redundant communication link in URTDSM project in order to prevent PMUs data intermittency and repetitive failure between PDC-PDC communication between ERLDC and SLDCs.	Powergrid informed that the redundant communication link in URTDSM project has been provided with all constituents except DVC. The same would be completed at the earliest.	<i>Powergrid informed that no alternate path is there to provide redundant communication link for DVC system. ERLDC informed that alternate communication link may be provided using PowerTel network. Powergrid informed that they will discuss this issue separately with ERLDC.</i>

### **3. SCADA Data Summary :-**

**State Sector:** Following are the deliberations regarding data non-availability of state sector stations: -

AOR	Station	Overall Status	Deliberation in last TeST meeting	Latest Status
WBSETCL	TLDP 220kV	Not Available	WBSETCL informed that they would write a letter to NHPC for providing the port.	
	Dharampur 220kV	Not Available	WBSETCL informed that they have placed the order for Dharampur 220 kV RTU integration and it would be available at the earliest.	
	Egra 220	Yet to be integrated	WBSETCL informed that they have given this work to M/s Chemtrols.	
	Bantala 220kV	Not Available	WBSETCL informed that work related to Bantala 220 kV to be done by M/s Chemtrols. WBSETCL further informed that it would be completed by December, 2019.	
	Alipurduar 220kV	Not Available	WBSETCL informed that Alipurduar 220 kV RTU data would be available by January, 2020.	
BSPTCL	Motipur 220kV	Not available	BSPTCL informed that data is available and was needed to integrate over ICCP with ERLDC.	
JUSNL	Hatia New 220	Not Available	JUNSL informed that by March, 2020 they will make available all the data in their jurisdiction.	
	Jamtara 132kV	Not Available		
	Garwa 132kV	Yet to be integrated		
	Deoghar 132kV	Not Available		
	Kendposi 132 kV	Not Available		
OPTCL	JSPL 400kV	Most of the data not available	OPTCL informed that by June, 2020 they will make available all the data in their jurisdiction.	
	Nalco 220kV	Most of the data not available		
	Narsingpur 220kV	Station commissioned at		

		220kV without data telemetry		
	Bargarh 220	Station commissioned at 220kV without data telemetry		

Members may update.

### **Deliberation in the meeting**

*Members updated the latest status as given below: -*

<b>AOR</b>	<b>Station</b>	<b>Overall Status</b>	<b>Deliberation in last TeST meeting</b>	<b>Deliberation in 4<sup>th</sup> TeST meeting</b>
WBSETCL	TLDP 220kV 4	Not Available	WBSETCL informed that they would write a letter to NHPC for providing the port.	
	Dharampur 220kV	Not Available	WBSETCL informed that they have placed the order for Dharampur 220 kV RTU integration and it would be available at the earliest.	<i>WBSETCL informed that they have awarded the work to M/s Schneider.</i>
	Egra 220	Yet to be integrated	WBSETCL informed that they have given this work to M/s Chemtrols.	<i>WBSETCL informed that tendering in progress.</i>
	Bantala 220kV	Not Available	WBSETCL informed that work related to Bantala 220 kV to be done by M/s Chemtrols. WBSETCL further informed that it would be completed by December, 2019.	<i>WBSETCL informed that the work related to M/s Chemtrols has been completed and one SDH have been found faulty. Powergrid informed that above issue has been resolved.</i>
	Alipurduar 220kV	Not Available	WBSETCL informed that Alipurduar 220 kV RTU data would be available by January, 2020.	<i>WBSETCL informed that the work is getting delayed to ROW issue.</i>
BSPTCL	Motipur 220kV	Not available	BSPTCL informed that data is available and was needed to integrate over ICCP with ERLDC.	<i>BSPTCL informed that above work is completed and data is available.</i>
JUSNL	Hatia New 220	Not Available	JUNSL informed that by March, 2020 they will make available all the data in their	<i>Status –quo--</i>
	Jamtara 132kV	Not Available		
	Garwa	Yet to be		

	132kV	integrated	jurisdiction.	
	Deoghar 132kV	Not Available		
	Kendposi 132 kV	Not Available		
OPTCL	JSPL 400kV	Most of the data not available	OPTCL informed that by June, 2020 they will make available all the data in their jurisdiction.	<i>Status –quo--</i>
	Nalco 220kV	Most of the data not available		
	Narsingpur 220kV	Station commissioned at 220kV without data telemetry		
	Bargarh 220	Station commissioned at 220kV without data telemetry		

#### **ITEM NO. B.8: OPGW Installation in Teesta III-Kishanganj link**

Powergrid is implementing OPGW on Teesta III-Kishanganj TL under Fiber Optic Expansion Package (Additional Requirement). Following issues are faced during execution of the work:

##### **A. OPGW erection in section having aviation globules**

During erection of opgw, it is found that aviation globules are present in drum no. 41 (Loc. No 266 to Loc. No 270). For opgw erection, following options are proposed:

##### **OPTION-1:**

##### **OPGW in existing 400KV TeestaIII-Kishanganj TL for drum-41**

Taking out of aviation globules	Shutdown required on 400KV TeestaIII-Kishanganj TL for 2 days (06.02.20 & 07.02.20 ODB from 08:00 hrs to 17:00 hrs)
Installation of OPGW	A/R in non-auto mode for 5 days in 400KV TeestaIII-Kishanganj TL (08.02.20 to 12.02.20)
Putting the aviation globules in 400KV Rangpo-Kishanganj TL	Shutdown required 400KV Rangpo-Kishanganj TL for 2 days (13.02.20 to

(earthwire)	14.02.20)
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## OPTION-2:

### OPGW in existing 400KV Rangpo-Kishanganj TL for drum-41

Installation of OPGW	A/R in non-auto mode for 7 days in 400KV Rangpo-Kishanganj TL (06.02.20 to 12.02.20). During this period, A/R in non-auto mode will not be availed for 400KV Teesta III-Kishanganj TL.
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TPTL may kindly confirm implementation of the work. Approval of the Shutdown/AutoReclose in non-auto mode is also requested to be arranged by ERLDC.

## B. ROW/Old compensation issues:

During erection of opgw, work has been stopped at various locations due to ROW/Old compensation issues. In all locations, local villagers are demanding payment of old pending compensation from TPTL. ROW issues occurred is detailed as under:

Location no	OPGW Drum No	Remarks	Correspondences
Location no- 290A/0	Drum no-50	Work stopped on 19.10.2019 due to heavy ROW issue.	
Location no 274	Drum no-43	Work stopped on 06.11.2019 due to heavy ROW issue.	
Location no. 294B to 294D/1	Drum No. 51	Work stopped on 03.12.2019 due to heavy ROW issue.	
Location no. 308 to 311/2	Drum no. 58	Work stopped on 09.01.2020 due to heavy ROW issue.	

Members may discuss.

## Deliberation in the meeting

*ERPC decided to discuss above agenda in the next OCC meeting.*

## ITEM NO. B.9: Additional Agenda – Issues related to M/s Chemtrols – DVC

Sl. No.	Description of pending issue	Remarks	Timeline for completion
(1)	(2)	(3)	(4)
1	One UPS System at Howrah SLDC	Immediate rectification to be	

	out since 04.11.2019	done	
2	Cyber Security Audit for 2019 not done	Last conducted on 23/02/18. Not Done in 2019.	
3.	Routine maintenance/ Preventive maintenance not done	To be done	
4.	1 (one) nos of RTU Node faulty for long time	Faulty Node from Burdwan not repaired since 30.04.2019 and not returned till date.	
5.	01 (One) External Firewall (Checkpoint) taken for repair for last 01 month.	Not yet returned.	
6.	19 (nineteen) nos. MFM are faulty and taken away for repairing.	Not yet returned.	
7.	Spare Power Supply for RTU( DC to DC) converter should be made available for maintenance purpose..	Any DC-DC Converter failure makes RTU down for a long period.	
8	Dual Reporting of 11 RTUs pending	To be done in coordination of M/s Chemtrols and M/s Commtel.	
9.	Remote operation under ADMS System not functioning (i) At Maithon Hydel Station: (a) 33Kv Kulti 1 Feeder (b) 33Kv Kulti 2 Feeder  (ii) At Gola S/Stn. (a) 33Kv Hoppu Feeder	-Status of CB and Isolator available -Status of CB and Isolator available  -Status of CB and Isolator available	
10	LDMS at Kolaghat S/stn and BTPS S/stn not functioning	Required to be attended	
11	1 (One ) No of Cell ( 2V,160AH) of UPS-1 battery Bank is faulty.	UPS Running bypassing the 2(Two) Nos. Cell.	
12.	2 (two) nos of Rectifier Module from Gola S/S and Nimiaghat S/S taken away for repairing – Not yet returned.	To be attended by M/s Commtel	

M/s Chemtrols may update.

### **Deliberation in the meeting**

*M/s Chemtrols updated the latest status as given below: -*

Sl. No.	Description of pending issue	Remarks	Reply received from M/s Chemtrols via email
(1)	(2)	(3)	(4)
1	One UPS System at Howrah SLDC out since 04.11.2019	Immediate rectification to be done	Completed on 27.01.2020
2	Cyber Security Audit for	Last conducted on	Schedule for next Cyber Audit

	2019 not done	23/02/18. Not Done in 2019.	would be shared by 15th Feb 2020
3.	Routine maintenance/ Preventive maintenance not done	To be done	All maintenance is done on regular basis from July -19 and will be continue. PM time table for this year was attached at <b>Annexure-B9</b> .
4.	1 (one) nos of RTU Node faulty for long time	Faulty Node from Burdwan not repaired since 30.04.2019 and not returned till date.	Faulty node has been returned on Dec-19 and kept in DVC store at Howrah Andul Road.
5.	01 (One) External Firewall (Checkpoint) taken for repair for last 01 month.	Not yet returned.	Already spare is available at site. For faulty item repairing activity is in under process and would be completed by 29.02.2020.
6.	19 (nineteen) nos. MFM are faulty and taken away for repairing.	Not yet returned.	All these MFM got damage due to field side issue and replacement of forced damaged materials not cover under AMC / warranty. Maximum MFM are unrepairable. Instead of above, M/s Chemtrols would return 3 nos new MFM for the same and request DVC and ERPC to close this issue.
7.	Spare Power Supply for RTU (DC to DC) converter should be made available for maintenance purpose.	Any DC-DC Converter failure makes RTU down for a long period.	Procurement is in under process and spare material would be available by 29.02.2020
8	Dual Reporting of 11 RTUs pending	To be done in coordination of M/s Chemtrols and M/s Commtel.	M/s Chetmrols informed that there is issue in communication. They have already completed the dual reporting with same philosophy in ECI network and 26 RTUs are running presently. Previously during the implementation of ECI network they have faced the same issue and lastly it was found that the issue was in their end. That time they have connected 3 no's RTU in Commtel network for testing of Dual reporting and it was working fine.
9.	Remote operation under ADMS System not functioning (iii) At Maithon Hydel Station: (c) 33Kv Kulti 1 Feeder (d) 33Kv Kulti 2	-Status of CB and Isolator available -Status of CB and Isolator available	In 1 <sup>st</sup> and 2 <sup>nd</sup> TeST meetings, DVC confirmed that ADMS AMC support is not required. Therefore, if ADMS not working properly, then it is not in scope of Chemtrols.

	Feeder  (iv) At Gola S/Stn. (b) 33Kv Hoppu Feeder	-Status of CB and Isolator available	<i>Further, if field side all signal are available, it means RTUs also working fine.</i>
10	LDMS at Kolaghat S/stn and BTPS S/stn not functioning	Required to be attended	<i>Issue would be resolved by 15-02-2020.</i>
11	1 (One) No of Cell (2V,160AH) of UPS-1 battery Bank is faulty.	UPS Running bypassing the 2(Two) Nos. Cell.	<i>M/s Chemtrols have taken up this issue with HBL for procurement of Battery Cell. But due to the very small quantity, HBL has delay in the manufacturing.</i>
12.	2 (two) nos of Rectifier Module from Gola S/S and Nimiaghat S/S taken away for repairing – Not yet returned.	To be attended by M/s CommTel	<i>Not in Chemtrols Scope.</i>

#### **ITEM NO. B.10: Additional Agenda – Issues related to M/s Chemtrols – BSPTCL**

##### **1. CRITICAL ISSUES**

- a) Cyber Security Audit: Cyber Security Audit of 2019 is pending.
- b) Compliance of Cyber Security Audit conducted in year-2018 not completed.
- c) One SMPS of VPS is defective since 29/11/2019 and yet not rectified.
- d) One AVR of 125 KV is defective since 03/10/2019 and not yet rectified.

##### **2. NON-CRITICAL ISSUES**

- a) Integration of new bay: - As per AMC contracts Chemtrols has to integrate 50 nos. of new bays in to RTU. We have requested several times to get it done. As per information they are not interested in said work due to financial crisis.
- b) The following materials are faulty which are required to be replaced at the earliest:
  - MFT – 9 pcs
  - Node – 6 Pcs

Sr. No.	Site Name	Description of Problem
1	Sitamarhi	Monitor is not getting OFF after a while of switching ON
2	Begusarai	Display issue
3	Hatidah	LDMS Not Working due to load will be shifting From old(Faulty) to New Charger
4	Ekgarsarai	SMPS Faulty
5	Dehri	SMPS Faulty
6	Bikramganj	Invertor+SMPS Faulty
7	Karmanasa	Invertor Tripping Issue

9	Sasaram	Invertor + SMPS Faulty
10	Banjari	Invertor Tripping Issue & Meerkat Soft. Cruppted
12	Goh	LDMS not getting ON
13	Aurangabad	Display is faint.
14	Rafiganj	Power Issue
15	Vaishali	LDMS not getting ON
16	Jandaha	Inverter issue.
17	Samastipur old	Meerket software Corrupted

c) LDMS – 34 no. of LDMS are not functioning either of issue of inverter or CPU.

18	Kochas	Hardware and software issue
19	Buxar	Hardware and software issue
20	Dumaron	Software Issue
21	Purnea	Data not displaying
22	Forbisganj	System is not getting ON.
23	Kishanganj Old	Issue in SMPS
24	Baisi	Data is not being displayed
25	Katihar	Issue in UPS. System is not getting ON
26	Jamui	LDMS not installed
27	Chapra	Inverter issue
28	Sheetalpur	Issue in inverter
29	Phulparas	Power Supply Issue
30	Jainagar	UPS Issue.
31	Baripahari	Display Issue
32	Rajgir	Display Issue
33	Nawada	UPS issue. Getting turned OFF after turning ON.
34	Sheikhpura	LDMS not getting ON.
35	Tehta	Displays one day old data.
36	Chandauti	Meerkut Software Issue

M/s Chemtrols may update.

### **Deliberation in the meeting**

M/s Chemtrols updated the latest status as given below: -

## 1. CRITICAL ISSUES

- a) M/s Chemtrols informed that would share the schedule by 15.02.2020.
- b) M/s Chemtrols informed that Compliance report was submitted previously. But ERLDC requested for further modification at ERLDC site and requested to implement that to other SLDCs also. They have completed the same and found some technical difficulties during the execution. Finally, they have done that in 1<sup>st</sup> week of January and observed the system functions. Its working fine and final report would be shared by 3<sup>rd</sup> Feb 2020.
- c) M/s Chemtrols informed that the SMPS has got faulty due to improper condition of SLDC Control Centre. However, they have replaced the faulty SMPS with a new one from spare and procurement of the same is under process. The spare SMPS would be available by February 2020.
- d) M/s Chemtrols informed that the AVR card is an additional card used by Powerica for DG start. After getting that faulty, they run that DG by its default governor card provided by Cummins. DG is working fine without this card. However, they were asking Powerica to provide that card. Due to non-availability of stock it is taking the time.  
M/s Chemtrols further informed that the by end of Feb-2020, they would complete the procurement.

## 2. NON-CRITICAL ISSUES

- a) M/s Chemtrols informed that in 3<sup>rd</sup> TeST meeting M/s Chemtrols asked BSPTCL to share the list of additional bays where cable laying and field side activities are to be completed but till date no list has been provided by BSPTCL.
- b) M/s Chemtrols informed that MFM and Nodes has been sent to service centre for repairing. Spare has been provided for them. By March-2020 end they would repair the same.
- c) M/s Chemtrols informed that these issues are related to the operation of LDMS. In many sites they have found that issues are in communication link due to that RTUs are not reporting. Last two months site visit report was given at **Annexure-B10**.  
In many sites it has been found that LDMS is kept in a very bad condition. They are trying to close those issues. But maximum issues are related to mishandling of system. And all information is collected over the phone from site. M/s Chemtrols requested BSPTCL not to be address these types of issues in TeST meetings.

## **PART – C : ANY OTHER ITEMS**

### **ITEM NO. C.1: FOLLOW-UP OF DECISIONS OF THE PREVIOUS Telecommunication SCADA & Telemetry (TeST) SUB-COMMITTEE MEETING(S)**

The deliberations of previous TeST meetings which are to be updated are given at

Annexure.

Members may update the latest status.

**Deliberation in the meeting**

*Members updated the latest status which was given at **Annexure-C1**.*

**ITEM NO. C.2: Status of various works undertaken by M/s Chemtrols in Eastern Region**

Latest status of various works undertaken by M/s Chemtrols in Eastern Region are given at Annexure.

M/s Chemtrols may update the latest status.

**Deliberation in the meeting**

*M/s Chemtrols updated the latest status which was given at **Annexure-C2**.*

**ITEM NO. C.3: Provision of OPGW along with communication equipments in Important ISTS Lines (for strengthening of OPGW Network of ER-Grid and ER-NR & ER-WR Connectivity)**

In 23<sup>rd</sup> SCADA O/M meeting held on 06.03.2019, ERLDC requested ERPC to form a committee who can ascertain the requirement of OPGW along with communication equipment after considering the route diversity to bring reliability in Power System operation as per requirement.

Accordingly, a Committee was formed. The committee met on 14.08.2019 and 24.10.2019, wherein the members discussed about the requirement of additional Inter-regional and Intra-regional OPGW links for strengthening of Eastern Regional OPGW network.

Followings are the list of additional OPGW link, which are envisaged by the committee for implementation along with communication equipment and DCPS: -

SI No	Corridor	Selected lines for laying OPGW	Length (km)
1	ER- NR	765 kV S/C Gaya-Varanasi Line –I	265
2		400 kV D/C Patna – Balia Line –I	195
3	ER - WR	765 KV S/C Ranchi – Dharamjaygarh Line-1	305
4		765 KV S/C Jharsugada – Dharamjgarh Line-1	149
5	ER-SR	400 kV D/C Jeypore – Gazuwaka	221
6	ISTS network	400 kV D/c Nabinagar (BRBCL) Generating Station – Sasaram	82
7		400 kV Farakka –Purnea	160
8		400 kV Farakka-Sagardighi-Subhasgram	301

9		400kV Maithan (PG) – Durgapur (PG)	72
10		400KV Durgapur (PG) – Sagardighi (WB)	128
11	DVC network	220 KV KTPS – Giridih ( Line # 251 , 252 )	101
12		132 KV Jamuria – Ramkanali ( Line # 90)	53
13		132 KV Ramkanali – CTPS ( Line # 60)	70
14		132 KV Purulia – Jamshedpur ( Line # 39,40)	87
15		132 KV CTPS – Gola ( Line # 6,7)	67
16		Howrah (DVC) – Howrah(WB)	1
17	JUSNL	220 kV Daltonganj (JUSNL) – Latehar (JUSNL) LILOed at Daltanganj (PG)	90
18		220 kV Jodda (OPTCL)- Ramchandrapur (JH)	130
19		220 kV Chandil (JH)- Ranchi (PG) (up to LILO point)	90

Powergrid via mail dated 03.01.2020 confirmed the length of above transmission lines.

Members may note.

### **Deliberation in the meeting**

*Members noted.*

## Participants in 4<sup>th</sup> Telecommunication, SCADA and Telemetry (TeST) Meeting of ERPC

Venue: ERPC Conference Hall, Kolkata

Time: 11:00 hrs

Date: 31.01.2020 (Friday)

Sl No	Name	Designation/ Organization	Contact Number	Email	Signature
1	J. Bandyopadhyay	Member Secretary ERPC	9432326351	mserpc-power@gov.in	
2	D. K. Jain	Executive Director, ERLDC	9910344127	dk.jain@posoco.in	
3	S. P. BARNWAL	GM(SCADA) ERLDC	9433041812	spbarnwal@posoco.in	
4	B. Mondal	Dy. Manager (SCADA)	9903329271	BISWAJIT.MONDAL @POSOCO.IN	
5	Santanu Rudrapal	Manager (ULDC)	9434735848	Santanu.Rudrapal@ powergridindia.com	
6	K. K. Prusti	GM (ULDC) POWERGRID	8393882717	k-k-prusti@powergrid india.com	
7	S. K. SAHU	DGM (AM/IT) POWERGRID	907883643	SKSahu@powergrid india.com	
8	MITHUN CHOWDHURY	MANAGER POWERGRID	943815651	MITHUN@POWERGRIDIN- DIA.COM	
9	A. K. Sankar	DVC	9433992999	ak.sankar@dvc.gov.in	
10	AK Tiwary	DVC	9431509389	ashok.tiwary@dvc.gov. in	
11	S. C. Das	NTPC- Faridkot	9434038940	scdas01@ntpc.co.in	
12	Md. Jamwal	NHPC Rangit. Ps.	8768414747	mdjamwal@nhpc.ir	
13	SATINDRA GHOSH	MPL, TATA POWER	9204757805	satindra.ghosh@tatapower co.in	
14	Amit Chowdhury	ERLDC (SCADA) Assistant manager	8744834926	amchowdhury@posoco.in	
15	Rashmi Jaiswal	ERLDC	9007184509	rashmijaiswal@posoco.in	
16	Bibek Agrawal	ERLDC	9903071710	bibek@posoco.in	
17	J. G. Rao	ERPC	9547891353	ganesh.joda@ gov.in	
18	Shivam Asati	AD-II, ERPC	8253035332	shivamasati786@gmail. com	
19	Kumar Satyam	AD-II, ERPC	7355661655	satyam24365@gmail.com	
20	Rakesh Kumar	EEE (ULDC), BSPCL	9431470795	rakesh2k7.mit@gmail. com	

"Coming together is a beginning, staying together is progress, and working together is success." –Henry Ford

## Participants in 4<sup>th</sup> Telecommunication, SCADA and Telemetry (TeST) Meeting of ERPC

Venue: ERPC Conference Hall, Kolkata

Time: 11:00 hrs

Date: 31.01.2020 (Friday)

Sl No	Name	Designation/ Organization	Contact Number	Email	Signature
21	B. MADHU	S. E (E) WBSETCL	9163550747	cmnabhishek@ rediffmail.com	B.M.
22	D. SARKAR	Adl. C.E, (Com) WBSETCL	9432187659	- do -	
23	K. TRIPATI RAO ACHARYA	Sr. GM Telem OPTCL	9438908037	Cgm.tel@optcl .co.in	K. Tripati
24	P. K. NAYAK	DGM, Telem OPTCL	9438907502	pranab94@gmail.com	P.K.
25	PK Mahapatra	AGM, OPGL	9338715401	Pradeep.mahapatra @opgl.co.in	P. Mahapatra
26	SHIVAJI DEWANJEA	CHEMTROLS AUP	9748704685	shivaji.dewanjea@ chemtrols.com	Sh. Dewanjea
27	ANIRUDHAYA SAHA	CHEMTROLS/ Dy. Manager	9674507547	anirudhaya.saha@ chemtrols.com	Anirudhaya
28	SRIHARSHA CHIKKARS	GM - CUSTOMER RELATIONS	9880177779	SRIHARSHA.CHIKKARS @OSII.COM	S. Chikkars
29	✓				
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"Coming together is a beginning, staying together is progress, and working together is success." –Henry Ford

# LIST OF STATIONS HAVING FIBRE CONNECTIVITY FOR AMR DATA TRANSFER AS ON 06-JANUARY-2020

SNO	Utility Name	Substation Name	DCU No.	Fibre connectivity (Yes/No)
1	BIHAR	ARAH (ARB)	pgarctic00037	Yes
2	BIHAR	BANKA (BAN)	pgarctic00145	Yes
3	BIHAR	BIHARSHARIF (BIH)	pgarctic00039	Yes
4	BIHAR	BODHGAYA (BOD)	pgarctic00122	Yes
5	BIHAR	DEHRI (DEH)	pgarctic00078	Yes
6	BIHAR	DUMRAON (DUM)	pgarctic00036	No
7	BIHAR	FATUA (FAT)	pgarctic00131	Yes
8	BIHAR	HAJIPUR (HAJ)	pgarctic00132	Yes
9	BIHAR	JAGDISHPUR (JAG)	pgarctic00133	No
10	BIHAR	JAMUI (BSPHCL)	pgarctic00171	No
11	BIHAR	KAHALGAON (KAH)	pgarctic00068	No
12	BIHAR	KANTI (KAN)	pgarctic00074	Yes
13	BIHAR	KARMANASHA (KMN)	pgarctic00077	No
14	BIHAR	KHAGAU (KHA)	pgarctic00073	Yes
15	BIHAR	KISHANGANJ (KSN)	pgarctic00070	Yes
16	BIHAR	KUDRA (KUD)	pgarctic00176	No
17	BIHAR	LAKHISARAI (LKK)	pgarctic00172	Yes
18	BIHAR	MADHEPURA (MAD)	pgarctic00120	Yes
19	BIHAR	SIPARA (SIP)	pgarctic00130	Yes
20	BIHAR	SONENAGAR (SON)	pgarctic00075	Yes
21	BIHAR	SONNAGAR NEW	pgarctic00175	Yes
22	BIHAR	SULTANGANJ (SUL)	pgarctic00094	Yes
23	BIHAR	SABOUR (SBR)	pgarctic00093	Yes
24	BIHAR	MOHANIA (MOH)	pgarctic00076	No
25	BIHAR	NALANDA (NLN)	pgarctic00177	Yes
26	GRIDCO	BALASORE (BLS)	pgarctic00121	Yes
27	GRIDCO	BANGRIPOSHI	pgarctic00195	No
28	GRIDCO	BARIPADA (BAR)	pgarctic00063	Yes
29	GRIDCO	BUDHIPADAR (BUD)	pgarctic00048	Yes
30	GRIDCO	GMR (GMR)	pgarctic00142	No
31	GRIDCO	INDRAVATI (IND)	pgarctic00101	Yes
32	GRIDCO	JEYNAGAR (JYN)	pgarctic00103	Yes
33	GRIDCO	JINDAL (JIN)	pgarctic00043	No
34	GRIDCO	JODA (JOD)	pgarctic00042	Yes
35	GRIDCO	KATAPALLI (KTP)	pgarctic00184	Yes
36	GRIDCO	MENDHASAL (MEN)	pgarctic00062	Yes
37	GRIDCO	MIRMUNDALI (MML)	pgarctic00061	Yes
38	GRIDCO	RENGALI (REG)	pgarctic00060	No
39	GRIDCO	ROURKELA (ROU)	pgarctic00045	No
40	GRIDCO	SADEIPALI	pgarctic00196	Yes
41	GRIDCO	TARKERA	pgarctic00047	Yes
42	WEST BENGAL	BIDHANNAGAR (BDN)	pgarctic00029	Yes
43	WEST BENGAL	BIDHANNAGAR (BDN)	pgarctic00113	Yes
44	WEST BENGAL	BIRPARA (BIR)	pgarctic00021	Yes

45	WEST BENGAL	DALKHOLA (DAL)	pgarctic00082	Yes
46	WEST BENGAL	JEERAT (JRT)	pgarctic00023	Yes
47	WEST BENGAL	KALIMPONG (KLM)	pgarctic00031	Yes
48	WEST BENGAL	KHARAGPUR (KSG)	pgarctic00127	Yes
49	WEST BENGAL	KURSEONG (KSG)	pgarctic00124	Yes
50	WEST BENGAL	MALDA (MAL)	pgarctic00007	Yes
51	WEST BENGAL	SAGARDIGHI (SAG)	pgarctic00006	No
52	WEST BENGAL	SANTALDIH (SNT)	pgarctic00058	Yes
53	JHARKHAND	CHAIBASA (CHA)	pgarctic00198	Yes
54	JHARKHAND	CHANDIL (CHN)	pgarctic00016	Yes
55	JHARKHAND	DEOGHAR (DEO)	pgarctic00055	No
56	JHARKHAND	DUMKA (DUM)	pgarctic00173	Yes
57	JHARKHAND	GARHWA (GAR)	pgarctic00051	No
58	JHARKHAND	GOELKERA (GOL)	pgarctic00100	At present, No Tie with JUSNL
59	JHARKHAND	HATIA (HAT)	pgarctic00081	Yes
60	JHARKHAND	JAMTARA (JMT)	pgarctic00054	No
61	JHARKHAND	JAPLA (JAP)	pgarctic00050	No
62	JHARKHAND	KENDPOSI (KEN)	pgarctic00098	No
63	JHARKHAND	LALMATIA (LLM)	pgarctic00099	No
64	JHARKHAND	TENUGHAT (TGT)	pgarctic00040	Yes
65	JHARKHAND	RAMCHANDRAPUR (RCP)		Yes
66	JHARKHAND	PATRATU (PTR)		Yes
67	JHARKHAND	MANIQUE (MNQ)		No
68	JHARKHAND	DALTONGANJ (DLT)		No
69	SIKKIM	DIKCHU	pgarctic00181	No
70	SIKKIM	DIKCHU	pgarctic00182	No
71	SIKKIM	JORTHANG	pgarctic00183	No
72	SIKKIM	MELLI (MEL)	pgarctic00017	Yes
73	SIKKIM	MELLI (MEL)	pgarctic00032	Yes
74	DVC	DSTPP (AND)	pgarctic00004	Yes
75	DVC	JAMSHEDPUR (JAM)	pgarctic00011	Yes
76	DVC	KALNESHWARI (KAR)	pgarctic00026	Yes
77	DVC	KODERMA (KOD)	pgarctic00125	Yes
78	DVC	KOLAGHAT (KGT) DVC	pgarctic00008	Yes
79	DVC	MAITHON (MAI)	pgarctic00024	Yes
80	DVC	MANIQUE (MNQ)	pgarctic00018	Yes
81	DVC	MEJIA (MEJ)	pgarctic00025	Yes
82	DVC	RTPS (RTP)	pgarctic00137	Yes
83	DVC	TISCO (TIS)	pgarctic00138	Yes
84	DVC	BARHI (BAR)	pgarctic00052	Yes
85	DVC	DHANBAD (DHN)	pgarctic00053	Yes
86	DVC	WARIA (WAR)	pgarctic00005	Yes

**DVC PM DATES AMC YEAR 3 (2019-2020)**

					DVC Main	DVC Backup
AMC Quarter No	AMC Quarter Duration	PM Done By	Sr. No.	Equipment	PM Date	PM Date
AMC Quarter 1	(Jul-Sep) 2019	Chemtrols	1	Servers	18-Sep-2019	16-Sep-2019
AMC Quarter 2	(Oct-Dec) 2019		2		19-Dec-2019	27-Dec-2019
AMC Quarter 3	(Jan-Mar) 2020		3		Schedule	Schedule
			4			
AMC Quarter 1	(Jul-Sep) 2019	Chemtrols	5	VPS	Not Done	30-09-2019
AMC Quarter 2	(Oct-Dec) 2019		6		30-Dec-2019	Not Done
AMC Quarter 3	(Jan-Mar) 2020		7		Schedule	03-Jan-2020
			8			
AMC Quarter 1	(Jul-Sep) 2019	Chemtrols	9	VCS	Not Done	06-Aug-2019
AMC Quarter 2	(Oct-Dec) 2019		10		18-Oct-2019	29-10-2019
AMC Quarter 3	(Jan-Mar) 2020		11		08-Jan-2019	03-Jan-2020
			12			
AMC Quarter 1	(Jul-Sep) 2019	Delta	13	UPS	13-Sep-2019	07-Aug-2019
					Not done due to one UPS issue, PM restricted by DVC	01-Nov-2019
AMC Quarter 2	(Oct-Dec) 2019		14			
AMC Quarter 3	(Jan-Mar) 2020		15		24-Jan-2020	Schedule
			16			
AMC Quarter 1	(Jul-Sep) 2019	Garuda	17	DG	Not Done	
AMC Quarter 2	(Oct-Dec) 2019		18		13-Dec-2019	
AMC Quarter 3	(Jan-Mar) 2020		19		Schedule	
			20			

SL NO	SITE NAME	UTILITY	MONTH	DATE	CHEMTROLS ENGINEER	ISSUE REPORTED	ISSUE FOUND	CURRENT STTATUS	REMARKS	
01	220/132/33kv Sipara GSS	BSPTCL	NOV	14-Nov-2019	Mr. Satish Kumar	Data Not Reporting To SLDC	Node MAC Address Corrupted	Node Taken To SLDC		<a href="#">Click Here</a>
02	132kv Jakanpur	BSPTCL	NOV	14-Nov-2019	Mr. Guddu Kr. Singh	LDMS Not Starting	Motherboard & SMPS Faulty	<b>Issue Not Resolved</b>	Only RTU Data Reported to SLDC	<a href="#">Click Here</a>
03	Patliputra Cement	BSPTCL	NOV	16-Nov-2019	Mr. Satish Kumar	New RTU Configuration	New RTU Configuration	OK		<a href="#">Click Here</a>
04	132/33 kv Madhpura	BSPTCL	NOV	20-Nov-2019	Mr. Guddu Kr. Singh	Data Not Reporting To SLDC	PDH Issue	OK	Terminal Point Interchanged	<a href="#">Click Here</a>
05	220/132/33kv Sipara GSS	BSPTCL	NOV	22-Nov-2019	Mr. Satish Kumar	Data Not Reporting To SLDC	Node MAC Address Corrupted	OK	MAC Address Restored	<a href="#">Click Here</a>
06	220/132/33kv Biharsharif GSS	BSPTCL	NOV	28-Nov-2019	Mr. Satish Kumar	RTU Node & Meerkat Issue	RTU Node S/W Issue , Meerkat Corrupt	OK		<a href="#">Click Here</a>
07	220/132kv Hajipur GSS	BSPTCL	DEC	10-Dec-2019	Mr. Satish Kumar	LDMS Restarting frequently	LDMS CPU Heating Issue	OK	System Cleaned & Thermal Paste Change	<a href="#">Click Here</a>
08	220/132/33kv Fatuha GSS	BSPTCL	DEC	16-Dec-2019	Mr. Satish Kumar	Data Not Reporting To SLDC	Node Not Responding	OK	Node Changed 4 days	<a href="#">Click Here</a>
09	132/33kv Gaigath GSS	BSPTCL	DEC	17-Dec-2019	Mr. Satish Kumar	LDMS Not Starting	Operating System Issue	OK	OS Restored & System Cleaned	<a href="#">Click Here</a>
20	Harnaut	BSPTCL	January	01-Jan-2020	Mr. Guddu Kr. Singh	LDMS Not Properly Working ,	Meerkat Issue	ok	Meerkat Installed ,Bios Updated	
10	Nalanda	BSPTCL	January	06-Jan-2020	Mr. Satish Kumar	LDMS Not Starting	LDMS Not Starting	OK	Issue Resolved	
21	Hathidah	BSPTCL	January	06-Jan-2020	Mr. Guddu Kr. Singh	RTU Data Not Reporting To SLDC	PLCC issue ,	RTU Data Not Reporting To SLDC	LDMS System Installed , RTU Database Some Change and data Check Done	
11	Ekangsarai	BSPTCL	January	07-Jan-2020	Mr. Satish Kumar	LDMS Not Starting	SMPS Faulty	ok	SMPS & Motherboard Changed , Meerkat installed	
12	Bodhgaya	BSPTCL	January	08-Jan-2020	Mr. Satish Kumar	LDMS Not Starting	Inverter Issue	ok	Inverter Replaced with New UPS , Meerkat installed	
13	Belaganj	BSPTCL	January	13-Jan-2020	Mr. Satish Kumar	Meerkat Issue	System Time Issue & Meerkat Issue	ok	CMOS Battery Changed , Meerkat Installed , Bios Updated	
22	Ataula	BSPTCL	January	13-Jan-2020	Mr. Guddu Kr. Singh	LDMS Software	Meerkat Issue	ok	Meerkat installed	
23	jakanpur	BSPTCL	January	15-Jan-2020	Mr. Guddu Kr. Singh	LDMS Not Starting	Motherboard Faulty	ok	Motherboard Changed	
14	Belaganj	BSPTCL	January	17-Jan-2020	Mr. Satish Kumar	CB Status Issue	CB status issue	ok	Issue Resolved	
15	Hathidah	BSPTCL	January	18-Jan-2020	Mr. Satish Kumar	Data Not Reporting To SLDC	PLCC issue ,	ok	Tx Rx Cable Interchanged In PLCC , Status of BSF-2,ICT-2, ICT-1 Rectified	
16	Harnaut	BSPTCL	January	20-Jan-2020	Mr. Satish Kumar	Patliputra Ultratech Cement Line Charge	Patliputra Ultratech Cement Line Charge	ok	Patliputra Ultratech Cement Line Charge	
17	sasaram	BSPTCL	January	21-Jan-2020	Mr. Satish Kumar	LDMS Not Starting	SMPS Faulty	Inverter Dead	SMPS & Motherboard Changed , Meerkat installed	
18	Dehri	BSPTCL	January	22-Jan-2020	Mr. Satish Kumar	LDMS Not Starting	SMPS Faulty, Display Adaptor Faulty, VGA Cable	Display Adaptor Faulty	SMPS & Motherboard Changed , DP Cable Changed	
19	Banjari	BSPTCL	January	23-Jan-2020	Mr. Satish Kumar	LDMS Not Starting	System Time Issue & Meerkat Issue	ok	Meerkat Installed ,CMOS Battery Changed,Bios Updated	
24	sabour	BSPTCL	January	24-Jan-2020	Mr. Guddu Kr. Singh	Data Not Reporting To SLDC	Server Node Faulty	ok	Server Node Changed , Meerkat Installed , Bios Updated	

SI No.	Agenda point	Deliberation in the last TeST meeting	Deliberation in the 4 <sup>th</sup> TeST meeting
<b>3rd TeST Meeting</b>			
1.	Restoration of frequent failure of Sagardighi STPS data	ERPC advised WBSETCL & Powergrid to co-ordinate for early restoration of the same. ERPC further advised WBSETCL & Powergrid to come up with a redundant path for providing the Sagardighi STPS data.	<i>WBSETCL informed that they would consult WBPDCCL to come up with the same.</i>
2.	Replacement of faulty BCU (seven nos) at Kishanganj Site	Powergrid informed that they have already taken the matter with their OEM (M/s Siemens) and would be resolved by January, 2020.	<i>Powergrid informed that 4 nos. of BCU have been replaced.</i>
3.	Losses in Rourkela – Budipadar – Nayagarh - Bhubaneswar communication path	OPTCL informed that they would resolve the above issue by 5th January, 2020.	<i>OPTCL informed that they have resolved the issue.</i>
4.	Permission for OPGW laying in TLDP-NJP OPGW link under Fiber Optic Expansion Project (Additional Requirement)	ERPC asked WBSETCL to send the details to ERPC at the earliest.  WBSETCL sent a letter vide dated 10.01.2020 to ERPC.	<i>WBSETCL asked Powergrid to drop the tender for OPGW laying TLDP-NJP OPGW link under Fiber Optic Expansion Project (Additional Requirement) and further informed that WBSETCL would complete the same on their own.</i>
5.	Short-closing of the contract (Backup NLDC part) under URTDSM Project - Backup NLDC Control Center under URTDSM Project could not be commissioned due to non-readiness of UPS room at ERLDC	ERLDC informed that renovation of UPS room would be completed by end of March, 2020.	

SL No	POSOCO / Constituent	Deliberation in the last TeST meeting	Latest Status
<b>ERLDC Portion</b>			
1	PM not being carried out by M/s Chemtrols through OEM	Chemtrols informed that problem of Fuel injector coil at ERLDC would be solved by 31st December 2019.	COMPLETED
2	Implementation of Automatic Demand Management Scheme (ADMS) in Bihar & Jharkhand	M/s Chemtrols informed that ADMS in Jharkhand has been implemented successfully. Testing clearance is due from BSPTCL side.	Jusnl Completed BSPTCL having communication issue with field.
<b>DVC</b>			
1	Cyber security audit report is not submitted by M/s Chemtrols even for the last year conducted on 23.02.2018.	Chemtrols informed that schedule for next cyber security audit will be submitted by December 2019.	Submitted
2	19 nos MFM and 01 (one) Node are faulty – to be rectified.	M/s Chemtrols informed that 01(one) node was already handed over to DVC and faulty MFM will be handed over shortly.	Node already As informed by Chemtrols all those MFM are got damage due to field side issue and replacement of forced damaged materials not cover under AMC / warranty. Maximum MFM are
3	Analog and Digital Data from Jamshedpur S/S for 33 KV JUSCO line is not available.	M/s Chemtrols informed that it would be resolved by 15th January 2020.	Completed with DVC
4	<b>Data Reporting Issues:</b>		
4.1	(i) Mosaboni S/S – Analog and Digital Data from all 33 KV Bays.	Chemtrols informed that they would be visiting DVC, Maithon to resolve the issue.	Completed with DVC
4.2	(ii) Kolaghat S/S - Analog Data for 132 KV Howrah Bay, Kharagpur		
	(iii) Nimiaghat S/S - Both Analog and Digital Data from all 33 KV Bays		
4.3	(iv) Putki S/S - Analog and Digital Data for Line # 47 (132 KV Putki - Nimiaghat line)		
4.4	(iv) CTPS B: Analog data of LV side from Gen # 7 & 8.		

4.5	(v) MTPS A: Analog data of LV side from Generator # 6.		
4.6	(vi) Biada S/S: Both Analog and Digital Data for all 33 KV Bays and Digital for all 132 KV bays.		
5	PM of DG is never carried out since installation	M/S Chemtrols informed that they will conduct the Preventive Maintenance for DG Sets once they are able to renew the	Completed
6	Three (3) nos. faulty Terminal Servers to be repaired	M/s Chemtrols informed that it would be resolved by December	One TS handed over to DVC.
<b><u>JUSNL Portion</u></b>			
1	CPU of LDMS of Japla, Latehar, Daltonganj and Kanke are not	M/s Chemtrols informed that it would be resolved by 15th	Completed
<b><u>BSPTCL Portion</u></b>			
1	Integration of new bay	M/s Chemtrols informed that work is in progress	BSPTCL has been requested to share the new bay list.
2	Cyber Security Audit of 2019.	M/s Chemtrols informed that it would be completed by 31/12/2019	Completed
3	Compliance of Cyber Security Audit conducted in year-2018	M/s Chemtrols informed that it would be completed by 31/12/2019	Completed
4	One No. of UPS faulty since 16/10/2019	M/s Chemtrols informed that it would be completed by 20/12/2019	Completed
5	One SMPS of VPS is defective since 29/11/2019	M/s Chemtrols informed that it would be completed by 15/01/2020	Procurement under progress. Will be completed by 29.02.2020
6	One AVR of 125 KV is defective since 03/10/2019	M/s Chemtrols informed that it would be completed by 15/01/2020	
7	20 no. of LDMS are not functioning either of issue of inverter or CPU.	M/s Chemtrols informed that LDMS related issue would be resolved by 15/01/2020	Work in Progress.
8	<b>Integration of new bay:-</b> As per AMC contracts Chemtrols has to integrate 50 nos. of new bays in to RTU.	M/s Chemtrols informed that procurement of requisite materials at their end is under process. Chemtrols requested BSPTCL to share the feeder details again so that the same could be completed by 29 Feb 2020. BSPTCL agreed for the same.	BSPTCL has been requested to share the new bay list.

9	The following materials are faulty which are required to be replaced at the earliest: <ul style="list-style-type: none"> <li>•MFT – 9 pcs</li> <li>•Decode – 2 pcs</li> <li>•Node – 6 Pcs</li> </ul>	M/s Chemtrols informed that faulty materials (MFT, Decode & Node) need to be sent to Chemtrols, Goa for necessary repair work and the same would be completed by 31st March 2020.	MFT will be delivered to BSPTCL by 15/02/2020 Decode Modem has been repalced RTU Nodes - need 1 month more for repairing that nodes
10	One No. of MP 2553 RICOH Printer is defective.	M/s Chemtrols informed that the cost implication for procurement of damaged parts of MP 2553 RICOH Printer should be borne by BSPTCL. Chemtrols again informed that quotation has already been shared with BSPTCL	BSPTCL need to process further
<b><u>WBSETCL Portion</u></b>			
1	Chemtrols RTU is not integrated through IEC-104 protocol though communication link is ready	M/s Chemtrols informed that work is in progress.	Work in progress according to the allocation of site.