## North Eastern Regional Power Committee

## <u>Agenda</u>

## For

## 14<sup>th</sup> NETeST Sub-Committee Meeting

Time of meeting : 14:00 Hrs.

Date of meeting : 11<sup>th</sup> July, 2019 (Thursday)

Venue : "Hotel Nandan", Guwahati.

## A. CONFIRMATION OF MINUTES

## CONFIRMATION OF MINUTES OF 13th NETeST Meeting held on 09.04.2019.

The minutes of 13<sup>th</sup> NETeST Meeting held on 9<sup>th</sup> April, 2019 at Guwahati were circulated by NERPC vide letter No. NERPC/SE(O)/TeST/2018/ dated 14<sup>th</sup> May, 2019.

The Sub-committee may confirm the minutes of 13<sup>th</sup> NETeST meeting of NERPC as no comments/observations were received from the constituents.

#### ITEMS FOR DISCUSSION

#### A.1 <u>Status of SLDCs in NER:</u>

SN	Utility	Status as informed in 13 <sup>th</sup> NETeST	Latest status
UPG	RADATION OF SLDC	ČS –	
1	Assam	Completed in all respects.	
2	Tripura	Completed in all respects.	
3	Meghalaya	Completed in all respects.	
4	NERLDC	Completed in all respects.	
NEW	/ SLDCs		
5	Manipur	Completed in all respects.	
6	Nagaland	RTUs installed but non-reporting.	
7	Mizoram	RTUs installed but non-reporting.	
8	Ar. Pradesh	RTUs installed but non-reporting.	
9	Backup NERLDC	Completed in all respects.	

Any pending points may be discussed

## Members may kindly intimate the status.

## A.2 Status of FO works under different projects:

Latest status as per 13<sup>th</sup> NETeST:

Name of the Project	Latest status may be intimated
	M/s KEC Handing over MOM signed with AEGCL
	A. M/s TENDOT
	<b>a</b> . WIP in all 14 links
	<b>b.</b> Progress affected due to ROW.
	c. Expected completion March'19.
	NOTE:
MW Vacation & OPGW Project	Arunachal Pradesh may please provide new tower route schedule & readiness for LILO part (Lekhi connectivity from existing Nirjuli-Ranganadi line). The schedule completion 2 months from receipt of new tower route schedule.
	Railway diversion of POWERGRID also suffering due to ROW in 3 locations to be resolved by Arunachal Pradesh.
	NERTS replied that Ranganadi is presently reporting to NERLDC by commissioning of OPGW via part of Ranganadi-Balipara & part of Nirjuli- Gohpur up to Gohpur (Ranganadi-Ghpur link) & then via Gohpur-Balipara in 18-19.01.2019. ROW issue in Nirjuli-Ranganadi(LILO at Leikhi & Parey) is yet to be sorted.
	Action: DoP Ar. Pradesh Action: NERPC
	TRIPURA
	<ul> <li>253.7 of 320.319 Km Completed</li> </ul>
	<ul> <li>63.522 km (02 links viz. SM Nagar~Rokhia &amp; SM Nagar~Monarchak, line is under construction) front not available due to construction of 2 lines by TSECL</li> </ul>
	Completion Status :
	NOTE1: Silchar-Pallatana OPGW work under halt due to objection of NETC & OTPC for transient lightning related fault in rainy season.

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NER FO Expansion/Additional requirement of OPGW	NOTE:2: Manipur: Supply – Complete, Erection: 160/365 km, Team is mobilized by M/s TCIL. Target completion: July-19. Battery bank/DCPS under NERFO- Supplied
	15 Location Completed Except Umtru Power Station. MePTCL informed that there is space constraint in the present PLCC room. A separate room will be needed to accommodate the equipments under this project.
Upgradation of ULDC FO node	NERTS informed that official from NERTS had visited for collection of card and found there is still no space. Without the same, project cannot be completed. And so help from MEPTCL/G division is requested.
	2nd visit made. Report submitted to Director, Generation-MePGCL. Further space inside UMTRU is to be cleaned & AC system not working.

#### NERTS may discuss the present status:

Critical Issues against project implementation may be discussed

Name of the Project	Critical Issue
Upgradation of ULDC FO Node	Space constraint in Umtru, non-availability of fiber in Misa-Dimapur-Imphal (old OPGW) & Space in Kohima
MW Vacation	ROW issue in Nirjuli-Ranganadi Line, non readiness of two tower peak in DoP AP transmission Line for LILO to Leikhi. Stoppage of work due to ROW/Paddy field etc.

NERTS may please submit the latest status link-wise under various FO projects

Members may please discuss.

#### B. NEW ITEMS

#### B.1 Strengthening of PLCC System by NER States:

As per discussion in previous meetings the following were supposed to be completed by Jan'19:

- a. 18<sup>th</sup> TCC/RPC consolidated network of OPGW.
- **b.** NERPSIP communication details.
- **c.** Assam, Manipur, Meghalaya communication map submitted by the respective utilities.

The updated communication map of NER was prepared and shown by NERLDC, POSOCO. The map is considered as the final-map and new addition may be added as per inputs from utilities. The map shows that dual-channel for tail-end stations have not been planned. The Map is attached as **Annexure B.1**.

The constituents of NER shall submit suggestions/comments on the communication map for tail-end station.

#### Members may please discuss.

## B.2 Improvement of data availability of NER:

As per IEGC 4.6.2, all users shall ensure telemeter power system parameters to RLDC. The present level of data availability of NER grid is as tabled in the **Annexure B.2**, which is less than 50% in the region.

- 1) NERPC should give ultimatum to SLDCs of Nagaland and AP for not acting on the issues and also matter should be conveyed to respective govt.
- 2) NHPC to confirm that RTU/Gateway with min. 4 ports are included in the tender or not. As per the 13th NETeST, the order was to be placed by Aug'19. The rectification of data from old S900 RTU was to be corrected prior to it with one bay on each working day from 15th April 2019 onwards. No progress has been shown by NHPC in this regard.
- 3) Joint team from NERTS, NERLDC and NEEPCO was scheduled to visit Kopili and Khandong on 23-24th April 2019, NERLDC and NERTS team were ready, but no further plan for invitation was made by NEEPCO. A plan should be conveyed by NEEPCO at the earliest.

# All constituents with detailed action plan for ensuring 100% reliable & redundant data to NERLDC

#### NERLDC may please deliberate

## B.3 Status of URTDSM

Angle error and rectification: Matrix formed by NERLDC and presented in OCC meeting. Study group not yet formed.

<u>Flexibility of trend window TDF UI and ETV (5 min & 15 min)</u>: NERTS informed the features are as per approved technical specifications. Though NERTS will explore the possibilities of changing features, if implemented in other RLDCs. NERTS will revert with the details before next NeTEST meeting.

Status of Loading of Power System Analysis package by IIT Mumbai: Loading of PSA by IIT-Bombay was scheduled by May'19, but not done yet. A rescheduled date of 8th July 2019 is given by NERTS.

## NERTS, NERLDC may please intimate the latest status

## B.4 <u>GPRS connectivity for Substations and Leased line for SLDC:</u>

In 13<sup>th</sup> NETeST meeting the following timeline(s) were agreed to by the different utilities:

Name of utility	GPRS SIM/Broadband	Lease Line connectivity at SLDC	
TSECL	Balance SIMs yet to be received	Not Available.	
MSPCL	All stations are reporting.	Available	
DoP Nagaland	4stations reporting. DoP to take up with GE for Nagarjan. Further DOP to take up with Service provider & BSNL higher authority for proper 3G network.	Not Available	
P&ED Mizoram	3G SIM & Internet link with static IP is yet to be provided.	Not Available	

TSECL/MSPCL/DoP Nagaland/P&ED Mizoram/NERTS may please inform the latest status.

#### B.5 <u>Selected cases of sub-stations for rectification of corresponding</u> <u>data/communication related issues:</u>

#### a) NEEPCO:

- i. Ranganadi: PLCC link disconnected without prior intimation after commissioning of FO link. The PLCC should have acted as a back-up link for the data from the sub-station
- **ii. Kathalguri:** Single-channel is available. Phone is not working causing inability of contact the sub-station.
- **iii. Doyang:** Phone not working as Doyang sub-station is not able to hear voice on Orange-VoIP phone. Orange has mentioned that there is no problem at its end.
- **iv. Pare:** No VoIP facility available in the sub-station. The communication is being done on BSNL/Mobile phones.

NEEPCO may address the different issues of each station on priority with strict deadline.

#### NEEPCO may please intimate the status.

**b) NTPC BgTPP:** Only one (01) VoIP phone is available and that too in "Switchyard Control Room". No phone is available in the Unit Control Room (03 in nos.). NTPC may provide dedicated VoIP phones in all Unit Control Rooms on priority with strict deadline.

#### NTPC may please intimate the status.

**c) POWERGRID** Salakati: The data of the sub-station takes a lot of time in pooling (happens automatically after every communication failure and restoration). It generally takes about 1 hr. for this station. NERTS, POWERGRID may address the issue by finding and resolving the issue of slow pooling on priority with strict deadline.

#### NERLDC may please intimate the status.

**d) OPTC Palatana:** Single Channel is available over PLCC. The constituent is not cooperative in case of any data disruption. OTPC to ensure dual-channel on priority with strict deadline.

### OTPC may please intimate the status.

e) NHPC Loktak: New RTU/Gateway was under procurement process but its status of completion schedule is not known yet. NHPC to elaborate the status of the procurement and installation of new RTU/Gateway in the sub-station.

### NHPC may please intimate the status.

**f) Tripura: i. General Issue:** Data of all the sub-stations (especially southern Tripura) goes OUT in case of any grid failure. All data is being received through Agartala-Rokhia line in which any tripping leads to high noise in PLCC leading to data interruption.

Tripura to elaborate on mitigation plan, if any, on the matter of non-availability of data in case of any grid failure. Also, the rectification plan for high noise in PLCC corresponding to Agartala-Rokhia line in case of tripping needs to be explained and implemented at the earliest.

**ii. Surjamani Nagar:** Battery bank issues are being faced in the sub-station. All data goes OUT in case of any power supply failure.

Action: The battery banks related issues to be resolved and a scheduled deadline to be given for it with strict compliance.

## Tripura may please intimate the status.

g) Meghalaya Killing: PLCC issues in the sub-station due to which the data is not stable.

The reason of PLCC related issues needs to be elaborated and resolved at the earliest with strict deadline to be given in the NETeST forum.

## MePTCL may please intimate the status.

## h) Mizoram:

**i. Kolasib:** The station has been handed over by POWERGRID to Mizoram State Govt. Hence, the data is not reporting at present.

The reason of non-reporting of data needs to be elaborated and resolved at the earliest with strict deadline to be given in the NETeST forum.

ii. Serchhip (Bukpoi): Station not modeled in SCADA database by Mizoram

The sub-station needs to be modelled at the earliest by SLDC and corresponding details needs to be conveyed to NERLDC for corresponding inclusion in database at its end. A strict deadline to be given in the NETeST forum for completion.

iii. Lunglei (Khawira): Station not modeled in SCADA database by Mizoram

The sub-station needs to be modelled at the earliest by SLDC and corresponding details needs to be conveyed to NERLDC for corresponding inclusion in database at its end. A strict deadline to be given in the NETeST forum for completion.

## DoP Mizoram may please intimate the status.

## B.6 Status of pilot VSAT project:

NERLDC discussed detailed plan for execution of VSAT pilot project in 12th NETeST meeting, and also presented quotation for the pilot project. In 154th OCC, forum decided all the constituents would share the cost. Further, Brynihat S/s was identified as the location for pilot project.

NERLDC requested NERPC to make consensus and gather purview of constituents in implementation and cost-sharing of VSAT pilot project.

## Members may please discuss.

## B.7 Drawal points data availability:

In 13<sup>th</sup> NETeST meeting, NERLDC presented the latest status of drawal points data availability). The forum noted the alarmingly high non-reporting RTUs of Ar. Pradesh, Mizoram, Nagaland and Tripura. Members requested NERPC to write to the higher authorities of the respective organizations apprising them of the indirect loss (by way of DSM 4th amendment) due to non-reporting of RTUs to the SLDCs.

## NERLDC and NERPC may please intimate the status.

## B.8 VSAT For Roing Tezu Namsai:

This is in line with discussion in 9<sup>th</sup> NETEST. POWERGRID has taken up a proposal based on VSAT technology (The DPR is attached as ref. Annexure-PGCI VSAT-based on i-direct technology with extended C-Band in compliance with TS as recommended by CEA 's draft technical standard of communication system. Earlier cost is now reduced and revised cost is apx. 54,653,880.00 for 5 years. The same will not be taken from PSDF and proposed to be invested by POWERGRID and be recovered on cost plus basis on POC from tariff.

The 13<sup>th</sup> NETeST forum decided the following:

- By April'2019 demo date to be finalised
- By May'19 demo to be completed
- If demo successful then order to be placed by June'19

• Prior to placing of order exact bandwidth would be decided in the corresponding NETeST meeting.

## NERTS may please intimate the status.

## B.9: Readiness for supply of CFEs in Badarpur (2<sup>nd</sup> TS Node)

Supply & installation of additional CFEs in Badarpur has been taken up by NERLDC. Accordingly channel routing & requirement for data reporting via Misa & Badarpur (Back up RLDC &RLDC) may be proposed by NERLDC and same link/channel plan is to be approved by CTU LD&C so that additional number of PDH cards V.24 as required Misa & Badarpur may be taken care(If required would additionally be procured).

Links from Badarpur & Misa already provided up to NERLDC in last Aug18. However, Onward 2nos. Links from Badarpur & Misa up to Back Up NERLDC will be taken from POWERTEL on add cost basis once Terminal servers are in place, channels re-routing is approved and requisite number of PDH cards are procured.

In the 13<sup>th</sup> NETeST forum, NERLDC informed that the status would be intimated in the next NETeST meeting after discussion with GE. NERLDC requested NERTS to submit channel re-routing and also to procure requisite nos. of PDH cards.

## NERTS may please intimate the status.

## B.10. Data validation status of all PGCIL owned substations:

The database validation (**Annexure-B.10**) of POWERGRID owned sub-stations in NER has been completed from POSOCO end and the list of addresses has been shared with NERTS, POWERGRID.

NERTS, POWERGRID has not provided status of possibility of rectifying 9 out of 23 stations by deputing NERTS/OEM Engineers. The NERTS/NE-RTAMC to validate data at its end. The LoAs by NERTS to OEM for database modification at site was scheduled to be issued by 01st week of Jun'19 (with completion of works till Jul'19) and its status needs to be conveyed by NERTS, POWERGRID.

## NERTS / NERLDC may please intimate the status.

## B.11. Data validation status of all stations of Assam:

The database validation from POSOCO and Assam end has been completed. The corresponding data validation table can be referred as **Annexure-B.11**.

The corrective actions for rectification to be done by APGCL and AEGCL and corresponding deadline to be conveyed and the status of rectification of data related issues as highlighted in the Validation-List with corresponding deadlines needs to be elaborated.

## APGCL & AEGCL may please intimate the status.

## B.12. Data validation status of all stations of Meghalaya:

The database validation from POSOCO and Meghalaya end has been completed. The corresponding data validation table can be referred as **Annexure-B.12**.

The corrective actions for rectification to be done by MePTCL corresponding deadline to be conveyed and the status of rectification of data related issues as highlighted in the Validation-List with corresponding deadlines needs to be elaborated.

#### MePTCL may please intimate the status.

### B13. <u>Schedule for completion of FO projects under execution</u>:

In the 13th NETeST meeting, NERTS informed the forum that completion of FO Expansion Project remains same as was intimated in 19th NERPC meeting(July19). However, in some critical links(4links), it may extend up to Dec19.

A committee comprising of NERPC, NERTS and NERLDC will review the status of link in 2nd week of May'19. NERLDC requested for senior level participation of the meeting and if possible the senior level representative of respective contractors.

A meeting on the above referred matter has been done between NERTS, POWERGRID and NERLDC, POSOCO on 18-06-2019. The list of undergoing FO projects can be referred from **Annexure-B.13**.

Review of link status from Joint committee of NERPC, NERTS and NERLDC was scheduled to be done in 2nd week of May'19 but it has not been done yet. NERPC may please re-schedule it.

#### Members may please discuss.

#### B14. Shut Down Procedure for Optical Links:

The procedure was formulated by NERLDC and it was decided that the same procedure will be followed by all utilities of NER till any new procedure is approved. But the procedure is not being followed by utilities and it is found that the shut-down for Optical-links is being taken without consent OR just intimating by sending an e-mail to NERLDC.

#### Members may please discuss.

#### B.15. <u>Dual channel availability for reliable and redundant communication system</u> <u>in NER:</u>

As per section 10 of CERC communication regulations, 2017 "all users of CTU, NLDC, RLDCs, SLDCs, STUs shall maintain the communication channel availability at 99.9% annually: Provided that with back up communication system, the availability of communication system should be 100%". As such to improve the reliability of the communication system it is required to establish dual channel as a part of back up communication system. Central sector stations provide dual channel for respective stations.

In the 13th NETeST meeting, NERTS informed that dual channel for all the stations will be made available as the FO projects completes, by July'19.

NERTS to update the dual-channel reporting considering the completion of FO projects by Jul'19. Dual-channels are required at both Shillong and Guwahati

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premises of NERLDC, POSOCO. The solution to matter that current RTUs have 2-ports but the requirement will be fulfilled by 4-ports needs to be discussed.

Members may please discuss.

#### B16. Long outage of RTU data:

As per 14.ii of Communication regulation(CERC), May'17 the Data restoration procedure was to be made by CTU, POWERGRID.

#### NERTS may please intimate the status.

#### B.17.<u>Standard procedure to exchange the information regarding the SCADA</u> <u>database between SLDC and NERLDC.</u>

Mismatch in SCADA database between SLDCs and NERLDC is affecting the availability of telemetry at NERLDC. As data is exchanged between SLDCs and NERLDC over ICCP, which needs synchronised database between the both the control centres. As a standard procedure followed at NERLDC, NERLDC apprise about any changes in NERLDC SCADA to NLDC within a week of the implementation of changes. Action: NERLDC suggest forum to follow the same practice in order to mismatch in database, which will help in increase in telemetry availability of the region.

In the 13th NETeST meeting, the forum requested all the SLDCs and NERLDC to maintain their databases in sync and inform in case of any changes.

#### Members may please discuss.

#### B.18. Establishment of Link between Badarpur to Backup Guwahati and Misa to Backup Guwahati(Earlier agenda B.9):

As terminal server is installed at Misa and terminal server will be installed at Badarpur, NERLDC request NERTS to establish following links:

a. Misa to Guwahati

b. Badarpur to Guwahati .

In the 13th NETeST meeting, NERTS informed that NERLDC may kindly install the terminal server and intimate. Within 20 days of same, Links will be provided.

NERLDC may please intimate the status.

# B.19. <u>The time line for OPGW connectivity to the following Power Stations of NEEPCO:</u>

i) AGBP ii) DHEP iii) PaHEP In the 13th NETeST meeting, NERTS informed the forum that the OPGW connectivity for the above stations are covered under NER-FO project and timeline(s) are as follows: i) AGBP - July'19 ii) DHEP - July'19 iii) PaHEP - Dec'19.

Members may please discuss.

#### B.20. <u>Utilities executing regional projects to submit monthly progress report to</u> <u>NERLDC/NERPC:</u>

The progress report is not getting shared with NERLDC for informational purposes. NERPC may also elaborate on the status of receipt of progress report at its end.

Members may please discuss.

#### B.21. <u>Establishment of State of the Art U-NMS System for Centralized</u> <u>Supervision for ISTS and State Utility Communication Network in a</u> <u>unified manner:</u>

CERC notified Communication Regulation in May'17 and it envisages Centralized Supervision System for ISTS Communication. As per the regulation clause:

## Quote:

OBJECTIVE: These regulations provide for planning, implementation, operation and maintenance and up-gradation of reliable communication system for all communication requirements including exchange of data for integrated operation of National Grid.

5. SCOPE and APPLICABILITY:

(i) These regulations shall apply to the communication infrastructure to be used for data communication and tele -protection for the power system at National, Regional and inter-State level and shall also include the power system at the State level till appropriate regulation on Communication is framed by the respective State Electricity Regulatory Commissions.

(ii) All Users, SLDCs, RLDCs, NLDC, CEA, CTU, STUs, RPCs, REMC, FSP and Power Exchanges shall abide by the principles and procedure as applicable to them in accordance with these regulations.

6. NODAL AGENCY:

(i) The nodal agency for planning, and coordination for development of communication system for inter-State transmission system user shall be the Central Transmission Utility.

(ii) The nodal agency for planning, and coordination for development of communication system for intra - State transmission system user shall be the State Transmission Utility.

(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.

#### Unquote

Further, in line with regulation provisions of centralized supervision for quick fault detection and restoration of communication network of ISTS and all other Utility by integrating its NMS with other users NMS has been kept in the documents of Technical standard & Manual of Communication Planning Criteria being finalized by CEA. In is addition to this guideline on availability of Communication system for ISTS has been submitted to CERC by NPC for which centralized U-NMS considered essential.

Accordingly, CTU is to implement State of the Art Unified Network Management System (U-NMS) in a Control Center environment at National/Regional level.

The establishment of U-NMS is proposed to be taken up in a unified manner for implementing centralized supervision of communication Network for transmission system of Cross Border, Inter Regional, Inter-State and Intra-State System.

The proposed U-NMS shall acquire data directly from existing NMS of ISTS and State Utility and also from nodes not integrated with existing NMS for all ISTS and all other Utility communication links. The U-NMS will acquire information of communication network of ISTS, State Utility and cross Border communication system. The U-NMS application shall facilitate for controlling, managing, operation, fault detection and restoration and maintenance of ISTS and State communication System.

It will be possible to integrate different make NMS and Network Element with proposed U-NMS. (In U-NMS adequate provision shall be made to integrate upcoming nodes by having sufficient capacity i.e. 200%).

The proposed U-NMS to be deployed for NLDC, RLDCs and SLDCs to manage National, Regional and State level Communication System.

U-NMS Configuration considered for NLDC & RLDCs shall consist of Servers, Storage Devices, VPS, Switches, Routers, Firewall, Remote workstations etc. in dual LAN in Main (High Availability-HA) and Backup configuration to manage ISTS regional, interregional and Cross Border communication links.

(Fig: 1 &3- Typical RLDC Architecture & RLDC/ NLDC CC Configuration) U-NMS Configuration for SLDCs shall consist of VPS, Remote workstations, Printer, Furniture etc. are considered with rights to access servers of respective RLDCs to manage their respective Communication Network.

(Fig: 2 &4- Typical SLDC Architecture & CC Configuration)

Following functions (Service Assurance, Service Fulfillment, Web Consoles, Ticketing etc.) are considered in the proposed U-NMS. (Applications/ Functions may vary at NLDC/RLDCs/ SLDCs- depending upon the Operational / Administrative Requirements):

U-NMS PROJECT PROPOSAL:

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- 1) Control Centre at NLDC
- 2) Control Centre at RLDCs
- 3) Workstation based Control Centre at SLDCs

Estimated cost- Rs. 600 Cr. (excluding AMC cost and Civil Works) with implementation Time (from date of Investment Approval): 2 Years (24 months)

The scheme shall be implemented by POWERGRID on tariff route basis and investment to be recovered as per CERC notification.

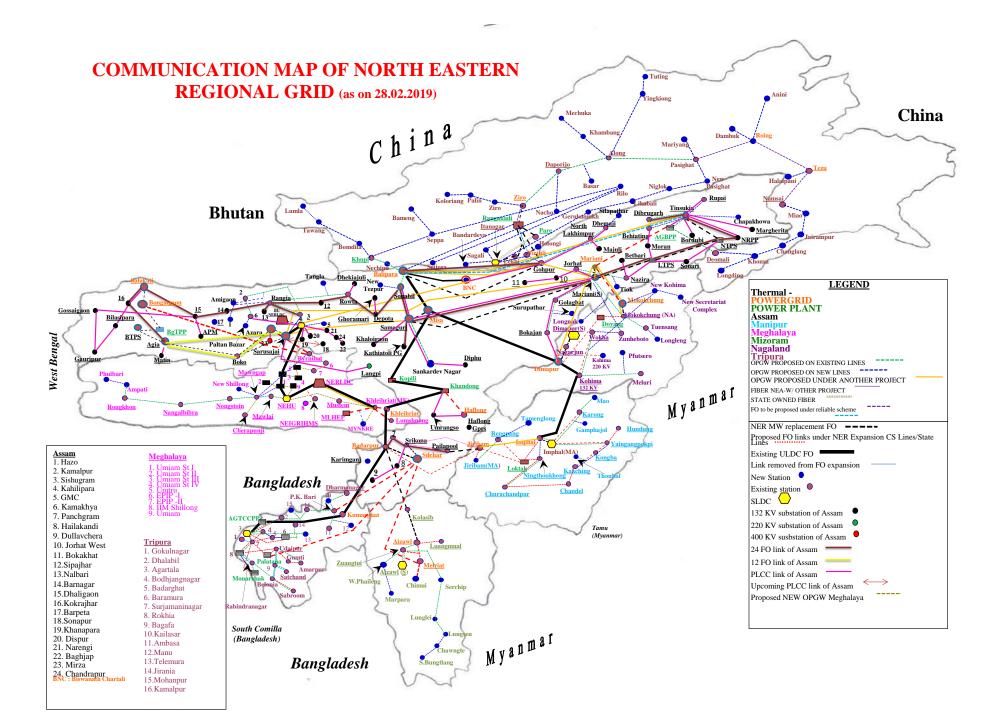
#### Members may please discuss.

#### Any other item:

#### Date and Venue of next NETeST:

It is proposed to hold the 15<sup>th</sup> NETeST meeting of NERPC on second week of August 2019. The date & exact venue will be intimated in due course.

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#### Annexure 1

## Telemetry Availability Status at NERLDC from Constituents (as on 03-07-2019):

Sl. No.	Name of the Constituents	Total Analogue Data points	Total Digital Data points	Total Data Points	Analogue Data points Reporting	Digital Data Points Reporting	Total Report ing	Total Percentage of data Availability
1	Arunachal Pradesh	108	150	258	10	12	22	8.52%
2	Assam	1337	1954	3291	321	481	802	24.37%
3	Manipur	180	255	435	82	147	229	52.64%
4	Meghalaya	409	386	795	189	48	237	29.81%
5	Mizoram	71	50	121	12	12	24	18.60%
6	Nagaland	237	270	507	24	18	42	8.28%
7	Tripura	524	715	1239	147	143	290	23.41%
8	PGCIL	568	1145	1713	468	936	1404	81.96%
9	NEEPCO	205	295	500	172	277	449	89.8%
10	NTPC	28	53	81	28	53	81	100%
11	OTPC	41	78	119	41	78	119	100%
12	NHPC	20	36	56	17	29	85	82.14%
	NER	3708	5359	9067	1494	2205	3699	40.79%

### Annexure 2

#### STATUS OF DATA VALIDATION OF NERTS STATIONS AS ON 03/07/19

Sl. No.	Name of RTU	Status of Data validation
1	Aizawl	Completed
2	2 Badarpur Completed	
3	Balipara	Completed
4	BNCHVDC	Database to be at site
5	Bongaigoan	Completed
6	Dimapur	New Gateway to be procurred
7	Haflong	Completed
8	Imphal	Completed
9	Itanagar(Nirjuli)	Completed
10	Jiribam	Completed
11	Khleiriat	Isolators to be incorporated as SPS in site
12	Kopili-Ex	After completion of GIS
13	Kumarghat	Completed
14	Mariani	Database upgradation at site
15	Melriat	Completed
16	Misa	Database to be pending at site
17	Mokokchung	Completed
18	Namsai	To be corrected after implementation of VSAT
19	Roing	To be corrected after implementation of VSAT
20	Salakati	Completed
21	Silchar	Silchar gateway doesn't support configuration of both side of ICTs
22	Tezu	To be corrected after implementation of VSAT
23	Ziro	Completed

#### Annexure 3

#### Telemetry Data Validation between SLDC Assam, NERLDC and Communication Department of AEGCL(Annexure D)

SL No.	NAME OF STATION	Assam SLDC Status as on 28/03/2019	Reason for Not Reporting	Responsibility	Target to Complete	
1	Agia			Responsibility	Complete	Remarks
		Yes	RTU database to be rectified at site and SAS upgradation in progress	CGM T&T, and CGM SLDC AEGCL	Aug. 10	Material not reached the
2	ASHOK PAPER MILL(APM)	No	PLCC is not working and PTTL: 6 to go a	Contract of the state of the st	Aug-15	KIOSK building completed for
3	AZARA	Yes	PLCC is not working and RTU is faulty SAS upgradation in progress	CGM T&T , and CGM SLDC AEGCL	Aug-10	installation of SAS panels.
4	PANCHGRAM	Yes	Non-svailable points will be checked jointly by SLDC and Communication department	CGMT&T, and CGM SLDC AEGCL	Aug-19	
	Denter a marking	100	Non-available points will be checked jointly by SLDC and Communication department		Jul-19	
5	BEHIATING	No	Gateway commissioning is pending after SAS completion already meeting held with M/S Techno for completion of the same	, and a data of the restort.	Jui-19	
6	BILASIPARA	Yes		CGMT&T, and CGM SLDC AEGCL	Jul-19	
7	BNC(AS)	No	Only ICT 1 bay to be rectified	CGMT&T, and CGM SLDC AEGCL	Jui-19	
	BOKAJAN	Yes	SAS commissioning under progress	CGMT&T, and CGM SLDC AEGCL	Jui-19	
	BOKAKHAT	Yes	ICT2 data is not available and isolators coming wrong. SAS work under progress	CGM T&T ,and CGM SLDC AEGCL	101-19	
	воко	Yes	SAS commissioning under progress	CGM T&T, and CGM SLDC AEGCL		
	BONGAIGOAN(BTPS)	Yes	RTU database to be rectified at site.	CGM T&T , and CGM SLDC AEGCL	Apr-19	
	and the second sec	Yes	SAS commissioning under progress	CGM T&T, and CGM SLDC ABGCL		
	BORDUBI	No	Gateway commissioning is pending after SAS completion already meeting held with M/S Techno for completion of the same		Apr-19	
	BORNAGAR	No	Gateway commissioning is pending after SAS completion	CGM T&T, and CGM SLDC AEGCL	May-19	
	CHANDRAPUR	No	SAS commissioning under progress	CGM T&T, and CGM SLDC AEGCL	Apr-19	
	DEPOTA(TEZPUR)	No	Under Progress to be completed by 29/03/2019	CGM T&T, and CGM SLDC AEGCL	Jul-19	
16	DHALIGAON	Yes	SAS upgration under progress.Old CRP panels connection to RTU connections removed.	CGM T&T, and CGM SLDC AEGCL		Completed
17	DHEKIAJULI	Yes	Only Voltage data wrong Will built and the Will be	CGM T&T, and CGM SLDC AEGCL	May-19	dempicated
18	DHEMAJI	37.	Only Voltage data wrong. Will have to call Vension Electric service neglectors removed. 8AS upgration under progress. PLCC link to be rectified and will request NERPSIP to expedite the project	CGM T&T, and CGM SLDC AEGCL	May-19	
19 1	DIBRUGARH	Yes	project	CGM T&T , and CGM SLDC AEGCL		
	DIPHU	1 03		CGM T&T, and CGM SLDC AEGCL	Jul-19	
	DISPUR	1 es	SAS commissioning under progress	CGM T&T , and CGM SLDC ABOCL	Jul-19	- and the second se
the second s	DULLAVCHERA		while to modulating	CGM T&T , and CGM SLDC AEGCL	Jul-19	
	GAURIPUR			CGM T&T , and CGM SLDC ABGCL	Apr-19	
	JOHPUR			CGM SLDC AEGCL		
	OLAGHAT	Yes	K10 database to be rectified at site SAS upgration under program		Apr-19	
	GOSSAIGAON	108 1	Data to be checked. Data upgration under SAS under progress	CGM T&T ,and CGM SLDC AEGCL	Jul-19	
		NO	Barth Mat work under progress	CGM T&T, and CGM SLDC AEGCL	Jul-19	
	IAFLONG	Yes 1	ink work under progress	CGM T&T ,and CGM SLDC ABGCL	Aug-19	
	IAILAKANDI		Data to be checked	CGM T&T , and CGM SLDC AEGCL	Oct-19	
	AGIROAD	Yes I		CGM T&T, and CGM SLDC AEGCL	Apr-19	
30 J.	AWAHARNAGAR		Mato by checked	CGM T&T, and CGM SLDC AEGCL CGM T&T, and CGM SLDC AEGCL	Apr-19	

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Jago 13/10/ 2013/19 20/3/19 20/3/19 30/3/19 30/3/19 30/3/19 Somah GM(SL), NERLOC

Yes Data to be checked 32 JORHAT(WEST) Yes No issue 33 KAHELIPARA CGM T&T, and CGM SLDC AEGCL Yes SAS commissioning under progress Apr-19 34 KAMAKHYA CGM T&T ,and CGM SLDC AEGCL Yes No issue 35 KAMALPUR CGM T&T, and CGM SLDC AEGCL Yes Digital and analog data to be checked, data are reporting May-19 36 KOKRAJHAR CGM T&T, and CGM SLDC AEGCL No 37 NORTH LAKHIMPUR No issue CGM T&T, and CGM SLDC AEGCL 38 LTPS No SAS commissioning under progress Apr-19 CGM T&T ,and CGM SLDC AEGCL Yes Digital and analog data to be checked, data are reporting 39 KARBI LANGPI CGM T&T, and CGM SLDC AEGCL 40 LANKA Yes Jul-19 No issue APGCL, SLDC Yes RTU database to be rectified at site. 41 MAJULI CGM T&T, and CGM SLDC AEGCL No 42 MARGHERITA Link to be established CGM T&T ,and CGM SLDC AEGCL No Jul-19 43 MARIANI CGM T&T, and CGM SLDC AEGCL Yes Jul-19 Data to be checked 44 MORAN CGM T&T , and CGM SLDC AEGCL No SAS commissioning under progress Aug-19 45 MATIA CGM T&T, and CGM SLDC AEGCL Yes No issue Jul-19 CGM T&T ,and CGM SLDC AEGCL 46 NAGAON Gateway commissioning is pending after SAS completion already meeting held with M/S Techno for Apr-19 CGM T&T, and CGM SLDC AEGCL No 47 NALBARI Yes Data stability to be checked 48 NAMRUP CGM T&T, and CGM SLDC AEGCL Yes Coordination with APGCL is required for database and telmetry May-19 49 NAMRUP PS1 CGM T&T, and CGM SLDC AEGCL No Coordination with APGCL is required for database and telmetry Apr-19 50 NARANGI APGCL, SLDC Yes 51 Database Issue NAZIRA APGCL, SLDC Digital and analog data to be checked, data are reporting Yes 52 PAILAPOOL SLDC department No Digital and analog data to be checked, data are reporting 53 RANGIA CGM T&T ,and CGM SLDC AEGCL Yes 54 RTU database to be rectified at site. ROWTA CGM T&T ,and CGM SLDC AEGCL Yes 55 RUPAI Digital and analog data to be checked, data are reporting CGM T&T ,and CGM SLDC AEGCL No 56 SAMAGURI CGM T&T, and CGM SLDC ABGCL Digital and analog data to be checked, data are reporting, RTU database to be rectified at site. 57 Yes SARUSAJAI CGM T&T and CGM SLDC AEGCL SAS commissioning under progress 58 No Jul-19 SIBSAGAR CGM T&T ,and CGM SLDC AEGCL Yes 59 SIPAJHAR No issue Jul-19 CGM T&T ,and CGM SLDC AEGCL 60 SISHUGRAM Digital and analog data to be checked, data are reporting Yes Apr-19 CGM T&T, and CGM SLDC AEGCL 61 SONABIL Yes Digital and analog data to be checked, data are reporting CGM T&T , and CGM SLDC AEGCL Bus data to be checked and ICTs to be removed from database Yes CGM T&T ,and CGM SLDC AEGCL 62 SONARI Gateway commissioning is pending after SAS completion already meeting held with M/S Techno for CGM T&T ,and CGM SLDC AEGCL No 63 SRIKONA Yes Digital Data to be checked 64 SONAPUR CGM T&T ,and CGM SLDC AEGCL Yes Jul-19 65 No issue TINSUKIA CGM T&T , and CGM SLDC AEGCL Yes Digital and analog data to be checked, data are reporting 66 UMRANGSHU CGM T&T ,and CGM SLDC AEGCL Yes No issue CGM T&T , and CGM SLDC AEGCL CGM T&T , and CGM SLDC AEGCL Reporting Not Rep

	40	SLDC responsibility
eporting		Communication Department responsibility 1
		SLDC and Communication Department Joint responsibility 0
		APGCL, SLDC and Communication Domains of the sponsability 0
		No issues 0
		0
		0 0

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Some GM(SL), NERLDC

# Draft of Minutes of Meeting between NERLDC and Meghalaya SLDC held at NEHU SLDC premises on 27th May 2019

A meeting was held, inline with minutes of 13th NETeST meeting, among representatives from NERLDC, Shillong and Meghalaya SLDC, Nehu and System Protection Division on 27th May 2019 for discussing various issues related to non-availability of real-time data of stations and communications etc. owned by MePTCL. The list of participants is listed in table below.

F.E.Kharshiing (SE, SLDC)
B.NIKNIA (EE, SP)
D.J.Lyngdoh (EE, SM, SLDC)
B.Narry (AEE,C&C)
C.W.Chen (AEE, SLDC)

The General Manager (SL, NERLDC) gave opening remarks about proceedings of the meeting and expressed his concerns about low availability of real-time data (32%) related to stations under MePTCL. The GM (SL, NERLDC) also suggested that the issues may be classified into following categories -

- Non-availability of data due to projects getting implemented under PSDF .
- Communication Links issues
- Site-level issues related to RTUs, Transducers, CT/PT terminations, etc.
- Operation & Maintenance like loose cabling, earthing issues, etc.
- Single Line Diagram between Field/Site and SLDC SCADA system .
- Database validation checking between Meghalaya SLDC and NERLDC .

A summary of discussion is listed below.

# 1.0 Station-wise issues related to non-availability of real-time data to NERLDC

As a first step, station-wise issues were discussed in detail related to non-availability of real-time data at SLDC and subsequently to NERLDC and a target action plan with time-line was prepared, wherever possible. The summary of the above discussion is listed in table below.

si. No.	Name Of Stations	Reason for Non-availability of Real Time data	Category of Work to be executed	Target Date for rectification	Remarks
1	Cherapunjee	PLCC issue b/w Mawlai to Nehu	Communication Media	Commissioning dates to be intimated at the earliest (MePTCL to complete on priority to increase availability of data)	Commissioning of Digital PLCC b/w Mawlai to NEHU to be taken up on priority to resolve the issue.
2	EPIP-1	<ul> <li>New MFTs are required</li> <li>Additional Digital Card to be procured for capturing remaining Digital inputs</li> </ul>	O&M	Analog data by 2 <sup>nd</sup> Week of Jun'19	MFTs computability issues also being faced

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SI. No.	Name Of Stations	Reason for Non-availability of Real Time data	Category of Work to be executed	Target Date for rectification	Remarks
3	EPIP-2	<ul> <li>New MFTs are required</li> <li>Additional Digital Card to be procured for capturing remaining Digital inputs</li> </ul>	0&M	Analog data by 2 <sup>nd</sup> Week of Jun'19	
4	Khleiriat	<ul> <li>New Cables will be laid for all digital inputs.</li> <li>Additional Digital cards to be procured for Isolators status.</li> </ul>	O&M	3 <sup>rd</sup> week of Aug'19	Digital Cards are available only for CBs at present.
5	Killing	<ul> <li>Failure of PLCC link between Killing &amp; EPIP 2</li> <li>Status of some of the Isolators is intermittent in nature and needs to be analysed by SLDC</li> </ul>	0&M	Till 31 <sup>st</sup> May 2019	<ul> <li>Some alarm at Killing end indicating problem at EPIF 2 end.</li> <li>May require manual tuning of PLCC panels</li> <li>ON/OFF of PLCC panels can be tried</li> </ul>
6	Leska	NSK 5 modem in PLCC panels seems to have some problem in its card	0&M	4 <sup>th</sup> Week of Jun'19	<ul> <li>RTU and media seems to the functional.</li> <li>Speech transfer in working but not data transfer.</li> <li>MePTCL to test modem at Leska.</li> <li>May request PGCIL to divert some additional Modem in spares, if available.</li> </ul>
7	Lumshnong	<ul> <li>Operation and Maintenance issues.</li> <li>Needs to be checked and resolved</li> </ul>	0&M	1 <sup>st</sup> Week of Jul'19	<ul> <li>Digital status data of some feeders not reporting</li> <li>Analog data of ICT-1 not reporting</li> </ul>
	Mawlai	<ul> <li>CBs status to be rectified</li> <li>Additional Digital Card to be procured for Isolators status</li> </ul>	0&M	31 <sup>st</sup> May 2019	<ul> <li>Station under modernization and a new bay is also under construction which may take around 1 year.</li> <li>Shifting of panels is being done and new</li> </ul>

SI. No.	Name Of Stations	Reason for Non-availability of Real Time data	Category of Work to be executed	Target Date for rectification	Remarks
					<ul> <li>panels will be placed subsequently.</li> <li>Date of modification will be intimated to SLDC/NERLDC</li> </ul>
9	Mawngap	Additional Digital Card to be procured for capturing remaining Digital inputs	0&M	To be decided	
10	Mendipathar	<ul> <li>ICT 2 whole bay not reporting</li> <li>Additional card for Digital Data to be procured</li> </ul>	O&M	Tentatively In Jul'19	Visit to Garo Hills to be decided tentatively In Jul'19
11	Mustem	<ul> <li>ICT 2 whole bay not reporting</li> <li>Needs to be checked and resolved</li> </ul>	0&M	3 <sup>rd</sup> week of Jun'19	<ul> <li>Bus 2 data and ICT 2 data not available</li> <li>All digital status data not available</li> </ul>
12	Nangalbibra	<ul> <li>132 kV Nongstoin Digital data is under PSDF</li> <li>ICT 2 is removed from service</li> </ul>	0&M	Tentatively In Jul'19	Visit to Garo Hills to be decided tentatively In Jul'19
13	Nehu	Additional Digital Card to be procured for capturing remaining Digital inputs	O&M	To be decided	All isolators data not available
14	NEIGHRIMS	<ul> <li>ICT 2 data is not reporting as it failed last week</li> <li>Additional Digital Card to be procured for capturing remaining Digital inputs under PSDF</li> </ul>	O&M	To be decided	-
15	Nongston	Earthing issues at Nangalbibra	0&M	Tentatively In Jul'19	<ul> <li>Entire station's data not reporting</li> <li>MePTCL to take up the issue with EE (T&amp;T, Tura)</li> </ul>
16	New Umtru	No issues			
17	Rongkhon	<ul> <li>C&amp;R panels are erected; only terminations required</li> <li>Additional Cards for isolators status needs to be procured</li> </ul>	08M	Tentatively In Jul'19	Visit to Garo Hills to be decided

SI. No.	Name Of Stations	Reason for Non-availability of Real Time data	Category of Work to be executed	Target Date for rectification	Remarks
18	Umiam 1	To be analysed by SLDC and reported/resolved subsequently (visit planned till 31 <sup>st</sup> May 2019)		31 <sup>st</sup> May 2019	<ul> <li>Visit till 31st May'19 for planning further action plan</li> <li>Unit 2 &amp; 3 data are not reporting</li> <li>All digital data are not reporting</li> </ul>
19	Umiam 2	Problem with DC supply of RTU (visit planned till 31 <sup>st</sup> May 2019)	O&M	31 <sup>st</sup> May 2019	Visit till 31st May'19 for planning further action plan
20	Umiam 3	<ul> <li>Additional Digital Card to be procured for capturing remaining Digital inputs</li> <li>To be analysed by MePTCL and reported/resolved subsequently (visit planned till 31st May 2019)</li> </ul>	О&М	31 <sup>st</sup> May 2019	<ul> <li>Visit till 31<sup>st</sup> May'19 for planning further action plan</li> <li>Unit 1 under long outage</li> </ul>
21	Umiam 4	<ul> <li>PLCC media Issue</li> <li>To be analysed by MePTCL and reported/resolved subsequently (visit planned till 01<sup>st</sup> week of Jun'19)</li> </ul>	Communication Media	To be decided	
22	Umiam	<ul> <li>To be analysed by MePTCL and reported/resolved subsequently (visit planned till 01<sup>st</sup> week of Jun'19)</li> </ul>	0&M	To be decided	<ul> <li>ICTs data is not reporting</li> <li>Chemtrols- make RTU installed.</li> </ul>
23	Umtru	Additional Digital Card to be procured for capturing remaining Di inputs	O&M	To be decided	<ul> <li>All units are put out-of-service</li> <li>No plan for R&amp;M of units</li> <li>Station is acting like a switching station at present</li> </ul>

## 2.0 Schedule Plan for procurement of additional Digital Cards along with other accessories

MePTCL needs to be furnish the schedule-plan for procurement of additional digital cards, cabling, field cabling works, etc. to SLDC/NERLDC for improvement of Isolator status.

#### 3.0 Validation of database and displays

It was jointly agreed by NERLDC and SLDC that the database and displays of NERLDC will be validated with that available with SLDC and the same process will be followed by SLDC w.r.t. that available with sub-station site.

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NERLDC mentioned that an executive from NERLDC will be deputed at SLDC from 27-28<sup>th</sup> May 2019 for the validation of displays and database of stations under jurisdiction of Meghalaya SLDC. The observations after the database and displays validation activities are listed in *table* below for necessary rectification at SLDC/NERLDC end.

SI. No.	Name Of Stations	Database Comparison	SLD Comparison (Site and SLDC)	SLD Comparison (SLDC and RLDC)
1	Cherrapunjee	No issues.	No Issues.	To be done after necessary corrections at SLDC end.
2	EPIP-1	Transformer 2 is removed from SLDC database; To be removed from NERLDC database	Extra at site: Grey Stone, Transformer 2, Sai Prakash Extra at SLDC: Killing 2, Pione	To be done after necessary corrections at SLDC end.
3	EPIP-2	Transformer 2 is removed from SLDC database; To be removed NERLDC database	Extra at site: ICT, Capacitor, Trishul Extra at SLDC: New Umtru	To be done after necessary corrections at SLDC end.
4	Khleiriat	Transformer 2 is removed from SLDC database; To be removed NERLDC database	Extra at site: Badarpur, ICT 2, Nehu Extra at SLDC: Mustem, Leska 1, Leska 2	To be done after necessary corrections at SLDC end.
5	Killing	No issues.	Updated site SLD not available	To be done after necessary corrections at SLDC end.
6	Leska	No issues.	No issues.	To be done after necessary corrections at SLDC end.
7	Lumshnong	Amrit Line is under testing; Amrit_ME to be added in NERLDC database after commissioning of station; Load D_HILCM_LUMSH to be replaced with AMRIT line; Load D_JUD_LUMSH to be replaced with D_LUMSH_MPL_ load	Extra at site: Hill Cement, Jud Extra at SLDC: Amrit, MPL	To be done after necessary corrections at SLDC end.
8	Mawlai	No issues.	Extra at site: Mawph 2 Extra at SLDC: Cherrapunjee	To be done after necessary corrections at SLDC end.
9	Mawngap	Bus 2 kV is not modelled in SLDC & NERLDC Database; No issues	Extra at site: Mawla 2, Cherrapunjee Extra at SLDC: Future	To be done after necessary corrections at SLDC end.
0	Mendipathar	No issues.	Extra at site: Nangalbibra 2 Extra at SLDC: Agia	To be done after necessary corrections at SLDC end.

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SI. No.	Name Of Stations	Database Comparison	SLD Comparison (Site and SLDC)	SLD Comparison (SLDC and RLDC)
11	Mustem	No issues.	No issues.	To be done after necessary corrections at SLDC end.
12	Nangalbibra	Transformer 2 is removed from SLDC database; To be removed NERLDC database	Updated site SLD not available	To be done after necessary corrections at SLDC end.
13	Nehu	Bus 2 kV is not modelled in SLDC & NERLDC Database; No issues	Extra at site: Khleiriat Extra at SLDC: Mustem	To be done after necessary corrections at SLDC end.
14	NEIGHRIMS	No issues.	No issues.	To be done after necessary corrections at SLDC end.
15	Nongston	No issues.	No issues.	To be done after necessary corrections at SLDC end.
16	New Umtru	No issues.	No issues.	To be done after necessary corrections at SLDC end.
17	Rongkhon	Ampati Substation to be modelled in NERLDC SCADA database; D_AMPAT_RONGK 1 & 2 to be added in NERLDC SCADA database; Transformer 5 to be removed from NERLDC SCADA database	Updated site SLD not available	To be done after necessary corrections at SLDC end.
18	Umiam 1	No issues.	Site SLD not available	To be done after necessary corrections at SLDC end.
19	Umiam 2	No issues.	Site SLD not available	To be done after necessary corrections at SLDC end.
20	Umiam 3	Bus 2 kV is not modelled in SLDC & NERLDC Database; No issues	Site SLD not available	To be done after necessary corrections at SLDC end.
21	Umiam 4	Bus 2 kV is not modelled in SLDC & NERLDC Database; No issues	Site SLD not available	To be done after necessary corrections at SLDC end.
22	Umiam	Bus 2 kV is not modelled in SLDC & NERLDC Database; No issues	No issues.	To be done after necessary corrections at SLDC end.
23	Umtru	Bus 2 kV is not modelled in SLDC & NERLDC Database; Unit 1 to 4 and DA T1, DA_T2 to be	Extra at site: Unit 1 to 4 Extra at SLDC: New Umtru	To be done after necessary corrections at SLDC end.

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SI.	Name Of	Database	SLD Comparison (Site	SLD Comparison (SLDC and
No.	Stations	Comparison	and SLDC)	RLDC)
		removed from NERLDC database		

## 4.0 Projects under implementation by Power System Development Fund (PSDF)

MePTCL's System Protection Division stated that various projects are under progress and being funded by PSDF such as establishment of communication links and upgradation of sub-stations by implementing SAS systems. NERLDC mentioned that the plans and target dates for completion need to be listed and shared to NERLDC in view of availability of telemetry.

#### 5.0 Weekly/Monthly report of telemetry status

NERLDC stated that a weekly/monthly report of telemetry status is being shared by NERLDC to Meghalaya SLDC and System Protection Division of MePTCL on regular basis. Meghalaya SLDC mentioned that it is in receipt of all such reports and will coordinate accordingly.

#### 6.0 Joint collaboration for resolution of issues

The meeting ended with a resolution to provide all support from both NERLDC and Meghalaya SLDC side for quick rectification of all the listed issues and extending support for all related matters.

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SI No.	Link Name	Current Status	OPGW String Status	End Equipment Status	Target : As per 13th NeTESt	Target : As per 12th NeTESt
		Centr	al Sector			
1	132kV Melriat(PG) - Silchar(PG)	Complete	Complete	Complete	Data and Voice reported dtd 31.03.2019. Joint verification pending	Apr'19
2	132 kV Khandong - Haflong (PG)	WIP	Complete	Complete	Joint SAT pending	Apr'19
3	132 kkV Dimapur(PG)- Doyang(NEEPCO0	WIP	Complete	Installed, Link configuration pending	July'19	Apr'19
4	132 kV Doyang(NEEPCO)-Mokokchung (State)	WIP	Complete	Installed, Link configuration pending	July'19	Apr'19
5	220kV Mokokchung(PG) - Mariani (PG)	WIP	Complete	Installed, Link configuration pending	July'19	Mar'19
6	400 kV Mariani(PG)- Kathalguri (NEEPCO)	WIP	Complete	Installed, Link configuration pending	July'19	Mar'19
7	400kV Surajmaninagar (TSECL) - Pallatana (OTPC)	WIP	Complete	Installed, Link configuration pending	July'19	Apr'19
8	132 kV Badarpur(PG) - Jiribam (PG)	WIP	Supply: Delivered 28/67.166 Km	Supply Pending/Supply China on route within India as under halt for additional security Check & slow movement of Container/Rly from Port to Amingaon	Sept'19	Jul'19

Annexure 5
STATUS OF OPGW COMMUNICATION LINK IN NER UNDER FO EXPANSION

9	Bongaigaon (PG-400 kV) -220 kV Salakati - 220 kV BTPS	Supply Pending	Supply: Pending, Target : June'19	- do-	Sept'19	Jun'19
10	400 kV Mirza(Azara) - Byrnihat	Supply Pending	Supply : Delivered Erection - yet to start	Supply Pending	Aug'19	Jul'19
11	400kV Silchar - Palatana	Supply Pending	Stringing Completed: 61.146/247.409 Km / ROW issue	-do-	Dec'19	Aug'19
12	132 kV Agartala (TSECL) - RC Nagar (NEEPCO)	WIP	Complete	Supply Complete. Installation Pending due to space constraint - matter taken up with NEEPCO	Jul'19	Mar'19
13	132 kV Jiribam(PG)(Manipur) - Loktak (NHPC)	WIP	0/82.461 Km	Supply Pending/ROW suring initial survey Hilly area	Dec'19	Jul'19
14	132 kV Loktak(NHPC) - Imphal(PG)	WIP	Complete	Supply Pending	Jul'19	Jul'19
15	Pk Bari (TSECL) - LILO of (NETCL) Belonia	WIP	Supply Pending	Supply Pending	Dec'19	Jul'19
16	132 kV Parey-Chimpu	WIP	Supply pending	Supply complete	Dec'19	Jun'19
		MANIPUR	STATE SECTOR			
1	132 kV Yurembam- Yaingangpokpi	WIP	Complete	Supply Complete & installation complete. DCPS commission & Link commission pending	Jul'19	NA
2	132kV Yaingangpokpi - Kongba	WIP	Complete Additional 1.6 Km pending which is later added	-do-	Jul'19	NA
3	132kV Kongba - Kakching	WIP	Kongba - Kakching completed Addition of LILO (7KM) from in - between Tower at Thoubal is pending added later State	-do-	Jul'19	NA
4	132 kV Imphal (State) - Karong	WIP	40/65 Km completed. WIP	Supply completed	Jul'19	NA

5	132 kV kakching- Churachandpur 132 kV Loktak(NHPC) - Ningthoukhong	WIP	16/38 Km WIP During recent fanni storm - 3 nos. Towers collapsed and work under halt in 2 spans, will be restarted after tower restoration 8/11 Km completed	-do- -do-	Jul'19 Jul'19	NA
7	132kV Yaingangpokpi - Hundung	WIP	10/32 Km Completed	-do-	Jul'19	NA
8	132 kV Kakching - Chandel	WIP	15/25 Km completed	-do-	Jul'19	NA
9	132 kV Loktak(NHPC) - Rengpang	WIP	0/45 Work/ camping was stopped due to miscreants along Route to Loktak/ will be restarted soon after taking help from Administartion along with Jiribam - Loktak	-do-	Jul'19	NA
10	132 kV Jiribam (PG) - Jiribam ( state)	WIP	Supply pending	-do-	Jul'19	NA
	132 kV Ningthoukhong- Churachandpur	WIP	10/32 completed	-do-	Jul'19	NA
		TRIPURA	STATE SECTOR			
1	132 kV Agartala (TSECL) - Barumura (GTP)	Complete	Complete	Complete	Data and Voice reported dtd 31.03.2019. Joint verification pending Jul'20	NA
2	66 kV 79 Tilla Grid ( TSECL) -Badarghat	Complete	Complete	Complete	-do-	NA
3	132 kV Surajmaninagar (TSECL) - Budhungnagar	Complete	Complete	Complete	-do-	NA
4	132 kV Agartala (TSECL) - SM Nagar ( TSECL)	Complete	Complete	Complete	-do-	NA

5	132 kV Pallatana (OTPC) - Udaipur (TSECL)	WIP	Complete	Supply & Installation Done, Link commissioning pending due to other interconnect link pending	Jul'19	NA
6	132 kV Udaipur(TSECL) - Gumti HEP	WIP	Complete	-do-	Jul'19	NA
	66 kV Gumti HEP - Amarpur (TSECL)	WIP	Complete	-do-	Jul'19	NA
	66 kV Satchand (TSECL) - Sabroom (TSECL)	WIP	Complete	-do-	Jul'19	NA
	132 kV 79 Tilla Grid (TSECL) - Dhalabil (TSECL)	WIP	Complete	-do-	Jul'19	NA
	132 kV Rokhiya (GBPP) - Surajmaninagar (TSECL)	WIP	Supply Complete. Front not ready (TL construction by Tripura State)	-do-	Link to be deleted. Supply material to be handed over to TSECL	NA
	132 kV Surajmaninagar (TSECL) - Monarchak (NEEPCO)	WIP	-do-		-do-	NA
		MEGHALAY	A STATE SECTOR			
	132 kV NEHU - NEIGRIHMS	WIP	Supply pending	Supply complete	Jul'19	NA
	132 kV Khliehriat (PG)-Khliehriat (State)	WIP	Supply Completed. Stringing pending	Supply complete	Jul'19	NA
	132 kV Khliehriat (State)- Myntdu Leshka HEP	WIP	-do-	Supply complete	Jul'19	NA
	132 kV Khliehriat (State)- Lumshong (S/C)	WIP	-do-	Supply complete	Jul'19	NA
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		NAGALAND	STATE SECTOR			
	132 kV Kohima (132 kV) - Kohima ( 220kV)	WIP	Supply Completed. Stringing Pending	Supply Pending	Jul'19	NA
	132 kV kohima - Wokha	WIP	-do-	-do-	Jul'19	NA
	132 kV Doyang (NEEPCO) - Sanis	WIP	Supply Pending	Supply complete	Jul'19	NA
		MIZORAM	STATE SECTOR			
	Aizawl - Zemabawk I	WIP	Supply pending	Supply Complete	Jul'19	NA

	STATUS OF OPGW C	OMMUNICATION	LINK IN NER UNDER MW VACA	ATION PROJECT		]
SI No.	Link name	Staus as per 13th NeTESt	OPGW Stringing Status	End Equipment Status	Target As per 13th NeTEST	Target As per 12th NeTEST
1	132 kV Silchar - Srikona	Complete	Complete	Complete	-	
2	132 kV Mariani - Mariani	Complete	Complete	Complete	-	
3	132 kV Nirjuli - Ranganadi with Parey	WIP	ROW issue	Supply and Installation over SAT/Commissioning pending	-	Feb'19
4	Imphal (PG) - Imphal (State)	WIP	ROW issue	Supply complete	June'19	Mar'19
5	132 kV LILO of Aizawl- Zemabawk -II at Melriat SS	Complete	ROW issue	Complete	-	Feb'19
6	132 kV Melriat- Shimmui	WIP	ROW issue	Supply complete. Installation pending	June'19	Mar'19
7	132 kV Mokokchung - Mokokchung	WIP	ROW issue	-do-	June'19	Mar'19
8	Ranganadi - Gohpur ( part - I)	WIP	ROW issue	-do-		Mar'19
9	Ranganadi - Gohpur ( part - II)	WIP	ROW issue	-do-	-	IVIAI 19
10	Aizawl - Zemabawk -II	WIP	ROW issue	-do-	June'19	Mar'19
11	Dimapur-Dimapur	WIP	ROW issue	-do-	June'19	Mar'19
12	132 kV Ranganadi - Ziro	WIP	ROW issue	-do-	June'19	Mar'19
13	132 kV Lekhi - Itanagar / chimpu SLDC	WIP	ROW issue	-do-	June'19	Mar'19
14	132 kV LILO of Nirjuli- Ranganadi at Lekhi	WIP	ROW issue	-do-	-	Mar'19