

Agenda for 4th TeST Meeting

Date: 31.01.2020 Eastern Regional Power Committee 14, Golf Club Road, Tollygunge Kolkata: 700 033

EASTERN REGIONAL POWER COMMITTEE

AGENDA FOR 4TH TELECOMMUNICATION, SCADA AND TELEMETRY SUB-COMMITTEE MEETING TO BE HELD AT ERPC, KOLKATA ON 31.01.2020 (FRIDAY) AT 11:00 HOURS

PART – A : CONFIRMATION OF MINUTES

ITEM NO. A.1: Confirmation of minutes of 3rd TeST Sub-committee meeting held on 20.12.2019

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

Members may confirm the minutes of 3rd TeST Sub-committee 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 communicationproblems 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-B1**.

Members may update.

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 3rd 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 31st 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 23rd Dec. 2019. OSI informed that they would give the above license without any cost implication by 31st Dec. 2019 after receiving the hardware stream from ERLDC.

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

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 3rd TeST meeting, Powergrid asked members to furnish details regarding their NMS and sent the same to <u>uldcer2@powergrid.co.in</u> latest by 31st 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-B3**.

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

Members may discuss.

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	Kahalgaon 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	Kahalgaon 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	
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In 2nd 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 42nd 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 3rd 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

31st 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.

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

Utility	Status	Deliberation in the last TeST meeting	Target
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.	With the availability of OPGW between Chuzachen - Rangpo.

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

		Powergrid informed that OPGW	
		between Chuzachen-Rangpo would	
	D "	take 6-7 months more to complete.	NA 0000
JITPL	Pending	Powergrid informed that OPGW	May-2020
		communication links from JITPL to nearest Powergrid S/s would be	
		nearest Powergrid S/s would be completed by May 2020.	
GMR	Pending	Powergrid informed that OPGW	May-2020
		communication links from GMR to	
		nearest Powergrid S/s would be	
		completed by May 2020.	
JUSNL	Pending	JUSNL informed that their RTU	March, 2020
	_	replacement of 21 Nos. of RTU would	
		be completed by March 2020.	
OPTCL	Pending		November,2020
		replacement / up-gradation of old	
		RTUs (78Nos) will be awarded by December, 2019.	
WBSETCL	Pending	WBSETCL informed that they are	
	, errening	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	Pending	Teesta-V informed via email that the	June, 2020
– V & Rangit)	U	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.	
DMTCL	Pending	DMTCL representative was absent	OPGW not
Motihari		during the discussion.	available
BRBCL	Pending	DMTCL representative was absent	OPGW not
Nabinagar		during the discussion.	available
Teesta – III	Pending	Teesta III representative was absent	OPGW not
Dikchu	Donding	during the discussion. Dikchu representative was absent	available OPGW not
	Pending	Dikchu representative was absent during the discussion.	OPGW not available
Jorethang	Pending	Jorethang representative was absent	OPGW not
ooronang		during the discussion.	available
APNRL	Completed		
Barh	Completed		

Members may update the latest status.

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.

Link Path	Deliberation in last TeST meeting	Latest Status
DVC MCC located at Andul Road to ERLDC BCC at New Delhi - 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.	
WBSETCL MCC Andul road to ERLDC BCC located at New Delhi	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.	
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.	
	DVC MCC located at Andul Road to ERLDC BCC at New Delhi - 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.WBSETCL MCC Andul road to ERLDC BCC located at New DelhiFarakka to Jeerat - 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,	DVC MCC located at Andul Road to ERLDC BCC at New Delhi - DVC requested to include underground OFC in Howrah (WB) to Howrah (DVC) under the scope of upcoming project 'Strengthening of Inter- regional & Intra-regional OFG with also requested WBSETCL to provide necessary permission & space for laying of Underground OFC and terminal equipment.Powergrid requested ERLDC to write a letter to WBSETCL mentioning about the requirement of the same. ERLDC agreed for the same.WBSETCL MCC Andul road to ERLDC BCC located at New DelhiPowergrid requested ERLDC to provide space for installation of ULDC othat link may be configured in ULDC so that link may be configured in ULDC network.Farakka to Jeerat rowergrid informed that rosently. FO link connectivity is available between Farakka to Jeerat through Behrampu 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 informed that transmission line.

	SLDC - Powergrid informed that presently, FO link connectivity between Rourkela to Bhubaneswar SLDC is available through TSTPS, Meeramundali & Mendhasal which doesn't have route diversity.	requirement of Indian Railways. Once the tower shifting work will be completed by Indian Railways, OPTCL will start	
5.	Ranchi 400 kV (PG) to JUSNL SLDC (Kushai Colony) - 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.

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	Powergridanalyticsapplication:Powergridanalytical application software,which was supposed to beinstalledunderURTDSMproject,is yet to be madefunctional at SLDCs.	analytics application has been installed in only one server and requested to install in second server also to maintain redundancy.	
2	Integration with SCADA over IEC 104: Data export to SCADA from URTDSM system is not working properly.	frame requirement and requested	

Powergrid may update.

2. URTDSM Data Summary:-

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

a.	Bankruptcy/admin. issu	ue : 2 PMUs (IPPs - Monnet & IndBharat)
b.	Non-availability of communication link	: 8 PMUs (GMR IPP & JITPL IPP) : 2 PMUs at Tenughat
С.	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 42nd 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.	RedundantcommunicationlinkConsidering the importanceof PMUs data,Powergridagreedtoimplement	URTDSM project has been provided with all constituents	

redundant communication	completed at the earliest.	
link in URTDSM project in		
order to prevent PMUs data		
intermittency and repetitive		
failure between PDC-PDC		
communication between		
ERLDC and SLDCs.		

Powergrid, NTPC and OPTCL may update.

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 4 220kV	Not Available	WBSETCL informed that they would write a letter to NHPC for providing the port.	Status
	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 Jamtara 132kV Garwa	Not Available Not Available Yet to be	JUNSL informed that by March, 2020 they will make available all the data in their	

		I		
	132kV	integrated	jurisdiction.	
	Deoghar	Not		
	132kV	Available		
	Kendposi	Not		
	132 kV	Available		
OPTCL	JSPL	Most of	OPTCL informed that by	
	400kV	the data	June, 2020 they will make	
		not		
		available	available all the data in their	
	Nalco	Most of	jurisdiction.	
	220kV	the data		
		not		
		available		
	Narsingpur	Station		
	220kV	commissio		
		ned at		
		220kV		
		without		
		data		
		telemetry		
	Bargarh	Station		
	220	commissio		
		ned at		
		220kV		
		without		
		data		
		telemetry		

Members may update.

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:**

Taking out of aviation globules	Shutdown required on 400KV TeestallI-
	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)		
400KV	Ra	aviation ngpo-Kish	0	Shutdown Kishanganj	•	01
(earthwire)			14.02.20)			

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.

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. Diagram enclosed in **Annexure-B8.1**.

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	Remarks	Correspondences	
	Drum No			
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.	Correspondences enclosed in Annexure	
Location no. 294B to 294D/1	Drum No. 51	Work stopped on 03.12.2019 due to heavy ROW issue.	B8.2.	
Location no. 308 to 311/2	Drum no. 58	Work stopped on 09.01.2020 due to heavy ROW issue.		

Members may discuss.

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-C1.**

Members may update the latest status.

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-C2**.

M/s Chemtrols may update the latest status.

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 23rd 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 Interregional 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	Corridor	Selected lines for laying OPGW	Length
No			(km)
1	ER- NR	765 kV S/C Gaya-Varanasi Line –I	
2		400 kV D/C Patna – Balia Line –I	195
3	ER -	765 KV S/C Ranchi – Dharamjaygarh Line-1	305
4	WR	765 KV S/C Jharsugada – Dharamjgarh Line-1	149
5	ER-SR	400 kV D/C Jeypore – Gazuwaka	221
6	ISTS	400 kV D/c Nabinagar (BRBCL) Generating Station –	82
	network	Sasaram	
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	220 KV KTPS – Giridih (Line # 251 , 252)	
12	network	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	90
		Daltanganj (PG)	
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.

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	KHAGAUL (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

4 5				Maa
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
00			I Parctico0000	105

Existing NMS and Network Element for Integration with U-NMS

S.No. S	State	Original		Revised (after collection of data from constituents)	
	State	Existing System	No.	Existing System	No.
1		NMS	5	NMS	5
1	JUSNL	Network elements	6	Network elements	6
2	BSPTCL	NMS	5	NMS	5
2	DSPICE	Network elements	-	Network elements	-
3	DVC	NMS	4	NMS	4
5	DVS	Network elements	-	Network elements	-
л	OPTCL	NMS	2	NMS	2
4	OPICL	Network elements	69	Network elements	69
-		NMS	4	NMS	4
5	WBSTECL	Network elements	20	Network elements	20

Annexure-B8.1

Installation of OPGW Drum-41 in section having aviation globules in 400KV <u>Teestalll-Kishanganj TL</u>

OPTION-1

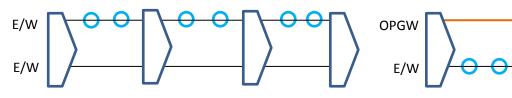
OPGW in existing 400KV TeestalII-Kishanganj TL

Taking out of aviation globules	Shutdown required on 400KV TeestallI-		
	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		
	Teestalll-Kishanganj TL (08.02.20 to 12.02.20)		
Putting the aviation globules in	Shutdown required 400KV Rangpo-Kishanganj		
400KV Rangpo-Kishanganj TL	TL for 2 days (13.02.20 to 14.02.20)		
(earthwire)			

Before

After

TeestallI-Kishanganj TL



Rangpo-Kishanganj TL

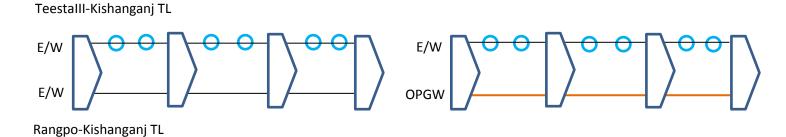
OPTION-2:

OPGW in existing 400KV Rangpo-Kishanganj TL

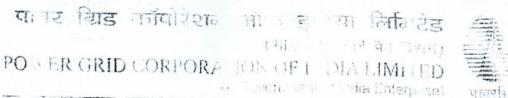
Installation of OPGW	A/R in non-auto mode for 7 days in 400KV	
	Rangpo-Kishanganj TL (06.02.20 to 12.02.20).	
	During this period, A/R in non-auto mode will not	
	be availed for 400KV TeestallI-Kishanganj TL.	

Before

After



1 1 (in kme) 1 (in kAnnexure-B8(A)2LILO



Kef No. TR-ILDLK/OPGW/ 1G44

Date: 20.01.2020

To, The Sub Divisional Officer, Kishanganj, Kishanganj, Bihar - 733202

Sub: ROW problem in OPGW Network Installation in Teesta-III – Kishanganj Transmission Line under Eastern Region Fibre Optic Expansion Project

Dear Sir,

With reference to the above-cited project, we would like to inform you that POWERGRID team is working at <u>400KV Teesta III - Kishanganj link</u> for OPGW installation work since Oct'19 & have completed approx.70 Km of OPGW installation till date in the mentioned line. But we are unable to process our balance OPGW installation work at <u>Lahara village and</u> Pothia Village because some local villagers are creating problem in our work at Location No. 308 to 311/2 and 294B/4. The Villagers name are Nur Islam (Mob: 7488122289), Umar Ali (8789892437) & Bhola (9801544974) of Lahara village and Md. Ezaz (Mob: 6206731026) of Pothia Village. They are demanding unauthorised compensation to let us work over there despite of no loss to them.

In view of the above, you are requested to kindly take necessary actions as early as possible to complete our balance work at Lahara (Location No. 308 to 311/2) and Pothia (Location No. 294B/4).

Thanking you for your kind co-operation.

Yours Kaihfully, 20/01/2020

(P K Ledekar) For, Power Grid Corporations Limited.

Copy: 1) DM & Collector, Distt. - Kishangani. Bihar
2) SP, Dist.- Kishangani. Bihar
3) GM/ ULDC/ RHQ/Kolkata
4) Sr. DGM/ Siliguri

LADON 20-01-2020

स्वहित एवं राष्ट्रहित में अर्जा चचाएं Save Energy for Benefit of Self and Nation 20/01/2020

पंजीव्हत कार्यालय: बी-9 जूनव इंस्टीट्यूशनल एपिया, कटवारिया समय, नई दिल्ली-110011 Registration Office : F-9: Outab Institutional Area, Katwana Sarai, New Delpi-110019

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Ref. No. TER-HIDLK/OPGW 1 G44

Date: 20.01.2020

To, The Sub Divisional Officer. Kishanganj, Kishanganj, Bihar - 733202

Sub: ROW problem in OPGW Network Installation in Teesta-III – Kishanganj Transmission Line under Eastern Region Fibre Optic Expansion Project

Dear Sir,

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Copy: 1) DM & Collector, Distt. - Kishanganj, Bihar
2) SP, Dist.- Kishanganj, Bihar
3) GM/ ULDC/ RHQ/Kolkata
4) Sr. DGM/ Siliguri

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पंजीकृत कार्यालय: बी- 9 कृतब इंग्टीट्यूशनल एरिया, कटवारिया अगय, नई विल्ली-110011 Registration Office - 5.9. Groat Institutional Area, Kalwana Sarai, New Dethi 11096

Scanned by CamScanner

pate: 12 th Dec, 2019

To, The

Patharkatta Police Station Bihar, 733202

> Facing some problem while working on open instantion SUB: more

Dear Sir,

WE, ZTT INDIA IVT. LTD , are working on <u>400 KV kistungani</u>-Teesta III link for OFGH installation work from 28.10.2019. After Completing 38 600 miss on said above link, we are unable to process opgin instantion work, because & one weat villager Flat Villageres demand money is creating problem with own team. On the basis of previous due, but the twive not given any prove be us. From Yestorday the had stopped our work f-So, Deave Sir, & serve be very -trappy if you kindly take necessary steps and allow us to do OUSE OPEN instanction some nibbout any norand.

Yours fairafnest Latesh kumar Sourie Pandy on one behalf of ZTT TNOTA PUT LTD.

Scamostel

To, The SHO kishanganj Police Station Bihar, 955107

SUF: Facing some problem while working on opgin installation work

Dear Sir,

2

WAY ZIT INDIA PUT. LTD, are morning ON 400 KV KISHANGANJ-TEESTATE Link For OPALT installation work from 18-10-2019. Aproz completing 48,112 MATE ON said above link, we are unable to process opens installability work at chaglinga, Belma, because four wock mager is creating purblem with our team. Frure weat vivergers name are SOHARAV, MANSOR ALAM, AKHTAR HUSSAIN, MOFIL ALAM . WE are facing problem on bolier

mo. 532. (weating number 300/1). These vinagers demand money on the basis of previous due, but they are not given any prive to us. From yesterday, we are not able to do not work. SI, Dear Sir, & stun be

very mappy if you winday take necessary seeps as soon as possible and allow us to do our opens installation work historie any hardoud.

D.S.J. Ronjing Phenon Engrine & do weekh

Action - 27/12/10

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lates 27 M Dec, 2019

			ANNEXURE-C1	
SI No.	Agenda point	Deliberation in the meeting	Latest status	
3rd 1	3rd TeST Meeting			
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.		
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.		
3.	Losses in Rourkela – Budipadar – Nayagarh - Bhubaneshwar communication path	OPTCL informed that they would resolve the above issue by 5th January, 2020.		
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 attached at Annexure-C1.4		
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.		

Annexure-C1.4



West Bengal State Electricity Transmission Co. Ltd.

(A Govt. of West Bengal Enterprise) CIN: U40109WB2007SGC113474

Office of the Chief Engineer

Communication Department

Abhikshan Building, BN Block, Sector - V, Salt Lake, Kolkata – 700 091 Telephone: 033 - 2367 1235 FAX: 033 - 2367 1235 Email: cmnabhikshan@rediffmail.com

Memo No: CMN/PGCIL/ Tech-5/

Date:

To The Chief General Manager (AM & ULDC), Regional HQ, Eastern Regional Transmission System-II, CF-17, Action Area-1C, New Town, Kolkata- 700156, West Bengal

Sub: Establishment of OPGW Link between TLDP and NJP

Ref: (i) Your letter ref. ER-II/ KOL/ ULDC/ WBSETCL/ F-31/ 6496 dated 01.01.2020, (ii) Your letter: ER/ KOL/ ULDC/ WB-OPGW/ 2229 dated 02.08.19, (iii) Our letter ref. CE(O&M)-I/ PGCIL/ OPGW/ NJP-TLDP/ 2019-20/ 674 dated 21/08/2019, (iv) Our letter ref. CMN/ ULDC/ TECH-2A/ 19447 dated 26.10.2019

Dear Sir,

With reference to above subject this is to inform you that we are principally agreed of providing FO connectivity through establishment of OPGW link in the TLDP-NJP line of WBSETCL as approved in 33rd ERPC meeting. In this regard following points please be noted:

A lot of communication has been made with you on this issue but the same has not been settled yet. The said tower line, TLDP III-NJP 220 kV is owned by WBSETCL. The OPGW of the said tower lines should be under ownership of WBSETCL. In this regard you were requested to clarify the Point No-3 (as referred in sl. no.- ii) by CE, O&M-I, WBSETCL with submission of proper documents. But no such proper reply has been received till date.

So, you are requested to clarify and clear those issues before deputing your team for the aforesaid job.

Thanking you,

Yours faithfully, Sd/-(D.K.Das) Chief Engineer, Communication Department WBSETCL

Date: 10. 61. 2020

Memo No: CMN/PGCIL/ Tech-5/20011(1)

- >1. Member Secretary, ERPC, 14, golf Club Road, Golf Gardens, Tollygunge, Kol- 700033
 - 2. ED (ERLDC), POSOCO, ERPC, 14, golf Club Road, Golf Gardens, Tollygunge, Kol- 700033
 - 3. PS to Dir(O), WBSETCL, Vidyut Bhavan, Kolkata- 700091

10/1/2020

Chief Engineer, Communication Department WBSETCL

			Annexure-C2
SL No	POSOCO / Constituent	Deliberation in the last TeST meeting	Latest Status
FRI	DC Portion		
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.	
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.	
DVC			
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.	
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.	
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.	
4	Data Reporting Issues:		
	(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.	
4.2	(ii) Kolaghat S/S - Analog Data for 132 KV Howrah Bay, Kharagpur Bay, Kolaghat		
	(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.		

	PM of DG is never carried out since installation Three (3) nos. faulty Terminal Servers to be repaired	M/S Chemtrols informed that they will conduct the Preventive Maintenance for DG Sets once they are able to renew the contract with M/s Garuda Power M/s Chemtrols informed that it would be resolved by December 2019	
JUSN	IL Portion		
1			
1	CPU of LDMS of Japla, Latehar,	M/s Chemtrols informed that it would be	
	Daltonganj and Kanke are not working	resolved by 15th January 2020.	
BSP1	CL Portion		
4	hate suppliers of a second second	NA/A Chamatanala in Cassard at the second state	
1	Integration of new bay	M/s Chemtrols informed that work is in	
		progress	
2	Cyber Security Audit of 2019.	M/s Chemtrols informed that it would be	
2	Compliance of Culture Consults Audit	completed by 31/12/2019	
3	Compliance of Cyber Security Audit	M/s Chemtrols informed that it would be	
	conducted in year-2018	completed by 31/12/2019	
4	One No. of UPS faulty since 16/10/2019	M/s Chemtrols informed that it would be	
-		completed by 20/12/2019	
5	One SMPS of VPS is defective since	M/s Chemtrols informed that it would be	
	29/11/2019	completed by 15/01/2020	
6	One AVR of 125 KV is defective since	M/s Chemtrols informed that it would be	
	03/10/2019	completed by 15/01/2020	
7	20 no. of LDMS are not functioning either		
	of issue of inverter or CPU.	issue would be resolved by 15/01/2020	
8	Integration of new bay:- As per AMC	M/s Chemtrols informed that procurement	
	contracts Chemtrols has to integrate	of requisite materials at their end is under	
	50 nos. of new bays in to RTU.	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.	
9	The following materials are faulty which	M/s Chemtrols informed that faulty	
5	are required to be replaced at the	materials (MFT, Decode & Node) need to be	
	earliest:	sent to Chemtrols, Goa for necessary repair	
	•MFT – 9 pcs	work and the same would be completed by	
	•Decode – 2 pcs	31st March 2020.	
	•Node – 6 Pcs		

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.	
WBS	WBSETCL Portion		
1	Chemtrols RTU is not integrated through	M/s Chemtrols informed that work is in	
	IEC-104 protocol though communication	progress.	
	link is ready		