

North Eastern Regional Power Committee

Agenda For

165th OCC Sub-Committee Meeting

Time of meeting : 12:00 Hrs.

Date of meeting : 14th February, 2020 (Friday)

Venue : "Hotel Nandan", Guwahati.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 164th MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 164th meeting of Operation Sub-committee held on 21st January, 2020 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2020/3052-3089 dated 6th February, 2020.

The Sub-committee may confirm the minutes of 164th 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 164th OCC:

State	R&U scheme	ADMS	Capacitor Installation	SAMAST**	Line Differential Protection
Ar. Pradesh	Package-I LoA issued. Materials expected to be received at site by Feb'20 P-II(for PLCC & communication) OBD done and LoA expected to be issued by Jan'20 P-III tender to be published by Jan'20. Station-wise status to be updated *	TPA signed and first tranche of funds received	-	Reply against TESG queries to be sent.	-
Nagaland	All completed except for PLCC package. Station-wise status to be updated.	TPA signed and first tranche of funds received	-	Reply against TESG queries to be sent.	Lines identified. Under DPR preparation stage.
Mizoram	Completed.	TPA signed	To reply to TESG queries.	To reply to TESG queries.	Lines identified for installation of DPR viz.

Agenda for 165th OCC Meeting to be held on 14th February, 2020

					132kV Aizawl - Luangmual and 132kV Kawmzawl - Khawiva.
Manipur	Package-II: completed Package-I: WIP Status report to be submitted	TPA signed.	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	All LOAs issued. 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	Balance LoA by Feb'20. Station-wise status to be submitted.	Contract Agreement signed. TPA by Feb'20.	-	Appraisal Committee approved.	Lines identified. Under DPR preparation stage.
Meghalaya	MePTCL Work completed MePGCL – Station-wise status to be updated.	First tranche of funds received. Requisition sent for second tranche. Work at SLDC & 2 stations completed.	-	Appraisal Committee approved.	LOA issued. First tranche of funds received.

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 164th OCC	Latest status
63MVAR Reactor at Byrnihat to replace with 80MVAR Reactor	MePTCL	Sanction order awaited.	
132kV Dimapur - Imphal (out since 25.07.18)	NERTS	Present status Foundation: 22/34 Erection : 22/34 Stringing:3.536/14Km	
220kV Sonabil-Samaguri-I	AEGCL	Jul'2020	
132kV Srikona-Panchgram (out since 14.01.2019)	AEGCL	Soil testing by NIT Silchar. Line if re-routed then rivers can be avoided and route shortened. Restoration may be delayed by 9 months due to rerouting.	
63MVAR L/R for 400kV Palatana-Silchar Ckt-I (out since Apr'19)	OTPC	Technical difficulty. Extension required. Filter machine not able to work due to humid conditions. 15.02.20 target	
OTPC Module-I (out since 07.10.2019)	OTPC	Rotor reached GE facility. 45 days for maintenance, 15min days fixing. 31.03.2020.	
50 MVAR L/R at Misa of 220 kV Misa – Mariani	NERTS	Jan' 2020	

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 164th 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	Commercial evaluation done. Award to be placed on M/s GE T&D by 31.01.20	

Agenda for 165th OCC Meeting to be held on 14th February, 2020

2	132kV AGTCCPP- Kumarghat	GPS to be procured and time synchronization of relay to be done	NEEPCO	Completed. 2 nos STG NR not synchronized due to non- availability of ports.	
3	132kV P.K. Bari- Kumarghat	Installation of Line differential relay	NERTS	Commercial evaluation done. Award to be placed on M/s GE T&D by 31.01.20	

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 164 th 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	Received all the ISGS. State generators are required.	
3	Furnishing Nodewise half hourly data monthly Required for studies pertaining to Real Time Market	By 10 th of the month	From 01.04.20 the RTM would be introduced. Meghalaya to submit to SO-II	

NERLDC may please intimate the latest status.

B.2. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING JANUARY, 2020

As per the data made available by NERLDC, the grid performance parameters for January, 2020 are given below:

NER PERFORMANCE DURING JANUARY, 2020

States	Energy Met (MU)		w.r.t. Dec,19 % inc (+) /dec (-)	Energy Reqr. (MU)		w.r.t. Dec,19 % inc (+) /dec (-)	% surplus (+) /shortfall (-) of energy In Jan,20
	Jan-20	Dec-19		Jan-20	Dec-19		
Ar. Pradesh	69.12	65.69	5.22	69.43	65.98	5.23	-0.45
Assam	685.07	653.7	4.80	700.17	663.14	5.58	-2.16
Manipur	82.78	79.02	4.76	83.22	79.48	4.71	-0.53
Meghalaya	194.22	184.93	5.02	209.12	188.25	11.09	-7.13
Mizoram	55.67	64.6	-13.82	55.99	64.89	-13.72	-0.57
Nagaland	69.23	66.84	3.58	69.64	67.15	3.71	-0.59
Tripura	170.37	104	63.82	170.8	104	64.23	-0.25
Region	1326.46	1218.78	8.84	1358.37	1232.89	10.18	-2.35

States	Demand Met (MW)		w.r.t. Dec,19 % inc (+) /dec (-)	Demand in (MW)		w.r.t. Dec,19 % inc (+) /dec (-)	% surplus (+) /shortfall (-) of demand In Jan,20
	Jan-20	Dec-19		Jan-20	Dec-19		
Ar. Pradesh	117.24	139	-15.65	125	146	-14.38	-6.21
Assam	1366.46	1380	-0.98	1366	1508	-9.42	0.03
Manipur	218.21	216	1.02	221	224	-1.34	-1.26
Meghalaya	371.49	365	1.78	371	364	1.92	0.13
Mizoram	126.92	125	1.54	127	107	18.69	-0.06
Nagaland	158.5	153	3.59	182	150	21.33	-12.91
Tripura	229	224	2.23	229	257	-10.89	0.00
Region	2587.82	2530	2.29	2746	2714	1.18	-5.76

REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU

Month---->	Jan-20	Dec-19
Total Generation in NER (Gross)	1334.156	1447.282
Total Central Sector Generation (Gross)	1068.987	1078.343
Total State Sector Generation (Gross)	265.169	368.939
Inter-Regional Energy Exchange		
(a) NER-ER	106.62	271.34
(b) ER-NER	39.84	2.44
(c)NER-NR	0.17	0
(d)NR-NER	228.27	299.59
© Net Import	161.32	30.69

AVERAGE FREQUENCY (Hz)

Month---->	Jan-20	Dec-19
	% of Time	% of Time
Below 49.9 Hz	6.48	6.48
Between 49.9 to 50.05 Hz	75.01	71.67
Above 50.05 Hz	18.51	21.85
Average	50.00	50.00
Maximum	50.27	50.34
Minimum	49.69	49.65

C. ITEMS- STATUS REVIEW

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

During 164th OCC meeting, the status as informed by different beneficiaries is as follows:

SN	Items	Status as given in 164 th OCC Meeting		Status as given in 165 th OCC Meeting	
		Timeline for completion	Timeline for completion	Timeline for completion	Furnishing of detail parameters
a. New elements					
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)	Jan'20	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	Jan'20	To be submitted to NERLDC.		
6	Bay at Agia S/S for 132kV Agia-Nangalibra Ckt #II by AEGCL	By Jan'20	To be submitted to NERLDC.		
7	80MVAR B/R at RHEP by NEEPCO	Price validation of old offers being done. Tender by May'20	To be submitted to NERLDC.		
b. Elements under breakdown/upgradation					

Agenda for 165th OCC Meeting to be held on 14th February, 2020

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	Jan'20	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	By Feb'20	To be submitted to NERLDC.		
12	Installation of LDP for 132kV AGTCCPP-Agartala D/C & 132kV PKBari-Kumarghat by NERTS	Commercial evaluation done. Award to be placed on M/s GE T&D by 31.01.20	-		
13	Procurement of GPS at AGTCCPP & time synchronization for 132kV AGTCCPP-Kumarghat by NEEPCO	Jan'20	-		
14	Diversion of 132kV Bawktlang-Sihhmui	Awarded on M/s DTE Const. Survey done. Work can be started subject to providing of stubs by P&ED Mizoram.	-		

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 7th 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 Feb'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):

- cost for the pilot project would be around Rs.6, 85,000/- (Rupees Six lakhs eighty five thousands only).
- Killing VSAT Pilot latest status to be informed.

NERLDC/MePTCL may please intimate the status.

C.5 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 completed for all utilities.
- Prospective Go Live by second week of Feb'20.
- All utilities (esp. nodal officers) to assign the roles and responsibilities as per the circulated format.
- Pending relay setting data to be submitted by the concerned utilities.

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.
- DoP Ar. Pradesh – LoA by Jan'20. Target Completion Mar'2020.
- P&ED Mizoram – Synchronizing facility with Synchronizing trolley to be established at 132kV Kolasib S/Sn.

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):

- In 164th OCCM informed that corrections have been done in NERTS stations except for one PMU of Bongaigaon and three PMUs of Dimapur, for which NERLDC is required to provide feedback.
- 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. 8 Tentative schedule for Black Start & Restoration Procedure Mock exercise in NER during the year 2019

Status/decisions as per previous meetings:

- RHEP – Machine to be synchronized at 132kV and units brought in other bus and done at mutually convenient date.
- AGBPP – Testing to be carried out as per Black start procedure finalised in 164th OCCM.
- Pare – Demonstration on 24.01.2020.

NEEPCO/NERLDC may please intimate the status.

C. 9 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. 10 Bus Configuration issues for various sub-stations:

Status as on 163rd OCC Meeting:

- 400kV Bus A at RHEP – Procurement of the following initiated:
 - Four sets of Pantograph isolators
 - One Set CT(Bus Coupler)

-One set CVT(Bus-A).

Tender by Mar'20.

- 132kV Bus Coupler at Pavoi - AEGCL to replace the old POWERGRID protection panels to SAS enabled panels. The protection transfer would be completed subsequently. By 31.03.2020.

NEEPCO/AEGCL may please inform the status.

C. 11 Status of recommendations reg GD-Vs on 03rd & 20th April,2019:

Recommendations	Status as informed in the 163rd 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)	By Jan'20	
Identification of feeders for additional UFR based load shedding under Islanding Scheme-II(Scope of TSECL)	By Jan'20	
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.	The DR of the relay pertaining to the 7 th Oct'19 incident has been successfully downloaded. The downloading software shall be handed over to NEEPCO by NERTS team visiting Khandong on 22.01.20.	
NHPC to procure standalone EL for Loktak HEP	Could not be updated due to absence of representative.	
Revised SPS-3 scheme offer sought from GE by NERTS	M/s GE could not submit the detailed break up.	
Impedance measurement for 400kV Paltana-Silchar D/C, 400kV Silchar-Azara, 400kV Silchar – Byrnihat	Impedance measurement of 400kV Pallatana-Silchar Line done. Results are under examination. Any review in the settings, if required shall be intimated to NERPC by 31.01.20.	
Line parameters to be matched at Silchar, Azara and Byrnihat.	Shall be done by 31.01.20. Azara may provide the existing settings.	

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	AEGCL, NERTS, NERLDC, NERPC to jointly visit 400kV Azara.	
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Concerned utilities may please update the status.

C.12 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 164 th 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.13 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 158th OCCM.

In 162nd 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.

In 164th OCCM MePTCL informed that the tap position would be changed by Jan'20 after taking shutdown.

NERLDC may please intimate the status.

C.14 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.

NERLDC may please intimate the status.

C.15 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.

Status as per previous meeting(s):

- SPS-1 is already turned ON at Silchar
- Scheme at Silchar shared with OTPC by NERTS
- OTPC to turn ON by Jan'20

OTPC/NERTS may please intimate the status.

C.16 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 Feb'20 after visit of OEM.

NEEPCO may please intimate the status.

C.17 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 162nd 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 164th OCCM the following status was given:

- 132kV Badarpur-Kolasib: PLCC link in place and working.
- 132kV Bairabi - Kolasib: By Feb'20.
- 132kV Tuirial-Kolasib: Restoration by NEEPCO in Jan'20.

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

C.18 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.

In 164th OCCM it was decided that NERPC would mail the LGBR figures to all SLDCs for verification.

NERPC may please intimate the status.

C.19 RE Generation details

In 163rd OCCM NERLDC requested the state utilities to furnish details of both the RE under operation and under planning along with the procedure followed for RE connectivity in the state grid. Format attached at **Annexure-C.19**

NERLDC may please intimate the status.

AGENDA ITEMS FROM NERLDC:

C.20 High DSM Outstanding

The status of DSM outstanding as on 31/01/2020 and up to Week-41 (06/01/19 to 12/01/19) is as below –

REGIONAL ENTITY	O/S PAYABLE TO POOL	O/S PAYABLE >13 WEEKS
Ar. Pradesh	19.35 Crores	15.68 Crores
Manipur	5.00 Crores	Nil
Nagaland	8.72 Crores	7.53 Crores

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

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.

NERLDC may please deliberate.

C. 21 Metering Status Review:

Agenda Description	Latest status
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. Dimapur I & II state end, II. Mokokchung end of Doyang	
SEMs to be Procured. tender issued on 09.01.20. Opening is on 23.01.20. LOA expected by 31.01.20.	

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.

Plants	Reservoirs level in meter	MU content	Present DC (in MU)	No of days as per current generation
Khandong + Kopili stg II			1.114	
Kopili			0	Will be “0” until further intimation.
Doyang			0.138	
Loktak			0.5	

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 99th 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 10th of the month, the shutdown availing agency would reconfirm to NERLDC on 7th 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 1st day of the following calendar month to the 30th/31st day of the same month.

The sub-Committee may kindly discuss and approve the transmission line outages proposed by Constituents for 01st March,2020 to 31st March,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 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 - Changes in tap settings of GT & UAT to be done for Module-I will be changed in Jan'20 and for Module-II in the next shutdown period
- BgTPP - Load angle limiter setting to be increased for U#III-10th May'20 and Unit#II – 1st Nov'2020
- AGTCCPP - Testing at AGTCCPP done on 07.12.19

Members may please discuss.

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

In 161st 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 162nd 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 & November'19 is as follows:

Day	Ar. Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
Median (Dec'19)	13	9	9	10	13	6	12

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

In 160th 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.

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
- Upgradation of 132kV Karong-Mao would be completed by 11.02.2020.
- A study would be carried out by NERLDC to determine the quantum of power that can be supplied with availability of 132kV Karong-Kohima, 132kV Dimapur-Kohima and 132kV DHEP-Sanis-Wokha-Kohima.

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		
Sl No	Name of Element	No of tripping during Dec' 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 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 to be submitted by NERTS within 10.02.2020.

Members may please discuss

D.12 Mock Test for SPS in NER

Decision as per previous meeting(s):

(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) Mock Test to be conducted in Feb'20 after finalisation of modalities in the Special Meeting to be held on Feb'20.

Members may please discuss

D.13 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 164th 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

Members may please discuss.

D.14 Submission of availability of Hot Spares of transformers and reactors of ISTS

Hon'ble CERC has advised POSOCO to collect the availability of Hot spares of Transformers and Reactors of ISTS licensees on quarterly basis. It has been observed by experience that quarterly collection of data has its own issues and challenges. Thus, In order to streamline the process of data collection, it is proposed that ISTS licensees may submit the data of availability of Hot spares of transformers and reactors along with data for verification of transmission elements availability.

A separate sheet containing details of all spares, its usage (change over) and outages etc. may be included in monthly outage file.

In 163rd OCCM NERLDC insisted that the details mentioned above has to be submitted as per CERC directives. NERTS requested that POWERGRID may be excused from submission of hot spares availability periodically. Intimation would be given to NERLDC when the spare is put into service. NERLDC mentioned that if the data is not received as

Agenda for 165th OCC Meeting to be held on 14th February, 2020 mentioned above, the same shall be intimated to Hon'ble commission. The forum decided to discuss the item in the next meeting.

Members may please discuss.

AGENDA ITEMS FROM NERLDC:

D.15 Protection Conclave:

Power System Protection Conclave will be organised by NERLDC on 16th and 17th March'2020 where eminent personalities from academics and power industry, like IITs, PRDC, NLDC, POWERGRID etc. will be participating. Therefore, all the utilities are requested for active participation to make the program a grand success.

NERLDC may please deliberate.

D.16 Installation of additional PMUs at Biswanath-Chariali:

4 nos. PMUs have been installed at 400 kV BNC under URTDMS. It is proposed to install additional PMUs at Converter Transformers and Filter Banks at BNC for monitoring purpose.

NERLDC may please deliberate.

D.17 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. List as **Annexure-D.17**

NERLDC may please deliberate.

D.18 Applications for charging of new elements:

NERTS vide letter NESH/PESM/466(S&W)/242 dated 22.01.2020 informed that construction of 02 nos of 132 kV bays at Biswanath Chariali (by POWERGRID) associated with 132 kV BNC - Itanagar D/C is in advance stage of completion and shall be ready for charging by March 2020.

NERTS vide letter NESH/PESM/466(S&W)/241 dated 22.01.2020 informed that construction of 02 nos of 400 kV bays at New Mariani (by POWERGRID) associated with 400 kV New Mariani – New Kohima D/C is in advance stage of completion and shall be ready for charging by July 2020.

NERLDC vide letters NERLDC/SO-II/1819 & NERLDC/SO-II/1820 dated 28.01.20 informed M/s Sterlite Power Grid Ventures Ltd., & M/s Kohima Mariani Transmission Ltd. Respectively intimate the expected date of charging of new elements to NERLDC two month in advance. It was also requested to follow the time schedule as per the approved procedure for interconnection of a new transmission element belonging to ISTS Transmission licensee and issue of certificate of successful trial operation by Regional Load Despatch Centres (RLDCs). Members from Sterlite may be called as special invitees to understand the status of compliance requirements.

NERLDC may please deliberate.

D.19 Single bus scheme in 132kV Gohpur S/S

The 132 kV Gohpur S/S of Assam has Single bus scheme with a sectionalizer isolator. But, as per CEA (Technical Standards for Construction of Electrical Plants and Electric Lines)

Regulations, 2010, the single main and transfer or double main scheme must be available at substations upto 132 kV level.

The single bus is required to be split using the sectionaliser isolator multiple times in a day at Gohpur in order to limit loading of 132 kV Gohpur- Nirjuli. Multiple online operation of isolator is not preferred as it can be dangerous to both man and material. Assam is requested to study and give the action plan for modification of the Bus configuration

NERLDC may please deliberate.

D.20 Voltage control at 400 kV level by using Kameng generation and reactive capability testing of Kameng:

It is proposed to utilize the Kameng units to absorb reactive power as per their maximum capability limits in order to control the high voltage prevailing in the 400 KV system in the Northern part of NER. Also during the Infirm generation of Kameng HEP, it is proposed to conduct the reactive capability testing in presence of OEM. NERLDC shall be physically witness the testing.

NERLDC may please deliberate.

D.21 Downstream network of upcoming 400kV New Kohima Substation:

As per the communication from DoP Nagaland, they are not able to develop the downstream transmission elements of upcoming 400kV New Kohima Substation. The target for completion of the TBCB line of 400 kV Imphal –New Kohima-Mariani is July'2020. In line with the completion target date of TBCB project, if the downstream transmission elements are not developed by Nagaland, the said lines will remain unutilized and will result in Overvoltage issues.

NERLDC may please deliberate.

D.22 DSM, RRAS, FRAS & Reactive Quarterly Reconciliation:

Requested all to sign the Third Quarter Reconciliation statements which were sent in the month of January'2020.

Same are also available in NERLDC website on the following links

DSM: <https://www.nerlhc.in/dsm-reconciliation/>

RRAS: <https://www.nerlhc.in/rras-reconciliation/>

FRAS: <https://www.nerlhc.in/fras-reconciliation/>

Reactive: <https://www.nerlhc.in/reactive-reconciliation/>

NERLDC may please deliberate.

Metering Agenda

D.23 Collection of SEM data before availing Shutdown:

SEM data should be collected before availing shutdown so that required full accounting week data could be sent to NERLDC in due time as per the provision of Regulations (by Tuesday Noon).

NERLDC may please deliberate.

D.24 Meter Replacement:

Following meters needs to be replaced on urgent basis:

1. Meter no. NP-8492-A i.e. Sarusajai end Umtru II feeder (defective for long time)
2. Meter no. NP-9456-A i.e. Azara end of Bongaigaon feeder (high time drift)
3. Meter no. NP-9457-A i.e. Azara end of Silchar feeder (high time drift)
4. Meter no. NP-9546-A i.e. Imphal end Imphal (PG) –II feeder (high time drift)
5. Meter no. NP-9438-A i.e. Dullavchera – Dharmanagar feeder (high time drift)

(Note: 2. to 5. all meters have time drift of more than 5 min)

NERLDC may please deliberate.

D.25 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. **Annexure-D.25**

NERLDC may please deliberate.

AGENDA ITEMS FROM OTPC:

D.26 Fixed SG in case of low demand

Providing SG @ 65% of installed Capacity in case of low demand for reliable operation of OTPC units.

OTPC may please deliberate.

D.27 Shutdown of plant

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

OTPC may please deliberate

AGENDA ITEMS FROM NTPC:

D.28 Ramp up/Ramp down of units

NTPC informed that +/-25MW ramp up/ramp down is creating problems for 250MW machine is creating problems.

NTPC may please deliberate

AGENDA ITEMS FROM AEGCL:

D.29 Temporary LILO at Karimganj S/S on 132kV Badarpur- Kumarghat Line:

Any other item:

Date and Venue of next OCC

Annexure-I	
Details to be submitted by the Wind/Solar generating stations which are regional entities/ lead generator, principal generator	
Type: Hydro/Wind/Solar Generator	
Total Installed Capacity of Generating Station	
Total Number of Units with details	
Physical Address of the RE Generating Station	
Connectivity Details	Location/Voltage Level
Connectivity Diagram	(Please Enclose)
Static data	As per attached sheet
Contact Details of the Nodal Person	Name : Designation : Number: Landline Number, Mobile Number, Fax Number E - Mail Address :
Contact Details of the Alternate Nodal Person	Name : Designation : Number: Landline Number, Mobile Number, Fax Number E - Mail Address :

**Data to be submitted by the RE Generator / lead generator,
principal generator (Suggested List)**

For Wind turbine generating plants

S No	Particulars
1	Type
2	Manufacturer
3	Make
4	Model
5	Capacity
6	commissioned date
7	Hub height
8	total height
9	RPM range
10	Rated wind speed
11	Performance Parameter
12	Rated electrical power at Rated wind speed
13	Cut in speed
14	Cut out Speed
15	Survival speed (Max wind speed)
16	Ambient temperature for out of operation
17	Ambient temperature for in operation
18	survival temperature
19	Low Voltage Ride Through (LVRT) setting
20	High Voltage Ride Through (HVRT) setting
21	lightning strength (KA & in coulombs)
22	Noise power level (db)
23	Rotor
24	Hub type
25	Rotor diameter
26	Number of blades
27	Area swept by blades
28	Rated rotational speed

**Data to be submitted by the RE Generator / lead generator,
principal generator (Suggested List)**

For Wind turbine generating plants

29	Rotational Direction
30	Coning angle
31	Tilting angle
32	Design tip speed ratio
33	Blade
34	Length
35	Diameter
36	Material
37	Twist angle
38	Generator
39	Generator Type
40	Generator no of poles
41	Generator speed
42	Winding type
43	Rated Gen. Voltage
44	Rated Gen. frequency
45	Generator current
46	Rated Temperature of generator
47	Generator cooling
48	Generator power factor
49	KW/MW @ Rated Wind speed
50	KW/MW @ peak continuous
51	Frequency Converter
52	Filter generator side
53	Filter grid side
54	Transformer
55	Transformer capacity
56	Transformer cooling type

**Data to be submitted by the RE Generator / lead generator,
principal generator (Suggested List)**

For Wind turbine generating plants

57	Voltage
58	Winding configuration
59	Weight
60	Rotor weight
61	Nacelle weight
62	Tower weight
63	Over speed Protection
64	Design Life
65	Design Standard
66	Latitude
67	Longitude
68	COD Details
69	Past Generation History from the COD to the date on which DAS facility provided at RLDC, if applicable
70	Distance above mean sea level

For Solar generating Plants

Static data points:

1	Latitude
2	Longitude
3	Turbine Power Curve
4	Elevation and orientation angles of arrays or concentrators
5	The generation capacity of the Generating Facility
6	Distance above mean sea level etc.
7	COD details
8	Rated voltage
9	Details of Type of Mounting: (Tracking Technology If used, single axis or dual axis, auto or manual)
10	Manufacturer and Model (of Important Components, Such as Turbine, Concentrators, Inverter, Cable, PV Module, Transformer, Cables)
11	DC installed Capacity
12	Module Cell Technology
13	I-V Characteristic of the Module
14	Inverter Rating at different temperature
15	Inverter Efficiency Curve
16	Transformer Capacity & Rating , evacuation voltage, distance form injection Point

Strategic locations for PMU installation (apart from those covered under URTDSM)

Sl. No	Locations
1	Palatana
2	BgTPP
3	AGTCCPP
4	Loktak
5	Doyang
6	Turial
7	Monarchak
8	Rokhia
9	Leshka
10	Khandong
11	Pare
12	LTPS
13	NTPS
14	Aizawl
15	Khliehriat
16	Surajmaninagar
17	Azara
18	Byrnihat
19	Kohima

TIME DRIFT REPORT STATUS

SL.NO	PGCIL	STATUS
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
13	Balipara	REPORT NOT RECEIVED/ACTION NONE
	ASSAM	
14	DULLAVCHERRA	IRREGULAR
15	NAGALAND(S)	IRREGULAR
16	MIZORAM(S)	REPORT NOT RECEIVED
	TRIPURA	
17	SM NAGAR	REPORT NOT RECEIVED
18	79 TILLA	REPORT NOT RECEIVED
	ARUNACHAL PRADESH	
19	CHIMPU	REPORT NOT RECEIVED
	GENERATION	
20	AGBPP	REPORT NOT RECEIVED
21	DOYANG	REPORT NOT RECEIVED
22	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