

# North Eastern Regional Power Committee

## Agenda For

### 163<sup>rd</sup> OCC Sub-Committee Meeting

Time of meeting : 10:00 Hrs.

Date of meeting : 13<sup>th</sup> December, 2019 (Friday)

Venue : "Hotel Nandan", Guwahati.

#### A. CONFIRMATION OF MINUTES

#### CONFIRMATION OF MINUTES OF 162<sup>nd</sup> MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 162<sup>nd</sup> meeting of Operation Sub-committee held on 15<sup>th</sup> November, 2019 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2016/4556-4591 dated 25<sup>th</sup> November, 2019.

*The Sub-committee may confirm the minutes of 162<sup>nd</sup> OCCM of NERPC as no comments/observations were received from the constituents.*

#### ACTION TAKEN -ITEMS

#### B.1. ACTION TAKEN:

#### 1. IMPLEMENTATION OF PROJECTS FUNDED FROM PSDF:

The status as informed in 162<sup>nd</sup> OCC:

State	R&U scheme	ADMS	Capacitor Installation	SAMAST	Line Differential Protection
Ar. Pradesh	Package-I NOA issued Finance dept concurrence not given. P-II tender opened. P-III tender by Nov'19. Station-wise status to be updated *	TPA to be signed by Govt. of Ar. Pradesh by 22.11.2019.	-	Reply against TESG queries to be sent.	-
Nagaland	All completed except for PLCC. Station-wise status to be updated.	A/c opened. Fund requisition to be sent to NLDC.	-	Reply against TESG queries to be sent.	Lines identified. Under DPR preparation stage.
Mizoram	Not updated due to absence of representative	Not updated due to absence of representative	To reply to TESG queries.	To reply to TESG queries.	Lines identified for installation of DPR viz. 132kV Aizawl - Luangmual and 132kV Kawmzawl - Khawiva.

Agenda for 163<sup>rd</sup> OCC Meeting to be held on 13<sup>th</sup> December, 2019

Manipur	By Nov'19 Station-wise Status report to be submitted	By Nov'19 A/C will be opened and subsequently requisition for funds.	Approval awaited for NIT	To reply to TESG queries.	Lines identified. LDP for 132kV Imphal-Imphal and 132kV Jiribm-Jiribam proposed. Under DPR preparation stage.
Tripura	Station-wise status to be updated *	Contract agreement signed. Draft TPA with Govt of Tripura. TPA & A/C opening by Nov'19	Study to be carried out in consultation with NERLDC.	To reply to TESG queries.	Lines not yet identified. To be taken up in Sub-group.
Assam	Station-wise status to be submitted for 48 stations by Nov'19	TPA by Nov'19	-	Appraisal Committee approved.	Lines identified. Under DPR preparation stage.
Meghalaya	MePTCL Station-wise status updated MePGCL - Station-wise status to be updated.	Requisition for first tranche given to PSDF. Work at SLDC & 2 stations completed.	-	Appraisal Committee approved.	LOA issued. Fund awaited.

Meghalaya has submitted the station-wise status. The other state utilities are requested to furnish status in similar format, station-wise as per format by first week of every month on regular basis to Member Convener, PSDF Project Monitoring Group (AGM, NLDC, POSOCO) with a copy to NPC & NERPC. The LOAs of R&M Scheme are to be furnished to NERLDC/NERPC regularly. As per deliberation in the previous meetings all the utilities were requested to submit station-wise status of R&U schemes.

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

**2. Long Outage of Important Grid Elements:**

Name of the Element	Name of Utility	Status as informed in 162 <sup>nd</sup> OCC	Latest status
63MVAR Reactor at Byrnihat to replace with 80MVAR Reactor	MePTCL	Agreed by NLDC/NPC	

<p>132kV Dimapur - Imphal (out since 25.07.18)</p>	<p>NERTS</p>	<p>NERTS updated the following Status: Foundation: 23/28 Erection: 19/28 Stringing: Mobilization done for clearance of vegetation along realigned ROW. Stringing to start from 18<sup>th</sup> Nov 2019.</p> <p>ROW constraint still exists for three locations and associated spans. Continuous rainfall and landslide triggered road blockade, is seriously affecting the pace of work.</p> <p>04 Nos. Towers at Loc. 355, 358, 366 and 367 damaged in recent times due to heavy landslide. Moreover One No. Newly casted foundation (loc. 377) has been damaged due to landslide. These additional locations too needs reconstruction / rectifications for overall restoration of the line. Sr. GM, NERTS, Misa stated that possibility of soil strata got disturbed due to heavy soil cutting by NHIDCL which has resulted indiscriminate land sliding.</p> <p>EE, DoP Nagaland stated that for</p>	
--	--------------	---	--

Agenda for 163<sup>rd</sup> OCC Meeting to be held on 13<sup>th</sup> December, 2019

		Kohima zone Re-survey may be done and further informed that on 20.11.2019 a Special meeting between DoP, Nagaland and NHIDCL has been agreed for discussion regarding re-routing of the line.	
220kV Sonabil-Samaguri-I	AEGCL	NIT by Nov'19	
132kV Srikona-Panchgram(out since 14.01.2019)	AEGCL	Pile foundation may be required. LOI for soil testing soon.	
63MVAR L/R for 400kV Palatana-Silchar Ckt-I (out since Apr'19)	OTPC	By Dec'19	

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

**3. Follow up of recommendations of PCC/Sub-group:**

SN	Name of element	Actions to be taken	Concerned Utilities	Status as informed in the 162 <sup>nd</sup> OCC Meeting	Latest status
1	132 kV AGTCCPP - Agartala D/C	Installation of Line Differential in 132 kV AGTCCPP - 79 Tilla D/C & Review of impedance setting of both ends as a temporary measure.	NERTS/ NEEPCO	LDR: Technical evaluation completed. Under commercial evaluation stage. Award by Dec, 2019  <u>Impedance Measurement</u> : To be completed by 30.11.19	
2	132kV AGTCCPP- Kumarghat	GPS to be procured and time synchronization of relay to be done	NEEPCO	Dec'19	

**Agenda for 163<sup>rd</sup> OCC Meeting to be held on 13<sup>th</sup> December, 2019**

3	132kV P.K. Bari- Kumarghat	Installation of Line differential relay	NERTS	Technical evaluation completed. Under commercial evaluation stage. Award by Dec, 2019	
---	----------------------------------	---	-------	--	--

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

**4. Furnishing of various data for reliable operation of grid:**

SN	Data reg.	Target deadline	Status as informed in the 162 <sup>nd</sup> OCC Meeting	Latest status
1	Furnishing Technical and Commercial data for computation of PoC Charges and Losses for January to March'20 (Q4 of 2019-20)	15.10.19	Manipur, Assam, Meghalaya, Mizoram and Nagaland submitted. Rest 2 states to be submitted. Tripura by Nov,2019, Ar. Pradesh- by Nov'19 end, NHPC & NEEPCO to submit	
2	Furnishing details regarding GT Tap Positions of ISGS and other generators. Required for studies related to reactive power capability testing	15.10.19	Pare not submitted. Data from State Generators also required	
3	Furnishing Nodewise half hourly data monthly Required for studies pertaining to Real Time Market	By 10 <sup>th</sup> of the month	Received from Arunachal, Manipur, Mizoram. TSECL will submit by Nov'19. Assam, Meghalaya and Nagaland to submit from next month.	

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

**B.2. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING NOVEMBER, 2019**

NERLDC shall present the Grid Performance for the month of November, 2019.

**C. ITEMS- STATUS REVIEW**

**1. Status of Generating Units, Transmission Lines in NER:**

During 162<sup>nd</sup> OCC meeting, the status as informed by different beneficiaries is as follows:

SN	Items	Status as given in 162 <sup>nd</sup> OCC Meeting		Latest status	
		Timeline for completion	Timeline for completion	Timeline for completion	Furnishing of detail parameters
<b>a. New elements</b>					
1	400/220kV, 315 MVA ICT-1 of NTPC at Bongaigaon	Jan'20	Already submitted		
2	Kameng HEP of NEEPCO two units (2 x 150 MW)  Next two units (2x150 MW)	Dec'19	CEA clearance available		
3	220/132 kV, 1x160 MVA ICT with GIS Bay at Kopili	Test charging shall be delayed due to damage to the Power House and Switchyard after failure of Penstock at Kopili.	To be submitted to NERLDC.		
4	Dedicated 33kV feeder at Khliehriat Substation from Lumshnong.	Date to be finalized.	Not applicable.		
5	220kV Balipara-Sonabil-2	Dec'19	To be submitted to NERLDC.		
6	Bay at Agia S/S for 132kV Agia-Nanglibibra Ckt #II by AEGCL	ERL panel supplier expect to deliver in 15 days. By Dec'19	To be submitted to NERLDC.		
7	80MVAR B/R at RHEP by NEEPCO	Discussed in 2nd NERSCT	To be submitted to NERLDC.		

<b>b. Elements under breakdown/upgradation</b>					
8	Up-gradation of 132 kV Lumshnong-Panchgram line	TESG queries submitted	Not applicable.		
9	PLCC Panels at Loktak end of Loktak - Ningthoukhong 132 kV feeder and Loktak - Rengpang 132 kV feeder	Nov'19. NERPC to write to MD, MSPCL for expediency.	Not applicable.		
10	Upgradation of 132 kV Bus Bar at Umiam Stg- III to ACSR Zebra	DPR submitted. Other upgradation works to be included in DPR	Not applicable		
11	Upgradation of 132kV Karong-Kohima (till Mao) by MSPCL	It was decided that MSPCL would upgrade the entire line. DoP Nagaland to take up with MSPCL for entire upgradation by MSPCL. Loc.No. 189 to 228 i.e., 9km stringing left. Shutdown applied for.	-		
12	Installation of LDP for 132kV AGTCCPP-Agartala D/C & 132kV PKBari-Kumarghat by NERTS	Technical evaluation completed. Under commercial evaluation stage. Award by Dec 2019	-		
13	Procurement of GPS at AGTCCPP & time synchronization for 132kV AGTCCPP-Kumarghat by NEEPCO	Dec'19	-		

Agenda for 163<sup>rd</sup> OCC Meeting to be held on 13<sup>th</sup> December, 2019

14	Diversion of 132kV Bawktlang-Sihhmui	Technical Evaluation completed. Award by 20 <sup>th</sup> Nov 2019. Work completion: 28 <sup>th</sup> Feb 2020	-		
----	--------------------------------------	--	---	--	--

**Concerned constituents may kindly intimate the status.**

**C.2. Update on Real Time Energy Assessment for Effective Grid Management:**

Data availability is given below:

Name of the state /utility	Data Availability (in%)	Issues	Status as updated in the 162nd OCCM
DoP Ar. Pradesh	Not updated	-	Same problems persisting. CDAC to visit critical locations immediately.
Assam	62%	-	
Manipur	80%	(i)Frequent hang of TARA device, resumes reporting upon reboot. (ii) Yurembam end of 132kv of Imphal(PG)-2 fdr, corresponding to SEM NP-8374-A not reporting. (iii) Jiribam 132/133kv ICT(manipur consumption), corresponding to SEM NP-8501-A not reporting	
Meghalaya	0% detailed report to be submitted	after TARA devices are connected the SEMs they hang.	
Mizoram	50%	Luangmual end of 132kV Aizawl(PG) not reporting; Kolasib end of 132kV Badarpur(PG) not reporting	
Nagaland	37.5%	Non-reporting: (i)Kohima end of 132kV Dimapur(PG)-2 (ii)Sanis end of 132kV DHEP (iii)Mokokchung end of Mokokchung(PG)-1 (iv) Mokokchung end of Mokokchung(PG)-2 (v) Mokokchung end of DHEP FDR	
Tripura	12.5%. Network available 24x7. Device fault suspected.	-	

**CDAC/SLDCs may please intimate the latest status.**

**C.3. Ensuring proper functioning of Under Frequency Relays(UFR) & df/dt Relays:**

In 7<sup>th</sup> NPC meeting held on 08.09.17 it was agreed that mock test is good enough to test the healthiness of the UFR & df/dt relays. The frequency of site inspection was proposed to be upto six months. RPC may carry out periodic inspection, in line with provisions of IEGC and furnish inspection reports to NPC.

Deliberations in the previous meetings:-

- Inspection for Mawphlang completed.
- Inspection for Sankardevnagar, Rangia and Rowta under Assam was completed in April'2019.
- UFR Inspection and Testing for TSECL Stations as well as UFRs under Islanding Scheme No.2 carried out in June'19.
- UFR Inspection for Dimapur, Nagaland completed in the third week of September, 2019.
- Status of recommendations subsequent to UFR Inspection:

**TSECL**

UFR location, No. feeders	Recommendation	Status
132/33kV Surjamaninagar, 1no 33kV feeder	Relay to be replaced.	
132/33kV 79Tilla, 4nos 33kV feeders	Relay operation to be instantaneous with no time delay. To be taken up with OEM	
66/33/11kV Badarghat, 2nos 33kV feeders	Relay operation to be instantaneous with no time delay. To be taken up with OEM	
132/66/33/11kV Rabindranagar, 1nos 33kV feeder	Relay operation to be instantaneous with no time delay. To be taken up with OEM	

**DoP Nagaland**

UFR location, No. feeders	Recommendation	Status
132/66/33kV Dimapur, 2nos 33kV feeder	Relays to be retrofitted.	

Common recommendation for AEGCL, MePTCL, DoP Nagaland & TSECL - Separate records for UFR operation to be maintained at the respective Sub-station(s).

- UFR Inspection for Manipur in Nov'19.

***NERPC/TSECL may please inform the status.***

**C.4. Extended C Band VSAT for power system communications in NER:**

In 162<sup>nd</sup> OCCM, NERLDC informed that the cost for the pilot project would be around Rs.6, 85,000/- (Rupees Six lakhs eighty five thousands only).

***NERLDC/MePTCL may please intimate the status.***

**C.5. DIMAPUR PG telemetry out since Feb'18.**

In 162<sup>nd</sup> OCCM, NERTS informed that the Analog and Digital Data has started reporting. Additional new signals provided by RLDC being configured and validated. The same would be completed by 30.11.2019.

***NERTS may please update the latest status.***

**C.6 Update on PDMS:**

As per deliberation in the previous meeting(s) the following status/decisions:-

- SAT for Assam system completed. Data collection for Meghalaya, Tripura & Mizoram completed.
- Network to be finalised based on the feedback of Operational load flow given by NERLDC
- Data collection & database building to be completed for Arunachal Pradesh and Nagaland.
- Prospective Go Live by Dec'19.
- All utilities(esp. nodal officers) to assign the roles and responsibilities as per the circulated format.

***NERPC/PRDC may please update the status.***

**C.7 Non-availability/ Non-functioning of synchronization facility at numerous stations**

As per deliberations in the previous meetings the following is the status for synchronization facility at stations of different utilities:

- AEGCL – along with the black start testing of AGBPP, demonstration of Synchronisation using BCU would be done at Mariani (PG) for which NERLDC will arrange isolation / separation system into two parts and POWERGRID will synchronize the systems in SAS.
- DoP Ar. Pradesh –Lekhi S/S no Sync check relay is available while for Chimpu relay is available. The approval for procurement of trolley/synchroscope by Nov'19.

***AEGCL/DoP Ar. Pradesh may please update the status.***

**C.8 Phase shift errors in PMU:**

The following status was updated by NERTS/AEGCL in the 15<sup>th</sup> NETeST meeting:

- Issues in some of the stations have been rectified. NERLDC may confirm or update what to be done for rest of the stations based on the feedback by NERTS after corrections, as per system study group of NERLDC.
- Site drawing for PMU connection has been handed over to Assam which would be adopted (for rewiring etc.) by AEGCL during SAS upgradation in four stations.

***NERTS/AEGCL may please update the status.***

**C. 9 Tentative schedule for Black Start & Restoration Procedure Mock exercise in NER during the year 2019**

Status/decisions as per previous meetings:

- LOKTAK On 31.10.19 Bus-A charged. Tentative date for the Black Start Nov'19.
- RHEP to be done in lean season & after Bus A is restored.
- DOYANG could not be completed due to synchronization problem in 132kV DHEP-Dimapur-I
- AGBPP – segregation of auxiliary supply has been completed. Presently 2-3 mins are required for shifting of generator from one bus to another and minimum 100MW load is required at 132kV level.

***NEEPCO/NHPC/NERLDC may please intimate the status.***

**C. 10 DVAR and PSS at AGTCCPP:**

In 162<sup>nd</sup> OCCM DGM, NEEPCO informed that due to outage of Kopili HEP, shutdown of AGTCCPP cannot be taken at the moment. The commissioning timeline of DAVR & PSS shall be decided after return of Khandong HEP.

***NEEPCO may please intimate the status.***

**C. 11 Bus Configuration issues for various sub-stations:**

Status as on 161<sup>st</sup> OCC Meeting:

- 400kV Bus A at RHEP - elements of Bus-A tested. Report submitted. Procurement of the following initiated:
  - Four sets of Pantograph isolators
  - One Set CT(Bus Coupler)
  - One set CVT(Bus-A)
- 132kV Bus Coupler at Pavoi - Protection of both the circuits completed by NERTS. protection transfer to Bus-Coupler (in case of Line CB outage) to be checked by NERTS within Nov'19

***NEEPCO/NHPC/AEGCL may please inform the status.***

**C. 12 Status of recommendations reg GD-Vs on 03<sup>rd</sup> & 20<sup>th</sup> April,2019:**

Recommendations	Status as informed in the 162 <sup>nd</sup> OCCM	Latest status
Investigation of conductor failure for 400kV Palatana-Silchar D/C (Scope NERTS)	Report submitted to NERPC. Manufacturing defect. Referred to OEM.	
Study for reactive compensation in Tripura System(scope of TSECL)	NERPC vide letter dated 11.10.2019 has written to CMD, TSECL for forthwith submission of data. No update from TSECL	
Identification of feeders for additional UFR based	NERPC vide letter dated 11.10.2019 has written to	

Agenda for 163<sup>rd</sup> OCC Meeting to be held on 13<sup>th</sup> December, 2019

load shedding under Islanding Scheme-II( Scope of TSECL)	CMD, TSECL for procurement & installation of UFRs. No update from TSECL	
Standalone EL for integration of relay at AGTCPP by Oct'19(Scope of NEEPCO)	By Mar'2020	
All stations to confirm DR downloading facility and it's healthiness at respective stations. A consolidated undertaking by the respective utility in this regard is to be submitted prior to each OCCM.	<b>NERTS</b> The REL-670 relay at Khandong for Kopili - II feeder is planned to be upgraded by Dec'19.	
NHPC to procure standalone EL for Loktak HEP	Under process exact date of LOA to be confirmed	
Revised SPS-3 scheme offer sought from GE by NERTS	M/s GE is yet to submit the detailed breakup. Target: by 30.11.2019	
Impedance measurement for 400kV Paltana-Silchar D/C, 400kV Silchar-Azara, 400kV Silchar - Byrnihat	Impedance measurement shall be completed by 30.11.19.	
Line parameters to be matched at Silchar, Azara and Byrnihat.	The reviewed parameters shall be given to Azara by 30.11.19 for implementation.	
NERTS and AEGCL to jointly visit Azara and check exact cause for delay in appearance of voltage input to relay when charged via Tie Breaker	Joint visit done. But the problem of delayed appearance of voltage while charging through Tie CB could not be identified.  AEGCL to take up with OEM	

***Concerned utilities may please update the status.***

**C.13 Tripping of all units of BgTPP:**

On 23/05/2019 Units I, II, III of BgTPP tripped at 03:06 hrs, 03:37 hrs, 03:56 hrs respectively. In 158th OCCM NTPC gave a detailed presentation on tripping of the three units on 23.05.2019. The suggested recommendations by NTPC are as follows:

Sl. No.	Recommendation	Status as informed in the 162nd OCCM	Latest status
---------	----------------	--------------------------------------	---------------

2	Providing alternate cooling water source to compressors	Unit-1 overhead tank connection made, when unit-2 will go under s/d then connection would be completed. S/D planned Apr'2020	
---	---	--	--

***NTPC may please intimate the status.***

**C.14 Transformer Tap Optimization Study:**

NERLDC has conducted Transformer Tap Optimization studies considering High Hydro Scenario in North Eastern Region. Suggested taps position of important transformers in NER for maintaining bus voltages within permissible limit as well as to minimize system losses was circulated in the 158<sup>th</sup> OCCM.

In 162<sup>nd</sup> OCCM NERLDC stated that tap position for 400/220kV 315MVA ICTs at Byrnihat is to be changed from 9 to 6. MePTCL agreed in principle subjected to approval from authority.

***NERLDC may please intimate the status.***

**C.15 Better weather forecasting for power sector by IMD:**

Decisions/deliberations in the previous meetings:

- IMD to conduct survey for each of the individual utilities.
- Nodal officers for all the utilities nominated in the 159<sup>th</sup> OCCM.
- All utilities agreed to install AWR in their stations. All utilities are requested to submit the station list by November 2019.
- Selection of stations after survey remaining for all utilities except AEGCL & TSECL.

***NERLDC may please intimate the status.***

**C.16 Frequent trippings in Arunachal Pradesh system:**

In 159<sup>th</sup> OCCM Sr.GM(SO-I), NERLDC informed that in the months of June-July'19 frequent trippings were observed in the 132kV RHEP-Ziro-Daporizo-....corridor and lines connected to Lekhi. He requested the intervention of the forum for proper analysis of the same. Director, NERPC stated that participation of DoP Ar. Pradesh in the Sub-group meeting on Protection and PCC is extremely lacklustre. He requested DoP Ar. Pradesh to ensure adequate participation from concerned transmission division in all the meetings.

SE(SO&PSC), DoP Ar. Pradesh stated that there is no cohesiveness in data collection since engineers are scattered and onsite training is required. It was decided that after 15<sup>th</sup> August, 2019 scheduling of training is to be done, then DoP Ar. Pradesh to send personnel to Nirjuli(POWERGRID) for practical hands-on training. The following officers were nominated for the training:

- >Moli Kamki, AE, DoP Ar.Pradesh
- >Hibu Bama, EE, DoP Ar.Pradesh
- >Duyo Richo, AE, DoP Ar.Pradesh

In 162<sup>nd</sup> OCCM DoP Ar. Pradesh representative communicated that SE (SO&PSC), DoP, Ar. Pradesh has committed to send personnel to POWERGRID Biswanath Chariali/Misa

Agenda for 163<sup>rd</sup> OCC Meeting to be held on 13<sup>th</sup> December, 2019 for training by Nov'19. The forum requested DoP Ar. Pradesh to co-ordinate with NERTS RHQ for the same. AEGCL also proposed to arrange training on different numerical relays to officials from DoP AP, MSPCL, DoP Nagaland, P&ED Mizoram & TSECL.

***NERTS/DoP Ar. Pradesh may please intimate the status.***

### **C.17 Automatic Generation Control(AGC) in Indian Grid:**

Hon'ble Central Electricity Regulatory Commission (CERC) has stipulated the implementation of AGC in Indian Grid.

Stations in NER to have AGC:

BgTPP, AGBPP, Kopili, Loktak, Doyang, Khandong.

In 162<sup>nd</sup> OCCM NERLDC informed that BgTPP pilot started on 07.10.2019. NERLDC also presented the plant wise communication status till date. The forum noted that Fiber connectivity was discussed in detail in the 15<sup>th</sup> NETeST and except for Loktak all the plants have Fiber connectivity.

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

### **C.18 Reactivation of SPS -1**

The SPS-1 associated with tripping of generation of both Modules of Palatana CCGT (2 x 363.3 MW) is deactivated at present. The same needs to be activated to Avoid Violation of ATC of NER-ER Corridor.

In 162<sup>nd</sup> OCCM NERTS informed that SPS-1 is turned ON at Silchar Substation. OTPC requested for scheme from Silchar end so that signal send may be reviewed at Palatana. NERTS agreed to share the same.

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

### **C.19 PSS tuning testing for AGTCCPP and Tuirial**

Oscillations have been observed near Agartala on 28.10.2019. Also on 27.10.2019 oscillation was observed on Badarpur PMU. During that period, sufficient MVAR fluctuation was observed in Tuirial Unit-1. Oscillation subsided when Tuirial Unit-1 generation reduced and faded as Unit-1 was withdrawn. Hence PSS tuning test need to be performed in order to check such oscillations.

In 162<sup>nd</sup> OCCM DGM, NEEPCO informed that on 02.10.2019 BHEL tuned the PSS at Tuirial HEP and the oscillation was observed on 27.10.2019. He assured that BHEL will be called again to plant for rectification. ED, NERLDC requested all generators to do Step response test and results to be submitted to NERPC & NERLDC

***NERLDC/NERPC may please intimate the status.***

### **C.20 PLCC link issues**

(i) Presently, there is no communication link with Deomali. It is proposed to establish PLCC link between Deomali and AGBPP at the earliest for tele-protection and SCADA data. The approved VSAT for Arunachal Pradesh may be kept in Deomali. In 162<sup>nd</sup> OCCM it was requested DoP Ar. Pradesh to clarify whether the project envisages to install VSAT for one station or seven (7) stations.

(ii)As per visit of Committee ,comprising of members from NERPC, NERLDC, NERTS and P&ED Mizoram, to Kolasib Substation on 30.10.19, it was observed that PCC Link of Badarpur, Tuirial and Bairabi feeders are out of service. The PLCC link is to be restored at the earliest to ensure secure and reliable operation. In 162<sup>nd</sup>OCCM the following status was given:

- Tuirial HEP - To be restored by Nov'19.
- 132kV Badarpur-Kolasib - NERTS personnel to visit Kolasib. Resolution by Nov'19.
- 132kV Bairabi-Kolasib - Could not be updated due to absence of P&ED Mizoram representative.

***NERTS/P&ED Mizoram may please intimate the status.***

**C.21 Submission of the Annual Load Generation Balance Report (LGBR) for Peak as well as Off-peak scenarios and the Annual outage plan for 2019- 20 by 31.12.19 as per IEGC**

As per IEGC, each SLDC shall submit LGBR for its control area, for peak as well as off-peak scenario, by 31st December for the next financial year, to respective RPC Secretariat. The annual plans for managing deficits/surpluses in respective control areas shall clearly be indicated in the LGBR submitted by SLDCs. As per IEGC, all SEBs/STUs, Transmission Licensees, CTU, ISGS, IPPs, MPPs and other generating stations shall provide to the respective RPC Secretariat their proposed outage plan in writing for the next financial year by 31st October of each year. These shall contain identification of each generating unit/transmission line/ICT etc., the preferred date for each outage and its duration and where there is flexibility, the earliest start date and latest finishing date.

***Members may please discuss***

**C.22 SCED Refund**

In 161<sup>st</sup> OCCM NERLDC informed that as per CERC order 08/SM/2019 dated 28.09.2019; 400Cr is to be distributed on Pan-India basis. The Account details of all the state utilities/Power Departments was requested for smooth transfer of money.

In 162<sup>nd</sup> OCCM APDCL informed that a/c details submitted was submitted on 24.10.2019. NERLDC informed that payment for beneficiaries could not be released due to non-submission of account details by Tripura and P&ED Mizoram.

***State DISCOMS/NERLDC may please intimate the status.***

**C. 23 Metering Status Review:**

<b><i>Agenda Description</i></b>	<b><i>Status as updated in the 162nd OCC Meeting</i></b>	<b><i>Latest status</i></b>
----------------------------------	--	-----------------------------

<b>Agenda Description</b>	<b>Status as updated in the 162nd OCC Meeting</b>	<b>Latest status</b>
<p>Correction of Meter error:</p> <p><b>(i) Erratic reading:</b></p> <p>I. Ningthokhoung end of Imphal,</p> <p>II. Kohima end of Karong,</p> <p><b>(ii) Sign Change:</b></p> <p>I. Dimapur I &amp; II state end,</p> <p>II. Motanga end of Rangia</p> <p>III. Mokokchung end of Doyang</p>	<p>In 161st OCC Meeting, NERTS informed that they will look into the matter</p>	
<p>SEMs to be Procured</p>	<p>In 162nd OCC Meeting, NERTS informed that concurrence had been completed. Tender issue expected by 31.12.19</p>	
<p>Urgent Meter Replacement of</p> <p>1. Mariani (AS) end of Misa</p> <p>2. Mariani (AS) end of Kathalguri</p> <p>3. Mariani (AS) end of 33 kV Changki</p>	<p>In the 162<sup>nd</sup> OCC Meeting, it was proposed that SEMs</p> <p>1. Golaghat end of Mariani</p> <p>2. Golaghat end of Bokajan will be diverted to</p> <p>1. Mariani end of Misa</p> <p>2. 33 kV Mariani end of Changki</p> <p>NERTS informed that they will look into the matter.</p>	

***NERLDC/NERTS/All STUs may please intimate the status.***

**D. ITEMS FOR DISCUSSION**

**D.1 Generation Planning (ongoing and planned outages)**

a. Present per day MU and projected number of days of operation.

<b>Plants</b>	<b>Reservoirs level in meter</b>	<b>MU content</b>	<b>Present DC (in MU)</b>	<b>No of days as per current generation</b>
Khandong + Kopili stg II			<b>0.588</b>	
Kopili			<b>0</b>	

Doyang			<b>0.462</b>	
Loktak			<b>1.6</b>	

The outage of other generating stations may be approved considering the present water levels in reservoirs and long term outage of Kopili HEP.

***The Committee may discuss and approve the proposed shutdown by Generating Stations as given in Annexure – D.2 which is available in NERPC website.***

#### **D.2 Outage Planning Transmission elements**

It was agreed in the 99<sup>th</sup> OCC meeting that shutdown will be availed only after approval is given by the OCC forum. It was also agreed that deferment/revision of outages elements other than already approved in OCC will be henceforth put/displayed in the website of NERPC (**under Operational Activities/OCC Approved shutdown**) as per CERC regulations/ CEA guidelines etc for ensuring smooth & secure grid operation.

**Furnishing request of shut down of the element, which was approved by NERPC, by Indenting Agency (ISTS licensees/STUs/Generating Companies) to NERLDC:** Planned shutdown approved by NERPC shall be considered for implementation by NERLDC on D-3 basis. If an outage is to be availed on say 10<sup>th</sup> of the month, the shutdown availing agency would reconfirm to NERLDC on 7<sup>th</sup> of the month by 10:00 Hr. This practice is necessary to ensure optimal capacity utilization and the time required for associated system study/coordination by/amongst RLDC/NLDC.

It was decided in the previous OCCM that shutdown would be granted from the 1<sup>st</sup> day of the following calendar month to the 30<sup>th</sup>/31<sup>st</sup> day of the same month.

***The sub-Committee may kindly discuss and approve the transmission line outages proposed by Constituents for 01<sup>st</sup> January,2020 to 31<sup>st</sup> January,2020 which is available in the website of NERPC.***

#### **D.3 Estimated Transmission Availability Certificate (TAC) for the month of October,2019 - November,2019:**

NETC and POWERGRID have submitted the outage data for the month of October,2019 - November,2019. So the attributability of outage of the said elements may please be finalized.

***Members may please discuss.***

#### **D.4 Assessment of TTC, TRM & ATC by SLDC on respective Inter-State Transmission Corridor**

NERLDC has assessed the state control area wise, state subsystem wise and group of control-area wise TTCs for NER Grid. The study results will be presented during the meeting. SLDCs are requested to check and validate the TTC of their control areas as computed by NERLDC for the period Jan-March'20.

***Members may please discuss.***

#### **D.5 RGMO performance analysis of events**

Decisions in the previous meetings:

- NERLDC to scan PMU records for any event prior to 11:55hrs on 05.02.2019 resulting in droop of frequency by more than 0.03 Hz.
- BgTPP Unit #II mechanical problem in Turbine to be rectified.
- BgTPP DAS data to be submitted for event dated 05.06.19.
- For event dated 21.08.2019 DAS data to be submitted by Kopili HEP, Khandong HEP and Palatana GBPP.
- Reasons for non-sustenance of positive generation of Unit -II & III at BgTPP to be furnished.
- For event dated. 01.11.2019, BgTPP and Loktak HEP to provide DAS data.

***Members may please discuss.***

#### **D. 6 Reactive power capability/injection of generating stations:**

Decisions/deliberations in the previous meetings:

- Palatana GBPP - Joint meeting date to finalized mutually by NERLDC & OTPC. Tentatively by Nov'19.
- BgTPP - Testing completed on 30<sup>th</sup> of Sept. Load angle limiter setting to be increased. NTPC is in the process of consultation with OEM.
- AGTCCPP - NEEPCO to explore Reactive Power Testing.

***Members may please discuss.***

#### **D.7 3-phase Auto-reclosure for 400kV Silchar-Azara & 400kV Silchar - Byrnihat:**

In 161<sup>st</sup> OCCM NERLDC opined that in view of separation of grid(s), the 3 phase AR may not be implemented. Sr.DGM, NERTS stated that 3-ph AR for the 2 lines may be implemented with dead sync at Azara and Byrnihat and check sync at Silchar. This would address the concern of NERLDC. Further SOTF will act for 3-ph through fault at Azara and Byrnihat.

Director, NERPC informed that the proposal was mooted in view of frequent faults due to back flashover affecting more than 2 phases. The forum requested NERPC to take views of CEA in the matter and referred the item to next OCCM for further discussion.

In 162<sup>nd</sup> OCC NERLDC informed that the Single phase Auto-reclosure is non-functional at Azara end of 400kV Silchar-Azara and such steps may be taken to restore the same alongwith other anomalies at Azara, prior to implementation of 3-ph AR.

Director, NERPC stated that the views of CEA have been sought i.r.o. of 3-ph AR for 400kV Silchar-Azara and 400kV Silchar-Byrnihat.

***NERLDC/NERPC may please intimate the status.***

**D.8 Accurate Load forecasting by SLDCs as per IEGC c1.5.3 for better system operation**

RMSE for load forecast of actual data in comparison to that forecasted by the states for the month of October'19 is as follows:

Day	Ar. Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
Median	15	15	10	25	14	16	12

Forum decided that load forecast error will be monitored in OCC Meeting till the RMSE comes below 5%

In 160<sup>th</sup> OCCM CGM, NERLDC informed that POSOCO in association with IIT, Guwahati is developing methodology to forecast at the regional level. He requested all SLDCs to be proactive for the same.

*Members may please discuss.*

**D.9 Continuous shutdown of 220 kV Bus Coupler & 4 x 33 MAV 22/132kV ICT-1 along with associated bays w.e.f 06/09/2019 and shifting of 01 set of 220 kV Bus PT w.e.f 02/09/2019.**

Under the NERSS VIII, SS01 package , the 220/132 kV Dimapur substation is being upgraded from AIS to GIS including replacement of existing 4x33.33 MVA, 220/132 kV single phase unit transformer by 1 x 160 MVA, 220/132 kV 3-phase unit and addition of 1 No 1x160 MVA, 220/132 kV 3-phase transformer.

The existing 220/132 kV Dimapur substation is a conventional AIS substation having 220 kV bays with double main cum transfer scheme and 132 kV bays with single main and transfer bus schemes. Under the NERSS VIII project, all the existing 220 kV and 132 kV AIS bays shall be changed to GIS bays (Double main bus scheme) in the same existing switchyard by creating space for 220 kV GIS building , 132 kV GIS building and outer Gas Insulated Bushings **after dismantling the existing tower/ beams/ equipment's along with structures. During this upgradation period, both the 220 kV & 132 kV bays shall be operated on single bus system and only 220 / 132kV 100 MVA ICT 2 shall remain in service. "**

As per the proposed up-gradation and dismantling, only 220 KV Bus-A (towards the Transmission line side) will be in service. For construction of 200kV GIS Building and 132kV GIS building following assets at Dimapur substations shall be required to be dismantled.

- (1) 220/132 kV 4 X 33MVA ICT-1
- (2) 200kV ICT – 1 BAY
- (3) 132kV ICT – 1 BAY
- (4) 200kV BUS B
- (5) 200kV BUS COUPLER BAY

The substation layout diagram is attached for further reference.

The existing 220 kV PTs of Bus 1 & 2 are installed where the 220 kV GIS building is proposed to be constructed. As such 1 set of the bus PT is to be shifted to a convenient location towards ICT-2 area.

After shifting of the PT to the new location, dismantling works of the bus coupler bay and ICT-1 bays including the 4x33.33 MVA 1-Phase transformer will commence.

Once the above shutdown is approved, the shutdown shall continue till erection, testing and commissioning of the new GIS system which is February 2021 as per the approved L2 schedule.

Considering the above, It is proposed for Shutdown below mentioned assets under new construction activity related outage:

- b. Continuous Shutdown of BUS A w.e.f 02.09.2019 to 05.09.2019 for shifting of 1 set of 220 kV Bus PT as above.
- c. Continuous Shutdown of the 220kV/132kV 4x 33 MVA ICT – 1, 220 kV Bus coupler and ICT-1 bays (Bay No.203 & 204)w.e.f 06/09/19 till erection, testing and commissioning of the new GIS system.

In 162<sup>nd</sup> OCCM the following were decided to be the pre-requisites for granting shutdown for 220/132kV ICT-1 at Dimapur:

(i) Restoration of 132kV Dimapur-Kohima - Status: By 10.12.2019

(ii) NEEPCO to complete installation of Numerical relay for 132kV Doyang-Dimapur D/C by 27.11.2019. Shutdown for installation of relay for 132kV Doyang-Sanis shall be after Hornbill festival i.e. after 10.12.2019

(iii) 132kV Karong-Kohima upgradation to be completed and line returned to service by 30.11.2019.

***Members may please discuss.***

**D.10 Monitoring of Critical Elements affecting the reliability of and security of the Grid**

Critical Elements which affect NER/ER TTC/ATC Values and Cause major Grid Disturbance		
SI No	Name of Element	No of tripping during Sep' 19
1	400 kV Bongaigaon - Byrnihat S/C	Count will be presented during the meeting
2	400 kV Bongaigaon - Azara S/C	
3	400 kV Silchar - Azara S/C	
4	400 kV Silchar - Byrnihat S/C	
5	400 kV Palatana - Silchar D/C	
6	400/132 kV, 125 MVA ICT I and II at Palatana	
7	132 kV Palatana - Surajmaninagar S/C	
8	400 kV Balipara - Misa D/C	
9	400/220 kV 1x315 MVA and 1 x 500 MVA ICTs at Misa	
10	132 kV Imphal - Dimapur S/C	
11	132 Khandong - Kopili D/C	

#### **D.11 Implementation of revised SPS-3 scheme**

As per the Minutes of 20th TCC & 20th NER Power Committee Meetings held at Guwahati on 12th Sept., 2019 (Agenda No. D 20), the said SPS is to be discussed again in OCC and it is to be put up in the 21st TCC/RPC Meeting.

In 162<sup>nd</sup> OCCM Director, NERPC recounted the deliberations of the 20th TCC/NERPC meeting, wherein it was decided that the scheme of SPS-3 with generation reduction for Palatana to be reviewed in OCC forum.

OTPC representative stated that 400kV corridor is tripping prone and this triggers SPS-3 condition frequently. Due to this machines come under tremendous stress and their health is affected.

ED, NERLDC stated SPS-3 is necessary for secure operation of the NER Grid. As the generation in the southern NER pocket remains high for most of the time of the day, generation reduction is the only option for successful operation of SPS 3. He stressed upon the forum to implement revised SPS-3 scheme based on flow based scheme at the earliest to ensure reliable and secure operation of NER Grid. Until the implementation of revised scheme, existing SPS-3 to be kept in service as per the real time requirements.

Member Secretary, NERPC decided that the Special Committee tasked for study of backing down generation at Palatana (and other matters) would review the SPS-3 scheme on lines suggested by the 20th TCC/NERPC. The Committee would submit its report by Nov'2019.

***Members may please discuss***

#### **D.12 Restoration of Assets damaged at Kopili HEP due to failure of Penstock:**

220kV Misa-Kopili ckt I, II, III and 132kV Kopili-Khandong D/C are under outage since 07.10.2019. This is considerably reducing reliability of NER grid.

To finalise action plan for early restoration of the said connectivity, it is proposed to form a senior level task force consisting of members from NERPC, NERLDC & NERTS and convene a meeting of the task force at the earliest.

In 162<sup>nd</sup> OCCM Director, NERPC informed that Special Committee Meeting was convened on 06.11.2019. Five areas were identified for early restoration. It was also decided that 220kV System at Kopili is to be handed over to NERTS at the moment for restoration.

Sr. DGM, NERTS stated that the clearing work has started and switchyard area has to be cleared manually. Likely completion by Jan'20.

Further, he informed that separate kiosk is to be installed in lieu of the damaged ones and the requirement of 132/33kV ICT for Auxilliary Supply. After detailed deliberation, the following were decided:

- (i) Diversion of Kiosk from Silchar to Kopili.
- (ii) 220V DCDB and charger to be tested
- (iii) Particular milestone bar chart to be prepared by NERTS and submitted forthwith.

***Members may please discuss***

**D.13 Non - Availability of Synchronization Facility at Kolasib**

As per visit of Committee ,comprising of members from NERPC, NERLDC, NERTS and P&ED Mizoram, to Kolasib Substation on 30.10.19, it is observed that Synchronization facility is not available at Kolasib. It is very important that all 132 kV level and above Stations are provided with Synchronization facility. Necessary measures may be taken to procure synchronization facility at Kolasib.

*Members may please discuss*

**D.14 Mock Test for SPS in NER**

Decision as per the 162<sup>nd</sup>OCCM:

(i)Periodic Mock test (frequency once in six months) to be conducted for all SPS. However, the scope would not cover physical tripping of elements/generating units. Prior to a Mock Test the modalities and objectives for testing to be determined by Sub-group.

(ii) A Special Meeting on SPS would be convened by NERPC in the 3<sup>rd</sup> week of Nov'19 for review of SPS-5 to SPS-9.

(iii) Testing of SPS-1 to SPS-4 agreed in the 1<sup>st</sup> week of Dec'19 by the team constitutes earlier for mock testing

*Members may please discuss*

**AGENDA ITEMS FROM NERLDC:**

**D.15 Near Miss Incident in NER Grid at 16:58 Hrs on 20.11.19:**

Continuous shutdown of the 400 kV Bus-2 at Bongaigaon S/S was availed w.e.f. 12.11.19 to 20.11.19 for up gradation by replacing the 4" IPS AI Tubes with 4.5" IPS AI Tubes. During the shutdown period of Bus-2, all elements were in service through Bus-1. After completion of work, shutdown of Bus-2 was returned on 20.11.19 and the Bus was charged at 16:58 Hrs through the Main CB of 400/220 kV ICT-2. Immediately, all the Main Circuit Breakers connected to Bus-1 tripped on LBB protection of main CB of the 400 kV Bus Reactor-2 which was connected to Bus-1.400/220 kV, 315 MVA ICT at BgTPP, NTPC also tripped at 16:58 Hrs on Backup Over Current Protection

The following points are needed to be clarified by the NERTS, POWERGRID:

- a) Reason for delay in closing the main CBs of Bus-2 (~1 Hour)
- b) Reason for operation of Backup Impedance relay of Bus Reactor which was connected to Bus-1 at the time of charging of Bus-2.
- c) LBB relay operation could not be ascertained from DR output as well as SoE submitted by NERTS, POWERGRID. DR output of LBB relay to be submitted by NERTS, POWERGRID.
- d) Reason for operation of Bus Reactor 3 & 4 on same day i.e. 20-Nov-19

*NERLDC may please deliberate.*

**D.16 High DSM Outstanding:**

As per clause 10 of DSM Regulation 2014, the DSM payment by the respective Constituents shall be made within 10 days of issuance of DSM statement by NERPC. In case of default, RLDC may implement clause 25A of Open Access Regulation wherein the respective Constituent will be barred from STOA transactions. Also, addition of penal interest component on outstanding amount may mount higher burden on the Constituents.

The status of DSM outstanding as on 28/11/2019 and up to Week-33 (11/11/19 to 17/11/19) is as below –

REGIONAL ENTITY	D/S PAYABLE TO POOL	D/S PAYABLE >13 WEEKS
Ar. Pradesh	18.15 Crores	15.58 Crores
Manipur	10.37 Crores	8.62 Crores
Mizoram	10.89 Crores	10.81 Crores
Nagaland	11.69 Crores	11.6 Crores
Tripura	1.25 Crores	0

It is requested to clear the outstanding DSM payment on immediate basis.

***NERLDC may please deliberate.***

**Metering Agenda**

**D.17 High SEM Time Drift:**

Time drift in SEMs may result in computational errors in Regional Energy Accounts & Weekly Loss. All constituents in whose premises the meters are installed are required to take corrective action for time correction whenever meter time drift > 1minute and submit weekly compliance report of the same to NERLDC.

The compliance report of many locations as detailed in **Annexure D.17.a**, are not received by NERLDC and **Annexure D.17.b** provides location details of Drift correction action not being done / weekly SEM data not sent.

***NERLDC may please deliberate.***

**D.18 Meter Errors:**

Pair check error observed in following location, CT / PT error suspected.

- I) Imphal (S) end of Imphal (PG) –II : NP-9546-A
- II) PK Bari end of Kumarghat : NP-6875-A
- III) Dullavchera end of Dharmanagar : NP-9438-A

***NERLDC may please deliberate.***

**Any other item:**

**Date and Venue of next OCC**





### **TIME DRIFT REPORT STATUS**

<b>SL.NO</b>	<b>PGCIL</b>	<b>STATUS</b>
1	BNC (PG)	REPORT NOT RECEIVED/ACTION NONE
2	BADARPUR (PG)	REPORT NOT RECEIVED/ACTION NONE
3	Silchar(PG)	REPORT NOT RECEIVED/ACTION NONE
4	MARIANI (PG)	REPORT NOT RECEIVED/ACTION NONE
5	HAFLONG (PG)	REPORT NOT RECEIVED/ACTION NONE
6	Mokokchang(PG)	REPORT NOT RECEIVED/ACTION NONE
7	RANGIA (PG)	REPORT NOT RECEIVED/ACTION NONE
8	Aizawl(pg)	REPORT NOT RECEIVED/ACTION NONE
9	SALAKATI(PG)	REPORT NOT RECEIVED/ACTION NONE
10	BONGAGIGAON(pg)	REPORT NOT RECEIVED/ACTION NONE
11	DIMAPUR(pg)	REPORT NOT RECEIVED/ACTION NONE
12	Khliehriat(Pg)	REPORT NOT RECEIVED/ACTION NONE
	<b>ASSAM</b>	
13	DULLAVCHERRA	REPORT NOT RECEIVED
14	<b>NAGALAND(S)</b>	REPORT NOT RECEIVED
15	<b>MIZORAM(S)</b>	REPORT NOT RECEIVED
	<b>TRIPURA</b>	
16	SM NAGAR	REPORT NOT RECEIVED
17	79 TILLA	IRREGULAR
	<b>ARUNACHAL PRADESH</b>	
18	CHIMPU	REPORT NOT RECEIVED
	<b>GENERATION</b>	
19	AGBPP	REPORT NOT RECEIVED
20	DOYANG	REPORT NOT RECEIVED
21	PALATANA	IRREGULAR
22	PARE	IRREGULAR

### **Time Drift Corrective Action Not taken**

Sl. NO.	ENTITY	LOCATION	TIME DRIFT STATUS (MIN)	STATUS
1	ASSAM	AZARA-BONG	-04:35	Meter replaced due to high time drift but due to inaction drift >4
2	ASSAM	AZARA-SIL	-04:58	Meter replaced due to high time drift but due to inaction drift >4
3	ASSAM	DULLAVCHERRA	+02:20	No action taken

### **Locations not sending weekly SEM data**

Sl. No.	LOCATION NOT REPORTING	STATUS
1	UDAIPUR	DATA NOT SENT
2	SONABIL	DATA NOT SENT