



भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

उत्तर क्षेत्रीय विद्युत समिति

Northern Regional Power Committee

सं. उक्षेविस/प्रचालन/108 /04/2019 1406-1440

No. NRPC/OPR/108/ 04/2019

दिनांक : 14, फरवरी, 2019

Dated: 14, February, 2019

सेवामें/To,

टेस्ट उप-समिति के सभी सदस्य (संलग्न सूचीनुसार)

Members of TeST Sub-Committee (As per List)

विषय : टेस्ट उप-समिति की 14 वीं बैठक का कार्य बृत्त ।

Subject: 14th meeting of TeST Sub-Committee - Minutes.

महोदय,

Sir,

उत्तर क्षेत्रीय विद्युत् समिति की टेस्ट उप - समिति की 14 वीं बैठक, दिनांक 17 दिसम्बर, 2018 को उत्तर क्षेत्रीय विद्युत् समिति सम्मलेन कक्ष, कटवारिया सराय, नई दिल्ली में आयोजित की गयी थी। इस बैठक के कार्यबृत्त की एक प्रति आपकी सूचना एवं आवश्यक कार्यवाही हेतु इस पत्र के साथ संलग्न है।

14th Test Sub -Committee meeting of NRPC was held on 17th December, 2018 at NRPC conference hall, Katwaria sarai, New Delhi. A copy of the minutes of the meeting is enclosed herewith for favor of information and necessary action.

भवदीय

Yours faithfully,

(आर पी प्रधान)

(R P Pradhan)

अधीक्षण अभियंता

Superintending Engineer

List

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12. SE(communication), RVPNL, Heerapura, Jaipur-302005, (Fax-0141-2250967)
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17. General Manager(ULDC) & General Manager (LD&C) POWERGRID, New Delhi-110016, (Fax-011-23270590)
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24. Chief Engineer (SO&C), SLDC, HVPNL, Sewah, Panipat , (Fax-0172-258526667)
25. Dy. General manager, Rosa PSCL , (Fax-0223-3033662)
26. Chief Engineer(SLDC), UPPTCL, Lucknow.(Fax 0522-2287885)
27. Chief Engineer(Transmission), NPCIL, Mumbai-400094,(Fax-022-25991258)
28. DGM, Electrical, Jhajjar Power Ltd., Haryana, (Fax-01251-266211)
29. Director, Lanco Anpara Power Ltd., (Fax-124-2341627)
30. GM (Comm.), Aravali Power Company Pvt. Ltd., NOIDA, (Fax-0120-2425944)
31. Development Commissioner (P), PDD, Srinagar, J&K, (Fax-0194-2452173)
32. Managing Director, J&K State Power Dev. Corp., Srinagar, J&K, (Fax-0194- 2500145)
33. HOG power system control, TATA Power Delhi Distribution Limited, New Delhi, (Fax-011-27468042), CENNET building, Opp to PP Jewellers Netaji subhsh place,, New Delhi (Kind Attn Sh.P Devanand)
34. Sr. Vice President, JSW Energy Ltd., New Delhi-110066 (Fax: 46032343 / 48178740)
35. Managing Director, UPCL, Dehradun-248006, (Fax-0135-2768867)

Minutes of 14th meeting of Telecommunication, SCADA & Telemetry (TeST)
Sub- Committee dated 17.12.2018

1. Confirmation of Minutes

1. Confirmation of Minutes:

MS,NRPC informed the committee members that the minutes of 13th meeting of TeST sub-committee held on 24.04.2018 were issued vide letter no NRPC/OPR/108/04/2018/6402-36 Dtd 01.06.2018. No comments were received on the minutes and he requested members to confirm minutes. The Committee confirmed the minutes without any modification.

1A. Follow -up

1A . Follow-up of Decisions in 13th Test meeting held on 24.04.2018

MS NRPC requested committee members to timely comply with the decisions taken in previous TeST meetings. Necessary action to be taken by constituents and Time line for Various issues were mentioned in Minutes of 13th TeST meeting issued on.01.06.2018. As per the reply and feed back from constituents on follow-up of 12th and 13th TeST meetings, updated status is as following.

Annexure-IA

Follow up of issues of 12th TeST meeting Decisions

Sl No	Issue	Action by	Target Time line	Compliance present status as on 17 th Dec 2018
2.2.4.2	Regarding underground fibre connectivity of UP SLDC Gomti Nagar with 220kV S/S Gomti Nagar. The sub-committee advised POWERGRID for expediting the award process and complete the connectivity at the earliest	POWERGRID	May 2018	POWERGRID informed that work of 7kM under ground Fibre cable laying completed and asked UPPTCL to use the fibre , so that fault , if any may be noticed and rectified

				immediately to avoid fibre cut at multiple locations. UPPTCL agreed to put some channels on this link.
2.2.9.1	Requirement of E&M card for fiber home PDH/SDH system at RVPNL	POWERGRID	Dec 2018	POWERGRID informed that requirement from constituents have been received, only RRVPNL have requested for E&M card for fiber home PDH/SDH system and procurement of small quantity required for RRVPNL may not be feasible. He further informed that new PDH have been ordered in various projects, the requirement can be met through new procurement rather than taking cards for equipment which are nearing end of life and hence no spare procurement is being done. However if RRVPNL and other constituents require cards for old PDH/SDH system , they can arrange on their own.
2.2.9.2	Repairing of HBL Make DCPS Installed by M/S COMMTEL:	POWERGRID	Jan 2018	Ongoing activity and repairing of DCPSs are under progress.

				PSTCL 19/25, RRVPNL7/7,CS-8/18, UPPTCL-5/25. To be completed by jan-19.
3.2.5.2	BBMB and UP were in process of testing their back-up SLDCs, wherein they were facing some issues. M/s Siemens representative assured to resolve the issues by Jan., 2018.	SIEMENS	May 2018	UPPTCL, BBMB & PSTCL networking issues has been resolved after change in IP configuration for SLDC/Sub-LDCs. UPPTCL: For new stations, integration problem still persists due to data conflict, PGCIL asked to use IP address after vetting from M/s Siemens. Regarding IP phone problem, PGCIL informed that offer has been taken for developing islands to avoid complete exchange outage. BBMB :05 out of balance 06stns(Except Bhiwani) will be tested by Jan -19. Before connecting LAPTop for testing of new stations clearance from SLDCs should be essential; NRPC may frame guide line on receipt of agenda from UPPTCL/other constituent on this issue.
3.2.5.3	All the SLDCs would test back-up SLDC at least once in every six month. The sub-committee advised	ALL SLDCs &	31.03.2018	<i>Respective Constituents have to test their back</i>

	all the members to complete this exercise by 31st March, 2018	SIEMENS		<i>up control room.No constituent has completed this testing. Most of the constituents complained about no support from M/s Siemens regarding data transfer on 101 protocol, they also complained about incompetency of manpower deployed at sites, by M/s Siemens and lack of their back hand support.MS, NRPC requested POWERGRID to take up with M/s Siemens to resolve such a serious issue. POWERGRID agreed for the same and also told that some (five/six) data will made through at Shimla for HVPNL as sample. Testing rescheduled to complete before Feb 2019.</i>
5.1.1	NTPC informed that extension work of building at Dadri was going on and work would be completed by end of Feb' 2018, then POWERGRID can install PMUs in Dadri NTPC control centre.	NTPC & POWERGRID	15 th May 2018	NTPC confirmed their readiness of control room on 9th August' 2018, POWERGRID informed that PMU installation work in progress and will be commissioned by 15th Jan 2019

Follow up of issues of 13th TeST meeting Decisions

2.3	AMR data through Fibre Network	NRLDC & POWERGRID	15.06.2018	Communication links has been configured, scheme implementation is done through protection team(Powergrid O&M) to reply. POWERGRID informed that this does not pertain to their ULDC department and this point should be in OCC agenda. They had to carry out one testing at Maharanibag, which has been done.
2.4.2	Issuance of Technical Standards for the communication system	All Constituents	26.05.2018	MS NRPC requested members to submit their comments on draft technical standards
2.5.2.1 & 2.5.2.2	Implementation of OPGW under Package-I (a). Iva and V: HPSEB issues	POWERGRID	Sept/Oct 2018	<i>POWERGRID NR-II will update. HPSEB informed that OPGW laying work of PKG-V has been completed, configuration also done but data shifting is balance, POWERGRID informed that data shifting is not part of contract this is to be done by constituents themselves. Regarding PKG-I(a) HPSEB informed that around 180km out of 551km OPGW has been laid and work is stopped from November-</i>

				<p><i>2017,POWERGRID informed that OPGW laying on 66kV towers is not possible due to peak bending and their strengthening is required, HPSEB told to carry out work on 132kV &220kV first for which POWERGRID agreed. NRPC asked to give time line, but POWERGRID informed that a meeting with contractors has been fixed on 20th December-18 in Jammu and after meeting time line can be given. MS,NRPC requested POWERGRID to include representative of HPSEB also in above meeting and furnish outcome/details to NRPC, POWERGRID agreed.</i></p>
2.2.3.1	Replacement of diverted Communication Equipments /Additional BOQ for DTL	POWERGRID	31.12.2018	<p>POWERGRID informed that they were ready to supply FIBCOM make SDH equipment through Amendment in ongoing contract however DTL requires ECI make equipment for uniformity of their network. POWERGRID Further informed that, ZTT have denied supply of ECI equipment under Package-V. Under Reliable</p>

				communication scheme, SDH equipment are also envisaged and most likely Tejas will be supply vendor , however supply will commence after 6-8 months (June-2019), DTL agreed on Tejas equipment. MS, NRPC requested POWERGRID to confirm that equipment supply must be of Tejas make.
2.5.5.5	Implementation of Multi Site Configuration between SLDC Chandigarh and SLDC Patiala:	POWERGRID	15.05.2018	Work completed.
2.6	The sub-committee advised all the constituents to submit requirement of additional Ethernet ports/SDH equipment latest by 15 th May, 2018	All Constituents	15.05.2018	POWERGRID informed that Ethernet Port requirement from Constituent have been received and POWERGRID has taken offer and are in the process of procurement under reliable communication scheme. Regarding time line POWERGRID informed that Ethernet Port at NRLDC has been installed and further procurement and installation will be done progressively as per requirement.
3.6.1	PSTCL Multisite link issues	POWERGRID & SIEMENS	31.05.2018	Multisite implemented.

5.3	NTPC informed that extension work of building at Dadri was going on and work would be completed by end of Feb' 2018, then POWERGRID can install PMUs in Dadri NTPC control centre.	NTPC & POWERGRID	15 th May 2018	NTPC confirmed their readiness of control room on 9th August' 2018, POWERGRID informed that PMU installation work in progress and will be commissioned by 15th Jan 2019s)
5.5.1	BBMB informed that URTDSM Scheme, 2 * 60 kVA UPS system along with Battery Bank had to be provided by POWERGRID.	POWERGRID	Supply by July 2018 & installation by Sept 2018	UPS along with battery bank have been delivered. ACDB is also delivered at NRLDC and ACDB for BBMB is being dispatched. Installation shall commence from 15 th Jan ' 2019. Regarding issue raised by NRLDC on requirement of isolation transformer POWERGRID informed that at NRLDC it is available and UPS can be commissioned without isolation transformer and same can be taken in circuit later on. On NRLDC query about shutdown time required for taking isolation transformer into service, POWERGRID informed that it can be taken into service in one hour S/D.
6.8	Pending TDS : POWERGRID requested all Constituents to submit Quarterly TDS certificate in time against payment made to POWERGRID for Consultancy / AMC	All Constituents	15.05.2018	Some of the Constituents have shared the details, however in general no Constituents have shared the details regularly. POWERGRID informed

				that except PSTCL no other constituent submit TDS certificate timey. MS, NRPC requested POWERGRID to give reminder to constituents on monthly basis.
6.9	Signing side letters of AMC MOU. POWERGRID agreed to send side letters and relevant constituents agreed to send signed letters by 31.05.2018.	POWERGRID	31.05.2018	POWERGRID sent side letter in May' 2018 however signing of Side letter are still pending from DTL, RVPNL, UPPTCL & J&K PDD for OPGW maintenance and side letter for RTU maintenance is pending from PTCUL & PDD
6.10	Maintaining of temperature at control centres :	All Constituents	31.05.2018	<i>J&K PDD have not complied till date and due to this communication equipment & SCADA/EMS services shutdown several times at Jammu control centre</i>
6.11	<u>Draft Communication Audit Procedure</u> The sub-committee advised all the constituents to send their comments, if any,	All Constituents	31.05.2018	No comment received from any constituent.

2. Telecommunication Related Issues

2.1 OPGW installation under central and state sectors:

2.1.1 OPGW installation under central and state sectors:

2.1.1.1 Latest status of OPGW installation progress under central sector: The details of balance work out of 5203 Kms. of OPGW under Central sector, as informed by POWERGRID representative in 13th TeST meeting is as under:

(i) Abdullapur – Dehradun : The link had been commissioned on 30.03.2018.

(ii) Kishenpur – Dulhasti : The link had been commissioned on 19.01.2018.

iii) Uri-II to Uri-I line : 10 Kms. POWERGRID had deployed their OPGW maintenance team for completion of Uri-I to Uri-II in Feb' 2018. However, due to shelling from Pakistan side, the work could not be executed at that time. A team was redeployed again after 2 months 18.04.2018 but due to severe ROW issue, work could not be carried out. POWERGRID officials confirmed that after settlement of ROW/compensation issues with the help of District Administration, team would be deployed to complete this link (Uri-II to Uri-I link).

2.1.1.2 Member Secretary informed that as per 43rd NRPC meeting decision, POWERGRID can not short close the work and for any support required from J&K local administration shall be made available. POWERGRID informed that the work can be taken up by end of Feb 2019 subjected to site weather conditions .

2.1.2 Reliable Communication Scheme under Central Sector for NR.

2.1.2.1 Implementation of following Communication Schemes were approved in 37th TCC and 40th NRPC meeting held at Srinagar.

a) Reliable Communication Scheme under Central Sector for Northern Region consisting of 5428 Km of OPGW along with communication equipments and associated items at a cost of Rs. 177 Cr.

b) Replacement of OPGW along with communication equipment and associated items installed under ULDC project Phase-I consisting of 1820 Km of OPGW along with communication equipments and associated items at a cost of Rs. 60 Crs. The same is taken up as a part of Reliable Communication Scheme under Central Sector for Northern Region.

2.1.2.2 In the 12th TeST meeting, Representative of POWERGRID informed that DPR has been prepared and approved but due to revision in Qualifying Requirement (QR) with the provision of "Make-in-India" , tendering process was rescheduled. He added that NIT was expected by Jan'18

2.1.2.3 In 13th TeST meeting, Representative of POWERGRID informed that NIT for Reliable scheme was published on 22.02.2018. However, due to muted participation / queries raised by bidders, date for opening of NIT was extended 3-4 times and opening was expected on 03.05.2018. The placement of award was expected by July' 2018. LOA to be awarded in Nov-2018

2.1.2.4 POWERGRID representative informed that this package has been awarded in Nov 2018 with 22 month completion schedule.(i.e. Sept 2020).

2.1.2.5 Member secretary NRPC requested POWERGIRD to provide detailed list of links covered under these packages.

2.1.3 Latest status of OPGW installation progress under state sector:

2.1.3.1 Latest status of OPGW installation progress under state sector as updated by POWERGRID, are as under:

SI No	Name of Package	Award Date	Completion schedule	Status
1	OPGW for State sector (Package-V) M/s ZTT/ECI/Steel Product	July, 2015	May, 2018	Out of total 1669 Kms., 1663 Kms. Completed. Balance – 06 Kms. POWERGRID informed that balance 6 km under UP could not completed due to severe ROW problem. UPPTCL informed that ROW is severe issue and not yet resolved. POWERGRID stated they may short close this line.
2	OPGW for State sector additional requirement (Package-I a) (supply Pkg) M/s SDGI-Offshore contract	Oct, 2015	31 st Dec 2018	Initial Scope: 2800 km Revised Scope: 3374 km (after detailed survey) Supply completed: 3234km. Balance 140 Kms to be supplied by March' 2019
3	OPGW for Additional requirement for CS and SS (Package-III a) M/s Prem Power	Sept,2015	March 2019	Revised scope: 735 Kms. Total supply completed. 450 Kms installation completed.

2.1.3.2 Regarding balance portion of 6 Km. under Package-V, on DTL line i.e. Bamnauli-Ballabgarh (8 Km), and Bamnauli- Jhatikara (2 Km.) , representative of POWERGRID informed that OPGW works had been completed on both of the DTL links. However, minor approach cable laying was pending, as DTL had shifted their transmission line to Under-ground cabling near Bamnauli premises,

due to which quantity of approach cable has changed and POWERGRID had to arrange the materials for the same.

POWERGRID informed that above work has been completed.

2.1.3.3 POWERGRID informed that under Package-V on UPPTCL's 400kV Greater Noida - 220 kV Noida Sector 20 link, 2.7 Km. OPGW work had been completed. POWERGRID representative further informed that for 6.2 Km. OPGW work on UPPTCL's Muradnagar-Loni link under Package-V, POWERGRID had again attempted for laying of OPGW. However, due to be severe ROW issues/ opposition by landowners, work could not be taken up. Matter had been escalated to District Administration for resolving of ROW issue. POWERGRID representative reiterated that completion of this link may not be possible as the earlier dispute for compensation to landowners by UPPTCL was still unresolved and now they are demanding very high compensation for damage of crops. He informed that landowners denied permission for carrying out OPGW work without sorting out earlier issues of compensation payment. Since this issue is long pending and UPPTCL informed that ROW is severe issue and not yet resolved, POWERGRID stated they may short close this line.

2.1.3.4 Regarding installation of OPGW supplied under State sector additional requirement (Package-I a) - 3374Kms (After detailed survey) POWERGRID informed that: Installation for these OPGW links were bifurcated in two Region i.e. NR-I (810 Kms -all central sector links) and NR-II (2510 Kms Central sector & State sector). Out of 810 kms, 750 Kms had been completed, Bhinmal- Zarda and Greater Noida-Dadri links are pending. For NR-II, out of 2510 Kms, 1576 Kms has been completed which includes HPSEBL-187/551, BBMB-56/143 & PSTCL-1333/1816. Target completion date for NR-II links will be decided after meeting arranged by POWERGRID to be held at Jammu on 20th Dec' 2018. Present status (NR1-750/810, NRII 1576/2510)

2.1.3.5 Incorporation of OPGW links in ULDC Packages : POWERGRID submitted following information regarding OPGW for central and state sectors under additional package.

Following links pertaining to PSTCL, HPSEBL & CENTRAL SECTOR were included in NR Expansion scheme (ADDITIONAL REQUIREMENT) PACKAGE, laying of OPGW was discussed in earlier TeST meetings and incorporation of total 654 Kms in OPGW links for Central Sector (64.885Kms for redundancy of OPGW network) and State Sector (PSTCL-472.187 Kms & HPSEBL-117.079 Kms as state required for expansion and redundancy network) and were made on request of respective constituents but approval of NRPC/TCC is still be accorded. POWERGRID requested for incorporation of following links to put up for kind approval by TeST sub-committee/NRPC.

POWERGRID informed that this is part of already awarded additional package (I(a)-3374km) for which work is in progress and confirmed that it is already approved by NRPC.

Approved by NTPC

Central Sector Links				
Sl. No.	Name of Link	Voltage Level (KV)	OPGW	Route length (in kms)
1	Parbati III Power Station -Banala	400	24 F OPGW	7.774
2	Dadri- Maharanibagh	400	24 F OPGW	57.111
	Central Sector (Total in kms)			64.885
HPSEBL Links				
1	Kumarsain - Gumma	66	24 F OPGW	44.94
2	Bhaba - Naptha	220	24 F OPGW	2.14
3	Bathri - Kurthala	132	24 F OPGW	48.5994
4	Solan - Kunihar	132	24 F OPGW	21.4
	HPSEBL (Total in kms)			117.0794
PSTCL Links				
Sl. No.	Name of Link	Voltage Level (KV)	OPGW	Route length (in kms)
1	LILO Portion of Sultanpur 220 - Patti 220 at Chola Sahib 220kV	220	48 F OPGW	4.672
2	LILO Portion of Talwandi Bhai 220 - Ferozpur 220 at Sadiq	220	48 F OPGW	23.605
3	LILO portion of Ablowal 220 - Rajla 220 at Passiana 220	220	48 F OPGW	1.102
4	Rajla 220 - Patran 220 with LILO at kakrala 220	220	48 F OPGW	3.39
5	Rajla 220 - Patran 220 with LILO at Patran 400	220	48 F OPGW	5.826
6	LILO portion of Patran 220 - Sunam 220 at Bangan 220	220	48 F OPGW	12.67
7	LILO portion of Sunam 220 - Mansa 220 at Jhunir 220	220	48 F OPGW	33.585
8	LILO Portion of Mansa 220 - GHTP 220 at Dhanaula 220	220	48 F OPGW	37.89
9	LILO Portion of Mansa 220 - GHTP 220 at Talwandi Sabo 220	220	48 F OPGW	29.122

10	LILO Pt. of GHTP 220 - Talwandi Sabo 220 at Maur 220	220	48 F OPGW	8.735
11	Muktsar 220 - Bathinda 220 with LILO at Malout 220	220	48 F OPGW	24.035
12	Muktsar 220 - Bathinda 220 with LILO at Badal 220	220	48 F OPGW	25.457
13	LILO of Sahnewal 220 - GGSSTP 220 at Kohara 220	220	48 F OPGW	2.843
14	LILO of Sahnewal 220 - GGSSTP 220 at Gaunsgarh 220	220	48 F OPGW	16.685
15	LILO Portion of ASPH-I 132 - ASPH II 132 at Anandpur Sahib 132	132	48 F OPGW	2.993
16	Bilaspur 132 - Doraha 132 - Sahnewal 220	132	24 F OPGW	21
17	MPH-I-II-III-IV - Shri Har Gobindpur - Wadala Granthian 220	132	24 F OPGW	80
18	Jamsher 220 - Jadla 220	132	24 F OPGW	67.326
19	LILO Portion of Jamsher 220 - Jadla 220 at Goraya 220	132	48 F OPGW	7.49
20	Jadla 220 - GGSSTP(RTP) 220	220	24 F OPGW	43.393
21	LILO Portion of Wadala Granthian 220 - FC Churian 220 at Kotli Surat Mali 220	220	48 F OPGW	9.08
22	LILO Portion of FC Churian 220 - Civil Lines Asr 220 at Majitha 220	220	48 F OPGW	5.44
23	LILO Portion of Civil Lines Asr 220 - Khassa 220 at Chugawan 220	220	48 F OPGW	5.848
	PSTCL (Total in kms)			472.187
Total Additional Requirement for Central & state Sector in Kms				654.1514

2.1.3 A :OPGW Requirement of PSTCL .

2.1.3 A 1. Package- V under which 216 kM OPGW has been laid as per target, covering 7 sections but commissioning of 4 sections namely Moga- Mukatsar (71Km), Nakodar-Kartarpur (27Km); LILO of Gobindgarh-Ablowal at Rajpura (34Km) and LILO of Mukatsar – Bajakhana at Sandhwan (2 Km) is still pending although their erection has been completed PGCIL may take expeditious steps in this regard.

Representative of POWERGRID informed that shut down is required to complete pending work and same shall be arranged by PSTCL.

2.1.3 A 2. On-going package 1 (a)/ IV pertaining to laying of OPGW and indoor equipment is being executed by PGCIL and 900 kM OPGW has been laid against target of 1370Km. As PGCIL has supplied DCPS and batteries at almost all the S/Stns. covered under this project but 48 V, 15 Amp DCPS (battery chargers and 200 AH VRLA type batteries for following 6 No. S/Stns are required, too, for PDH/SDH which may be

procured and installed by PGCIL as has been done for other S/Stns. covered under said package:-

- a. 220 KV Jhunir
- b. 220 KV Verpal
- c. 220 KV Rashiana
- d. 132 KV ASPH-I
- e. 220KV Bangan
- f. 220 KV Chhola Sahib

Representative of POWERGRID informed that supply will be completed by end of Jan 2019

2.1.4 OPGW cut due to diversion of Transmission Lines

Representative of POWERGRID informed that as per discussion in last TeST meeting, OPGW issues in UPPTCL in Noida area shall be rectified by them by end of May' 2018, accordingly commissioning of ECI equipment shall take place, however rectification of OPGW links in Noida-Sector129 to Greater Noida 400kV to Noida 220kV-Sector-20 to Noida 220kV-Sector-62 are yet to be done and data reporting on these links interrupted even communication equipment were commissioned one year back.

Representative of POWERGRID informed that UPPTCL shall arrange approach cable upto NAVADA station and agreed to complete the work within 15 days after that on priority.

POWERGRID further requested Member Secretary NRPC to issue guidelines to all states to avoid disruption of installed OPGW network during construction of new line /LILO/Diversion/Fire in yard area damaging approach cable. Member secretary, NRPC requested NRLDC and POWERGRID to take up this issue as agenda for next NRPC meeting

2.1.5 Status of NHPC stations

2.1.5.1 Representative of NHPC informed the following status of OPGW connectivity at NHPC Power Stations under Central Sector scheme.

- a) During 13th TeST meeting held on 24.04.2018 it was informed by POWERGRID that OPGW work at URI Power Station shall be completed in 15 days. Further, the matter was taken up as agenda point in 39th TCC & 42nd NRPC Meetings in which it was informed by POWERGRID that after settlement of ROW/compensation issues with the help of District Administration, team would be deployed to complete this link but work is pending till date. SE(C) informed that J&K administration help can be arranged by NRPC if other compensation related issues settled by

POWERGRID and NHPC. MS NRPC informed that as per 43rd NRPC meeting decision POWERGRID should resolve the issues and complete the long pending work at the earliest.

- b) During 13th TeST meeting held on 24.04.2018 POWERGRID informed that work at Bairasiul and Sewa-II would be completed within 15 days and that at Parbati-III is likely to be completed by June 2018.

Representative of POWERGRID informed that OPGW connectivity for Bairasiul was completed and data reporting at NRLDC has started. Work at Sewa-II is pending due to payment issue to be resolved by J&K. Representative of PDD J&K informed that he will apprise the issue to the concerned J&K officials.

With regards to Parbati-III connectivity, POWERGRID informed that due to non-issuance of work permission by Parbati Koldam Transmission Co. Ltd. (PKTCL) for OPGW laying on their lines citing following issues for resolution

- 1) any dispute, arbitrations, ROW issues with locals,
- 2) Outage /tripping of transmission lines,
- 3) decrease in availability of PKTCL transmission system and
- 4) Loss of revenue etc.

Due to above, OPGW work is seriously affected for 400 kV Parbati Pooling – Parbati III T/L (part), 400 kV Parbati III – Parbati II T/L (part) and 400 kV Parbati Pooling Station – Koldam T/L.MS, NRPC suggested that NRPC will write letter to PKTCL to resolve the impasse, so that work could be started and Parbati-III, Parbati-II and Koldam connectivity could be established.

2.1.5.2 Data telemetry of Kishanganga HE Project through OPGW

Representative of NHPC informed that In the 13th TeST meeting held on 24.04.2018, it was informed by POWERGRID that new transmission line from Kishenganga to Wagoora was under construction through Amargarh and OPGW connectivity would be established only after commissioning of the transmission line which is likely to be completed by June 2018. POWERGRID representative agreed to inform the status after checking OPGW availability on this line for data telemetry of Kishanganga HE Project.

During 39th TCC & 42nd NRPC Meetings, POWERGRID informed that they will confirm later regarding installation of Terminal Equipment at Kishanganga HEP once Fibre is available.

Representative of POWERGRID informed that installation of terminal equipment is in progress for OPGW connectivity to Kishanganga.

2.2 Issues in AMC and replacement of existing S900 RTUs

2.2.1 Representative of HVPNL informed that the AMC of S-900 RTUs was valid till July 2018 and requested POWERGRID to extend AMC by one more year. HVPNL also informed that the DPR of SLDC Expansion Project Phase-II through PSDF funding has been approved by WTDs of HVPNL and 14 nos. old S-900 RTU's will be replaced under PSDF funding project.

2.2.2 Representatives of DTL and HPSEB also requested POWERGRID to extend AMC S900 RTUs till the completion of replacement which is in progress.

2.2.3 Representatives of NRLDC informed that many transducers are faulty at many locations where S900 RTUs are installed and requested POWERGRID to arrange for spare transducers where required.

2.2.4 Representative of POWERGRID informed that AMC for S 900 RTUs has been extended for one year with effect from 15th Dec 2018. .

2.2.5 Regarding requirement of spares cards and transducers of S900 RTU issues POWERGRID requested sub-Committee to create a pool in coordination with constituents UPPTCL & RVPNL where old RTUs were already replaced. Further he informed that all necessary transducers required would be replaced in next 30 days. NRLDC requested POWERGRID to procure some transducers and cards to create spare for future requirement also.

POWERGRID agreed to purchase the same in consultation with NRLDC and during AMC of RTUs, same shall be replaced at the earliest.

2.2.6 Replacement of old S900 RTUs

Representative of POWERGRID informed that MoU/Agreement & payment from all relevant constituents against their requirement have been received. POWERGRID also informed that bids have been opened and are in technical evaluation stage and may be placed by 15th Jan 2019 with 18 month completion time schedule. POWERGRID also informed that cabinet will not be replaced.

2.3 Communication issues of NR States

2.3.1 UP communication issues

2.3.1.1 Representative of UPPTCL informed that completion of Azamgarh (400)-Gorakhpur (400 UPPTCL) link, in Central Sector, has been inordinately delayed. Data transmission of many substations have not been transferred to fibre optic system due to incomplete fiber link. POWERGRID informed that both the links i.e. Gorakhpur (UP) – Gorakhpur (PG) and Gorakhpur – Azamgarh has been commissioned and UPPTCL may inform their requirement for configuration of channels for telemetry data/voice.

2.3.1.2 UPPTCL requested POWERGRID to inform the status of procurement of PDH equipment in replacement of Nokia PDH. Representative of POWERGRID informed that replacement of Fujitsu and Nokia communication equipment is covered under reliable communication scheme, though PDH was not envisaged in the scheme but on requirement basis, same shall be covered in the scheme.

UPPTCL is requested to provide the list of location wise PDH requirement for NRPC approval.

2.3.1.3 FRTU for viewing data of UPS & DG set: Representative of UPPTCL informed that it was agreed by POWERGRID in 12th TeST meeting that procurement of FRTU's will be done by POWERGRID along with the procurement of RTU's, the procurement is still pending. Representative of POWERGRID informed that procurement of FRTU's will be done under replacement of S900 RTU package and same was recorded in earlier TeST meetings

2.3.2 HPSEB Communication Related Issues: Representative of HPSEB informed the following Communication related issues

2.3.2.1 Installation of OPGW under Package-I : Under package-I (a), OPGW of about 545.335 Km is to be laid on HPSEBL transmission network and as per LOA, work was to be completed by 31.03.2017, however, as per 13th TeST MoM, it was agreed by POWERGRID that this work shall be executed by December' 2018.

In this context, it is intimated that the teams involved in stringing work of OPGW has been dismantled from HPSEBL site w.e.f. 19.11.2017 and as on date, no stringing work is being carried by the Firm on HPSEBL Transmission network. It is, therefore, requested that OPGW stringing work may be restored immediately so that it could be completed by December, 2018 as decided in 13th TeST meeting. Representative of POWERGRID informed that they can complete all lines of 132KV and stringing on 66KV towers is not possible due to tower bending issue. It was decided that by loose stringing (leaving sufficient loop) tower bending of 66 KV towers can also be resolved. POWERGRID NR-II informed that final status will be decided in meeting scheduled on 20th Dec 2018 at Jammu. Status details of work completed and balance shall be informed by POWERGRID after that meeting .

2.3.2.2 The data of 220KV Giri station is not available at SLDC/ALDC Control Centre, Shimla w.e.f March'2018 due to LILO of 132KV Giri-Solan line. OPGW has been laid between Giri-Solan, Giri-Kalaamb and SDH, PDH along with 48VDCPS have been delivered at said locations under Package-I(a). It is, therefore, requested that installation/SAT activity of OPGW, OLTE equipments along with 48V DCPS at Giri & Solan stations may be carried out at the earliest so that real time data of Giri station could be shifted from PLCC to fibre & routed through Giri-Solan-Totu-Jutogh. HPSEB requested POWERGRID to apprise the latest status and timeline for carrying out above activity.(31.12.18 expected). Representative of POWERGRID informed that communication equipment is ready and port is ready. They can provide the communication channel and arrange testing but shifting data is the responsibility of HPSEB.

2.3.3 DTL Communication issues : Representative of DTL informed the following Communication related issues

- 2.3.3.1 Newly Laid out OPGW from 220KV Mandola – Wazirabad (under system improvement scheme of central /state sector) is out of operation since last two months, thereby reducing system availability. Also, the 400KV Bamnauli-Ballabgarh and Bamnauli – Jhatikara link has not been commissioned. Representative of POWERGRID informed that all works has been completed, DTL agreed on the same.

DTL also requested POWERGRID to urgently get the OPGW repaired / pending work completed. Further, AMC of the OPGW be also urgently processed by PGCIL.

POWERGRID informed that AMC of OPGW laid under recent packages is under warranty period and any fibre cut shall be rectified under existing AMC contract of OPGW with additional charges as per provision of the contract.

- 2.3.3.2 New communication equipment (ECI make) that is supplied under ULDC Scheme has been installed and DTL is in process of shifting of data from the old setup (Fujitsu and Nokia equipment). Representative of POWERGRID informed that DTL may shift their data to ECI equipment, Fujitsu and Nokia equipment may be powered off, if not in service for central sector data and same shall be replaced under reliable scheme. ECI make communication equipment is not available but under new reliable communication package awarded in Nov 2018 to M/s Sterlite they can arrange Tejas communication equipment to DTL by August 2019. DTL agreed for the same. POWERGRID also informed that AMC of ECI make equipment is part of original contract and covers AMC for six (06) years and team is being deployed for maintenance purpose

2.3.3.3 Replacement of diverted Communication eqpts /addl BOQ.

A number of SDH/PDH communication equipments have been diverted / utilized by PGCIL for the project works, from earlier allocated DTL sites, such as 220KV Patparganj / Preet Vihar etc. Plan for replacement / installation at those sites along with the additional approved BOQ for other sites, be provided. POWERGRID agreed for replacement of diverted Communication eqpts /addl BOQ.

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2.3.3.4 Charges for bay extension in Siemens RTU's.

As already requested in previous TeST meetings, Unit charges for extension of 220 / 66 / 33 KV bays in RTU's installed by Siemens under ULDC#2 needs to be provided to the Utilities to enable the proposed bay extension work at various sites. Same has still not been provided. Representative of POWERGRID requested DTL and other constituents to take up additional charges issue directly with M/s Siemens.

2.3.4 HVPNL communication issues

Implementation of MultiSite Configuration between SLDC Panipat and SLDC Shimla:- Representative of HVPNL informed that the implementation of Multisite Configuration between SLDC Panipat and backup SLDC Shimla is pending. Out of total 39 no. Stations, only 14 no. Stations of Shimla end are reporting at SLDC Panipat. Matter may be taken up with M/s Siemens for its early solution. Representative of POWERGRID informed that it may be due to non synchronisation of data base which should be done by HVPNL them selves how ever issue regarding non reporting of data on 101 protocol may be resolved by sending SIEMENS engineer to integrate at least 5 stations at Shimla and integration of other 101 data from stations shall be continued by HVPNL themselves

2.3.5 PSTCL Communication issues

Representative of PSTCL requested POWERGRID to convey the approved integration charges payable to M/s Siemens Ltd for carrying out integration of addition/extension of bays for Siemens RTUs. Representative of POWERGRID requested PSTCL to take up additional charges issue directly with SIEMENS.

2.4 Communication issues of NRLDC

2.4.1 Communication plan for channel redundancy and to back-up NRLDC

Representative of NRLDC informed that the provision of redundant communication was discussed in 8th TeST held on 26th July, 2016, This is to inform that redundant data communication is yet to be ensured at NRLDC after one year of discussion.

Presently only 93 RTU out of 124 are reporting on redundant channel. It is requested to expedite the process of providing redundant channel at the earliest.

However redundant channels provided are also intermittent causing loss of data in real-time. SE(C) NRPC informed that NRPC secretariat constituted a committee with representatives of NRLDC, POWERGRID and NRPC for continuous monitoring of channel redundancy in 10th TeST meeting but progress is very slow and requested POWERGRID to complete the task at the earliest. Representative of POWERGRID informed that redundant channel for PGCIL sub-stations will be provided within one month.

NRLDC also requested NTPC /NHPC to resolve the issue of redundant channels at the earliest. NHPC/NTPC agreed to resolve the issue within 30 days.

Further NRLDC requested NRPC to call a special meeting of IPPs so that redundant channel issue of IPP RTUs can be resolved.

SE(C) NRPC informed that a separate meeting with IPPs on channel redundancy is scheduled in first week of Jan 2019.

2.4.2 Requirement of Ethernet ports at NRLDC

Representative of NRLDC informed that During 12th TeST meeting, Committee has approved for procurement of additional Mux at NRLDC to cater requirement of additional Ethernet port. Representative of POWERGRID informed that additional SDH equipment has been installed at NRLDC and requirement of other constituents have been received and also considering future requirement a package of 1.5 crores with Tejas equipment is in procurement process. Further, NRLDC informed that presently bandwidth in some of the paths/equipment has started choking due to lots of PMU data under WAMS Project/ AGC pilot project, establishment of inter-regional control centres of SCADA and other new schemes. Keeping in view of upcoming schemes, upgradation of NLDC and establishment of REMC control centres and backup control centre at Kolkata for WAMS system, POWERGRID may explore upgradation of communication equipment from STM-16 capacity to STM-64 or adopt other latest technology to cater additional requirement for future projects. POWERGRID agreed on the same and confirm that they will re-look at whole Northern Region network in view of future requirements and submit plan in next meeting for approval.

2.5 Signing of side letters of MoU for AMC:

- 2.5.1 Representative of POWERGRID informed that Side letter of MoU for AMC contract for OPGW was expired on 30.06.2018, POWERGRID has sent side letters to respective constituents for signing of side letter to MOU. Signing of side letters are still pending from DTL, RVPNL, UPPTCL & J&K PDD.

POWERGRID requested DTL, RVPNL, UPPTCL & J&K PDD.to expedite the signing of MoUs immediately otherwise it is difficult to carry out the AMC works without MOU in place.

Powergrid also informed that Side letter of MoU for maintenance of RTUs was sent to all Constituents only BBMB have signed the same till date. All constituents are again requested to send signed copy of side letter on priority so that award of AMC contract for S900 may be finalised after that.

3.0 Issues in Unified Load Dispatch & Communication scheme of NR (Phase-II):

3.1 Requirement of Ethernet ports at NRLDC

Representative of NRLDC informed that during 13th TeST meeting, Committee has approved for procurement of additional Mux at NRLDC to cater requirement of additional Ethernet port.

This issue is covered under item 2.4.2

3.2 DTL SCADA issues (agenda by DTL)

Representative of **DTL** informed the following **SCADA** related issues

3.2.1 Data loss of EDNA from 25-Jun-18 15:00 hrs to 26-jun-18 09:00 hrs.

On 25th June 2018, 18 Hrs of eDNA data was lost due to negligence of Siemens site engineers. Till date we have not received any clarification related to cause of data loss. M/s SIEMENS informed that data loss is due to stoppage of e-DNA service on DS server and they will take care in future. MS, NRPC suggested to take analysis report from M/s Siemens regarding failure of e-DNA service, he also suggested to check Data synchronisation with backup SLDC at Jaipur on regular basis.

3.2.2 Database synchronization problem with multisite.

There are issues in database synchronization with multisite regarding synchronization of IFS database of RRVPNL. Representative of POWERGRID informed that it is necessary to verify data synchronisation from Jaipur end also after completing activity from DTL side by deputing additional man power at Jaipur to ensure successful functioning of multisite. M/s SIEMENS informed that RTU database script was already provided and in case of IFS channel changes shall be carried out manually at respective SLDCs from both sides.

3.2.3 STLF issues

In load error analysis page the current forecast value does not match with any of the forecasted values. POWERGRID agreed to take up the issue with M/s Siemens

3.2.4 Number of open access consumers of more than 10MW load are to be integrated in SCADA of SLDC.

As per open access regulations these consumers are to provide metering data via two channel of communication to SLDC. These consumers may be required to install routers/switches etc at SLDC's communication rooms (space and auxiliary supply shall have to be provided by SLDC) and integrated in Siemens SCADA system. It is understood that Gujarat SLDC is charging these consumers for installing their equipments in SLDC.

The various modes of integration alongwith the safety requirements (firewall etc) and any changes required in SCADA needs to be discussed and some kind of procedure may be formulated for future standardization.

M/s SIEMENS informed that this is not in the scope of the contract and additional requirement of DTL.

- 3.2.5 **Replacement of Old DC Power supplies:** The DC Power supplies, supplied under ULDC Phase-I Project are nearly 18 years old out of which Ascom make chargers are currently under AMC valid till 2020. However, Chhabi make chargers are not covered under any AMC. These chargers have become old and susceptible to frequent break downs and therefore need replacement. There is an option to either replace old charger with new DC Chargers or provide 220 V DC to 48V DC converters which tap 220V DC supply from sub- station DC Supply.

Representative of DTL requested TeST sub-Committee to provide technical reasoning/guidelines(if any) in support of any of the two options above or any other option considered suitable.

Representative of NRLDC informed that battery bank installed at NRLDC is faulty and requested PGCIL to replace the battery bank .

Representative of POWERGRID confirmed that it will be replaced under reliable communication package which covers replacement of ULDC Phase-I equipment.

3.3 UP SCADA issues :Representative of UPPTCL informed the following SCADA related issues

- 3.3.1 **Frequent interruption in data communication /Networking issues:** It has been observed that frequent data interruption for short duration is taking place especially between terminal servers installed at sub LDCs to Backup SLDC/ Main SLDC. Sometimes frequent failure of data reporting from all RTU/SAS to Main /Backup SLDC also takes place and continues until communication cables are taken out from IFS routers /switches and then connected again. It has been discussed in 13th Test meeting and earlier also. In the 13th TeST meeting it was requested by UPPTCL & UPSDLC that services of an external agency in Networking experts may be taken up by M/s Powergrid for sufficient period to study the behavior of UP communication network and remedial measures to be suggested. Formal letter has already been submitted to NRPC in this regard. POWERGRID agreed to take up the issue with M/s Siemens

3.3.2 Short Term Load Forecasting:

M/S Siemens has been told to incorporate following features in STLF but same are yet to be provided

- (i) Manual Execution mode is to be activated by Siemens.
- (ii) Feature for incorporating correction factor is also to be activated.
- (iii) Feature for restricted demand forecast is also to be provided.

M/s SIEMENS informed that STLF application is running successfully in UPPTCL.

3.3.3 EMS tuning : It is affected by frequent outage of WUPPTCL link. POWERGRID agreed to take up the issue with M/s Siemens.

3.3.4 Interruption in publishing of SCADA data on SCADA web server :

M/s SIEMENS informed that script of auto updation of SCADA data was provided but due to heavy traffic some times manual update may be required after restart.

3.3.5 Delay in implementation of various pending SCADA /EMS work by Siemens:

- (i) OTS issues: still unresolved even after taking up this issues in various TeST Meetings as well raising the issue separately also with Siemens/ POWERGRID. M/s SIEMENS informed that due to data mismatch OTS related issues may occur.
- (ii) frequently IMM problem occurs.

POWERGRID agreed to take up the issue with M/s Siemens

3.3.6 Issues raised in 12th TeST meeting regarding total failure of SCADA & EMS on 08-12-2017 are still unresolved. POWERGRID agreed to take up the issue with M/s Siemens

3.4 PSTCL SCADA Issues

3.4.1 Regarding interruption of publishing of SCADA data on SCADA Web Server:

Issue regarding non updation/publishing of SCADA data on Siemens web server is being raised/discussed by State Utilities including NRLDC in various TeST meetings in the past but issue has not been resolved fully till date by M/s Siemens in spite of assurance given by them. As a result, remote user/ Dispatcher has to face a lot inconvenience due to inaccurate real time SCADA data on SCADA website. On dated 31 Aug 18 at time 11:58 Hours, Total Punjab RES generation was showing 465 MW in SCADA, where as in Siemens web server, it was displaying 162 MW only.

PSTCL requested POWERGRID to take up the matter with SIEMENS to get it resolved completely, so that these kind of issues does not happen in future. M/s SIEMENS informed that script of auto updation of SCADA data was provided but due to heavy traffic some times manual update may be required after restart JBOSS service on web server.

3.4.2 Frequent interruption of Interstate Drawl Points: Frequent interruptions in Telemetry data of Interstate Drawl Points (PGCIL, BBMB etc.) has been observed mainly due to issues like fault(s) in Battery Charger & OPGW Breakdown. List of such major incidents happened in the past is attached along with as Annexure-1 for reference please. Due to frequent interruption of telemetry data, dispatcher(s) face major problem in controlling the grid. In addition, mismatch in SEM-SCADA data is a great concern for DisCom(s) also who have to bear financial burden due to UI account.

PSTCL requested POWERGRID to look into the issue & explore the possibility of minimizing such kind of incidents in future as well as to take measures to reduce down time of outage of telemetry data. POWERGRID agreed to take up the issue with M/s Siemens.

3.5 HVPNL SCADA issues

Representative of HVPNL informed the following SCADA related issues

3.5.1 Rollover to IPv6:- In the 12th TeST Meeting, the sub-committee advised that the necessary action regarding migration to IPv6 in compliance to Govt. directions shall be taken. SE (C) NRPC under item 3.2.4 of 13th TeST meeting where NRLDC _ informed that that changes in webserver are required to migrate to IPV6. He suggested that all the utilities should arrange IP from their respective ISP for migration to IPv6. Once the IP is available required c SE (C) requested POWERGRID to take up this issue with SIEMENS for changes in web server. M/s SIEMENS informed that their system will support this feature but with necessary field equipment to be arranged by POWERGRID/HVPNL.

3.5.2 Interruption in publishing of SCADA data on SCADA Web Server:- The publishing of SCADA data on SCADA Web Server gets interrupted many times, resulting into inconvenience to the system user. The interruption in the publishing of SCADA data on SCADA Web Server has occurred many times during past more than four months at SLDC Panipat. In 13th TeST meeting representative of SIEMENS agreed to take action to resolve the problem. M/s Siemens may be asked to check and resolve the issue at the earliest. M/s SIEMENS informed that script of auto updation of SCADA data was provided but due to heavy traffic some times manual update may be required after restart M/s SIEMENS informed that script of auto updation of SCADA data was provided but due to heavy traffic some times manual update may be required after restart JBOSS service on webserver

3.5.3 Non-working / Failure of Haryana SLDC Website:- A no. of instances of non-working of Haryana SLDC Website has occurred in the past few months viz. 04.03.2018, 17.05.2018 and 28.06.2018. The website during its failure has been restored by M/s Siemens in a long span of time. Moreover, the detailed analysis report citing the reason of failures, preventive action taken, any kind of data loss etc. has not been provided by M/s Siemens for any of the instance mentioned above. In 13th TeST meeting representative of SIEMENS agreed to submit detailed

report after detailed analysis. SE (C) requested POWERGRID to take up this issue with SIEMENS. to avoid recurrence of such instances in future.

M/s SIEMENS informed that they are continuously observing the problem after that incident and no reoccurrence happened till date.

3.5.4 EMS Training: - It was decided in the 12th TeST Meeting that POWERGRID shall arrange EMS training from M/s Siemens on behalf of all the NR constituents. The training was conducted from 21.05.2018 to 25.05.2018 by M/s Siemens at SLDC Panipat. But as per the training module finalized by NRPC, STLF (Short Time Load Forecasting) was not covered in the training session which is important from the system operation point of view. Thus the matter may be taken up with NRPC/M/s SIEMENS to cover the pending module & complete the training in all aspects. Member Secretary NRPC informed that STLF (Short Time Load Forecasting) is not a part of EMS application as per specification hence not included in EMS training. However NRPC secretariat is planning to organize training on Load forecasting which is an important SCADA application.

3.5.5 EMS Issues: While carrying out the EMS tuning activity, certain problems/misconceptions are being faced which are not been resolved even with the help / support available from M/s. Siemens Engineers deployed at SLDC, Panipat as they are not conversant with the EMS functionality of the system.

The matter was discussed in the 12th & 13th TeST meeting wherein it was assured by M/s Siemens to deploy suitable manpower, who can help in EMS tuning activity at SLDC Panipat. POWERGRID agreed to take up the issue with M/s Siemens.

M/s Siemens. Informed that there are huge changes in HVPNL but data base was not updated due to which EMS applications are not running successfully and during their visit on 7th Dec 2018 some issues were resolved and explained how to resolve other issues. They are continuously monitoring the issue.

3.5.6 Performance of the Site Engineer deployed by M/s SIEMENS at SLDC Panipat:-

Representative of HVPNL informed that the Software Engineer was deployed without any prior intimation/discussion and consent of HVPNL authorities. Matter was taken up with M/s Siemens and POWERGRID a no. of times regarding this issue and was also deliberated in the 13th TeST Meeting. Despite of this there was no software engineer available at site from 01.06.2018 to 17.06.2018 without any prior intimation to SLDC HVPNL during which many serious issues/problems occurred and none was taken care off by M/s SIEMENS for its early solution. Moreover it is pertinent to mention here that the new Software engineer, deployed by M/s Siemens w.e.f. 18.06.2018 having no knowledge and experience regarding the SCADA System Software and is unable to resolve the issues/events at site. M/s Siemens has been reported a no. of times that the software engineer provided is not conversant with the system and may be replaced with a trained personnel for early redressal of the issues. This is a

matter of great concern and may lead to security issues/system threat & hamper the smooth functioning and healthiness of the system. M/s Siemens Ltd. may be asked to provide the qualified and skilled engineers in accordance with the conditions of the contract to maintain the SCADA/EMS System to the desired level of availability.

Representatives of DTL and other SLDCs supported HVPNL opinion and requested POWERGRID for necessary action in this regard. POWERGRID requested members to forward any communication from states to SIEMENS on above issue so that they can take up this matter with SIEMENS higher authorities.

3.5.7 Cyber Security Audit Compliance:

Every year the cyber security audit is being taken up by the 3rd party vender AKS through M/s SIEMENS. The report is being submitted regarding the same and recommendations are being made by the Audit team. Moreover the new patches that are available must also be installed in the system and the report regarding the same must also be provided by M/s SIEMENS.

M/s SIEMENS informed that cyber security audits dpne as per contract and any patches suggested in the report were updated and detailed report will be submitted for the same at the earliest.

4. Telemetry Related Issues

4.1 Present Status of Telemetry

Representative of NRLDC submitted presentation regarding status of telemetry in Northern region. Some important slides of this presentation are enclosed as Annexure A

4..1.1 Non-Availability / Reliability of Telemetry

Representative of NRLDC informed that at some new stations at 400 kV integrated in the system, though the telemetry integration is ensured before charging the new element, the reliability of telemetry is poor. The reliability of telemetry of the following stations are very poor:

PGCIL			
Parbati-II	Agra South	Harsh Vihar	
Sitarganj	Allahabad 400 KV	Baspa	
Kishanganga	Baglihar*	Mainpuri 765	
Chamera-I	Mathura	Kawai	

Bahadurgarh	Srinagar UK	Vishnu Prayag	
Budhil	Chhabra	Suratgarh	
Malana	Makhu		

*Baghilar yet to be integrated

Member Secretary NRPC noted that responsibility for most of the above stations is with POWERGRID and informed that with new CERC regulation of availability of communication in place it is necessary for POWERGRID to maintain high standards of telemetry for grid security.

POWERGRID and other constituents agreed to take necessary steps for uninterrupted reliable telemetry from all stations and resolution target for restoration of reliability.

4.1.2 **Status telemetry of TCSC / FSC**

Representative of NRLDC informed that even after continuous monitoring and requests by NRLDC to utilities to ensure reliable telemetry at the control centre. it is being observed that FSC/ TCSC status is not available from following locations.

S. No.	Station	Line	FSC Data Status
1	Ballabgarh	Kanpur	Not reporting
2	Bareilly 400	Meerut	Not reporting
3	Lucknow 400	Gorakhpur	Not reporting
4	Mainpuri	Fatehpur	Not reporting
5	Meerut 400	Koteshwar	Not reporting
6	Gorakhpur	Muzaffarpur	Not reporting
7	Unnao	Bareilly (UP)	Not reporting

NRLDC requested Utilities to arrange for integration of telemetry of FSC/TCSC at the earliest. Member Secretary NRPC requested POWERGRID and UPPTCL to take immediate necessary action to resolve the problems.

4.1.3 **Telemetry from Kurukshetra HVDC – as per agreed in the separate meeting**

In addition to this, in meeting held at Kurukshetra, POWERGRID had agreed to provide telemetry of additional data of HVDC as shown below which is still to be completed:

S. No.	Description	Clause in MoM dated 12-07-2018
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1	Extinction angle (<i>inverter and rectifier stations</i>) and Firing angle (<i>inverter and rectifier stations</i>)	17
2	Telemetry of "real-time mode (<i>bi-polar with both DMR, bi-polar with one DMR, etc.</i>) of operation" and "instance of changeover"	20

Representative of POWERGRID informed that there is lukewarm response from GE. MS , NRPC requested POWERGRID to explore with all possible efforts to establish telemetry at the earliest as agreed in 40th TCC & 43rd NRPC meeting.

4.1.4 Telemetry of weather parameter in view of forthcoming winter

NRLDC requested ALL constituents to ensure correct telemetry of weather parameters and submit the report of availability of correct data from weather stations, So that the data from that stations can be used in winter season. Members of all constituents agreed for the same.

4.2 Telemetry of digital status

4.2.1 Telemetry of digital status Agenda by NRLDC)

Representative of NRLDC informed that The importance of correct Digital telemetry was discussed in all the sub-committee meeting and it is observed that there is no improvement in this regard. It was decided in 13th TeST Sub-committee meeting that the constituent will furnish the availability status of 220 kV and above stations and improvement there off.

CERC has given direction for implementation of Fast Regulation Ancillary Service (FRAS) and for implementation of the same, unit wise telemetry of digital status is a strict requirement. Therefore availability of unit wise status must be ensured on reliable basis.

NRLDC requested all members to furnish the status of digital data telemetry of the stations and ensure further improvement of digital telemetry for smooth grid operation.

(Action: All constituents; Time line: 31.12.2018)

4.2.2 Telemetry of digital status

Representative of HVPNL informed that this issue have been discussed with HVPNL TS Wing. However digital status is not correctly reporting due to old equipment i.e. mainly isolators. The CB status is reporting correctly up to 90% approx in 220KV & above Substations.

4.3 Calculation of Actual Drawl in SCADA:

Representative of HVPNL informed the following status.

The SEM and SCADA data for each points are being compared and the points for which % age errors are more than 5 % are reported for correction. The

inaccuracy/mismatch (in SCADA Vs SEM) for the below mentioned points was reported in past months but the problem is yet to be resolved.

- 1 Hisar_PG - 220 KV Fatehabad-1.
- 2 Kurukshetra HVDC_PG – 400/220KV T/F T-1 & T-2
- 3 400KV Dhanonda-Mahendergarh PG Ckt-1

HVPNL requested NRLDC to resolve the problem of SCADA data mismatch with SEM and restore accuracy of telemetry data.

SE(C) NRPC requested HVPNL to submit detailed root cause report of above three stations inline with NRPC approved procedure to analyze reasons for mismatch. MS NRPC requested POWERGRID to take necessary action to resolve above issues at the earliest .

5 Unified Real Time Dynamic State Measurement (URTDSM) Scheme.

5.1 URTDSM Status :-

- 5.1.1 Representative of HVPNL informed that SAT of URTDSM system installed at SLDC Panipat was completed on 16.02.2018 and has already been confirmed to POWERGRID and M/s GE India Ltd along with certain observations. In accordance with the above, the GSAVT period of 1000 hrs will have to be completed on 29.03.2018. But during SAVT period, URTDSM system failure occurred on dated 28.03.18. Matter has been already taken up with M/s PGCIL & M/s GE India Ltd. to submit the detailed report regarding failure of URTDSM system, but nothing has been received in this regard. Thus repeated SAVT may be carried out on account of the system failure during SAVT period. In addition, out of the total 9 no. PMUs installed at PTPS, only 2 no. PMUs are reporting at SLDC. Moreover the status regarding shifting of 3 Nos. PMU's from PTPS to DCRTTP may be intimated. Matter needs to be taken up with the concerned. POWERGRID informed that letter for failure of URTDSM system will be shared with HVPNL and for shifting of 3 Nos. PMU's from PTPS to DCRTTP has been completed and installation of PMUs at DCRTTP will commence within 10 days after commissioning of Pragati Power PMUs which is under installation stage.

5.1.2 Installation of PMU:-

Representative of HVPNL informed that site survey was done by M/s GE at 220KV DCRTTP Switchyard for the re-installation of PMU. Now the dismantling of PMU from PTPS 1 to 4 and installation of PMU pending on part of M/s Powergrid.

- . 5.1.3 Representative of POWERGRID informed that shifting of 3 Nos. PMU's from PTPS to DCRTTP has been completed and installation of PMUs at DCRTTP will commence within 10 days after commissioning of Pragati Power PMUs which is under installation stage.

Action; POWERGRID; Time line: 31st Dec 2018)

5.2 UP URTDSM issues:

5.2.1 Representative of UPPTCL informed that Khara PMU not reporting, PMU reporting from Fiber Home become intermittent. POWERGRID informed that as such there is no communication issue at khara, however will send team to identify the issue. POWERGRID further, informed that due to fire at Obra-B, all cable (CT/PT/DI) of PMU panel and associated optical cable has been burnt and data reporting has stopped since 2 months. MS, NRPC informed UPPTCL to take up the matter with UPUUNL to provide cables for re-commissioning of PMUs at Obra

5.2.2 No site engineer is available :

Representative of DTL informed that no site engineer is available for monitoring / trouble shooting of the installed URTDSM system at SLDC, since last two months. POWERGRID agreed to take necessary action .

(Action; POWERGRID; Time line: Dec 2018)

5.2.3 Unavailability of PMU Data

Representative of **PSTCL informed that** PMU data of Guru Gobind Singh Super Thermal Plant(GGSSTP),Ropar is not available till date at Punjab SLDC, although it was assured by PGCIL that said issue shall be resolved during SAVT

PSTCL requested POWERGRID to do the needful in this regard & to intimate the tentative date of availability of PMU data of GGSSTP,Ropar

POWERGRID informed that PMU data for Guru Gobind Singh Super Thermal Plant(GGSSTP) and Ropar shall be started after commissioning of OPGW and communication equipment under additional requirement scheme. Progressively commissioning target Mar/ June' 2019.

(Action; POWERGRID; Time line: Mar/ June' 2019)

6 OTHER ISSUES

6.1 Frequent Non- availability of Siemens Site Engineer:

This issue was covered under item 3.5.6

6.2 Status of revised LOA of AMC of ULDC phase II according to GST:

Representative of DTL requested POWERGRID regarding status of ULDC II SIEMENS contract amendment In line with point no. 3.4.4 of 13th TeST sub-

committee MOM. Representative from POWERGRID informed that contract amendment will be issued by the end of Dec-18 to facilitate payment as per GST.

6.3 DISPOSAL OF OLD AND OBSOLETE SCADA EQUIPMENT OF ULDC-I SCHEME:

6.3.1 Representative of **HPSEB** informed that the recovery charges against ULDC-I scheme was completed during July'2017 but communication regarding disposal of old & obsolete equipment's under said scheme is still awaited from M/s POWERGRID. POWERGRID informed that letter has been issued and they will provide book value required for disposal of ULDC Phase-I equipments.

6.3.2 In the 12th TeST & 13th TeST Meeting, representative of POWERGRID informed that the final payment from the constituents is yet to be received. Once the payment is received, POWERGRID would issue the letter confirming the disposal of the old and obsolete equipments installed under ULDC Phase-1. Representative of **HVPNL** informed that confirmation in this regard has not received till date. POWERGRID informed that letter has been issued for disposal of ULDC Phase-I equipment.

6.3.3 Representative of POWERGRID informed that obsolete equipment of ULDC Phase I is now is the property of the respective constituents and same may be disposed .

6.3.4 MS NRPC requested constituents to keep some of the important cards and S 900 transducers with them as NR pool to help requirement of other constituents till the complete replacement of S 900 RTUs in northern region.

6.4 Survey off of Old Assets under ULDC Phase-I& Dismantling of Microwave Tower

This issue is covered under item 6.3.

6.5 Delay in payment:

Representative of HVPNL informed that it has been made all the pending payments to M/s POWERGRID i.e. amount 22,07,071/- from May-18 to July-18. HVPNL has already informed to M/s Powergrid for the integration of 23 no. C-264 RTUs and informed that no maintenance was done for these 23 no. S-900 RTU sites. No pending payment is there towards HVPNL as of now. POWERGRID informed that approx. Rs 7-8 lacs has been deducted by HVPNL and needs to be paid to POWERGRID .SE (C) requested both POWERGRID and HVPNL to verify and resolve mutually in a separate meeting.

(Action; HVPNL, POWERGRID; Time line: 31.12.2018)

6.6 Pending payment of AMC from PTCUL

Representative of NRLDC informed that PTCUL was repeatedly requested by NRLDC for reconciliation and payment of pending invoice of AMC of old Alstom System for the year 2007-2012: Amount pending as per NRLDC is Rs.8,35,384/- Part payment was released by PTCUL after first round of reconciliation on

October 2017 after Special meeting between PTCUL, NRLDC & NRPC at Dehradun on 31.08.2017

Letters from NRLDC dated 19th July 2018 & 21st September 2018 requested PTCUL to release pending payment. Non reconciliation is resulting in outstanding payment by PTCUL in the of accounts book and Audit observations. AMC project with erstwhile ALSTOM presently M/s GE is still open due to non-payment. NRLDC requested PTCUL to release of payment and Project closing Representative of PTCUL informed that same will be released after reconciliation between NRLDC and PTCUL. NRLDC requested PTCUL to arrange for meeting at the earliest.

(Action; PTCUL, NRLDC; Time line: 31.12.2018)

6.7 Delay in Payment to POWERGRID

Representative of POWERGREID informed that POWERGRID is providing consultancy services on RTU/APS/Wideband/OPGW maintenance to constituents on overhead charges basis as per MOU signed with respective Constituents. Constituents are paying on quarterly or yearly basis with advance payment, however even advance payments are being released on delay of 5-6 months and in some cases the delay is of up to one and half year which is not acceptable and POWERGRID have no other option but to deduct the overhead charges from advance 1% deposited with it.

Outstanding payment:

1. DTL – Rs. 1.8 Lac (OPGW)
2. J&K PDD – Rs 23.71 Lac (APS, OPGW, RTU, wideband & Insurance)
3. PTCUL – Rs 8.24 Lac (wideband, APS, OPGW & RTU)
4. UPPTCL – Rs 82 Lac (APS, RTU, OPGW, wideband & Insurance)
5. HVPNL – Rs 8 Lac short payment (RTU, Insurance, OPGW, APS & wideband equipment)

Above outstanding amounts are pending since long back and POWERGRID is regularly pursuing the case with respective Constituents however settlement of payment issue was not closed till date even repeated reminders. Now POWERGRID is going to stop AMC works for UPPTCL, PTCUL and J&K PDD where no issue has been identified for delay of payment. Revised MOU side letters in line with GST clause has been sent to Constituents for signing to avoid any delay in payment on account of taxes.

Representatives of above consultants agreed to take necessary action for early release of above pending payments.

(Action; UPPTCL, PTCUL and J&K; Time line: 31.12.2018)

6.8 Pending TDS:

Representative of POWERGRID requested all Constituents to submit Quarterly TDS certificate in time against payment made to POWERGRID for Consultancy / AMC services which is required to match the books of Accounts.

He further informed that POWERGRID is not taking any overhead charges and it was also objected by auditors several times for this type of works without any overhead charges and delay in payment. In view of non-payment of insurance charges, all constituents are requested to do their insurance at their own.

(Action; All Constituents; Time line: 31.12.2018)

6.9 Maintaining of temperature at control centres:

Representative of POWERGREID informed that issue of maintaining the temperature at 27 Degree Celsius in Communication, Server room, Battery room, adequate numbers of Air conditioners was discussed in 13th TeST meeting and 39th TCC & 43rd NRPC meeting. He further informed that it is necessary to maintain temperature at 27 Degree to prevent Auto shutdown SCADA/URTDMS servers and loss of data due to over temperature (set at 33 Degree), SE(C) NRPC requested all constituents to maintain standard AC temperature, specially J&K PDD where repeated incidents of shutdown of communication equipment & SCADA/EMS services reported at Jammu control centre. Representatives of J&K and other constituents acknowledged the issue and agreed to take necessary action .

(Action; All Constituents; Time line: 31.12.2018)

List of participants in the 13th meeting of Telecommunication, SCADA and Telemetry sub-committee held on 17.12.2018 at NRPC New Delhi

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