

**North Eastern Regional Power Committee**  
**Agenda For**

**166<sup>th</sup> OCC Sub-Committee Meeting**

**Time of meeting : 10:00 Hrs.**

**Date of meeting : 6<sup>th</sup> March, 2020 (Friday)**

**Venue : "Hotel Nandan", Guwahati.**

<b>A. CONFIRMATION OF MINUTES</b>
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**CONFIRMATION OF MINUTES OF 165<sup>th</sup> MEETING OF OPERATION SUB-COMMITTEE OF NERPC.**

The minutes of 165<sup>th</sup> meeting of Operation Sub-committee held on 14<sup>th</sup> February, 2020 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2020/3052-3089 dated 28<sup>th</sup> February, 2020.

***The Sub-committee may confirm the minutes of 165<sup>th</sup> OCCM of NERPC as no comments/observations were received from the constituents.***

<b>ACTION TAKEN -ITEMS</b>
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**B.1. ACTION TAKEN:**

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

The status as informed in 165<sup>th</sup> OCC:

State	R&U scheme	ADMS	Capacitor Installation	SAMAST**	Line Differential Protection
Ar. Pradesh	Package-I Materials supplied. P-II(for PLCC & communication) Contract signed P-III updation of BoQ being undertaken. Floating of tender by March'2020. Station-wise status to be updated *	TPA to be signed **	-	All TESG queries replied to. except BoD approval	-
Nagaland	All completed except for PLCC package. By Feb'20 Station-wise status to be updated.	First tranche of 30% funds to be released and requisition for second tranche of 60% to be submitted.	-	Reply against TESG queries sent except BoD approval.	Lines identified. Under DPR preparation stage.
Mizoram	Completed. 10% remaining claim by Feb'20	Original TPA to be sent to NLDC. By Feb'20	To reply to TESG queries.	To reply to TESG queries.	Lines identified for installation of DPR viz. 132kV Aizawl -

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					Luangmual and 132kV Kawmzawl - Khawiva.
Manipur	Package-II: completed Package-I: WIP Status report to be submitted	TPA signed.	Approval awaited for NIT	Reply against TESG queries sent except BoD approval.	Lines identified. LDP for 132kV Imphal-Imphal and 132kV Jiribm-Jiribam proposed. Under DPR preparation stage.
Tripura	All LOAs issued. Station-wise status to be updated *	Contract agreement signed. Draft TPA with MD, TSECL. TPA & A/C opening by Feb'20.	Study to be carried out in consultation with NERLDC.	Reply against TESG queries sent except BoD approval.	Lines not yet identified. To be taken up in Sub-group.
Assam	Balance LoA by Feb'20. Station-wise status to be submitted.	Contract Agreement signed. TPA to be approved by govt by Feb'20.	-	Appraisal Committee approved.	Lines identified. Under DPR preparation stage.
Meghalaya	MePTCL R&U works Completed. Final 10 % released MePGCL - 10% claim by Feb'20. Station-wise status to be updated.	Requisition sent for second tranche. Work at completed.	-	Appraisal Committee approved.	60% claim submitted

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 165 <sup>th</sup> OCC	Latest status
63MVAR Reactor at Byrnihat to replace with 80MVAR Reactor	MePTCL	Sanction order received.	
132kV Dimapur - Imphal (out since 25.07.18)	NERTS	Present status Foundation: 22/35 Erection : 22/35 Stringing:6.6/14.6Km DC, Kohima has been instructed to assist NERTS. PG may follow up.	
220kV Sonabil-Samaguri-I	AEGCL	Tender floated. Completion time 3 months. By 01.03.20 LOA.	
132kV Srikona-Panchgram (out since 14.01.2019)	AEGCL	Srikona-Panchgram delayed due to two river crossings	
63MVAR L/R for 400kV Palatana-Silchar Ckt-I (out since Apr'19)	OTPC	PPM value for moisture still high. 15.03.2020	
OTPC Module-I (out since 07.10.2019)	OTPC	By 31.03.2020	
50 MVAR L/R at Misa of 220 kV Misa – Mariani	NERTS	The Old Mariani Line Reactor is taken in to service on 25.01.20 and the New Mariani Line Reactor is taken in out of service, which is expected to come in to service by 31.03.20	

**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 165 <sup>th</sup> OCC Meeting	Latest status
1	132 kV AGTCCPP - Agartala D/C	Installation of Line Differential in 132 kV AGTCCPP - 79	NERTS/ NEEPCO	LOA to be placed by 29.02.20	

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		Tilla D/C & Review of impedance setting of both ends as a temporary measure.			
2	132kV AGTCCPP-Kumarghat	GPS to be procured and time synchronization of relay to be done	NEEPCO	By Feb'2020	
3	132kV P.K. Bari-Kumarghat	Installation of Line differential relay	NERTS	LOA to be placed by 29.02.20	

***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 165 <sup>th</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, Mizoram, Nagaland & NEEPCO submitted	
2	Furnishing details regarding GT Tap Positions of ISGS and other generators. Required for studies related to reactive power capability testing	15.10.19	State generators data not received	
3	Furnishing Nodewise half hourly data monthly Required for studies pertaining to Real Time Market	By 10 <sup>th</sup> of the month	From 01.04.20 the RTM would be introduced. Meghalaya to submit to SO-II	
4	RE Generation details. Data for both RE under operation & RE under planning is required.	-	All state generators data not received	

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

**B.2. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING FEBRUARY, 2020**

NERLDC to present the operational performance and grid discipline for the month of February, 2020.

**C. ITEMS- STATUS REVIEW**

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

During 165<sup>th</sup> OCC meeting, the status as informed by different beneficiaries is as follows:

SN	Items	Status as given in 165 <sup>th</sup> OCC Meeting		Latest status	
		Timeline for completion	Timeline for completion	Timeline for completion	Furnishing of detail parameters
<b>a. New elements</b>					
1	Kameng HEP of NEEPCO two units (2 x 150 MW) Next two units (2x150 MW)	Feb'20	CEA clearance available		
2	220/132 kV, 1x160 MVA ICT with GIS Bay at Kopili	Damage assessment done on 07.02.20.	To be submitted to NERLDC.		
3	Dedicated 33kV feeder at Khliehriat Substation from Lumshnong.	Date to be finalized.	Not applicable.		
4	220kV Balipara-Sonabil-2	Less sanction than DPR. By June'20 the work would be completed.	To be submitted to NERLDC.		
5	Bay at Agia S/S for 132kV Agia-Nangalbibra Ckt #II by AEGCL	By Feb'20	To be submitted to NERLDC.		
6	80MVAR B/R at RHEP by NEEPCO	Tender by May'20	To be submitted to NERLDC.		
<b>b. Elements under breakdown/upgradation</b>					
7	Up-gradation of 132 kV Lumshnong-Panchgram line	TESG queries submitted	Not applicable.		
8	PLCC Panels at	By Feb'20	Not applicable.		

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	Loktak end of Loktak - Ningthoukhong 132 kV feeder and Loktak - Rengpang 132 kV feeder				
9	Upgradation of 132 kV Bus Bar at Umiam Stg- III to ACSR Zebra	Revised DPR to be submitted	Not applicable		
10	Upgradation of 132kV Karong-Kohima (till Mao) by MSPCL	By Feb'20	To be submitted to NERLDC.		
11	Installation of LDP for 132kV AGTCCPP-Agartala D/C & 132kV PKBari-Kumarghat by NERTS	LOA to be placed by 29.02.20	-		
12	Procurement of GPS at AGTCCPP & time synchronization for 132kV AGTCCPP-Kumarghat by NEEPCO	By Feb'20	-		
13	Diversion of 132kV Bawktlang-Sihhmui	Tower materials awarded to M/s Skipper. Expected by : May'20	-		

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

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

Data availability is given below:

<b>Name of the state /utility</b>	<b>Data Availability (in%)</b>	<b>Issues</b>	<b>Status as updated in the 165<sup>th</sup> OCCM</b>
DoP Ar. Pradesh	Not updated	-	-
Assam	62%	-	-
Manipur	80%	(i)Frequent hang of TARA device, resumes reporting upon reboot. (ii) Yurembam end of 132kv of Imphal(PG)-2	(i)Frequent hang of TARA device, resumes

		fdr, corresponding to SEM NP-8374-A not reporting. (iii) Jiribam 132/133kv ICT(manipur consumption), corresponding to SEM NP-8501-A not reporting	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 reporting after replacement of adapter
Meghalaya	0% detailed report to be submitted	After TARA devices are connected the SEMs they hang.	Same problems persisting. CDAC to visit critical locations immediately.
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:-

- 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 Mokokchung in Mar'20.

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

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

Latest status as informed in previous meeting(s):

- Expenditure towards the Pilot project cost has been waived off.
- Killing VSAT presently reporting to SLDC Meghalaya & NERLDC.

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

**C.5 Update on PDMS:**

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

- Go Live of the project done on 14.02.2020.
- The user details station-wise to be shared by the nodal officers of Ar. Pradesh, Nagaland, TSECL and NERTS at the earliest for creation of login credentials.

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- The login credentials for PDMS would be shared with all the nodal officers.
- Training on PSCT, PDMS would be arranged in all the states starting with Meghalaya.
- A focused training on Fault level calculation and Overcurrent, E/F settings calculation and co-ordination studies would be held in Mar'20.

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

**C.6 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 – Remote Synchronization using BCU to be tested alongwith mock black start of AGBPP by March 2020.
- DoP Ar. Pradesh – Synchro check Trolley procurement at Lekhi S/S and Chimpu S/S. LoA: Jan'20. Target Completion Mar'2020.
- P&ED Mizoram - Procurement of synchronization trolley and installation of synchronization facility at 132kV Kolasib S/Sn would be taken up with higher authorities.

***AEGCL/DoP Ar. Pradesh/P&ED Mizoram may please update the status.***

**C.7 Phase shift errors in PMU:**

The following status as updated in previous meeting(s):

- Phase shift errors have been rectified for all the PMUs in NERTS stations
- Phase shift problems still persist for AEGCL stations
- PMUs at Tinsukia, Mariani, Samaguri not reporting

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

**C. 7 Tentative schedule for Black Start & Restoration Procedure Mock exercise in NER during the year 2019**

Status/decisions as per previous meetings:

- RHEP - By Mar'2020
- AGBPP – Black Start at AGBPP with the decided procedure and synchronization at New Mariani using BCU by Mar'2020.
- Pare - Mock black start was successful at Pare HEP on 24.01.2020 however there was delay in Synchronization at RHEP during Mock Black start at Pare. The issue

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

**C. 8 DVAR and PSS at AGTCCPP:**

Status as per previous meeting(s):

- PSS has been kept OFF in all DVR panels.
- Data required for PSS tuning has to be supplied by CTU.

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

**C. 9 Bus Configuration issues for various sub-stations:**

Status as on 163<sup>rd</sup> OCC Meeting:

- 400kV Bus A at RHEP - Technical details/specifications submitted to HoP, RHEP. The collection of budgetary offers would be done subsequently with tendering in May'2020
- 132kV Bus Coupler at Pavoi - By 31.03.2020.

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

**C. 10 Status of recommendations reg GD-Vs on 03<sup>rd</sup> & 20<sup>th</sup> April,2019:**

<b>Recommendations</b>	<b>Status as informed in the 165<sup>th</sup> OCCM</b>	<b>Latest status</b>
Study for reactive compensation in Tripura System(scope of TSECL)	Not completed.	
Identification of feeders for additional UFR based load shedding under Islanding Scheme-II( Scope of TSECL)	Not procured. Target to be communicated in next meeting.	
Standalone EL for integration of relay at AGTCCPP 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.	NERLDC informed that all utilities are submitting the undertaking.	
NHPC to procure standalone EL for Loktak HEP	By Mar'2020	
Revised SPS-3 scheme offer sought from GE by NERTS	Detailed break up to be submitted and order to be given by NERTS	
Impedance measurement for 400kV Paltana-Silchar D/C, 400kV Silchar-Azara, 400kV Silchar – Byrnihat	Results submitted to NERLDC on 12.02.20	
Line parameters to be matched at Silchar, Azara and Byrnihat.	Azara provided the existing settings on 13.02.20. The same are under examination	
NERTS and AEGCL to jointly visit Azara and check exact cause for delay in	AEGCL informed that the reason could not be	

appearance of voltage input to relay when charged via Tie Breaker	ascertained. However the matter would be under observation for recurrence.	
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**Concerned utilities may please update the status.**

**C.11 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 158<sup>th</sup> 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 165 <sup>th</sup> OCCM	Latest status
2	Providing alternate cooling water source to compressors	By May'2020	

**NTPC may please intimate the status.**

**C.12 Better weather forecasting for power sector by IMD:**

Decisions/deliberations in the previous meetings:

- The report regarding site selection for Automatic Weather Station submitted by IMD Department
- ISGS stations to be visited by IMD on urgent basis.
- Minute by minute data is to be shared by IMD with all utilities.
- IMD visited 3 PG stations and remaining to be visited by Mar'20.
- NERLDC to share the location of all CSGS with IMD

**NERLDC may please intimate the status.**

**C.13 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.

Status as per previous meeting:

- AGTCCPP - after receipt of data from CTU
- Tuirial - By 15<sup>th</sup> Mar'20 after visit of OEM.

**NEEPCO may please intimate the status.**

**C.14 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 165<sup>th</sup> OCCM SE(SO&PSC), DoP Ar. Pradesh informed that 7 stations have been identified for

VSAT. Materials for the same has been already delivered and about to be commissioned. The forum requested that one PMU be installed at Deomali as pilot.

(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 164<sup>th</sup> OCCM the following status was given:

- 132kV Badarpur-Kolasib: PLCC link in place and working.
- 132kV Bairabi - Kolasib: Matter taken up with higher authorities.
- 132kV Tuirial-Kolasib: Rectified and functioning

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

### **C.15 Shutdown of plant**

In 164<sup>th</sup> OCCM OTPC informed that high demand season for NER has been fixed from August- September. However the present tariff regulation has disincentivised taking shutdown during high demand season. Since the shutdown period for gas plants has already been decided in previous OCC, it was requested to provide relief.

In 165<sup>th</sup> OCC forum requested NERPC to take up the matter with Hon'ble CERC.

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

### **C.16 Auto recloser in 132 kV Rangia – Motonga line & 132 kV Salakati - Gelephu line (International lines connecting Bhutan Power System):**

As per the discussions in the 5th Operational Coordination Meeting between India and Bhutan, Bhutan informed that gang operated circuit breaker at Gelephu station has been replaced with independent pole CB for the 132 kV Salakati – Gelephu line and single-phase auto recloser can be operationalized at any time. Bhutan requested India to replace 3 phase gang operated CB mechanism with single phase CBs at Salakati end. In 132 kV Rangia – Motonga line Single Phase Auto Recloser (SPAR) is ready at Bhutan (Motonga) end but not ready at India end due to the same reason. POWERGRID to look in to this matter.

In 164<sup>th</sup> OCC meeting it was decided that 3 phase GO CB at Salakati and Rangia is to be converted to Single Pole CB. However NERTS stated that shutdown for the same is required. The forum requested NERTS to prepare the proposal and place it for ratification in the next TCC/RPC with the expenditure being shared under PoC mechanism.

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

### **C.17 Diversion of CT from Aizawl to Kolasib:**

In 165<sup>th</sup> OCCM NERLDC informed that as per report of the Committee which visited 132kV Kolasib S/Sn, the CT for 132kV Bairabi feeder is to be replaced. NERTS informed that spare CT is available at 132kV Aizawl S/Sn and same may be provided to P&ED Mizoram on loan basis. However P&ED Mizoram has to arrange for the diversion and installation. The forum approved and requested P&ED Mizoram to do the needful.

***P&ED Mizoram may please inform the latest status.***

**C.18 Auto-reclosure issues at Azara:**

In 165<sup>th</sup> OCCM AEGCL informed that at present single phase AR is not working for 400kV Silchar-Azara at Azara. This is due to communication channel problem at Azara with both Channel-1&2 blocked in PLCC panel. NERTS shared the number of the concerned maintenance firm with AEGCL with the request to get the work done, the cost for the same would be re-imbursable.

***AEGCL may please inform the latest status.***

<b>D. ITEMS FOR DISCUSSION</b>
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**D.1 Generation Planning (ongoing and planned outages)**

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

Plants	Reservoirs level in meter	MU content	Present DC (in MU)	No of days as per current generation
Khandong + Kopili stg II			<b>1.114</b>	
Kopili			<b>0</b>	Will be “0” until further intimation.
Doyang			<b>0.138</b>	
Loktak			<b>0.5</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> April,2020 to 31<sup>th</sup> April,2020 which is available in the website of NERPC.***

**D.3 Estimated Transmission Availability Certificate (TAC) for the month of December,2019 - January,2020:**

NETC and POWERGRID have submitted the outage data for the month of December,2019 - January,2020. So the attributability of outage of the said elements may please be finalized.

***Members may please discuss.***

**D.4 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.5 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.**

Decisions/deliberation in previous meeting(s):

- Continuous Shutdown of BUS A w.e.f 01.02.2020 to 06.02.2020 for shifting of 1 set of 220 kV Bus PT as above is required by NERTS.
- 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 06.02.2020 till erection, testing and commissioning of the new GIS system - required by NERTS
- Nagaland requires N-1 conditions to be met with support from 132kV Bokajan-Dimapur. Assam to support upto 25-30MW.

- A study would be carried out by NERLDC to determine the quantum of power that can be supplied considering return of 132kV Dimapur-Kohima, return of 132kV Karong-Kohima with higher capacity and support from Bokajan.

**Members may please discuss.**

#### **D.6 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.

Decisions/status as per deliberation in the previous meeting(s):

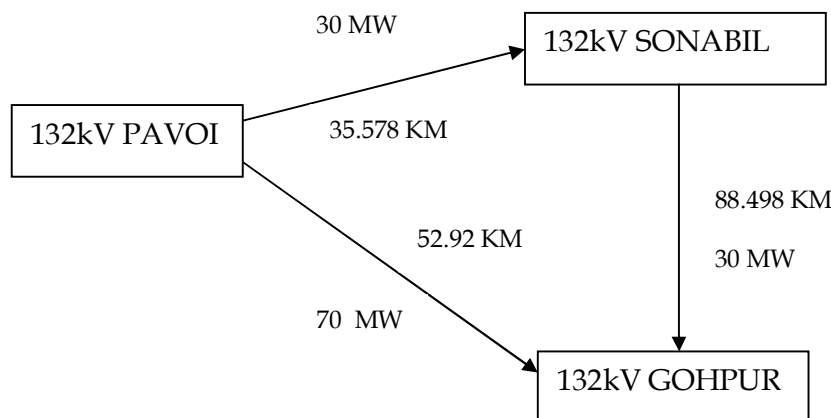
- 220kV Switchyard at Kopili HEP to be cleared by NEEPCO within Jan'20.
- C&R Panels to be diverted from Silchar to Kopili
- Misa-Khandong-Kopili link to be restored at the earliest.
- Site report submitted by NERTS and tentative completion time is 18months.
- Task Force to discuss ways to expedite the restoration of the switchyard.

**Members may please discuss**

#### **AGENDA ITEMS FROM AEGCL**

#### **D.7 Shorting of 132kv Pavoil-Sonabil & Sonabil-Gohpur at 186th location**

It was observed that during summer of 2019, power flow in 132kV Sonabil - Gohpur is around 30 MW and 70 MW flows in 132kV Pavoil - Gohpur, which creates loading issues in Gohpur, Nalkata, Majuli and Dhemaji (around 110 MW ).



AGM, SLDC proposes shorting of 132kV Pavoil - Sonabil & 132kV Sonabil - Gohpur at 186<sup>th</sup> location to mitigate this issue. After doing so, line length of Pavoil - Sonabil - Gohpur will reduce from 124.076 km ( 35.578km + 88.498 km ) to 55 km.

**AEGCL may please deliberate.**

**AGENDA ITEMS FROM STERLITE:**

**D.8 Tertiary loading of 400/132kV substation at Surajmaninagar & P.K.Bari**

M/s NER II Transmission Limited is constructing 400/132kV Substation at Surajmaninagar & P.K.Bari under this scheme, for Station auxiliary supply of each substation two nos. auxiliary transformer shall be provided out which one shall be connected with SEB supply and other one shall be connected to tertiary of 400/132kV Transformer.

In this regard kindly suggest us the following:

1. Meter specifications for tertiary transformer and the approval for tertiary Loading of 400/132kV Substation at Surajmaninagar & P.K.Bari.
2. Connectivity proposal for power drawl from transformer tertiary for station auxiliary supply as there is no prevailing case in the state of Tripura.

Necessary approval may please be accorded for the loading of tertiary transformer for station auxiliary supply at 400/132kV Surajmaninagar substation & 400/132kV P.K.Bari Substation.

***M/s STERLITE may please deliberate.***

**AGENDA ITEMS FROM NERLDC:**

**D. 9 Reactive power capability/injection of generating stations:**

Decisions/deliberations in the previous meetings:

- Loktak testing to be done in first week of Mar'20
- Kameng HEP – testing First week of Mar'20.

***Members may please discuss.***

**D.10 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, Loktak

Kopili, Doyang, Khandong(kept in abeyance).

Discussions in the 165th OCCM:

- FO communication path is available for all stations except Loktak HEP. However route redundancy/ alternate path is not available for any of the stations.
- Communication link availability status to be discussed in next NETeST meeting
- NHPC informed that necessary equipments for AGC would be ordered by Mar'20 with delivery/installation by July'20.

***Members may please discuss.***

**D.11 Proposal for Installation of PMUs in the strategic locations of State Power Systems**

NER grid is expanding very fast and most of NER states will be connected to the grid through 400 kV system in the near future. For the better monitoring and visualization of the grid, it is proposed to install PMUs in the strategic locations of State Power Systems. In 165<sup>th</sup> OCCM NERLDC suggested that PMUs may be installed unit wise for all the ISGSs for proper analysis of oscillations. After detailed deliberation the forum decided that usage of DAS data for oscillation analysis would be explored.

***Members may please discuss.***

**D.12 Accurate Load forecasting by SLDCs as per IEGC c1.5.3 for better system operation:**

RMSE for actual data in comparison to that forecasted data by the states for the month of Jan'20 is as follows:

Day	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
<b>Median (Jan'20)</b>	13	6	7	24	22	9	11

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

***NERLDC may please deliberate.***

**D.13 Low voltage in Manipur Power System in case of tripping/outage of 400 kV Silchar – Imphal D/C:**

To avoid low voltage situation in Manipur Power System, it is proposed to automatically disconnect 420 kV Bus Reactor at Imphal in case of tripping/outage of any one or both circuit of 400 kV Silchar – Imphal D/C at Imphal.

***NERLDC may please deliberate.***

**D.14 Restoration of 132 kV Jiribam (MSPCL) – Rengpang line**

Healthiness of 132 kV Loktak – Rengpang – Jiribam (MSPCL) – Jiribam (PG) link is vital for the reliable operation of Manipur Power System. 132 kV Jiribam (MSPCL) – Rengpang line is under long outage (since 20th Nov'19 as per NERLDC records).

MSPCL is requested to intimate the tentative schedule for the restoration of 132 kV Jiribam (MSPCL) – Rengpang line.

***NERLDC may please deliberate.***

**D.15 Submission of RIO clearance for 400 kV Silchar – Imphal D/C:**

It is seen that the RIO clearance is provisional for 2 months, Status of obtaining final RIO clearance may be submitted by NERTS.

***NERLDC may please deliberate.***

### **D.16 Charging of Khupi-Kimi (Kameng) line at 132 kV voltage level**

In the 54th PCCM, it was decided:

- 132kV line charged at 33kV presently shall be converted to 132kV.
- 132kV Seppa bay at Khupi to be used for 132kV Khupi-Kimi (Kameng).
- Insulator, line inspection to be carried out by DoP, Arunachal Pradesh.

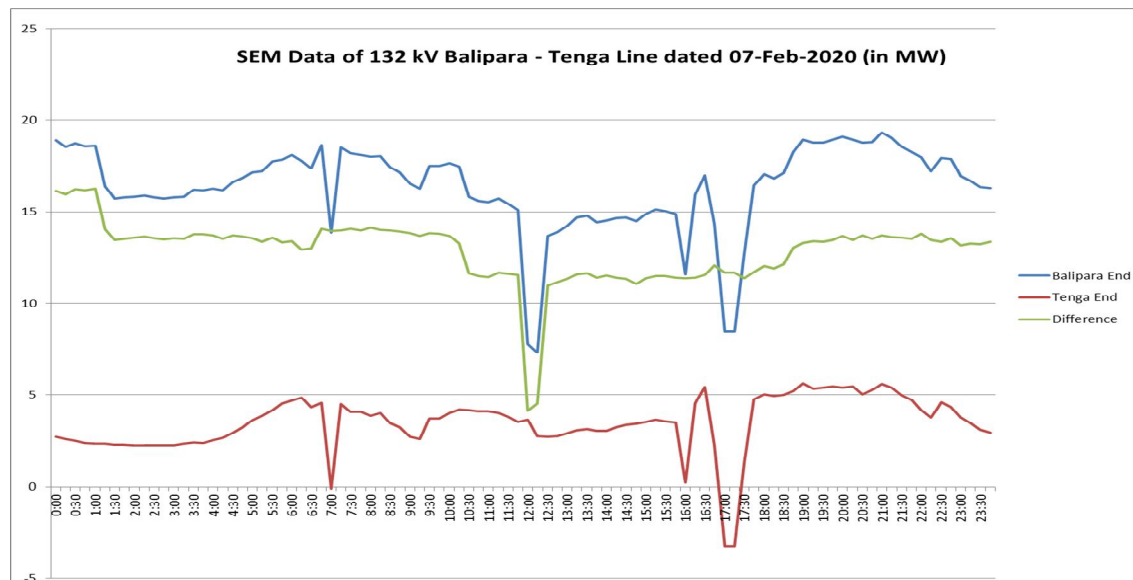
NEEPCO & DoP AP are requested to intimate the tentative schedule for the works involved.

***NERLDC may please deliberate.***

### **D.17 Conversion of all T-connection in 132 kV Balipara – Tenga – Khupi link to LILO**

In the 54th PCCM, forum requested DoP Arunachal Pradesh to submit a plan for the conversion of all T connections to LILO before next OCCM.

The forum advised NERLDC to tally SEM figures. As per SEM data, mismatch of ~12 MW was observed between Balipara & Tenga. Plot for 1 day is given below:



***NERLDC may please deliberate.***

### **D.18 HTLS reconductoring of 132 kV Umiam I- Umiam III D/C and 132 kV Badarpur – Panchgram line**

N-1 contingency is not satisfied for 132 kV Umiam I- Umiam III D/C during low generation and high demand in Southern Part of NER and Capital & Khliehriat Area of Meghalaya Power System. Also, during outage of 132 kV Umiam I- Umiam III D/C, overloading of 132 kV Badarpur – Panchgram line is observed. (Study Results are attached in **Annexure D.18**)

It is therefore proposed to reconductor the lines 132 kV Umiam I- Umiam III D/C and 132 kV Badarpur – Panchgram with HTLS conductor to increase the load ability of these lines.

***NERLDC may please deliberate.***

## **Metering Agenda**

### **D.19 Correction of Meter error**

Correction of Meter error:

(i) Erratic reading:

- I. Ningthokhoung (NP-9521-A) end of Imphal,
- II. Kohima (NP-9703-A) end of Karong,
- III. Imphal(S) ( NP-9546-A) end of Imphal(PG)-II
- IV. Dullavchera (NP-9438-A) end of Dharmanagar

(ii) Sign Change:

- I Rengpang end of Loktak
- II. Mokokchung end of Doyang
- III. PK'Bari end (NP-9709-A) of 132 kV Silchar-1

As discussed Both end Sample data of all five lines had been provided by NERLDC for further analysis.

***NERLDC may please deliberate.***

### **D.20 SEMs to be Procured**

In 165<sup>th</sup> OCC Meeting, NERTS intimated that M/s L& T has sought some extra time (up to 26.02.20) to submit their bid.

Order may be placed to L&T and supply expected by end of Feb'2020

***NERLDC may please deliberate.***

### **D.21 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 attached as per **Annexure-D.21**

***NERLDC may please deliberate.***

### **D.22 Meter Replacement:**

- i. Meter no. NP-8492-A i.e Sarusajai end Umtru II feeder (defective for long time)
  - ii. Meter no. NP-9456-A i.e Azara end of Bongaigaon feeder
  - iii. Meter no. NP-9457-A i.e Azara end of Silchar feeder
  - iv. Meter no. NP-9546-A i.e Imphal end Imphal (PG) –II fdr
  - v. Meter no. NP-9438-A i.e Dullavchera – Dharmanagar fdr
- (Note: ii. to v. all meters have time drift of more than 5 min)  
Timeline of replacement: Feb,2020

***NERLDC may please deliberate.***

**D.23 Collection of SEM data before availing Shutdown:**

In 165<sup>th</sup> OCC Meeting, Sr.DGM(AM), NERTS informed that if any feeder is currently under shutdown voltage of any phase active PT secondary supply may be extended from the nearest panel to energize the meter and data may be collected thereafter. In case of SS shutdown, extension of PT supply is not possible. Such problem is faced during 132 kV Dharmanagar main bus continuous shutdown w.e.f 02.02.20.

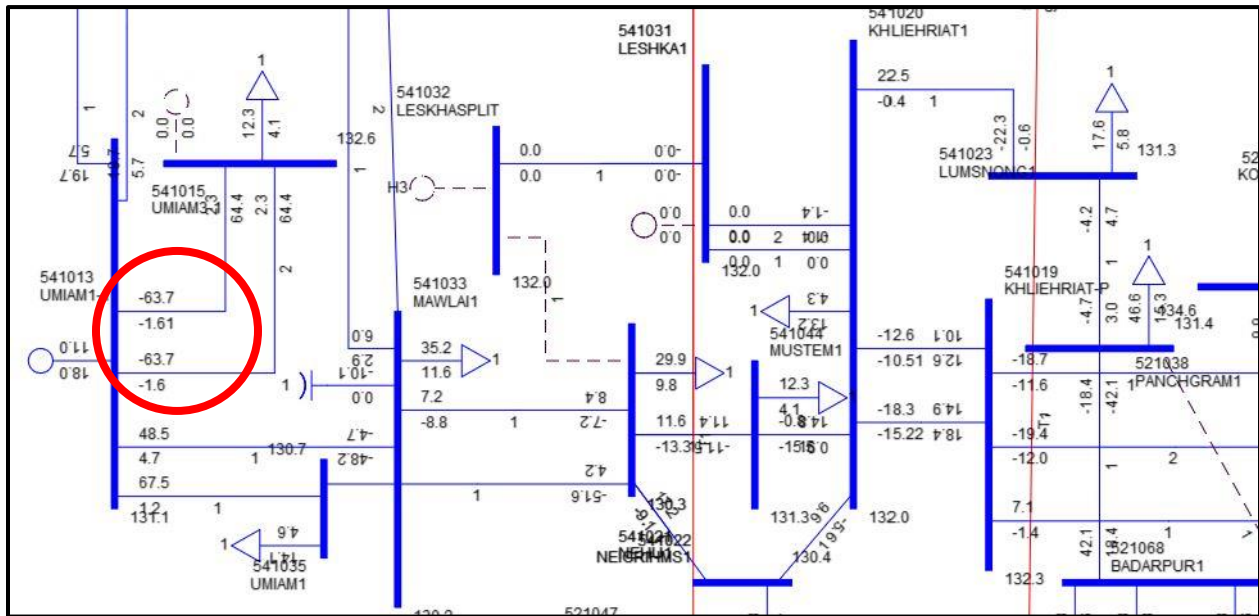
***NERLDC may please deliberate.***

**Any other item:**

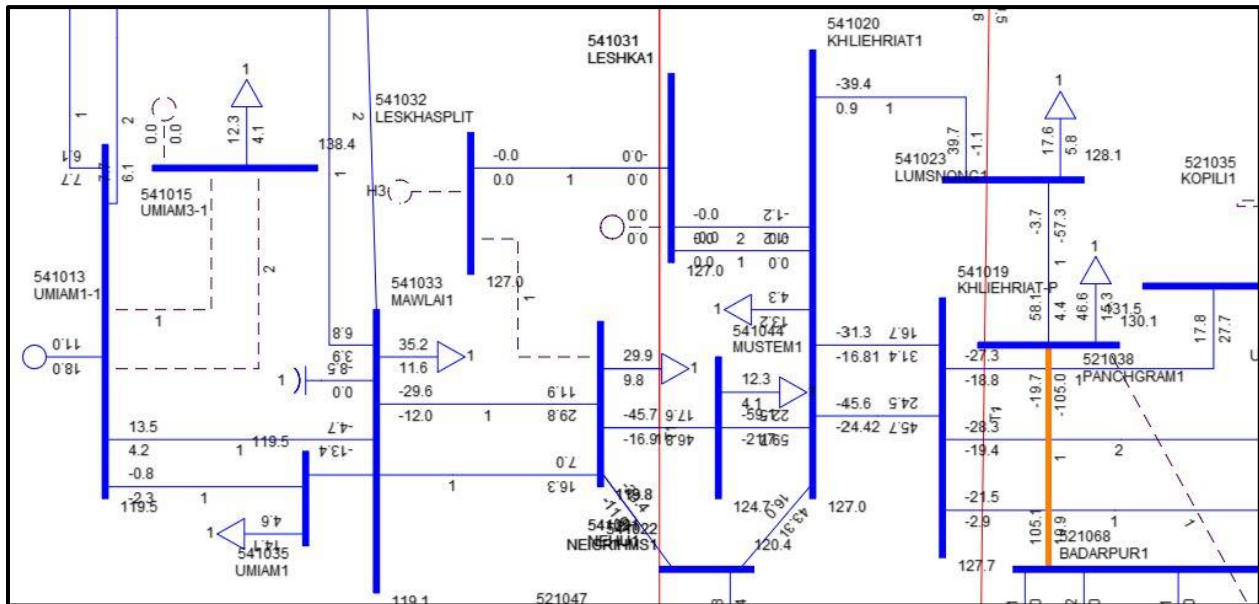
**Date and Venue of next OCC**

## Study Results

### Case 1: N- 1 contingency not satisfied 132 kV Umiam I– Umiam III D/C



### Case 2: overloading of 132 kV Badarpur – Panchgram line during outage of 132 kV Umiam I– Umiam III D/C



*Note: Total Demand met of South Assam, Tripura (with Bangladesh), Manipur, Mizoram, Meghalaya (Khliehriat Area) considered in the base case= 915 MW*

## Annexure B

### TIME DRIFT REPORT STATUS

SL.NO	PGCIL	STATUS
1	BNC (PG)	REPORT NOT RECEIVED
2	BADARPUR (PG)	REPORT NOT RECEIVED
3	SILCHAR (PG)	REPORT NOT RECEIVED
4	MARIANI (PG)	REPORT NOT RECEIVED
5	HAFLONG (PG)	REPORT NOT RECEIVED
6	MOKOKCHUNG (PG)	REPORT NOT RECEIVED
7	RANGIA (PG)	REPORT NOT RECEIVED
8	AIZWAL (pg)	REPORT NOT RECEIVED
9	SALAKATI(PG)	REPORT NOT RECEIVED
10	BONGAGIGAON(pg)	REPORT NOT RECEIVED
11	DIMAPUR(pg)	REPORT NOT RECEIVED
12	KHLEIRIAT (Pg)	REPORT NOT RECEIVED
13	BALIPARA	REPORT NOT RECEIVED
	<b>ASSAM</b>	
14	DULLAVCHERRA	REPORT NOT RECEIVED
15	GOHPUR	REPORT NOT RECEIVED
16	RANGIA	REPORT NOT RECEIVED
17	<b>MIZORAM(S)</b>	REPORT NOT RECEIVED
	<b>TRIPURA</b>	
18	SM NAGAR	REPORT NOT RECEIVED
19	79 TILLA	REPORT NOT RECEIVED
	<b>ARUNACHAL PRADESH</b>	
20	CHIMPU	REPORT NOT RECEIVED
21	LEKHI	REPORT NOT RECEIVED
	<b>GENERATION</b>	
22	AGBPP	REPORT NOT RECEIVED
23	DOYANG	REPORT NOT RECEIVED
24	PALATANA	REPORT NOT RECEIVED

### Locations not sending weekly SEM data

Sl. No.	LOCATION NOT REPORTING	STATUS
1	UDAIPUR	DATA NOT SENT
2	SONABIL	DATA NOT SENT
3	TINSUKIA	DATA NOT SENT
4	UMRANGSHOO	DATA NOT SENT