

# North Eastern Regional Power Committee

## Agenda

### For

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

Time of meeting : 10:00 Hrs.

Date of meeting : 11<sup>th</sup> April, 2018 (Wednesday)

Venue : "Hotel Nandan", Guwahati.

#### A. CONFIRMATION OF MINUTES

##### CONFIRMATION OF MINUTES OF 8<sup>th</sup> NETeSTS Meeting held on 18.01.2018.

The minutes of 8<sup>th</sup> NETeST Meeting held on 18<sup>th</sup> January, 2018 at Guwahati were circulated by NERPC vide letter No. NERPC/SE(O)/TeST/2018/ dated 01<sup>th</sup> February, 2018.

*The Sub-committee may confirm the minutes of 8<sup>th</sup> 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	Present Status	Status as informed in 8 <sup>th</sup> NETeST	Target Completion
UPGRADATION OF SLDCs				
1	Assam		Completed.	Completed. DG set-Target February-18.
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. DG set-Target February-18.
3	Meghalaya		Completed.	Completed. DG set-Target February-18.
4	NERLDC		Completed.	Completed. DG set-Target February-18.

NEW SLDCs				
5	Manipur		Completed.	Completed. DG set-Target February-18.
6	Nagaland		Out of 12, 10 RTUs are installed and six tested. DG set space yet not ready.	Completed. DG set-Target February-18. Subject to hand over of DG site
7	Mizoram		Completed. AMC is still not signed. DG set space yet not ready.	Completed. DG set-Target February-18. Subject to hand over of DG site.
8	Ar. Pradesh		8 RTU installed and tested. Only one left.	Completed. DG set-Target February-18.
9	B/UP NERLDC		Completed.	Completed. DG set-Target February-18..

*Members may kindly intimate the status.*

**A.2 Non-reporting of RTUs of Constituents on Existing SCADA:**

**A) POWERGRID:** : 4 RTUs not reporting out of 22 RTUs & data of 1 RTU is wrong.

- a. KOPEX SAS line flow is OK but BUS data suspect.
- b. Roing and Tezu RTUs do not report.
- c. Kolasib out since 22.05.2017
- d. Status of CS RTUs on single link & requirement of 2nd link back up/redundant channel. Lists as on 09/08/2017:
  1. 800 kV HVDC BNC (Only one channel made)
  2. 400 kV Misa (2 channels made but only 1 available)
  3. 400 kV Bongaigaon (Only one channel made)
  4. 400 kV Silchar (2 channels made but only 1 available)
  5. 220 kV Dimapur (two channels but only 1 available)
  6. 220 kV Salakati (Only one channel made)
  7. 132 kV Imphal (Only one channel made)
  8. 220 kV Mokokchung (Only one channel made)
  9. Ranganadi ISGS (2 channels but Only one available)
  10. 132 kV Itanagar (Only one channel made)
  11. Kathalguri, ISGS (only one channel available)
  12. Palatana, ISGS (Only one channel made)
  13. 132 kV Kumarghat (2 channels made but only 1 available)
  14. Loktak ISGS (2 channels made but only 1 available)
  15. Khandong, ISGS (2 channels made but only 1 available)
  16. Jiribam (2 channels made but only 1 available)

17. Aizawl (only 1 available)
18. Badarpur (2 channels made but only 1 available)
19. Mariani (Only one channel made)

- e. CB status of the following RTUs are not reporting:
1. Biswanath Chariali
  2. Kolasib

***POWERGRID may kindly give the status.***

**B) NEEPCO:**

- a. Ranganadi HEP is not reporting constantly and RTU needs to be restarted every day to get data.
- b. CB status of the following RTUs are not reporting:
  1. Ranganadi
  2. Kopili

In the last meeting, NEEPCO confirmed to solve the issues along with links in line with grid codes at the earliest.

***NEEPCO may kindly intimate the current status.***

**C) AEGCL:**

In the new system, only 32 RTUs are reporting partially against 62 RTUs. This creates loss of observability of NER Grid specifically during grid problems. Restoration of all the non-reporting RTUs needs urgent action. The same also highlighted in the weekly telemetry status reports but tangible solution is yet to be achieved.

***AEGCL may kindly intimate the current status & reasons.***

**D) MePTCL/MeECL:** 18 RTUs are reporting out of 23 RTUs.

Generating Stations: Dedicated voice communication is yet to be established for Leshka HEP.

Sub-Stations Not Reporting: Umiam , EPIP-I , Lumshnong , Cherrapunji.

***MePTCL may kindly intimate the current status & actions taken.***

**E) TSECL:** 7 RTUs are reporting out of 25 RTUs.

Non-reporting RTUs are given below:-

Generating Stations: Gumti (since Jan, 2011).

Sub-Stations: Amarpur, Badharghat, Belonia, Bokafa, Boxanagar, Dharmanagar, Dhalabil, Gamaitila, Gournagar, Kamalpur, OMPI, Rabindranagar, Sabroom, Satchand, Agartala , Ambassa , Budhjungnagar.

***TSECL may kindly intimate the current status***

**F) Manipur:** SLDC of Manipur was declared commission vide Ref No NERLDC/SL/SCADA-Upgrade-Vol-II/8566-68 dated 15.03.2017. However only 4 nos of RTUs are found to be reporting out of 11 RTUs as on 04/04/2018 and No ULDC

Communication system is established till date.

Sub-Stations Not Reporting: Chandel, Hundung, Karong, Kongba.

***Manipur may kindly intimate the current status & actions taken.***

**G) Mizoram:** SLDC is commissioned but VC, Voice Communication system yet to be established. SCADA/ EMS System commissioned on 10.04.2017. Status of RTUs included in the project needs to be updated.

***Mizoram may kindly intimate the current status.***

**H) AP and Nagaland:** may kindly intimate the current status SLDC establishment & RTU Status.

**I) 132 KV BADARPUR-LUMSNONG telemetry LINK out:**

BADARPUR S/S (Assam) telemetry data is not coming.  
Lumsnong S/S (Meghalaya) telemetry is not available.

Real time drawal for Assam and Meghalaya affected due to non-telemetry problem.  
Real time Grid Management process hampered.

***Status in both the S/S may be intimated at the earliest.***

**A.3 Status of FO works under different projects:**

Name of the Project	Latest status
ULDC replacement	
MW Vacation	
NER-FO Expansion	

***NERTS may please intimate the status.***

**A.4 EARLY COMPLETION OF OPGW BASED COMMUNICATION SYSTEM IN INTRASTATE GRID OF MANIPUR IN THE INTEREST OF NER GRID SECURITY AND SMOOTH POWER SUPPLY MANAGEMENT IN MANIPUR:**

During the 18th TCC meeting, MD, MSPCL informed that Intra-state communication is under focus of government and it is being monitored very closely. He stated that though quantity modification was done in 17th TCC/RPC (held on 04.10.2016), work has not yet been completed.

ED(LD&C),POWERGRID informed that materials have been inspected at China and by end of Nov'17, materials would be delivered. GM, NERTS informed that target time for completion as per 6th NETeST meeting of NERPC is November, 2018.

During 8th NETeST meeting, DGM, NERTS informed the forum that the material for installation has already been dispatched. Stringing of fiber will start from February 2018.

***MSPCL, NERLDC may kindly intimate the status***

**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.

During 8th NETeST meeting, Sr. Manager, NEEPCO informed that length of PLCC in the Kathalguri – Misa link is 380km approx. and due to this long distance the channel is intermitting.

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.

***Members may like to discuss.***

**B.2 OPGW link between RHEP Power house and Biswanath Chariali/ Nirjuli sub-station required.**

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.

***NEEPCO & NERTS may please deliberate.***

**B.3 PMU Display availability at SLDC:**

Due to non-availability of separate communication links, PMU Displays are not available at all the SLDCs. A workaround may be that of using one of the SCADA (ICCP) links for both ICCP as well as PMU display. In this case the Internal Firewall of RLDC & SLDC need to include one additional policy for making through the PMU display traffic. As such, no security violation is envisaged as only HTTP port of PMU Historian need to be forwarded.

During 8th NETeST meeting, after detailed deliberation it was decided that NERTS, NERLDC and AEGCL will sit together to explore the possibility of using old ULDC link for PMU display(After checking their healthiness). NERLDC will finalize a date for the meeting.

***NERLDC & NERTS may please deliberate.***

#### **B.4 Security Arrangement for SCADA System:**

Presently, the SCADA/EMS Upgrade Project is running through its final phase & all state SLDCs except Arunachal & Nagaland are integrated with NERLDC. This network is also connected to rest of the RLDCs via NLDC. In this scenario, any security incident/ intrusion in one system will affect other connected systems also. Therefore hardening of the security of SCADA/EMS system is a necessity. The requirement may be defined in Two Parts: Cyber Security & Physical Security.

Cyber Security may be implemented by proper configuration of the security features available in the SCADA/EMS system viz. a uniform and effective Cyber Security Policy across the SLDCs & NERLDC, Firewall policies allowing only necessary traffic & discarding others, disallowing Remote Access of the system unless authorized by the system owner, regular check of the system for Updates/ Patches, proper maintenance of Patch Management server etc.

Physical Security is necessary to prevent mishandling/ misconfiguration - intentional or accidental, unauthorized removal of asset from the system, connecting/ disconnecting external devices like laptop, pen drive, dongle and the likes unless unavoidable etc.. One effective way of implementation of physical security is Installation of CCTV Camera/ Surveillance System at strategic locations like Control Room Entry & Server Room Entry, Inside Control Room & Server Room, UPS/ Battery Room, DG Set etc.

During 8th NETeST meeting, SE(O), NERPC informed the forum that representative from CEA will be giving presentation regarding Cyber Security in next OCC meeting. The forum also requested NERPC to write letters to respective states of NER for declaring SLDCs as protected and prohibited area.

***Members may please discuss.***

#### **B.5 Status of non- reporting RTUs:**

SCADA data from Kolasib are out since long (22.05.17) due to which Grid management activity is severely affected.

Dimapur and Doyang RTUs are not reporting since 22/01/2018.

Ranganadi RTU does not report continuously, RTU needs to be restarted every day to get data. Team needs to be formed involving PG and RHEP and solve the problem within fixed time.

Tezu, Roing and Melrihat Data either does not report or fluctuate frequently due to unstable GPRS connection. Dual redundancy is to be implemented.

Status of RTU replacement and procurement of new RTUs may be intimated.

***Members may please intimate the latest status.***

**B.6 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.

***Members may please discuss.***

**B.7 Furnishing of detail parameters for the On-going Projects likely to be commissioned within 6 months by Constituents:**

This is for kind information to constituents that before commissioning any new projects, the connectivity conditions pertaining to Telemetry Data/Voice communication systems in terms of clause 4.6.2 of IEGC 2010 read with Clause 6(3) of CEA (Technical Standards for connectivity to the Grid) Regulations, 2007 are to be fully met and the real time data of the station parameters be made available at the control centers along with voice communication systems at the time of commissioning. Moreover, it may also kindly be noted that as per recommendations of the Committee on Grid disturbance" Report on the Enquiry Committee on Grid Disturbance in Northern Region on 30th July 2012 and Northern, Eastern & North Eastern Region on 31st July 2012" dated 16.08.2012, clause (xiv) which is reproduced as follows - "Proper telemetry and communication should be ensured to Load Despatch Centers from various transmission elements and generating stations. No new transmission element/generation should be commissioned without the requisite telemetry facilities".

In view of the above, the following information/ parameters may kindly be furnished to NERLDC in advance for making the platform for Database in SCADA:

1. Single Line Diagram of the Power Station/Switchyards.
2. Data List of the Station (to check the signals of both Analog & Digital).

3. Wiring diagram of the Station (to check the wiring done at RTU end).
4. Generator Parameter details, Generator Transformer parameters.
5. Line and ICT details. Any additional requirement to be intimated

***Constituents to submit detail parameters projects well in advance under their jurisdictions & fulfill the condition of IEGC.***

**B.8 Optical Fiber connectivity for AGC project expansion:**

NTPC Dadri Stg-II was selected for the first project of Automatic Generation Control (AGC) in India. A mock test was conducted on 29<sup>th</sup> June 2017 from 1730 Hrs to 1910 Hrs and the mock test yielded desired/expected results.

Now, as a part of the AGC project expansion, a report needs to be filed with CERC, for which actual distance between the nearest communication node (equipment where the existing fiber optical cable terminates) and the unit control room (approximate distance from CR Panel) needs to be ascertained.

As per instruction from NLDC, NERLDC requested all ISGS to furnish the mentioned data. It is observed that optical fiber connectivity is there with few ISGS and details of those stations are as follows:

Sl. No.	Name of ISGS	Nearest Available Optical Node	Distance
1	AGBPP	Misa (PG)	383.4 km
2	AGTCCPP GTG Control Room	AGTPP (NEEPCO)	50 m
3	AGTCCPP STG Control Room	AGTPP (NEEPCO)	200 m
4	Ranganadi HEP	Balipara (PG)	191 km
5	Kopili HEP	Kopili (NEEPCO)	30 m
6	Kopili Stage 2 HEP	Khandong (NEEPCO)	15-20 m
7	Khandong HEP	Khandong (NEEPCO)	15-20 m
8	Palatana	Silchar (PG)	247 km
9	Loktak HEP	Imphal (PG)	35 km
10	Doyang HEP	Dimapur (PG)	92.5 km
11	BTPS (NTPC)	Salakati (PG)	3.5 km

During 8<sup>th</sup> NETeST meeting, DGM, NERTS gave assurance to the forum that OPGW link of BTPS(NTPC)- Salakati (400KV) will be completed by March, 2018 to facilitate AGC pilot project.

The following is the current status of the link under Powergrid.

- 4.Ranganadi HEP to Balipara(PG)- Under Work in progress
8. Palatana- Silchar(PG)- Work Under Progress. Delay due to ROW issue. Target December, 18.
9. Loktak HEP- Imphal (PG)-By December, 2018.
- 10.Doyang HEP- Dimapur (PG)- OPGW completed. By June 2018.



11. BTPS (NTPC)-Salakati (PG-400kv)- 3.5 km completed. New equipment by April, 2018.

*Members may please discuss.*

### **B.9 Optical Fibre connectivity for installation of Line Differential Protection:**

Optical Fibre connectivity of a line is essential for functioning of Line Differential Protection.

In 47<sup>th</sup> PCCM, it was decided that all utilities shall identify the short lines for installation of Line Differential Protection by 31<sup>st</sup> Jul'17.

Utilities shall furnish the list of short lines identified for installation of Line Differential Protection to NERPC/NERLDC along with availability of OPGW in the identified short lines (as per Annexure-I). Forum agreed that funding for installation of Line Differential Protection & OPGW can be awarded from PSDF for state utilities and PSUs may include these expenses in PoC Charges.

The list of lines along with availability of OPGW link not yet furnished by any utilities.

During 8<sup>th</sup> NETeST meeting, DGM, NERTS informed the forum that Power Grid has already installed line differential for short lines as per relevant approved scheme of POWERGRID Engg. Dept. (Like Bong-NTPC, Mokokchung -Mokokchung).

EE, MePTCL informed the forum that they have identified 17 lines for installation of line differential. The DPR of the same has already been sent to CEA/NLDC for funding from PSDF.

The list of lines along with availability of OPGW link not yet furnished by any utilities.

*Members may please discuss.*

### **B.10 Dedicated voice communication:**

Dedicated voice communication and availability is one of the key requirements for efficient grid management. But it is observed that whenever we try to talk to SLDCs always it shows busy. We have intimated POWERGRID to resolve this problem but still it is not solved but still it is pending.

Most of the PG stations are connected through only one dedicated voice communication. Minimum two no of dedicated link needs to be done at the earliest. Forum may discuss and time bound target may be fixed to fulfil the above requirement. Also 400 KV stations, HVDC station, SLDCs need 4 no of dedicated voice communication.

Following S/S either does not have link or links are not working.

- a. PALATANA (Biggest Gen in NER)-No dedicated voice link.
- b. 400 kV SILCHAR PG Station -No dedicated voice link.
- c. SM Nagar (International link)-No dedicated voice communication with RLDC.
- d. MONARCHAK Gen: No dedicated voice link with RLDC.
- e. SALAKATI (Inter Regional PG station) - No dedicated voice link.

- f. 400 kV BYRNIHAT/KILLING: No dedicated voice link with RLDC/SLDC.
- g. 400 kV Azara: No dedicated voice link with RLDC.
- h. NTPC, BgTPP - Even no BSNL or Mobile
- i. Zero,Roing,Tezu and Pasighat

Following S/S VOIPs are not working.

- 1. Kathalguri-23640154
- 2. Ranganadi-23640119
- 3. Kolasib-23640111
- 4. Doyang – 23640120
- 5. Kohima

Long outage of SLDC Assam VOIP numbers: 23610000/23610001

Long outage of SLDC Aizawl VOIP numbers: 23890002/23890003

***Members may please discuss.***

### **B.11 ISTS/ISGS CB status out and SOE Problem:**

CB status of ISTS and ISGS are out or wrong since long and due to which Sequence of Events report is not indicating correct picture of the Grid. In case of any tripping/disturbance SOE is the main report through which we can analyse any event but as CB status is not updating correctly SOE is not giving correct picture. So POWERGRID/NEEPCO/LOKTAK is requested to look into it and restore all CB status at the earliest.

It is very important to update SOE for proper grid visualization but most of unit outage or line tripping SOE are not updating. Most importantly disturbance/incidence analysis from SOE is not currently possible due to so much misleading information. In some cases misleading information are coming in SOE (say RCN unit 3 is coming as U1 out, same in Salakati , Ranganadi and Balipara element outage). So all element outages, SOE needs to be checked. For an example one disturbance may be taken as example and may be matched with SOE available to know the mismatch available.

During 8th NETeST meeting, DGM, NERTS informed that with NTAMC all data are made OK (Badarpur, Silchar, Balipara, Kumarghat, BNC, Misa, Khliehriat.etc., -others will also be completed with NTAMC project.

Project Manager, GE informed the forum that the RTMC/NTAMC operated stations have 100-1000s of IOs available for each station and only few data is required at RLDC. NERLDC is requested to provide IO list details be mapped to RLDC for displayas specifically required for grid operation. NERLDC may directly provide the same to POWERGRID.

***Members may please discuss.***

**B.12 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 date. 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.

*Members may please discuss.*

**B.13 Maintenance & Support Service under "Replacement / Up-Gradation of existing SCADA/ EMS System of NERLDC and SLDCs of North-Eastern Region" project by GE T&D India:**

As per Technical specification of 'Maintenance & Support services' clause 4.2.1: "At least one software engineer & one hardware engineer having expertise in SCADA/EMS system shall be available during the standard hours of service at each main control centre. The timings for emergency support would be 24 hours a day, 7days a week throughout the year.

The support personnel so deployed shall be qualified personnel having at least 5 years of experience in the delivered SCADA/EMS system. The owner can ask the contractor to replace the personnel deployed for maintenance support if his performance is not found to be satisfactory."

Performances of the personnel presently deployed in NER are not satisfactory.

During 8th NETeST meeting, AGM, NERLDC informed the forum that the performance of the AMC personnel posted in SLDC and RLDC is not satisfactory. The posted person is not able to handle most of the issues and always refers to the back office. This takes very long time in resolving day to day issues.

Project Manager, GE informed the forum that he is aware of the issues and will be arranging for appropriate man power and training. He requested for 2-3 months' time for resolving the issues.

*Members may please discuss.*

**B.14 Communication of Pare HEP:**

You are kindly aware that 110 MW Pare HEP of NEEPCO is in the last stage of commissioning and it is expected that 1st unit shall be ready for test synchronization by 1st week of March '2018. The LILO of existing Nirjuli-Ranganadi 132 kV line at Pare is part of the approved evacuation scheme for the Project. The LILO part is expected to be ready for charging by mid of February 2018. In this context, following is placed before you for kind perusal:

- a) Shut program of the Nirjuli-Ranganadi 132 kV line for conversion shall be intimated to you shortly.
- b) As per decision of the meeting held on 10.05.2016 at NERTS, two nos. new PLCC panels have been procured and one installed at Pare for Pare-Ranganadi line and other panel shall be installed at Ranganadi end immediately after shifting of existing panel of Nirjuli-Ranganadi 132 kV line. The existing PLCC panel at Ranganadi end of Nirjuli-Ranganadi 132 kV line shall be shifted to Pare for Pare-Nirjuli line.
- c) During the process of shifting and re-installation of PLCC panel from Ranganadi to Pare as mentioned at (b), the communication & data link between Ranganadi and Nirjuli shall be disturbed and the entire process is expected to be completed within 5-6 days' time. It is expected that shifting of PLCC panels work shall be taken up during 2nd week of February '2018.

In view of the above, I would like to request you to kindly advise your concern Officer to finalize the modalities how to proceed to complete the work without much disturbance to avoid inconvenience for real time grid operation. Completion of the shifting and re-installation of PLCC panel works is highly solicited.

During 8th NETeST meeting MS, NERPC gave a strong view in regard to non-compliance viz. telemetry & communication. He stressed that all utilities should plan in advance and put these links in place before commissioning of their units. He urged upon NEEPCO to comply at the earliest.

Sr. Manager, NEEPCO assured the forum that the communication channel will be ready before the commissioning of the project.

***NEEPCO may please deliberate.***

**B.15 Non-Reporting of Agartala PMU:**

As per report of enquiry committee on Grid Disturbance in NR on 30th Jul'12 & in NR, ER & NER on 31st Jul'18, it is recommended that functioning of existing PMUs and availability of their output to RLDCs and accuracy of time synchronization should be monitored on daily basis and, if required, corrective actions should be taken on priority basis.

In North Eastern Region, 8 PMUs have been installed in 400 kV Bongaigaon, 400 kV Balipara, 220 kV Sarusajai, 220 kV Misa, 132 kV Badarpur, 132 kV Agartala, 132 kV Imphal and 132 kV NEHU.

NERLDC on daily basis is monitoring, the availability of PMU data and issues relating to non-availability of PMUs are highlighted.

It has been observed that during recent disturbances, PMU data are not available in some of the locations. 132 kV Agartala PMU is not reporting since 11:40 Hrs of 22.03.18 and after 22<sup>nd</sup> March'18 there were 4 number of grid disturbances in Tripura Power System. Due to non- availability of PMU data, the disturbances could not be analyzed properly. As per information from SEL, the problem lies with CABLE in between FO media converter from PMU panel to FO media converter at Communication panel in the Control Room Building.

**It is thus requested Agartala to take immediate action in restoring Agartala PMU at the earliest.**

*Members may please discuss.*

**B.16 Identification of one CS link as approved in 18<sup>th</sup> NERPC:**

Vide CI.A.14 : APPROVAL OF RELIABLE COMMUNICATION SCHEME -CENTRAL SECTOR was approved . One link was mentioned as CS1-CS2(58km-future) but name of link was not mentioned in Annexure-A.14 of MOM. This link may be identified as Aizawl –Jiribam (175km) as this link is not covered in any project.

Further it may be noted that OPGW replacement as already approved in 18<sup>TH</sup> NERPC for central sector owned TLs (Either Replacement or new project; A.7 & A.14) , cost recovery mechanism will be same as old ULDC scheme.

*Members may please discuss.*

**B.17 Optimization of equipment for old OPGW replacement:**

For OPGW replacement projects of old links (ULDC- of central sectors/PGCI owned TL OPGW), necessary measures may be taken so that equipment qty may be optimized. If equipment already considered in NER FO EXPANSION Project or ULDC upgradation and Main1&2 Protection/Ring formation is achieved for network, then only optical directional cards may be considered in the existing equipment of NER FO expansion/ULDC upgradation scheme. This will avoid additional cost & space requirement will be reduced as replaced OPGW's link direction may be accommodated in same equipment

*Members may please discuss.*

**B.18 Shut Down Procedure for Optical Links:**

In 134<sup>th</sup> 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 142<sup>nd</sup> 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.

*Members may please discuss.*

**B.19 Finalization of Remote Consoles for State SLDCs under URTDSM WAMS project.**

*NERTS may please deliberate.*

**B.20 Handing over of GPRS SIMs/ Racks/ for commissioning.**

*NERTS may please deliberate.*

**Any other item:**

**Date and Venue of next NETeST**

It is proposed to hold the 10<sup>th</sup> NETeST meeting of NERPC on second week of June, 2018. The date & exact venue will be intimated in due course.

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