

North Eastern Regional Power Committee

Agenda

For

12th NETeST Sub-Committee Meeting

Time of meeting : 10:00 Hrs.

Date of meeting : 10th January, 2018 (Thursday)

Venue : "Hotel Nandan", Guwahati.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 11th NETeST Meeting held on 13.11.2018.

The minutes of 11th NETeST Meeting held on 13th November, 2018 at Guwahati were circulated by NERPC vide letter No. NERPC/SE(O)/TeST/2018/ dated 05th December, 2018.

The Sub-committee may confirm the minutes of 11th NETeST meeting of NERPC as no comments/observations were received from the constituents.

ITEMS FOR DISCUSSION

A.1 Status of SLDCs in NER:

SN	Utility	Status as informed in 10 th NETeST	Status on 11 th NETeST & Target of Completion	Target Completion
UPGRADATION OF SLDCs				
1	Assam	Completed.	DG set- ACDB issue resolved and DG set commissioning by 25.11.2018	
2	Tripura	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	Completed.	Completed.	
4	NERLDC	Completed.	SAT Completed.	

5	Manipur	Completed.	DG set target-Nov18	
6	Nagaland	Out of 12, 10 RTUs are installed and six tested. DG set space yet not ready.	Completed	
7	Mizoram	Completed. AMC is still not signed. DG set space yet not ready.	Completion by Nov18	
8	Ar. Pradesh	8 RTU installed and tested locally without communication links.	Completed.	
9	Backup NERLDC	Completed.	Completed.	

Members may kindly intimate the status.

A.2 Status of FO works under different projects:

Latest status as per 11th NETeST:

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. <p>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.</p> <p><i>NERTS replied that Communication</i></p>

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

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.

Rectification work for the links viz. BTPS-Agia, Agia-Sarusajai, Samaguri-Mariani, Namrup-Tinsukia shall be completed by Dec-18.

NERTS replied that rectification work for the links viz. BTPS-Agia, Agia-Sarusajai, Samaguri-Mariani, Namrup-Tinsukia shall be completed by Dec-18.

Sub-committee noted.

M/s TENDOT

4. WIP in all 14 links
5. Progress affected due to ROW.
6. Expected completion March'19.

NOTE

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.

Railway diversion of POWERGRID also suffering due to ROW in 3 locations to be resolved by Arunachal Pradesh.

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

	<p>take up in TCC/RPC.</p> <p>Action: NERPC</p>
NER FO Expansion/Add req of OPGW	<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 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"> a. Manipur: Supply – Complete, Erection: 0 km, Team is mobilized by M/s TCIL. b. 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 c. Target completion: June-19 d. 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.</p>

	<p>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>
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. Critical Issues against project implementation may be discussed

Name of the Project	Critical Issue
Upgradation of ULDC FO node	
MW Vacation	
NER FO Expansion/Add req of OPGW	

NERTS may please intimate the status.

B. NEW ITEMS

B.1 Strengthening of PLCC System by NER States:

As per discussion in previous meetings:

- Communication schemes of Mizoram, DoP Ar.Pradesh, Nagaland and Tripura - By Nov'18
- 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.*
- NERPSIP communication schemes - *Already submitted to NERLDC/NERPC. To be included in the map.*

NERLDC/NERPC may please inform the status.

B.2 Termination of OPGW at RHEP:

The latest status as per 11th NETeST meeting:

- **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

Members may please discuss.

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

As per discussion in the previous meetings the following were 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. 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 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. 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 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*

Members may please discuss.

B.4 MW and MVAR data validation:

In 11th NETeST meeting 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.

NERLDC may please intimate the status.

B.5 Shut Down Procedure for Optical Links:

In 11th NETeST the draft procedure was presented by NERLDC. 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.

NERTS may please inform the status.

B.6 Discontinuity in links for MW vacation project.

In 11th NETeST meeting 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.

AEGCL may please intimate the status.

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 proj 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 11th NETeST meeting NERTS informed that the same will be submitted to NERPC by a month after discussing with LD&C and other regions.

NERPC/NERTS may please inform the latest status .

B.8 Improvement of Data Availability of NER

In 11th NETeST 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.

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 (Analog and Digital) has been prepared by NERLDC and is displayed in OCC and NETeST forum every time (attached in **Annexure-B.8**).

It is requested to rectify all the analog data and digital status data of all stations of Central Sector and State Sector and improve the data availability for smooth Grid Operation.

Members may please discuss.

B.9 Status of URTDSM

In 11th NETeST meeting NERTS informed that SAT of SPDC at NERLDC, PDC at Assam & Meghalaya SLDC are completed, 41 PMUs are reporting as on date. 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 Bongaigaon would be completed by 10.12.2018.*

NERLDC has informed that the following points have been found during SAT which need to be taken up for operator utilisation of the URTDSM project:

- a) Flexibility of trend window TDF UI and ETV (5 min & 15 min)
- b) Phase Angle shift errors of stations are yet to be solved.

NERTS may please intimate the latest status

B.10 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

In 11th NETeST 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.

TSECL/MSPCL/DoP Nagaland may please inform the latest status.

B.11 Outage of Telemetry:

The following stations data are very important for NER grid operation and need to be restored urgently. Kindly update the progress status for the works.

- a) S900 RTU of 400 kV **Ranganadi** (NEEPCO) is not reporting. Kindly update the status of procurement of C264 and MFTs required for integration.
- b) **Mariani S/s and Mokokchung S/s** are not reporting since 30/12/2018.

Further, the following RTUs data over the GPRS/internet is highly intermittent:

- a) Roing S/s,
- b) Tezu S/s,

Members may please discuss.

B.12 Discussion on visit to KPTCL regarding VSAT:

As per discussion in previous meetings:

- Leased Line Connectivity has been explored by NERTS for Roing, Tezu & Namsai with recurring expenditure amounting to INR 28 lakhs.
- VSAT Pilot project to be executed at Byrnihat station. The data would be transmitted from Byrnihat to KPTCL (via satellite) to SRLDC to NLDC to NERLDC. This would be kept in monitoring mode in the interim.
- NERPC to take up with proper authorities for funding of VSAT in NER from suitable sources.
- A visit to KPTCL would be done on the 10th of December, 2018 with members from NERLDC, AEGCL and NEEPCO to assess the technical feasibility.

Members of the group which visited Bangalore on 10.12.18 updated the 151st OCC forum of the technical aspects of the visit:

- Extended C Band Technology is being used by KPTCL. Same technology has to be replicated for NER.
- Minimum hardware is required at the remote stations and easy to install with only 3 units (modem, switch and antenna).
- Delay in receipt of data & voice is minimum and negligible.
- Voice communication is reliable and clear.

The team has confirmed that they are convinced about the performance of VSAT Communication Technology and that it is more suitable for NER Region.

Members who went for study tour on VSAT to KPTCL may kindly share their views and further course of action. Consent letter from KPTCL addressed to MS, SRPC is attached in Annexure-D for observation.

Members may please discuss.

AGENDA ITEM FROM NEEPCO:

B.13 Permission for 1st time charging of 400/132 KV Switchyard of kameng Hydro Electric Project, NEEPCO

OBJECTIVE : To check permission for 1st time charging of of 400/132 KV Switchyard of Kameng Hydro Electric Project, NEEPCO with one Data Channel from Powegrid's Balipara Sub-Station to with NERLDC Shillong

BACKGROUND:

- I. NEEPCO's 4X150 MW Kameng HE Project was scheduled for commissioning in Mar-April 2018. However, during pre-commissioning stage on Mar 2018, leakages in penstock have been witnessed. The rectification works are presently on progress and it is anticipated that two units shall be ready for commissioning within March 2019.
- II. In the meantime, NEEPCO has sought from NERLDC on 10/12/2018 for 1st time charging 400/132 KV Switchyard of the Project.
- III. It is to be mentioned that the data telemetry with NERLDC, Shillong has been established subsequently and the data validations for all elements of the switchyard have since been completed.
- IV. For data communication, dual PLCC channel till wideband location i.e Balipara has been established. However, from Balipara to NERLDC Shillong, only one channel is presently made available.
- V. For voice communication, dedicated Telephone (landline) has been provided and also alternative dedicated Voice Communication over PLCC has been established.
- VI. It has also been certified that the alternative channel through OPGW shall be available after completion of additional communication scheme by NERTS as approved in 18th NERPC meeting (item A.7).

- VII. NERLDC, however, desires that complete alternate two channels from Kameng HEP via Balipara to NERLDC shall be provided.
- VIII. As per Connection Agreement drawn between NEEPCO and Powergrid, establishment of communication system from Balipara to NERLDC is in the scope of CTU i.e. Powergrid, however its cost shall be borne by NEEPCO. NEEPCO accordingly has taken up with Powergrid to provide the two channels from Balipara. Powergrid, however, informed that at present there is no additional spare channel readily available from Balipara to NERLDC and additional one channel shall be made available between Balipara to NERLDC by 2 months with installation of new equipment/cards at Balipara. Powergrid has been requested vide letter dated 03/01/2019 (copy enclosed at **Annexure B.13**) for urgent action to make necessary arrangement to provide complete alternative two channels.
- IX. All NEEPCO's contractors viz. BHEL & Techno-Electric and its sub-contractors/vendors engaged in construction of NEEPCO's Switchyard and Power Station are waiting for clearances from NERLDC to charge and commissioning the Switchyard since last week of December 2018.

PROPOSAL:

With the above background and as establishment of the alternative channel from Balipara to NERLDC is beyond the control of NEEPCO, it is solicited that NERLDC may consider granting of provisional clearance to NEEPCO for charging of the Switchyard of Kameng HEP based on the Powergrid's assurance that the additional channel shall be made available in next 2 months time.

NEEPCO may please deliberate.

AGENDA ITEMS FROM NERLDC:

B.14 Outage of telemetry during grid disturbance:

A. At 10:19 Hrs of 05/12/2018, there was a grid disturbance in North Eastern Region. During the grid disturbance following RTUs were not reporting which caused inconvenience in grid restoration:

- i. 400 kV Bogaigaon
- ii. 400 kV Misa
- iii. 200 kV Salakati
- iv. 132 kV Nirjuli
- v. Pare HEP

It is requested to provide necessary details for failure of aforementioned data and take necessary action to avoid the same in future.

NERLDC may please deliberate.

B.15 Dual channel availability for reliable and redundant communication system in NER:

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.

The attached list in Annexure-B shows the status list of central sector stations with dual channel.

It is requested to provide dual channel for all the central sector stations where it is not available.

NERLDC may please deliberate.

B.16 Drawal points data availability:

A list of drawl points is prepared and is attached in Annexure-C. To effectively monitor the deviation of states and generators as per 4th Amendment of DSM regulation, the drawl points data indicated in the list are very important.

It is requested to every constituent to maintain the data availability of drawl points to help themselves for better real time monitoring of the grid and the deviation from schedule.

NERLDC may please deliberate.

Any other item:

Date and Venue of next NETeST

It is proposed to hold the 13th NETeST meeting of NERPC on second week of April, 2019. The date & exact venue will be intimated in due course.



SYSTEM LOGISTICS, NERLDC

Telemetry Statistics of States and Central Sector RTUs



DATA AVAILABILTY AS ON NER 31/12/2018

Total No. of Analog Points	Total No. of Digital Points	Total No. of Points	Analog Points Reporting	Digital Points Reporting	Total No. of Points Reporting	%age Availability of Analog Points	%age Availability of Digital Points	%age Availability
3647	5063	8710	1556	1945	3501	42.66%	38.41%	40.19%



DATA AVAILABILITY OF STATES AS ON 31/12/2018

Sl No.	State	Total No. of Analog Points	Total No. of Digital Points	Total No. of Points	Analog Points Reporting	Digital Points Reporting	Total No. of Points Reporting	%age Availability of Analog Points	%age Availability of Digital Points	%age Availability
1	Arunachal Pradesh	106	152	258	0	0	0	0	0	0
2	Assam	1217	1731	2948	492	512	1004	40.42%	29.57%	34.04%
3	Manipur	180	255	435	106	179	285	58.88%	70.19%	65.51%
4	Meghalaya	409	388	797	220	56	276	53.79%	14.43%	34.63%
5	Mizoram	71	50	121	9	7	16	12.67%	14%	13.22%
6	Nagaland	237	270	507	5	2	7	2.11%	0.74%	1.38%
7	Tripura	524	715	1239	138	134	272	26.33%	18.74%	21.95%



DATA AVAILABILITY OF CENTRAL SECTOR AS ON 31/12/2018

Sl No.	State	Total No. of Analog Points	Total No. of Digital Points	Total No. of Points	Analog Points Reporting	Digital Points Reporting	Total No. of Points Reporting	%age Availability of Analog Points	%age Availability of Digital Points	%age Availability
1	PGCIL*	628	1082	1710	396	764	1160	63.05%	70.60%	67.83%
2	NEEPCO	202	286	488	125	157	282	61.88%	54.89%	57.78%
3	NTPC	31	49	80	23	49	72	74.19%	100%	90%
4	OTPC	42	85	127	42	85	127	100%	100%	100%
5	NHPC	18	29	47	17	27	44	94.44%	93.10%	93.61%

* Due to failure of several converter PGCIL data reporting was around 40% On 31.12.2018. After restoration, the data availability figure on 02.01.2018 is reflected for PGCIL above.



ISO 9001 & 14001
OHSAS 18001

नॉर्थ ईस्टर्न इलेक्ट्रिक पावर कॉर्पोरेशन लि.

(भारत सरकार का उद्यम)

NORTH EASTERN ELECTRIC POWER CORPORATION LTD.

(A GOVT. OF INDIA ENTERPRISE)

OFFICE OF THE DIRECTOR (TECHNICAL)



No. NEEPCO/D (T)/KaHEP-8/2018-19/ 467

Dated: 02.01.2019

To

The Executive Director,
NERTS, Powergrid Corporation of India Ltd.,
Lapalang, Shillong-793006

Sub: 600 MW Kameng HEP. Reg. Data Communication with NERLDC via Balipara.

Dear Sir,

We would like to inform that we have recently planned to charge the 400/132 kV Switchyard of our 600 MW Kameng HE Project and accordingly, we have approached NERLDC, Shillong on 10/12/2018 to grant clearance of 1st time charging of the switchyard.

You are aware that the pre-requisite for the getting clearance is the establishment of the data telemetry and voice communication between Power House of the Project and NERLDC, Shillong. With the co-operation and assistance from Powergrid, we could establish data telemetry and voice communication with NERLDC Shillong via Powergrid's Balipara Sub-station.

It is to be mentioned that for data telemetry, dual PLCC channel have been configured upto Balipara, whereas from Balipara to NERLDC, only one channel is made available. NERLDC has made the observation to provide complete alternate two channels from Kameng HEP via Balipara to NERLDC.

We understand that at present, there is no spare port available in Telecom panel at Balipara to make the alternative channel available upto NERLDC and in order to meet the requirement as observed by NERLDC, new equipment/cards or upgradation of the telecom panel at Balipara are required.

NERLDC is not granting the clearance to charge our switchyard without fulfilment of above requirement. It is to be mentioned that as per Connection Agreement between NEEPCO & Powergrid, providing communication from Balipara up to NERLDC is in the scope of Powergrid.

You may appreciate that all our contractors/vendors engaged in construction of our Switchyard and Power Station are waiting for clearances to charge and commission the Switchyard. We, therefore, request your intervention on the matter for urgent action to make necessary arrangement to provide complete alternate two channels to NERLDC.

Thanking you

Yours faithfully,

(V. K. Singh)

Director (Technical)