



भारत सरकार Government of India

विद्युत मंत्रालय Ministry of Power

उत्तर पूर्वी क्षेत्रीय विद्युत समिति

North Eastern Regional Power Committee

एन ई आर पी सी कॉम्प्लेक्स, डोंग पारमाओ, लापालाङ, शिल्लोंग-७९३००६, मेघालय
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No. NERPC/SE (O)/NETeST/2018/**5312-5349**

Dated: December 05, 2018

To,

1. Managing Director, AEGCL, Bijuli Bhawan, Guwahati – 781 001
2. Managing Director, APDCL, Bijuli Bhawan, Guwahati – 781 001
3. Managing Director, APGCL, Bijuli Bhawan, Guwahati – 781 001
4. Director (Generation), Me. PGCL, Lumjingshai, Short Round Road, Shillong – 793 001
5. Director (Distribution), Me. ECL, Lumjingshai, Short Round Road, Shillong – 793 001
6. Director(Transmission), Me. PTCL, Lumjingshai, Short Round Road, Shillong – 793 001
7. Managing Director, MSPDCL, Secure Office Bldg. Complex, South Block, Imphal – 795 001
8. Managing Director, MSPCL, Electricity Complex, Keishampat, Imphal – 795 001
9. Director (Tech.), TSECL, Banamalipur, Agartala -799 001.
10. Director (Generation), TPGCL, Banamalipur, Agartala -799 001.
11. Chief Engineer (WE Zone), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791111
12. Chief Engineer (EE Zone), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791111
13. Chief Engineer (TP&MZ), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791111
14. Engineer-in-Chief (P&E), Department of Power, Govt. of Mizoram, Aizawl – 796 001
15. Chief Engineer (P), Department of Power, Govt. of Nagaland, Kohima – 797 001
16. CGM, (LDC), SLDC Complex, AEGCL, Kahilipara, Guwahati-781 019
17. Group General Manager, NTPC, Bongaigoan Thermal Power Project, P.O. Salakati, Kokrajhar- 783369
18. ED, NERTS, PGCIL, Dongtiah-Lower Nongrah, Lapalang, Shillong -793 006
19. ED (O&M), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
20. ED (Commercial), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
21. ED (O&M), NHPC, NHPC Office Complex, Sector-33, Faridabad, Haryana-121003
22. Vice President (Plant), OTPC, Badarghat Complex, Agartala, Tripura - 799014
23. GM, NERLDC, Dongtiah, Lower Nongrah, Lapalang, Shillong -793 006
24. Member Secretary, ERPC, 14 Golf Club Road, Tollygunge, Kolkata-700033
25. Chief Engineer, GM Division, Central Electricity Authority, New Delhi – 110066
26. Chief Engineer (NPC), NRPC Complex, Katwaria Sarai, SJSS Marg., New Delhi - 110016

Sub: Minutes of 11th NETeST Meeting.

Sir/Madam,

Please find enclosed herewith the minutes of 11th NETeST Meeting held at Guwahati on the **13th November, 2018** for your kind information and necessary action. The minute is also available on the website of NERPC, **www.nerpc.nic.in**.

Any comments/observations may kindly be communicated to NERPC Secretariat at the earliest.

Encl: As above

भवदीय / Yours faithfully,

बि. लिं गखोइ / B. Lyngkhoi
निदेशक / Director/ SE

Copy to:

1. CGM, AEGCL, Bijuli Bhavan, Guwahati - 781001
2. CGM, APGCL, Bijuli Bhavan, Guwahati - 781001
3. CGM, DISCOM, Bijuli Bhavan, Guwahati - 781001
4. Head of SLDC, Me.ECL, Lumjingshai, Short Round Road, Umjarain, Shillong – 793 022
5. Head of SLDC, Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791 111
6. Head of SLDC, Department of Power, Dimapur, Nagaland
7. Head of SLDC, Electricity Department, Govt. of Manipur, Keishampat, Imphal – 795 001
8. Head of SLDC, Department of Power, Govt. of Mizoram, Aizawl – 796 001
9. Head of SLDC, TSECL, Agartala – 799 001
10. Chief Engineer(Elect), Loktak HEP, Vidyut Vihar, Kom Keirap, Manipur- 795124
11. Addl. GM (EED), NTPC Ltd., Bongaigoan Thermal Power Project, P.O. Salakati, Kokrajhar- 783369
12. DGM (C&M), OTPC, 6th Floor, A-Wing, IFCI Tower -61, Nehru Place, New Delhi – 110019.



निदेशक / Director/ SE

North Eastern Regional Power Committee

MINUTES OF THE 11th NER Telecommunication, SCADA & Telemetry

(NE-TeST) COORDINATION

SUB-COMMITTEE MEETING OF NERPC

Date : 13/11/2018 (Tuesday)
Time : 10:00 hrs
Venue : "Hotel Nandan", Guwahati.

The List of Participants in the 11th NE-TeST Meeting is attached at **Annexure - I**

Shri P.K. Mishra, Member Secretary, NERPC welcomed all the participants to the 11th North Eastern Telecommunication, SCADA & Telemetry meeting. He stated that communication is one of the most important parts in power system today. He mentioned that the availability of telemetry is not satisfied as presented by NERLDC and stated that though commissioning/upgradation of SLDCs is completed but unless the data reaches the SLDCs & NERLDC the job is not yet over. He hoped that the RTUs would be integrated soon for effective operation of the SLDCs. Member Secretary instructed Director, NERPC to form a Sub-group so that telemetry status, monthly monitoring of various projects may be done. He hoped that this would render the NETeST agenda to be focused and result oriented.

Thereafter he requested Shri B. Lyngkhoi, Director to take up the agenda items for discussion.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF THE 10th MEETING OF "NORTH EASTERN TELECOMMUNICATION, SCADA & TELEMETRY (NETeST)" SUB COMMITTEE OF NERPC.

Director, NERPC informed that minutes of the 10th NETeST Meeting held on 16th July, 2018 at Guwahati were circulated by NERPC vide letter No. NERPC/SE(O)/TeST/2018/ dated 14th August, 2018.

The Sub-committee confirmed the minutes of the 10th NETeST Meeting as no comments/observations were received from the constituents.

A.1 Status of SLDCs in NER:

SN	Utility	Status as informed in 09 th NETeST	Status as informed in 10 th NETeST	Status on 11 th NETeST & Target of Completion
UPGRADATION OF SLDCs				
1	Assam	DG set commissioning pending due to ACDB input connection feasibility is not there.	Completed.	DG set- ACDB issue resolved and DG set commissioning by 25.11.2018
2	Tripura	DG set completed. SAT of remaining 2 RTUs by July'18.	4 RTUs tested. 3 RTU ready for testing. DG set- Installed. Foundation & earthing readiness confirmed by TSECL on 09.12.17. Alstom had some contract issue. Team will be deputed by 15days.	Completed.
3	Meghalaya	DG set installed.	Completed.	Completed.
4	NERLDC	DG set commissioning pending.	Completed.	SAT Completed.
5	Manipur	DG set commissioning pending.	Completed.	DG set target- Nov18
6	Nagaland	DG set installation & commissioning planned in Sept18.	Out of 12, 10 RTUs are installed and six tested. DG set space yet not ready.	Completed
7	Mizoram	DG set installation & commissioning planned in August'18. Sihmui RTU SAT by July'18	Completed. AMC is still not signed. DG set space yet not ready.	Completion by Nov18
8	Ar. Pradesh	DG set completed. To be formally inaugurated in July'18.	8 RTU installed and tested locally without communication links.	Completed.
9	Backup NERLDC	Completed	Completed.	Completed.

Deliberation in the Meeting:

SE, SLDC, DoP Ar. Pradesh informed the following:

- RTUs are not reporting except Chimpu.
- SIMs have already been handed over to NERTS.
- Handing over of assets by NERTS to be done formally.

GM(AM), NERTS stated that RTU links via GPRS would be completed soon(4months) soon as all modems have reached site. He requested DoP Ar. Pradesh to give the "handing over" format to NERTS.

The Sub-committee noted as above.

Action: State Utilities, GE

A.2 Status of FO works under different projects:

Name of project	Latest status
MW Vacation OPGW project	<p>M/s KEC</p> <ol style="list-style-type: none"> 1. All 17 links already commissioned. 2. 3 nos. of links down due to failure of AEGCL 132kV Srikona-Panchgram tower. AEGCL intimated that there is no place for erection of ERS and 2-3 pile foundation needs to be done. AEGCL informed that tower restoration will take time possibly by Jan'19. Communication Links are restored via new path ie Jiribam PG –Pailapool (AEGCL) - Srikona (AEGCL) - Silchar (PG)-- Shillong Badapur (Panchgram) AEGCL data is reporting via Badarpur PG upto Shillong. <i>NERTS replied that Communication Links are restored via new path i.e. Jiribam PG –Pailapool (AEGCL) - Srikona (AEGCL) - Silchar (PG)-- Shillong Badapur (Panchgram) AEGCL data is reporting via Badarpur PG upto Shillong</i> NERLDC is requested to verify the same 3. 4 nos. Link requires detail assessment for rectification and job is in progress. Expected completion of rectification by Dec'18.

	<p>Rectification work for the links viz. BTPS-Agia, Agia-Sarusajai, Samaguri-Mariani, Namrup-Tinsukia shall be completed by Dec-18.</p> <p><i>NERTS replied that rectification work for the links viz. BTPS-Agia, Agia-Sarusajai, Samaguri-Mariani, Namrup-Tinsukia shall be completed by Dec-18.</i></p> <p><i>Sub-committee noted.</i></p> <p>M/s TENDOT</p> <ol style="list-style-type: none"> 4. WIP in all 14 links 5. Progress affected due to ROW. 6. Expected completion March'19. <p>NOTE</p> <ol style="list-style-type: none"> 1. 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. <p>Railway diversion of POWERGRID also suffering due to ROW in 3 locations to be resolved by Arunachal Pradesh.</p> <p><i>SE, SLDC DoP Ar. Pradesh informed that tower route schedule has been handed over to NERTS. NERTS requested once again to submit. Regarding hampering of diversion works for 3 towers it was decided to take up in TCC/RPC.</i></p> <p><i>Action: NERPC</i></p>
<p>NER FO Expansion/Add req of OPGW</p>	<p>TRIPURA</p> <ul style="list-style-type: none"> • 253.7 of 320.319 Km Completed • 63.522 km (02 links viz. SM Nagar~Rokhia & SM Nagar~Monarchak, line is under construction) front not available due to construction of 2 lines by TSECL • Completion: Mar 19 <p>MIZORAM & MANIPUR</p> <ul style="list-style-type: none"> • 80% Material supplied. • Target Completion June 19 <p>NOTE</p> <p>Silchar-Pallatana OPGW work under halt due to objection of NETC & OTPC for transient lightning related fault in rainy</p>

	<p>season.</p> <p>P&ED Mizoram informed that for 132kV Aizawl-Zemabawk line fibre is being laid by NERTS, with terminal equipment supplied by NERTS. Compatibility to be confirmed by NERTS.</p> <p>NERTS informed the following:</p> <ol style="list-style-type: none"> Manipur: Supply – Complete, Erection: 0 km, Team is mobilized by M/s TCIL. Aizawl-Zemabawk-II (Zungtui) is already considered in MW Vacation project. The OPGW cabling part is completed as well. Also, Aizawl-Zemabawk-I (Luangmual) is considered in NER FO Expansion project. Terminal equipments (SDH/PDH) for both locations ie Zungtui & Luangmual and their optical connectivities are considered in NER FO Expansion equipment packages Target completion: June-19 Battery bank/DCPS under NERFO- By Mar'19
Upgradation of ULDC FO node	<p>15 Location Completed</p> <p>Except Umtru. MeECL informed that there is space constraint in PLCC room. Separate room may be constructed and included in scope.</p> <p><i>NERTS & MeECL to visit in the first week of Dec'18</i></p>

Critical Issues against project implementation may be discussed

Name of the Project	Critical Issue
Upgradation of ULDC FO node	<i>NERTS reply: All nodes are commissioned and reporting except Umtru.</i>
MW Vacation	<p>Rectification work of AEGCL links Sarusajai-Agia-BTPS, Namrup-Tinsukia & Samaguri-Mariani are under process due to discontinuity/break in fibre.</p> <p><i>Target Completion: Dec-18.</i></p> <p>Optical link of Srikona AEGCL~ Badarpur AEGCL(panchgram) is down due to tower failure.</p>
NER FO Expansion/Add req of OPGW	<i>Supply of 188.365 km of OPGW cable and associated H/W is still pending by supplier</i>

The detail status with target completion link-wise is given in **Annexure-A.2**. SE, SLDC, P&ED Mizoram stated that for Mizoram more OPGW links are required with 100% funding preferably from PSDF.

Director, NERPC requested him to prepare the DPR in this regard. He also informed the house that missing OPGW links/equipments may be included in NERPSIP which has a contingency of • 660Cr.

GM(AM), NERTS informed that TCIL(Telecommunications Consultant India Ltd.) which is a government PSU is executing NER-FO works. The pace of works of M/sTCIL is very slow and below par. He requested NERPC to take action in this regard.

The Sub-committee noted as above.

Action: State Utilities, NERTS, NERPC.

B. NEW ITEMS

B.1 Strengthening of PLCC System by NER States:

PLCC system works as a back-up path for telemetry of RTUs. It is proposed that each constituent may kindly revive/ install PLCC as per relevant norms for 132Kv & above T/Ls for data path connecting to respective SLDC.

Each state may discuss about their present status of connectivity & future plan PLCC connectivity.

DGM, NERTS informed the forum that stringing work of OPGW is already completed and the link will be through OPGW by March, 2018.

AGM, AEGCL informed the forum that most of communication channel is through with OPGW. The left out station will be connected through PLCC once NER SIP project is complete.

In 9th NETeST meeting DGM, NERLDC informed that MePTCL has submitted their connectivity diagram including planned future expansion. The map for Manipur and Nagaland has also been prepared. The forum once again requested NERTS to submit requisite connectivity schemes planned under NERPSIP. Manager, NERTS requested NERPC to write to ED, NERPSIP for the same.

In 10th NETeST meeting after detailed deliberation both MSPCL and TSECL agreed to submit the PLCC scheme details by Jul'18. The forum once again requested NERPC to ensure participation of POWERGRID-NERPSIP in the next meeting, to update the various communication scheme details. NERLDC informed that communication map has already been drafted and after inputs from remaining utilities it may be finalized. Manager, NERTS informed that the communication grid map attached in the minutes of the 18th NERPC may be perused for this purpose.

Deliberation in the meeting

The following were decided:

a. Communication schemes of Mizoram, DoP Ar.Pradesh, Nagaland and Tripura	By Nov'18
b. Communication map to be prepared by NERLDC	Consolidated map of Assam to be prepared in the Sub-group meeting on 22.11.18. Rest to be prepared subsequently.
c. NERPSIP communication schemes	Already submitted to NERLDC/NERPC. To be included in the map.

The Sub-Committee noted as above.

Action: All remaining utilities/POWERGRID/NERPC/NERLDC.

B.2 Termination of OPGW at RHEP.

The RTU of Ranganadi Power House is working properly at Ranganadi. The Link with SCADA at RLDC is disrupting many times due to weak link with Ranganadi. OPGW link may be established between Ranganadi and Biswanath Chariali/ Nirjuli.

During 8th NETeST meeting, DGM NERTS, informed that OPGW installation almost completed except 10km left due to ROW & administrative issue. The matter is being pursued with District administration and splicing under progress. The link will be through by March, 2018.

In 9th NETeST meeting, Manager, NERTS informed that RHEP is to be connected via Nirjuli-Ranganadi Link. It may be noted that Nirjuli-Ranagandi (NDTL) is made LILO at Leikhi & Pare. Pare LILO has already been taken care in MW Vacation OPGW project & equipment in NER FO Expansion. However, for Lekhi LILO point connectivity, DOP-AP (transmission division) is constructing TL LILO part up to Lekhi

from tower loc.134. The said work is yet to be completed. Further DOP, AP has been asked to provide the exact Tower schedule so that POWERGRID may arrange OPGW accordingly. Target for connectivity-by 2months w.e.f LILO part completion by DOP AP.

In 10th NETeST meeting NERTS informed that the work is carried under MW Vacation project executed by M/s Ten Dot. The new tower route schedule & readiness for LILO part (Lekhi connectivity from existing Nirjuli-Ranganadi line) is yet to be provided by DOP Ar. Pradesh. Rain/landslide/water accumulation is also delaying the project. Target completion is Nov/Dec18.

In 149th OCC meeting DGM(AM) NERTS requested that 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. He further informed that Railway diversion of POWERGRID also suffering due to ROW in 4 locations to be resolved by Arunachal Pradesh. The forum requested DoP Ar. Pradesh to expedite. NEEPCO also requested that alternate path for OPGW may be laid using 400kV lines from RHEP.

NEEPCO has informed that termination of OPGW link in the Ranganadi HE Plant is required at the earliest and Ranganadi station be declared as Wide area network point. The equipment for OPGW is laying in the Power House site since several months awaiting for Termination of OPGW for reliable communication for both Voice and data. In this regard NEEPCO is already entered into the agreement with PLCC for Lease Line. At present ULDC Phone in RHEP is not working since two to three years due to failure in PLCC media and also our plant is operating in web based scheduling system which require uninterrupted internet facility. This can also be achieved by commissioning of OPGW.

Deliberation in the meeting

The latest status as informed by NERTS:

- **Connectivity of RHEP via Nirjuli:** Tower schedule is yet to be provided for connectivity via Nirjuli-Leikhi-Pare-RHEP. Target completion 3 months upon submission of tower schedule.
- **Connectivity of RHEP via Biswanath Chariali:** Delayed due to ROW issue in Arunachal Pradesh-Tower no.1—3 (Railway diversion area).

Sr. Manager, RHEP, NEEPCO requested that the OPGW connectivity of RHEP be completed at the earliest. Further he informed that the terminal equipments are lying

at RHEP presently. GM (AM), NERTS assured that the same would be commissioned by Dec'18.

On request of NEEPCO, POWERGRID already prepared a redundant communication scheme for Ranganadi data from RHEP to BNC via PLCC and further connecting to a leased link. The same was shared with NEEPCO for implementation after needful review with copy to NERPC

The Sub-Committee noted as above.

Action: DoP Ar. Pradesh/NERTS.

B.3 Implementation of Central Electricity Regulatory Commission (Communication System for inter-State transmission of electricity) Regulations, 2017:

As per section 10 of these regulations, 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%.

Further, as per clause 7.3(ii) of these regulations, The RPC Secretariat shall certify the availability of communication equipment for CTU, ISGS, RLDCs, NLDC, SLDCs based on the data furnished by RLDC.

In the above context followings are to be submitted by NERTS, POWERGRID and other STUs :

1. List of links for which CoD has been declared till date &
2. The links for which CoD is likely to be declared in near future.

In this regard a letter vide Ref: NERLDC/ SL/Telecom\9908 dtd. 29.08.17 and subsequent reminder letter vide Ref: NERLDC/SL/TELECOM/10823 dtd. 03.01.2017 was issued to NERTS, POWERGRID and NERLDC/ SL/Telecom\9928 dtd. 31.08.17 and subsequent reminder letter NERLDC/ SL/Telecom\11402-414 dtd. 13.03.18 to SLDCs for furnishing the list of communication links. POWERGRID has submitted a list of links (enclosed in Annexure-A) for Further details.

However, no data have been furnished by SLDCs till date. The details are required for making complete communication diagram and monitoring of availability of links.

In 9th NETeST meeting CE, NPC clarified that the CERC (Communication System for Inter-state transmission of electricity)Regulations, 2017 is meant to bifurcate the cost of transmission of power and transmission of data, among other things. Since CERC

has jurisdiction only over ISTS elements it is inferred that only links pertaining to ISTS elements/ nodes are under the purview of the current regulation. So, only ISTS links availability or commissioning may be monitored. DGM(SL),NERLDC opined that later on SERCs would adopt the CERC regulation in toto. Further if state links upto 132kV are not monitored it reduces grid visibility and deteriorates SE also. It was also emphasized by utilities in forum that keeping 99.9% availability is very difficult even for Central or state sector as sometimes in remote NER, time of restoration is delayed due to land slide/strike/local bandhs and spares are not readily available in NER market unlike other parts of India. CE, NPC welcomed the concerns from operators point of view and reiterated that only ISTS links/links upto ISTS nodes are to be monitored for the purpose of availability calculation. The forum thanked CE,NPC for clarifying in detail.

In 10th NETeST meeting DGM(SL), NERLDC informed that a draft format for the purpose of availability calculation has been prepared by NERLDC. He requested members to submit their suggested changes to the format, after incorporation of which the format may be finalised.

ED, NERLDC opined the following w.r.t. Availability Calculation of communication channels:-

- Presently NERTS should submit the availability data in the format to NERLDC for verification and further certification by NERPC.
- Since the regulation came into effect from 15.05.2017, the data from May'17 to Mar'18 may be submitted forthwith and consequently monthly data may be submitted.
- Availability for communication links associated with ISTS wideband only may be dealt with at the moment.

Manager, NERTS informed that there has been an outage of NMS most probably in the month of Dec17. The forum requested NERTS to submit the data from Date of restoration till Mar'18 and also directed that a backup storage may be installed immediately for NMS. It may be noted that availability calculation is yet to be finalized by NPC & so data wrt NMS may be considered for link availability.

Since it is inferred that the above Regulations would apply to ISTS links / links up to ISTS nodes, ED, NERLDC suggested that to start the process for Availability Calculation of the Communication System for ISTS and to have a related report in

place in the event of CERC asking for the same. NERTS was accordingly requested to submit a monthly report from May 2017 onwards subject to availability of link.

Deliberation in the meeting

The following were discussed and decided:-

- *Presently, NERLDC asked that NERTS should submit the availability data in the format to NERLDC for verification and further certification by NERPC - NERTS submitted (attached at **Annexure-B.3(I)**). To be submitted monthly by NERTS.*
- *Since the regulation came into effect from 15.05.2017, the data from May'17 to Mar'18 may be submitted with supporting NMS report forthwith and consequently monthly data may be submitted - Only submitted lumpsum availability (**Annex. B.3(I)**) from Jan'18 to Oct'18.*
- *Availability for communication links associated with ISTS wideband only may be dealt with at the moment - The forum approved the same.*
- *Links diagram data from Assam, Meghalaya states have been received; detailed channel routing is yet to be submitted by the all states- Assam has submitted in the desired format (attached at **Annexure-B.3(II)**). Other state utilities and NERTS to submit in the same format.*
- *A consolidated list of communication links has been made from the details submitted by POWERGRID. The detail list is attached in Annexure-**B.3(III)**. The details of commissioning dates and owner has to be updated and submitted by NERTS, POWERGRID - NERTS to update and submit availability data in similar format to NERLDC.*
- *The forum may approve the draft format for availability calculation already circulated by NERLDC-. POWERGRID intimated that matter would be reverted back*

The Sub-Committee noted as above.

Action: NERLDC/NERTS.

B.4 MW and MVAR data validation:

For correctness of real time data ie MW/MVAR/KV/FREQUENCY validation is required between the real time system and site in every quarter and report has to be maintained for verification. But in absence of this validation process, MW data, MVAR data, Voltage data are not getting reported correctly and ultimately misleading real time grid managers.

During 8th NETeST meeting, SE(O), NERPC requested NERLDC to sit together with Constituents one by one each and validate the data. The process may be started with Assam first.

AGM, AEGCL informed the forum that their state SLDC has started validating data by jointly visiting site one by one.

DM, AEGCL informed that Assam data has been validated. The forum requested Meghalaya SLDC to do likewise.

In 10th NETeST meeting DGM(SL) NERLDC asked Assam to submit the data validated stations report as many RTUs of Assam not reporting to NERLDC through ICCP.

MeECL representative informed that validation work has started for Meghalaya SLDC and is slated for completion by July'18.

Deliberation in the meeting

DGM(SL), NERLDC requested that feedback of data validation be given to NERLDC. Members decided that the matter may be discussed in the Sub-group meeting on 22.11.2018.

The Sub-Committee noted as above.

Action: NERLDC/all SLDCs.

B.5 Shut Down Procedure for Optical Links:

In 134th OCCM it was decided that communication related shutdown would be approved in OCC forum alongwith generation and transmission element(s) shutdown. However, in absence of list of important links, equipments etc. utilities risk affecting the ICCP system. In 142nd OCCM, the unforeseen outage of ICCP on 10.03.18 was highlighted.

The forum may deliberate on the list of links, equipments and detailed modus operandi for availing communication related shutdown.

In 9th NETeST meeting Director/SE(O&P), NERPC highlighted the backdrop and requirement of a specified shutdown procedure/modalities along with finalization of list of links for which shutdown has to be approved in OCC forum. DGM(SL), NERLDC informed that in SR shutdown of all links related to ICCP and PMU data are approved in OCC forum. After detailed deliberation the forum requested NERLDC to prepare a list of important links in consultation with NERTS. SE(O&P), NERPC also requested that the list should contain the path in detail from ISGS/ISTS node/SLDC to NERLDC with name of owner and maintaining utility. During meeting, NERTS had provided the main lists pertaining to ICCP connectivity route etc.

In 10th NETeST meeting the necessity of availability of critical Optical communication links / nodes without hampering monitoring of the power system was discussed. NERLDC informed that the clear list of OPGW/PLCC links (by collecting from all utilities of NER) is being compiled in a Communication map and the detailed end-to-end channel(port to port) list is being prepared and the same would be circulated shortly. The draft Communication map alike POWER map may be prepared & submitted soon by NERLDC so that if any changes are there same may be commented by utilities. NERTS already provided list of links(MW,ULDC,FO expansion) and already prepared a FO Map as circulated in 18th NERPC and same may be taken as reference. After detailed deliberation the forum referred the matter to the next OCC meeting for shut down procedure finalization. Only Meghalaya submitted the communication drawing, Assam submit but not detailed. NERTS referred 18th RPC minutes. DGM(SL) NERLDC opined that the communication drawing submitted in 18th RPC is only links not channel details.

Director NERPC mentioned that that preparation/finalization Network is long pending and at first, communication Link network diagram (OPGW/PLCC/Others) just alike power map connecting critical stations of CS/ISGS/States & LDCs of NER may be prepared by RLDC. Onward, if required, incorporation of channels & other requirements may be done in next stage by RLDC by collecting from respective utility. Issues/requirements from state utility/central utility may be taken up bilaterally and if same is not sorted out, can be discussed in meeting

Deliberation in the meeting

DGM(SL), NERLDC cited the relevant clauses of the regulation. The draft procedure was presented by NERLDC (attached at **Annexure-B.5(I)**). The forum decided that for shutdown of communication links similar procedure as that of Transmission elements is to be followed and approved the one prepared by NERLDC with following modification(s):

For Emergency shutdown requisition has to be given directly to NERLDC by concerned utility and NERLDC would subsequently grant approval if deemed fit.

- Shutdown application format made by NERLDC is attached at Annexure B.5(II).

The list of links alongwith ownership details is to be submitted by NERTS for ISTS & ISGS stations.

POWERGRID intimated matter will be reverted back after due deliberation.

The Sub-Committee noted as above.

Action: NERLDC/NERTS/all utilities.

B.6 Discontinuity in links for MW vacation project.

In the MW replacement OPGW project there was discontinuity observed in many links. The same has been intimated to PGCIL. Discontinuity in the fibers will hamper ongoing telemetry status and also upcoming projects if not rectified at the earliest.

The *.sor files taken by OTDR has been submitted to PGCIL for BTPS-Agia, Agia-Boko, Sarusajai-Mirza, Sarusajai-Agia, Samaguri_Mariani and Samaguri-Misa.

The 9th NETeST forum requested NERTS to check the discontinuity in links in consonance with AEGCL at the earliest.

In 10th NETeST meeting, Manager, NERTS informed that there is a break up of Link via Jiribam-Pailapool-Srikona-Panchgram-Badarpur due to failure of Tower in between Panchgram-Srikona-Pailapul. On rectification of Tower (5-6months as intimated by Assam), OPGW to be restored separately by AEGCL.

Further, for other locations, the joint box splicing rectification work is delayed due to unfavorable climatic conditions. Although, all fibre related issues will be sorted out by Nov 18.

Deliberation in the meeting

Pls refer to discussion in item **A.2**. NERTS informed that all nodes of Assam are reporting as on date. AEGCL informed that for Samaguri and Mariani one pair of fiber is working, others are damaged. While for Mariani, Namrup and Panchgram there is DCPS failure, which would be rectified by Dec'18.

The Sub-Committee noted as above.

Action: NERTS/AEGCL.

B.7 Finalization of agreement/formalities as to be adopted by operators while operating central sector assets (like VOIP, URTDSM, etc.).

Necessary formalities i.r.o operation may be finalized by NERTS, NERLDC & SLDC for proper operation of assets supplied under VOIP, FO EXPANSION, URTDSM etc where Equipment is installed in a control room but assets are not owned by owner of control room/LDC. Further for state sectors, wherever state links are established (e.g. NER FO Expansion project or similar) by & then AMC payment will be done by POWERGRID, for same billing will be done during AMC period against expenditure & as applicable.

In 10th NETeST meeting it was decided that the modalities would be presented in the next NETeST meeting for further ratification.

Deliberation in the meeting

GM(AM), NERTS informed that the same will be submitted to NERPC by a month after discussing with LD&C and other regions.

The Sub-Committee noted as above.

Action: NERTS.

B.8. Inter country Communication- Bangladesh & India(via SM Nagar -Comilla):

1.0 During Video Conference (7th Operational Cord meeting) arranged by NLDCs where NLDC-India, NLDC-Bangladesh, PGCB, ERLDC-Kolkata, NERLDC-Shillong, ERTS2, NERTS were present on 04.06.18. During meeting both way telemetry of data/voice SMNagar (Bangladesh) & Comilla(Bangladesh) was also discussed. NLDC wanted that data of Comilla (Bangladesh) SS is to be integrated to NERLDC/NLDC via SMNagar -Commila T/L link.

2.0 During meeting, following was proposed:

a) Power connectivity from Bangladesh to India is being made at multiple points/lines across diff border links (EHV AC; HVDC). It was proposed that preferably, NLDC India & NLDC Bangladesh/PGCB may take up for ICCP integration directly between each other to get data of specific stations only (rather than data integration from multiple points/stations across India/Bangladesh [which might risk cyber security issue, if so any in future] and so we get solution avoiding scheme" data Staion1 of one country DIRECTLY reporting to LDC of other country").

Note: The above was proposed keeping in view that any EHV station within India (connected to Inter country TL--to Bangladesh) will be reporting to respective SLDC/RLDC & so data of that station is already available in NLDC. Now NLDC can directly transfer that "specific data" to NLDC Bangladesh over ICCP (ICCP is normally more secure than any random 101/104 integration from substation level).

b) Similarly for voice, Inter exchange connectivity was proposed to be looked in to by NLDC-India & NLDC-Bangladesh directly between each other(rather than voice of station1 of country1 is made integrated at LDC of country2 at multiple points)

3.0 The matter of proposal/idea was appreciated by CE, NLDC Bangladesh . Both NLDC India & NLDC Bangladesh assured to take up the same with higher authorities of respective NLDCs along with other administrative/legal issues.

It may be noted legal or administrative issues (country to country) remain same irrespective of locations of connectivity(either NLDC, Delhi or SM Nagar, border are).

Hence, it is proposed to establish ICCP & inter exchange connectivity from NLDC Delhi to NLDC Dhaka.

In 10th NETeST meeting it was discussed that preferably, ICCP may be integrated between NLDC India & NLDC Bangladesh by taking up for inter-country administrative permission from respective authority with cyber security measures been taken care. The same is also opined by NERTS & discussed with POWERGRID's LD&C as well (designated for communication planning) keeping in view discussion in last meeting (7th Op cord meeting 04.06.18). The regulations of CEA/CERC hold good within/up to boundary of State/Country. Keeping in view country's security aspect(cyber & other regulations of DOT) & compliance thereof, same may be taken up by NLDC India with NLDC Bangladesh. However End to end(substation to substation) PLCC/Protection/FO Voice communication may be maintained between two border stations with intimation to concern authority as applicable. Channels as required up to border area may be provided by utility as per jurisdiction and same channels are proposed to be used by respective NLDCs.

NERTS informed that the views of POWERGRID communicated in the course of 7th Operational Coordination Committee meeting were not recorded in the MoM. The request for revision of MoM has been given to NLDC, POSOCO in this regard.

Forum opined that all cyber security concerns to be taken care for country-to country integration. This is also for intimation to next RPC level & further needful to be discussed in the next NETeST meeting as well.

Deliberation in the meeting

GM(AM), NERTS informed that for SLDC-Comilla, direct link is already established and voice is through via IP phone. In case of any outage, procedure for trouble logging shared with SLDC. TSECL confirmed that unidirectional calling via IP phone has been established from Surjamaninagar/SLDC to Comilla. After detailed deliberation the forum decided to drop the agenda item.

The Sub-Committee noted as above.

B.9 Improvement of Data Availability of NER

To observe and monitor the actual quantity of data that are available to NERLDC control room from Central sector as well as State sector stations, a detailed point list (analogue and digital) has been prepared by NERLDC (attached in **Annexure-B.9(I) & B.9(II)**).

Deliberation in the meeting

GM(AM), NERTS opined that after removing non-commissioned stations Data Availability for most utilities and NER as a whole would improve for e.g. after removing Subansiri HEP data availability of NERTS has improved to 63.21%..

DGM(SL), NERLDC stated that telemetry availability has to be informed to CERC periodically. Deletion of stations is not permissible because in event of disturbance, the figures would represent mal-information to CERC. The forum requested NERLDC to prepare a separate list for internal purposes, which would exclude non-commissioned stations/RTUs. This would enable higher focus and also proper RCA station wise. Members requested NERPC that the matter be discussed at length in Sub-group meeting on 22.11.2018.

The Sub-Committee noted as above.

Action: NERPC/NERLDC.

B.10 Status of URTDSM

Latest status as per 149th OCC meeting held on 11.10.2018:

1. SAT in 2nos. PDC completed. SAT for NERLDC PDC started.
2. 39 out 51 PMUs reporting. WIP for BNC. Target for completion-Jan2019

NOTE:

3. OPGW installation for Ranaganadi connectivity is on halt due to water log (at loc of shift from 132kV GITL to 400kV Line).

Further Splicing is delayed due to paddy & ROW

Members from various SLDCs informed that important nodes have been excluded from PMU installation under Phase-I & II. The forum decided that those locations would be included under Phase-III. All SLDCs to prepare list and communicate the same to NERLDC.

Deliberation in the meeting

NERTS informed that SAT of SPDC at NERLDC, PDC at Assam & Meghalaya SLDC are completed, 41 PMUs are reporting as on date. Details are attached at **Annex. B.10.**

DGM(SL), NERLDC informed the following:-

- More than 15min data cannot be seen in the trend window without distortion at present. *NERTS to explore and peruse the TS.*
- High deviation in phase angle between stations. He cited reference to letter dated. to ED, NERTS. - *GM(AM), NERTS clarified that this is due to phase shift between stations in NER, which is well known. For this possible remedy is to interchange*

the connections from CT &PT/CVT. He assured that the work at Bong would be completed by 10.12.2018.

The Sub-Committee noted as above.

Action: NERTS/NERLDC.

B.11 GPRS connectivity for Substations and Leased line for SLDC:

In 10th NETeST meeting the following timeline(s) were agreed to by the different utilities:-

Name of utility	Static IP at SLDC	GPRS SIM/Broadband
TSECL	By July'18	By 15.08.2018
MSPCL	-	Remaining By July'18
DoP Nagaland	-	By July'18

It was also intimated to states that instead of 3G SIM, if internet lease link is taken at substations also, then the same is also feasible with the modems provided for states.ED, NERLDC opined that GPRS is a temporary arrangement and should be discouraged. However it may be used as a stopgap arrangement till OPGW is implemented. However PLCC should serve as the backup for all state substations.

Deliberation in the meeting

NERTS informed the following status:-

- Only one SIM is provided by TSECL. - TSECL to provide remaining by Nov'18.
- SIMs provided by DOP, Nagaland.(One link commissioned).
- SIMs have been provided by DOP,AP.
- Mizoram is yet to provide the SIMs.
- For Manipur, SIMs as provided has been commissioned. Nodes are reporting
- Target completion: 5months subject to receipt of all SIMs.

The Sub-Committee noted as above.

Action: NERTS/TSECL/P&ED Mizoram.

B.12 Outage of Telemetry:

The following RTUs are not reporting for long duration:

- Ranaganadi since 07/09/2018,
- Kathalguri since 06/10/2018,
- Roing S/s Since 19/09/2018,
- Tezu S/s since 24/09/2018,

ECl channel of following RTUs is out of service as on date since 31/10/2018:

- 400 kV Bongaigaon S/s
- 220 kV Salakati S/s

c. 400 kV BgTPP

Deliberation in the meeting

NERTS informed the following status:-

Salakati and Bongaigaon data is reporting through Old link of ABB Mux.

Further, data which was made reporting through ECI Mux (Salakati/NTPC) is disturbed due to fiber break in BTPS Agia. KEC HAS TAKEN UP FOR RESTORATION. However, as the BTPS Agia link is not yet declared commissioned, hence same may not reflected. For Mariani DCPS problem would be rectified by Feb'19.

For non-receipt of Kathalguri data the Sr. Manager, NEEPCO informed that the modem at Misa was faulty. The same has been rectified and the station is reporting.

NERLDC informed that Ranganadi has to integrate other bays with RTU C264 by procuring MFTs. NEEPCO procurement is already in process and work to be completed by end of Jan'19.

The forum decided that the matter be discussed in the Sub-group on 22.11.18 with the latest status of non-reporting stations.

The Sub-Committee noted as above.

Action: NERTS

B.13 Discussion on visit to KPTCL regarding VSAT:

Field visit to KPTCL to see VSAT setup was discussed in the last meeting. It is requested to provide nomination for the above programme. The program is being organized tentatively on 1st week of December.

Deliberation in the meeting

After detailed deliberation it was decided that visit would be organised on 10.12.2018 at KPTCL, Bangalore. The nominated members from various utilities are as follows:-

- AEGCL- Shri P. Saha, AGM
- NEEPCO- Shri T.Tazi, Sr.Manager.
- NERTS - Shri Binod Deb Barma, Manager (09856293371)
- NERLDC - Shri M.K.Ramesh, DGM

It was also decided that NERPC would write to the concerned authorities of the above utilities for the said visit and to SRPC to inform KPTCL about this field visit.

The Sub-Committee noted as above.

Action: All utilities as above / NERPC.

Date & Venue of next NETeST meeting

It is proposed to hold the 12th NETeST meeting of NERPC on second week of January, 2019. However, the exact date and venue will be intimated in due course.

The meeting ended with thanks to the Chair.

Annexure-I**List of Participants in the 10th NETeST Meetings held on 16/07/2017**

SN	Name & Designation	Organization	Contact No.
1.	Sh. N. Perme, SE (SO&PSC)	Ar. Pradesh	09436288643
2.	Sh. Arup Sarmah, Dy. Mgr	Assam	09864267325
3.	Sh. Bimal Ch. Borah, AGM, SLDC	Assam	09475119248
4.	Sh. Narayan Sarma, DGM, MRTC	Assam	09435040035
5.	Sh. Pranab Saha, AGM (Comm)	Assam	09435561717
6.	Sh. Debajeet Saikia, Dy. Mgr	Assam	08724904083
	No Representatives	Manipur	-
7.	Sh. D. J. Lyngdoh, E.E (S.M), SLDC	Meghalaya	09774285158
8.	Sh. C. W. Chen, AE, SLDC, MePTCL	Meghalaya	09863093311
9.	Sh. Y. Kharपुरi, AE (C&C), MePTCL	Meghalaya	09774507325
10.	Sh. Lalbiaksanga, SE, SLDC	Mizoram	09436140932
	No Representatives	Nagaland	-
11.	Sh. Debabrata Paul, Sr. Manager	Tripura	09436500244
12.	Sh. Mrinal Paul, Manager, SOD	Tripura	09436137022
13.	Sh. Joypal Roy, Sr. Manager (E/M)	NEEPCO	09435577726
14.	Sh. T. Taji, Sr. Manager (KHEP)	NEEPCO	09436042053
15.	Sh. M.K. Ramesh, DGM (SL)	NERLDC	09449599174
16.	Sh. Tapabrata Paul, Engineer(SL)	NERLDC	07085012850
17.	Sh. P. Kanungo, GM	PGCIL	09436302823
18.	Sh. U. Kataki, Sr.GM	PGCIL	09435505418
19.	Sh. R. Kumar, Asst. Manager	PGCIL	09402184618
20.	Sh. N. Yugandhar, M(E&C), Loktak PS	NHPC	09800003819
21.	Sh. P.K. Mishra, MS	NERPC	-
22.	Sh. B. Lyngkhai, Director/S.E (O&P)	NERPC	09436163419
23.	Sh. Srijit Mukherjee, AEE	NERPC	08794277306

S. No.	LINK		PROJECT	CURRENT STATUS	COMMISSIONING DATE(Expected Date if not completed)	OWNER	REMARKS (IF ANY)
	FROM	TO					
1	ZIRO	RANGANADI	MW VACATION				
2	RANAGANADI	PARE	MW VACATION				
3	RANAGANADI	NIRJULI	MW VACATION				
4	PARE	CHIMPU	MW VACATION				
5	RANAGANADI	GOHPUR	MW VACATION				
6	GOHPUR	BALIPARA	MW VACATION				
7	TINSUKIA	NAMRUP	MW VACATION				
8	NAMRUP	LAKWA	MW VACATION				
9	LAKWA	MARIANI(AS)	MW VACATION				
10	MARIANI(AS)	MARIANI(PG)	MW VACATION				
11	MARIANI(AS)	SAMAGURI	MW VACATION				
12	SAMAGURI	MISA	MW VACATION				
13	SALAKATI	BONGAIGAON(PG)	MW VACATION				
14	BONGAIGAON(PG)	BgTPP	MW VACATION				
15	BgTPP	BTPS(AS)	MW VACATION				
16	BTPS(AS)	AGIA	MW VACATION				
17	AGIA	SARUSAJAI	MW VACATION				
18	AGIA	BOKO	MW VACATION				
19	AGIA	AZARA	MW VACATION				
20	SIRIKONA	PAILAPOOL	MW VACATION				
21	PAILAPOOL	JIRIBAM(PG)	MW VACATION				
22	SIRIKONA	SILCHAR	MW VACATION				
23	BADARPUR	BADARPUR(AS)	MW VACATION				
24	BADARPUR	SIRIKONA	MW VACATION				
25	SILCHAR	BADARPUR	MW VACATION				
26	BADARPUR	KOLASIB	MW VACATION				
27	KOLASIB	AIZAWL	MW VACATION				
28	DIMAPUR	NAGARJUN	MW VACATION				
29	NAGARJUN	DIMAPUR	MW VACATION				
30	IMPHAL	IMPHAL(MN)	MW VACATION				
31	DIMAPUR	NAGARJUN	MW VACATION				
32	MOKOKCHUNG	MOKOKCHUNG(NA)	MW VACATION				
33	SILCHAR	KILLING	MW VACATION				
34	KILLING	BONGAIGAON(PG)	MW VACATION				

S. No.	LINK		PROJECT	CURRENT STATUS	COMMISSIONING DATE(Expected Date if not completed)	OWNER	REMARKS (IF ANY)
	FROM	TO					
1	KATHALGURI	MARIANI(PG)	NER FO EXPANSION				
2	MARIANI(PG)	MOKOKCHUNG(PG)	NER FO EXPANSION				
3	MOKOKCHUNG(NA)	DOYANG	NER FO EXPANSION				
4	DOYANG	DIMAPUR(PG)	NER FO EXPANSION				
5	DOYANG	WOKHA	NER FO EXPANSION				
6	WOKHA	SANIS	NER FO EXPANSION				
7	WOKHA	KOHIMA	NER FO EXPANSION				
8	BADARPUR(PG)	JIRIBAM(PG)	NER FO EXPANSION				
9	JIRIBAM(PG)	JIRIBAM(MA)	NER FO EXPANSION				
10	JIRIBAM(PG)	LOKTAK	NER FO EXPANSION				
11	LOKTAK	IMPHAL(PG)	NER FO EXPANSION				
12	LOKTAK	RENGPANG	NER FO EXPANSION				
13	LOKTAK	NINGTHOUKHONG	NER FO EXPANSION				
14	NINGTHOUKHONG	CHURACHANDPUR	NER FO EXPANSION				
15	CHURACHANDPUR	KAKCHING	NER FO EXPANSION				
16	KAKCHING	CHANDEL	NER FO EXPANSION				
17	KAKCHING	THOUBAL	NER FO EXPANSION				
18	THOUBAL	KONGBA	NER FO EXPANSION				
19	KONGBA	YAINGANGPOKPI	NER FO EXPANSION				
20	YAINGANGPOKPI	IMPHAL(MN)	NER FO EXPANSION				
21	YAINGANGPOKPI	HUNDUNG	NER FO EXPANSION				
22	IMPHAL(MN)	KARONG	NER FO EXPANSION				
23	AIZAWL	LUANGMUAL	NER FO EXPANSION				
24	AIZAWL	ZUANTUI	NER FO EXPANSION				
25	ZUANTUI	SLDC AIZAWL	NER FO EXPANSION				
26	ZUANTUI	MELRIAT	NER FO EXPANSION				
27	AIZAWL	MELRIAT	NER FO EXPANSION				
28	MELRIAT	CHUIMUI	NER FO EXPANSION				
29	MELRIAT	SILCHAR(PG)	NER FO EXPANSION				
30	SM NAGAR	BJ NAGAR	NER FO EXPANSION				
31	SM NAGAR	MONARCHAK	NER FO EXPANSION				
32	SM NAGAR	BADHARGHAT	NER FO EXPANSION				
33	SM NAGAR	79 TILLA	NER FO EXPANSION				
34	SM NAGAR	ROKHIA	NER FO EXPANSION				
35	ROKHIA	UDAIPUR	NER FO EXPANSION				
36	UDAIPUR	GUMTI	NER FO EXPANSION				
37	GUMTI	AMARPUR	NER FO EXPANSION				
38	UDAIPUR	PALATANA	NER FO EXPANSION				
39	PALATANA	PK BARI	NER FO EXPANSION				
40	SILCHAR(PG)	MELRIAT	NER FO EXPANSION				
41	SATCHAND	SABROOM	NER FO EXPANSION				
42	79 TILLA	DHALABIL	NER FO EXPANSION				
43	79 TILLA	BARAMURA	NER FO EXPANSION				
43	KILLING	AZARA	NER FO EXPANSION				
44	KAHELIPARA	B/U NERLDC	NER FO EXPANSION				
45	NEHU	NEIGRIHMS	NER FO EXPANSION				
46	KHLIERIAT(ME)	LESKHA	NER FO EXPANSION				
47	KHLIERIAT(ME)	KHLIERIAT(PG)	NER FO EXPANSION				
48	KHLIERIAT(ME)	LUMSHONG	NER FO EXPANSION				
49	KHANDONG	HALFLONG	NER FO EXPANSION				

S. No.	LINK		PROJECT	CURRENT STATUS	COMMISSIONING DATE(Expected Date if not completed)	OWNER	REMARKS(IF ANY)
	FROM	TO					
1	SARUSAJAI	KAHELIPARA	ULDC PROJECT				
2	KAHELIPARA	UMIUM III	ULDC PROJECT				
3	UMIUM III	UMIUM I	ULDC PROJECT				
4	UMIUM I	NEHU	ULDC PROJECT				
5	NEHU	NERLDC	ULDC PROJECT				
6	KHLIEHRIAT(ME)	NERLDC	ULDC PROJECT				
7	BALIPARA	MISA	ULDC PROJECT				
8	MISA	KOPILI	ULDC PROJECT				
9	KOPILI	KHANDONG	ULDC PROJECT				
10	KHANDONG	KHLIEHRIAT(PG)	ULDC PROJECT				
11	KHLIEHRIAT(PG)	BADARPUR	ULDC PROJECT				
12	BADARPUR	KUMARGHAT	ULDC PROJECT				
13	KUMARGHAT	RC NAGAR	ULDC PROJECT				
14	RC NAGAR	SLDC AGARTALA	ULDC PROJECT				
15	MISA	DIMAPUR	ULDC PROJECT				
16	DIMAPUR	KOHIMA	ULDC PROJECT				
17	KOHIMA	IMPHAL	ULDC PROJECT				

Date Prepared	11/1/2018							PERIOD: 01-10-2018 to 31-10-2018	
				OUTAGE TIME					
Sl. No.	Name of RTU	Link Name/ ID	Path detail	FROM	TO	Non-Available Hours	% Availability	Reason for Non-availability	RTU/PMU/Link Affected
1	Agartala	Channel 1	Agartala-plcc-B-FO-C-OPGW-D-NERLDC						
		Channel 2	Agartala-plcc-D-FO-C-OPGW-K-NERLDC						
		Channel 3	Agartala-plcc-L-FO-M-OPGW-N-NERLDC						
2	Aizawl								
3	Badarpur								
4	Balipara								
5	BNC HVDC								
6	Bongaigoan								
7	BgTPP			31/10/2018 1426					
8	Dimapur								
9	Doyang								
10	Haflong			31/10/2018, 0232	31/10/2018 1550				
11	Imphal								
12	Itanagar(Nirjuli)								
13	Jiribam								
14	Kathalguri			09/10/2018, 1358					
15	Khandong								
16	Khleiriat								
17	Kolasib			4/25/2018					
18	Kopili								
19	Kopili-Ex								
20	Kumarghat								
21	Loktak								
22	Mariani								
23	Misa								
24	Mokokchung								
25	Namsai			31/10/2018 0233	31/10/2018 1135				
25	Palatana								
26	Pare								
27	Ranaganadi			07/09/2018, 1059					
28	Roing			19/09/2018, 1808					
29	Salakati			31/10/2018 1425					
30	Silchar			31/10/2018 0906	31/10/2018 1200				
31	Tezu			24/09/2018, 1734					
32	Ziro								

				OUTAGE TIME					
Sl. No.	Name of ICCP Links			FROM	TO	Non-Available Hours		Reason for Non-availability	Link Affected
1	Arunchal Pradesh	CPID XXXX							
2	Assam	CPID XXXX							
3	Manipur	CPID XXXX							
4	Meghalaya	CPID XXXX							
5	Mizoram	CPID XXXX							
6	Nagaland								
7	Tripura								
8	Backup-NERLDC								
9	NLDC								
10	Backup-NLDC								

NOTE: Document /Evidence such as NMS report to be attached with the report.

Equipment / Media Detail																						
Sl. No.	Name of RTU	Link Name/ CPID	Path detail	Node1	Media Detail	Node2	Media	Node3	Media Detail	Node4	Media Detail	Node5	Media Detail	Node6	Media Detail	Node7	Media Detail	Node8	Media Detail	Node9	Media Detail	Node10
1	Agartala	Channel 1	Agartala-plcc-B-FO-C-OPGW-D-NERLDC	Agartala ABB Make PLC Panel Model no XXXXXX	PCC	B-EG Make SDH Equipmen Model XXXX	FO	C-OPGW	OPGW	Nishu, ZTE equipmen Model 2094DE	NERLDC											
		Channel 2	Agartala-plcc-D-FO-C-OPGW-K-NERLDC																			
		Channel 3	Agartala-plcc-L-FO-M-OPGW-N-NERLDC																			
		Channel 4/ CPID 32918	Agartala-OPGW-NERLDC																			

Note: Kindly update all available detail.
In case of PMU/VC/new URTDSM Links please update the CPIDs if not correct in the sheet.

S. No.	LINK		PROJECT	CURRENT STATUS	COMMISSIONING DATE(Expected Date if not completed)	OWNER	REMARKS(IF ANY)
	FROM	TO					
1	ZIRO	RANGANADI	MW VACATION				
2	RANAGANADI	PARE	MW VACATION				
3	RANAGANADI	NIRJULI	MW VACATION				
4	PARE	CHIMPU	MW VACATION				
5	RANAGANADI	GOHPUR	MW VACATION				
6	GOHPUR	BALIPARA	MW VACATION				
7	TINSUKIA	NAMRUP	MW VACATION				
8	NAMRUP	LAKWA	MW VACATION				
9	LAKWA	MARIANI(AS)	MW VACATION				
10	MARIANI(AS)	MARIANI(PG)	MW VACATION				
11	MARIANI(AS)	SAMAGURI	MW VACATION				
12	SAMAGURI	MISA	MW VACATION				
13	SALAKATI	BONGAIGAON(PG)	MW VACATION				
14	BONGAIGAON(PG)	BgTPP	MW VACATION				
15	BgTPP	BTPS(AS)	MW VACATION				
16	BTPS(AS)	AGIA	MW VACATION				
17	AGIA	SARUSAJAI	MW VACATION				
18	AGIA	BOKO	MW VACATION				
19	AGIA	AZARA	MW VACATION				
20	SIRIKONA	PAILAPOOL	MW VACATION				
21	PAILAPOOL	JIRIBAM(PG)	MW VACATION				
22	SIRIKONA	SILCHAR	MW VACATION				
23	BADARPUR	BADARPUR(AS)	MW VACATION				
24	BADARPUR	SIRIKONA	MW VACATION				
25	SILCHAR	BADARPUR	MW VACATION				
26	BADARPUR	KOLASIB	MW VACATION				
27	KOLASIB	AIZAWL	MW VACATION				
28	DIMAPUR	NAGARJUN	MW VACATION				
29	NAGARJUN	DIMAPUR	MW VACATION				
30	IMPHAL	IMPHAL(MN)	MW VACATION				
31	DIMAPUR	NAGARJUN	MW VACATION				
32	MOKOKCHUNG	MOKOKCHUNG(NA)	MW VACATION				
33	SILCHAR	KILLING	MW VACATION				
34	KILLING	BONGAIGAON(PG)	MW VACATION				

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If any link is missed out, then kindly add to the appropriate list.

S. No.	LINK		PROJECT	CURRENT STATUS	COMMISSIONING DATE(Expected Date if not completed)	OWNER	REMARKS(IF ANY)
	FROM	TO					
1	KATHALGURI	MARIANI(PG)	NER FO EXPANSION				
2	MARIANI(PG)	MOKOKCHUNG(PG)	NER FO EXPANSION				
3	MOKOKCHUNG(NA)	DOYANG	NER FO EXPANSION				
4	DOYANG	DIMAPUR(PG)	NER FO EXPANSION				
5	DOYANG	WOKHA	NER FO EXPANSION				
6	WOKHA	SANIS	NER FO EXPANSION				
7	WOKHA	KOHIMA	NER FO EXPANSION				
8	BADARPUR(PG)	JIRIBAM(PG)	NER FO EXPANSION				
9	JIRIBAM(PG)	JIRIBAM(MA)	NER FO EXPANSION				
10	JIRIBAM(PG)	LOKTAK	NER FO EXPANSION				
11	LOKTAK	IMPHAL(PG)	NER FO EXPANSION				
12	LOKTAK	RENGPANG	NER FO EXPANSION				
13	LOKTAK	NINGTHOUKHONG	NER FO EXPANSION				
14	NINGTHOUKHONG	CHURACHANDPUR	NER FO EXPANSION				
15	CHURACHANDPUR	KAKCHING	NER FO EXPANSION				
16	KAKCHING	CHANDEL	NER FO EXPANSION				
17	KAKCHING	THOUBAL	NER FO EXPANSION				
18	THOUBAL	KONGBA	NER FO EXPANSION				
19	KONGBA	YAINGANGPOKPI	NER FO EXPANSION				
20	YAINGANGPOKPI	IMPHAL(MN)	NER FO EXPANSION				
21	YAINGANGPOKPI	HUNDUNG	NER FO EXPANSION				
22	IMPHAL(MN)	KARONG	NER FO EXPANSION				
23	AIZAWL	LUANGMUAL	NER FO EXPANSION				
24	AIZAWL	ZUANTUI	NER FO EXPANSION				
25	ZUANTUI	SLDC AIZAWL	NER FO EXPANSION				
26	ZUANTUI	MELRIAT	NER FO EXPANSION				
27	AIZAWL	MELRIAT	NER FO EXPANSION				
28	MELRIAT	CHUIMUI	NER FO EXPANSION				
29	MELRIAT	SILCHAR(PG)	NER FO EXPANSION				
30	SM NAGAR	BJ NAGAR	NER FO EXPANSION				
31	SM NAGAR	MONARCHAK	NER FO EXPANSION				
32	SM NAGAR	BADHARGHAT	NER FO EXPANSION				
33	SM NAGAR	79 TILLA	NER FO EXPANSION				
34	SM NAGAR	ROKHIA	NER FO EXPANSION				
35	ROKHIA	UDAIPUR	NER FO EXPANSION				
36	UDAIPUR	GUMTI	NER FO EXPANSION				
37	GUMTI	AMARPUR	NER FO EXPANSION				
38	UDAIPUR	PALATANA	NER FO EXPANSION				
39	PALATANA	PK BARI	NER FO EXPANSION				
40	SILCHAR(PG)	MELRIAT	NER FO EXPANSION				
41	SATCHAND	SABROOM	NER FO EXPANSION				
42	79 TILLA	DHALABIL	NER FO EXPANSION				
43	79 TILLA	BARAMURA	NER FO EXPANSION				
43	KILLING	AZARA	NER FO EXPANSION				
44	KAHELIPARA	B/U NERLDC	NER FO EXPANSION				
45	NEHU	NEIGRIHMS	NER FO EXPANSION				
46	KHLIERIAT(ME)	LESKHA	NER FO EXPANSION				
47	KHLIERIAT(ME)	KHLIERIAT(PG)	NER FO EXPANSION				
48	KHLIERIAT(ME)	LUMSHONG	NER FO EXPANSION				
49	KHANDONG	HALFLONG	NER FO EXPANSION				

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S. No.	LINK		PROJECT	CURRENT STATUS	COMMISSIONING DATE/Expected Date if not completed)	OWNER	REMARKS(IF ANY)
	FROM	TO					
1	SARUSAJAI	KAHELIPARA	ULDC PROJECT				
2	KAHELIPARA	UMIUM III	ULDC PROJECT				
3	UMIUM III	UMIUM I	ULDC PROJECT				
4	UMIUM I	NEHU	ULDC PROJECT				
5	NEHU	NERLDC	ULDC PROJECT				
6	KHLIEHRIAT(ME)	NERLDC	ULDC PROJECT				
7	BALIPARA	MISA	ULDC PROJECT				
8	MISA	KOPILI	ULDC PROJECT				
9	KOPILI	KHANDONG	ULDC PROJECT				
10	KHANDONG	KHLIEHRIAT(PG)	ULDC PROJECT				
11	KHLIEHRIAT(PG)	BADARPUR	ULDC PROJECT				
12	BADARPUR	KUMARGHAT	ULDC PROJECT				
13	KUMARGHAT	RC NAGAR	ULDC PROJECT				
14	RC NAGAR	SLDC AGARTALA	ULDC PROJECT				
15	MISA	DIMAPUR	ULDC PROJECT				
16	DIMAPUR	KOHIMA	ULDC PROJECT				
17	KOHIMA	IMPHAL	ULDC PROJECT				

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S. No.	LINK		PROJECT	CURRENT STATUS	COMMISSIONING DATE(Expected Date if not completed)	OWNER	REMARKS(IF ANY)
	FROM	TO					

Note: Kindly update all node and their status. If the link is in WIP stage , then expected target for commissioning may be given in the remarks column.
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Draft Communication Outage Procedure



