

North Eastern Regional Power Committee

Agenda For

147th OCC Sub-Committee Meeting

Time of meeting : 10:00 Hrs.

Date of meeting : 10th August, 2018 (Friday)

Venue : "Hotel Nandan", Guwahati.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 146th MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 146th meeting of Operation Sub-committee held on 17th July, 2018 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2016/4556-4591 dated 30th July, 2018.

The Sub-committee may confirm the minutes of 146th OCCM of NERPC as no comments/observations were received from the constituents.

ITEMS FOR DISCUSSION

B.1. ACTION TAKEN:

1. IMPLEMENTATION OF PROJECTS FUNDED FROM PSDF:

The status as informed in 146th OCC:

State	Protection System	ADMS	Capacitor Installation	SAMAST**
Arunachal Pradesh	A/C opened. NIT to be floated soon. Could not be updated due to absence of representative	Revised DPR submitted	-	DPR submitted for Techno-Economic Appraisal.
Nagaland	Pack-A: completed Pack-B: Aug'18 Pack-C: Aug'18 Pack-D: Completed.	Revised DPR yet to be submitted	To re-submit proposal to NERPC for Study.	DPR submitted for Techno-Economic Appraisal
Mizoram	LOAs completed. First tranche of funds requisitioned. Could not be updated due to absence of representative	Revised DPR submitted	Appraisal Committee is yet to approve	DPR submitted for Techno-Economic Appraisal

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Manipur	LOAs issued.	Revised DPR submitted	Submitted to NERPC for Study before sending to NPC/NLDC.	DPR submitted for Techno-Economic Appraisal
Tripura	Fund Released • 17.2 Cr. Tentative Completion by 31.12.2018	Revised DPR submitted	To submit proposal to NERPC for Study.	DPR submitted for Techno-Economic Appraisal
Assam	PLCC- tender evaluation complete. LOA to be issued after approval. Substation auxiliary and diagnostics tools - Tendering in process. All LOAs by Jul'18.	Revised DPR submitted	-	DPR submitted for Techno-Economic Appraisal
Meghalaya	MePTCL- All LOAs awarded. Earthing Package Tendering in Progress. Balance items by July'18 MePGCL –UC submitted.	Revised DPR submitted	-	DPR submitted for Techno-Economic Appraisal

The status of implementation of the above schemes (physical as well as financial progress) may please be reviewed and the entities are requested to expedite implementation of the schemes. The entities may also be advised to furnish status 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.

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 146 th OCC	Latest status
63MVAR Reactor at Byrnihat to replace with 80MVAR Reactor	MePTCL	SCM MoM yet to	

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		be issued.	
400KV 80MVAR Bus Reactor at Palatana	OTPC	By Aug'18	
Repairing of R-ph bushing of 63MVAR L/R at Balipara for 400kV Balipara-Bongaigaon -II <i>(out since 17.02.18)</i>	NERTS	By Nov'18	
400/132kV 125MVA ICT-II at Palatana <i>(out since 08.07.2018)</i>	OTPC	Restored on 21.07.2018. RCA to be submitted.	
Outage of 420kV 80MVAR L/R for 400kV Bongaigaon-NSLG-I at Bongaigaon(out since 04.07.18)	NERTS	-	

Utilities may please intimate the latest status.

3. Furnishing of various data for reliable grid operation:

Data regarding	Status as of 146th OCC		Latest status
DAS output for FRC calculation	Event Date: 10.05.18; OTPC, DHEP and RHEP provided information. NERLDC once again requested all generators to provide DAS data at the earliest for FRC calculation.		
Operating Procedures	Items	Data submitted by	
	OP of States	Submitted only by AEGCL, MePTCL and TSECL	
	OP of Transmission System	Not submitted by any constituents	
	OP of Generating Stations	Not submitted by any generators	
	OP of GIS	Not submitted by any constituents	
Data related to Power Map.	Items	Data submitted by	
	Communication (PLCC/OPGW/GPRVSAT/Satellite)	NERTS, Meghalaya, Assam & Mizoram provided the data.	
Patrolling report(s) for	No constituents have furnished the report		

T/L**.		
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NERLDC may please inform the status.

4. Monitoring of Corrective actions as decided in PCC forum:

Name of the Element	Action to be taken	Name of Utility	Status as of 146 th OCC	Latest status
132 kV Dimapur - Doyang 1 & 2 Lines	Installation of Numerical Relay at Doyang	NEEPCO	By Dec'18	
AGTCCPP- LFO	AVR replacement	NEEPCO	By Oct'18	
132kV PK Bari-Kumarghat	Installation of Line differential relay	NERTS	By Dec'18	
132kV AGTCCPP-Agartala D/C.	Line differential relay to be installed	NERTS	By Dec'18	
132kV PKBari	Installation of Numerical Relay under R&M (<i>high priority</i>). TSECL to divert NR to AGTCCPP.	TSECL	By Aug'18	
132kV Rokhia-79Tilla D/C	DPR to be installed	TSECL	By Aug'18	
400kV Silchar-Byrnihat and 400kV Silchar-Azara	Earthing through chemical treatment/installation of TLSA in the lightning prone areas with high tower footing resistance	NERTS	-	
Repeated tripping of Doyang Machines	DPR to be installed for lines and relays. CTs to be replaced.	NEEPCO	-	

Concerned utilities may please inform the status.

5. DIFFERENCE IN ACTUALS VS LGBR:

Energy Requirement:

Name of State	Apr18 (actual)	Apr18 (LGBR)	May18 (actual)	May18 (LGBR)	Jun 18 (actual)	Jun18 (LGBR)
Ar. Pradesh	69.80	68.35	71.77	70.26	70.76	65.89
Assam	680.19	612.74	738.04	778.29	913.96	864.22
Manipur	64.99	64.76	68.18	67.46	67.74	64.86
Meghalaya	131.74	149.00	138.92	143.00	143.28	142.00

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Mizoram	53.94	45.67	40.70	47.82	43.66	42.44
Nagaland	69.72	66.35	72.75	74.90	78.16	76.55
Tripura	155.05	99.18	101.52	98.38	121.77	123.16

Energy Availability:

Name of State	Apr18 (actual)	Apr18 (LGBR)	May18 (actual)	May18 (LGBR)	Jun18 (actual)	Jun18 (LGBR)
Ar. Pradesh	50.27	58.89	70.09	70.50	74.78	83.78
Assam	650.76	720.23	738.28	810.91	898.04	892.17
Manipur	70.23	76.30	95.07	86.53	101.66	102.23
Meghalaya	140.32	149.76	191.42	204.20	236.66	254.18
Mizoram	64.83	62.69	71.74	72.60	79.19	82.67
Nagaland	55.39	56.26	67.15	66.14	78.35	83.84
Tripura	276.86	267.05	252.31	281.99	255.49	242.47

Demand:

Name of State	Apr18 (actual)	Apr18 (LGBR)	May18 (actual)	May18 (LGBR)	Jun18 (actual)	Jun18 (LGBR)
Ar. Pradesh	130.38	141	128.33	145	138.12	131.00
Assam	1532.51	1447.42	1625.51	1665.49	1782.35	1761.14
Manipur	192.89	170.68	179.01	169.41	179.48	163.70
Meghalaya	307.28	320.10	370.59	334.40	325.51	298.94
Mizoram	98.37	94.60	95.98	94.60	102.57	85.16
Nagaland	155.71	128.56	147.06	140.94	129.40	152.90
Tripura	304.80	299.20	275.65	282.80	280.66	307.24

B.2. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING JULY, 2018

As per the data made available by NERLDC, the grid performance parameters for July, 2018 are given below:

NER PERFORMANCE DURING JULY, 2018

States	Energy Met (MU)		w.r.t. Jun,18 % inc (+) /dec (-)	Energy Reqr. (MU)		w.r.t. Jun,18 % inc (+) /dec (-)	% inc (+) /dec (-) of energy reqrs vs met. In Jul,18
	Jul-18	Jun-18		Jul-18	Jun-18		
Ar. Pradesh	69.00	62.78	9.91	70.01	63.73	9.85	-1.44
Assam	990.99	897.70	10.39	1027.43	936.53	9.71	-3.55
Manipur	72.02	65.26	10.36	73.09	66.32	10.21	-1.46
Meghalaya	172.38	149.63	15.20	172.38	149.63	15.20	0.00
Mizoram	51.15	53.00	-3.49	51.98	53.66	-3.13	-1.60
Nagaland	71.17	67.87	4.86	79.51	76.21	4.33	-10.49
Tripura	146.94	121.86	20.58	148.89	124.75	19.35	-1.31
Region	1573.65	1418.10	10.97	1623.30	1470.82	10.37	-3.06

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States	Demand Met (MW)		w.r.t. Jun,18 % inc (+) /dec (-)	Demand in (MW)		w.r.t. Jun,18 % inc (+) /dec (-)	% inc (+) /dec (-) of Demand vs met. In Jul,18
	Jul-18	Jun-18		Jul-18	Jun-18		
Ar. Pradesh	128	133	-3.76	138	138	0.00	-7.25
Assam	1776	1750	1.49	1863	1782	4.55	-4.67
Manipur	171	172	-0.58	174	179	-2.79	-1.72
Meghalaya	332	326	1.84	334	326	2.45	-0.60
Mizoram	98	93	5.38	101	103	-1.94	-2.97
Nagaland	126	129	-2.33	133	129	3.10	-5.26
Tripura	288	276	4.35	298	281	6.05	-3.36
Region	2798	2564	9.13	2899	2640	9.81	-3.48

REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU

AVERAGE FREQUENCY (Hz)

Month---->	Jul-18	Jun-18
Total Generation in NER (Gross)	1853.459	1623.369
Total Central Sector Generation (Gross)	1402.548	1221.425
Total State Sector Generation (Gross)	450.911	401.944
Inter-Regional Energy Exchange		
(a) NER-ER	3.24	38.21
(b) ER-NER	372.10	307.54
(c) NER-NR	468.53	309.33
(d) NR-NER	0.00	0.00
© Net Import	-99.67	-40.00

Month---->	Jul-18	Jun-18
	% of Time	% of Time
Below 49.9 Hz	10.25	11.84
Between 49.9 to 50.05 Hz	76.03	76.96
Above 50.05 Hz	13.01	11.18
Average	49.98	49.98
Maximum	50.24	50.24
Minimum	49.62	49.60

C. OLD ITEMS

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

During 146th OCC meeting, the status as informed by different beneficiaries is as follows:

SN	Items	Status as given in 146 th OCC Meeting		Status as given in 147 th OCC Meeting	
		Timeline for completion	Furnishing of detail parameters	Timeline for completion	Furnishing of detail parameters
1	400/220kV, 315 MVA ICT-1 of NTPC at Bongaigaon	By Oct-Nov'18	To be submitted to NERLDC.		
2	Kameng HEP of NEEPCO two		Already submitted.		

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	units (2 x 150 MW) Next two units (2x150 MW)	Dec'18			
3	400 kV D/C Silchar - Melriat line of PGCIL	Work held up due to not allowing POWERGRID to carryout diversion of State Line by P&E Mizoram.	To be submitted to NERLDC.		
4	132kV Monarchak – Surjamaninagar D/C of TSECL	RoW issue resolved. By Dec'18	To be submitted to NERLDC.		
5	SLDCs (Ar. Pradesh, Manipur, Mizoram, Nagaland)	Nagaland**- DoCO to be finalized Ar. Pradesh, Manipur - CoD Mizoram-ToC date to be confirmed. Except DG set(WIP), all other works are completed. Additional supply of RTUs & minor pending works by 4months.	Not applicable.		
6	400/220 kV 315 MVA ICT-II at Bongaigaon	Modification required in GIS Hall. Oct'2018	To be submitted to NERLDC.		
7	220/132 kV, 160MVA ICT-II at Balipara	ICT#II - delayed, Sept'18	To be submitted to NERLDC.		
8	220/132 kV, 1x160 MVA ICT with GIS Bay at Kopili	Sept, 2018.	To be submitted to NERLDC.		
9	400/132 kV, 1x315 MVA ICT-III at Silchar	Charged on 16.07.2018. After loading 24hrs DoCO to be finalized.	Already submitted.		

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10	Replacement of 2x315 MVA ICTs with 2x500 MVA ICTs at Misa (PG)	ICT-I : Nov'18 ICT-II : Dec'18	To be submitted to NERLDC.		
11	400 kV Silchar – Misa D/C	2019	To be submitted to NERLDC.		
12	1x125 MVAR Bus Reactor at 400 kV at Balipara	Sept, 2018(LOA date).	Already submitted.		
13	1x125 MVAR Bus Reactor at 400 kV Bongaigoan	Sept, 2018(LOA date).	Already submitted.		
14	33kV bay at 220kV Mariani(AS) S/Sn	Security Paid. Agreement made. Meter to be installed by ASEB.	Not applicable.		
15	33kV bay for 132kV Badarpur(PG) S/Sn	APDCL to submit revised estimate as earlier estimate was based on 33kV feeder from same source.	Not applicable.		
16	Dedicated 33kV feeder at Khliehriat Substation from Lumshnong.	MePDCL requires ROW clearance certificate from POWERGRID PGCIL taken up with district authority.	Not applicable.		
17	Construction of 132 kV Imphal (PG) - Yurembam III & IV lines with high capacity conductor by MSPCL	RoW problem#. Tentative Completion: Jul'18	To be submitted to NERLDC.		
18	LILO of 132kV Aizawl-Jiribam at Tipaimukh by MSPCL	Completed but telemetry not in place.	Already submitted.		
19	132kV	July'18 - IR	Already		

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	Ranganadi - Chimpu S/C of DoP Ar. Pradesh	value for 1 ph very low.	submitted		
20	MW Vacation OPGW project	All nodes are reporting. Srikona-Silchar-Badarpur-Kolasib-Aizwal completed. DOCO 01.04.18. Rectification by Sept18.	Not applicable.		
21	VOIP Exchange Project under NER FO exp/Add comm OPGW	All SLDC & NERLDC is now connected over VOIP Exchange. Completed in 31.03.2018	Not applicable.		
22	NER FO Expansion/Add req of OPGW	Present Status: Out of the list as per 18th RPC: WIP: Silchar-Melriat, SMN-Palla, SM-79T, 79Tila-rc Nagar, Badarpur-Jiribam, Completed OPGW: Khandong-Haflong, Doyang-Dimapur, Doyang-Mokokchung (St) Mokokchung-Mariani, Mariani-PG-Kathalguri. Equip: Supplied/Comm pending	Not applicable.		
23	URTDSM project	Supply & Installation completed:13/14 location 18nos. PMUs in 4 locations integrated	Not applicable		
24	Installation of	Under 'Reliable	Not		

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	telemetry for 132kV Tipaimukh S/S of MSPCL	Communications' scheme. By Aug'18	applicable		
b. Elements under breakdown/upgradation					
25	Up-gradation of 132 kV Lumshnong-Panchgram line	Entire line upgradation to be taken up by MePTCL for funding from PSDF. Revised DPR to be submitted.	Not applicable.		
26	Switchable line Reactors at 400kV Balipara & Bongaigoan	Bongaigaon- Aug'18 Balipara - Aug'18	To be submitted to NERLDC.		
27	PLCC Panels at Loktak end of Loktak - Ningthoukhong 132 kV feeder and Loktak - Rengpang 132 kV feeder	Oct'2018	Not applicable.		
28	Re-conductoring of 132kV Umiam Stg#I - Umiam Stg-III	DPR prepared and submitted for approval	Not applicable.		
29	Upgradation of ULDC FO node	Target completion : June 2018	Not applicable.		
30	Upgradation of 132kV Silchar-Imphal to 400kV	Oct'18	To be submitted to NERLDC		
31	Integration of existing bays with C264 RTU at RHEP by NEEPCO	Dec'18	Not applicable		
32	Replacement of CTs and installation of Bus Bar Protection at 220kV Misa	Under NERSS-VII	Not applicable		

Concerned constituents may kindly intimate the status.

ITEMS REG. SUBMISSION OF DATA/COMPLIANCE

C.2. Audit of PSS:

Decisions as per discussion in previous meeting(s):

- Members noted that PSS inspection would be futile and recommended that SRT may be submitted by all plants who have not done since last 3 years, at the moment.
- As per prevalent regulations only units above 50 MW are supposed to activate PSS mandatorily.

OTPC has to submit SRT for Palatana GBPP.

NERPC may please intimate the status.

C.3 Geospatial Energy Portal for NITI Aayog:

Latest status - MeECL and P&ED Mizoram has submitted. Remaining utilities yet to submit.

Members may please discuss.

C.4. Registration of all existing and upcoming electricity generating units of the country of capacity 0.5 MW and above under National Level Data Registry System

Generating utilities may please intimate the details of nodal officers.

C.5 Flexibility in generation and scheduling of thermal power station to reduce emissions:

The draft framework was circulated previously.

Members may provide their comments.

C.6. Absorption of Reactive Power by generators:

In 146th OCCM, Director/SE(O&P) informed that the common practice in other regions is to ensure absorption as per capability curve. Only when there are deviations then testing is performed as per suggestion of OEM. ED, NERLDC opined that presently at least absorption as per capability curve must be ensured for all CSGS. The forum requested all generating utilities to submit the capability curve for their respective units.

NERLDC/NERPC may please intimate the status.

D. NEW ITEMS

D.1 Generation Planning (ongoing and planned outages)

NEEPCO & NHPC may kindly intimate the availability for hydro stations:

Generating Station	Units running	MW	MU	Reservoir
Khandong				
Kopili				
Kopili-II				
Ranganadi			Subject to inflow	
Doyang				
Loktak				
AGBPP	-	-	-	-
AGTPP	-	-	-	-

The outage of other generating stations may be approved considering the present water levels in reservoirs.

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.

The sub-Committee may kindly discuss and approve the transmission line outages proposed by Constituents for August,2018- September,2018 which is available in the website of NERPC.

D.3 Estimated Transmission Availability Certificate (TAC) for the month of March, 2017 to May, 2018:

NETC and POWERGRID have submitted the outage data for the month of March, 2017 to May, 2018. So the attributability of outage of the said elements may please be finalized.

Members may please discuss.

D.4 Assessment of Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) by SLDC on respective Inter-State Transmission Corridor

Updated PSS/E Base Cases have been **mailed to all the SLDCs on 03.08.18**. All SLDCs are requested to assess the Total Transfer Capability (TTC), Transmission Reliability Margin (TRM) and Available Transfer Capability (ATC) for the month of September'18 using these cases, and submit the study cases and results to NERLDC by **20.08.18**.

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 the TTC of their control areas as computed by NERLDC and **give comments, if any, by 20.08.18**.

If no comments received from any SLDCs of NER, TTC, ATC & TRM figures of State control area and group of control areas as assessed by NERLDC will be considered as final and may be uploaded on website.

As per discussions in 122nd OCC meeting of NERPC, all SLDCs of NER may host the assessed TTC / ATC / TRM figures on their websites for information dissemination.

Members may discuss.

D.5. SPS mock testing & existing SPS scheme related:

As per previous discussion it was decided that:

- Separate asset would be created for SPS at Palatana and Silchar.
- OTPC would complete procurement on behalf of all beneficiaries. NERTS to provide technical support.
- A committee comprising of members from OTPC, PGCIL, POSOCO & NERPC to look into the matter viz. BCU replacement, Changing of SPS 3 Channel to other circuit, checking of SPS-3 logics in SCADA etc. and submit report for taking further decision of implementing SPS 3 Scheme with existing asset. The committee visit date to be finalized soon for any date after 2nd August 2018.

OTPC/NERTS/NERPC may please intimate the status.

D.6. Update on Real Time Energy Assessment for Effective Grid Management:

NERPC may please update the members of the present status.

D.7. Recording of operational instructions over VOIP in RLDC:

Status as updated in 146th OCCM: LOA has been placed and supply would be done by Aug'18.

NERTS may please intimate the latest status.

D.8. 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.

Discussions as per previous meetings:-

- Procedure for testing finalized
- First phase of UFR inspection and testing would be carried out from 27.07.2018 to 31.07.2018 for Mawphlang, Khliehriat and Nongstoin.

NERPC may please intimate the latest status.

D.9 Non-availability of SOE records of Biswanath Chariali, Ranganadi, Dimapur & Bongaigaon:

NERTS/NERLDC may please intimate the status.

D.10 Poor Governor Response during sudden drop of frequency

Latest event date and time : **on 06.05.2018 at 1651 Hrs**

NTPC - OEM would look into the issue and report would be presented in the next OCC meeting

NEEPCO requested to investigate the generators negligible response.

NERLDC may please intimate the status.

D.11 Crossing of 400 kV D/C Silchar-Melriat and 132 kV D/C Bawktlang - Sihmui Line

POWERGRID is constructing 400 kV D/C Silchar —Melriat Line as part of Pallatana Transmission System. During check survey, it has been observed that this line has to cross the 132 kV D/C Bawktlang-Sihmui line already constructed by P&E Department, Govt. of Mizoram. As per the proposed route alignment, the Loc No. 244 of the 400 kV line has to be erected at 10m distance from the Loc No. 86 of the 132 kV Line, which is not possible. Also there is no suitable place to relocate the Loc 244.

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A number of possibilities have been explored jointly with P&E Deptt., Mizoram to divert either of the two lines and the only feasible option has been intimated to Mizoram vide our letter No. NEAZL/CONST/P&E/2018 dtd. 21.05.18, in which 4 Nos towers of the 132 kV Line are to be diverted by erecting 5 Nos new towers. POWERGRID proposes to bear the cost of this diversion. A sketch of the propose arrangement is attached here with for kind reference.

It may please be noted that the matter is being pursued with P&E Deptt. Mizoram since January'2017 and a number of joint verification have been carried out but a consensus is yet to be reached.

In 145th OCCM DGM(AM), NERTS informed that 400kV Silchar - Melriat commissioning works are going on at an accelerated pace, and the diversion is an utmost necessity. Sr. Executive Engineer, P&ED Mizoram informed that in principle concurrence of P&ED Mizoram is there to the shifting of 132kV Bawktlang-Sihmui D/C. He also stated that estimate is being prepared by Executive Engineer(Trans), Kolasib and the same once approved would be given to NERTS. DGM (AM), NERTS requested Mizoram to allow POWERGRID to carry out the job immediately in parallel to approval of estimate to avoid delay in completion of the project.

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

D.12. Overloading Problem of 132 kV Pare-Ranganadi I and 132 kV Pare – Lekhi Lines

In 146th OCCM ED, NERLDC stated that at present to mitigate the overloading problem and to avert the tripping of 132kV Gohpur- Nirjuli and 132kV Nirjuli-Lekhi on O/C, split bus at Gohpur is essential. CGM, APDCL opined that for integrated operation split bus is not recommended and would reduce reliability of power supply. After detailed deliberation the forum decided the following:-

- A case study would be done by NERLDC for (i) closed loop operation at Gohpur, (ii) Split bus at Gohpur. This is to be circulated forthwith.
- In the meantime Gohpur load to be made radial from Nirjuli.
- 132kV RHEP-Chimpu to be charged ASAP by DoP Ar. Pradesh.
- NERLDC informed the forum that commissioning of the 132 kV Biswanath Chariali – Itanagar line & 132 kV Biswanath Chariali – Gohpur - Itanagar lines, which have been approved by joint Standing Committee of ER and NER on 03.01.2014 and 6th Standing Committee of NER on 03.10.16 respectively and is under execution by Sterlite Grid 4; would enhance the reliability of power supply to Gohpur.

NERLDC/AEGCL may please intimate the status.

D.13. High MVAR Drawl by Bangladesh

In previous discussion it was decided that NERPC would take up the matter with CEA/MoP/NLDC.

NERPC may please intimate the status.

D.14 Surplus in NER and backing down of hydro ISGS:

As per discussion in previous meeting the following were decided:-

- Beneficiaries to sell surplus in the DAM and Contingency market as far as possible.
- If beneficiaries unable to sell surplus in the market, consent may be given to generators to sell in the market.
- Ranganadi to have proper forecasting technique and declare DC realistically for scheduling/entitlement and R0.
- All generating stations to comply with generation reduction instruction given by NERLDC upto 55% technical minimum.

NERLDC may please update the forum.

D.15 Increase of Reliability of Power Flow to Bangladesh

As per previous discussion it was decided that:

- Overload relay with higher time setting to be installed at SMNagar.
- NERPC to take up the matter of uncontrolled Bangladesh loading with CEA/MoP/NLDC.

NERPC/TSECL may please intimate the status.

D.16. Review of Automatic Under Frequency Load Shedding (AUFLS) relay settings in Indian Power System

In 146th OCCM NERLDC informed that the points have been suggested by NLDC for the entire Indian grid. Director/SE(O&P) stated that the stages of the operation should be as per revised scheme agreed in the last NPC meeting i.e. 49.4 Hz, 49.2 Hz, 49.0 Hz, 48.8 Hz. It was decided that the state-wise quantum would be prepared and presented in the next OCCM for ratification.

NERLDC may please present the report.

AGENDA ITEMS FROM NERPC:

D.17. Repeated trippings due to vegetation:

In the deliberations of the Sub-group it has been observed that a number of lines are tripping due to vegetation overgrowth i.e. transient tripping almost continuously throughout the year.

Month	Name of line/ No. of trippings		
	132kV Balipara-Khupi	132kV Dimapur-Kohima	132kV Aizawl-Kumarghat
Jan'18	2	1	1
Feb'18	1	1	2
Mar'18	3	4	1
Apr'18	4	1	2
May'18	0	0	4
June'18	4	6	3
July'18	6	4	4

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For this patrolling reports and self-certification of vegetation clearance is to be submitted by the concerned utilities.

Also the following lines have been observed to have tripped frequently on transient faults due to vegetation in the months of May-Jul'18:

- 400kV Balipara- Biswanath Chariali -II
- 400kV Silchar - Azara
- 400kV Balipara - Bongaigaon-III

NERTS may please certify the vegetation clearance for the above critical corridors.

Members may please discuss.

D.18. VSAT for power system communications in NER:

As per discussion in 10th NETeST meeting it was decided that VSAT for remote station connectivity would be explored. NERTS was requested to prepare DPR and present in 147th OCC.

Members may please discuss.

AGENDA FROM MeECL:

D.19. Insurance of SLDC assets:

In the recently concluded 10th NETeST meeting, it was resolved that the Insurance of SLDC assets under SLDC Expansion project would be taken up in the RPC / TCC meeting.

Given the fact that PGCIL will, through CERC based tariff, be recovering the costs for the project, the question arises as to under whose responsibility falls the Insurance of SLDC assets under SLDC Expansion project.

The house may kindly deliberate on the above for clarification".

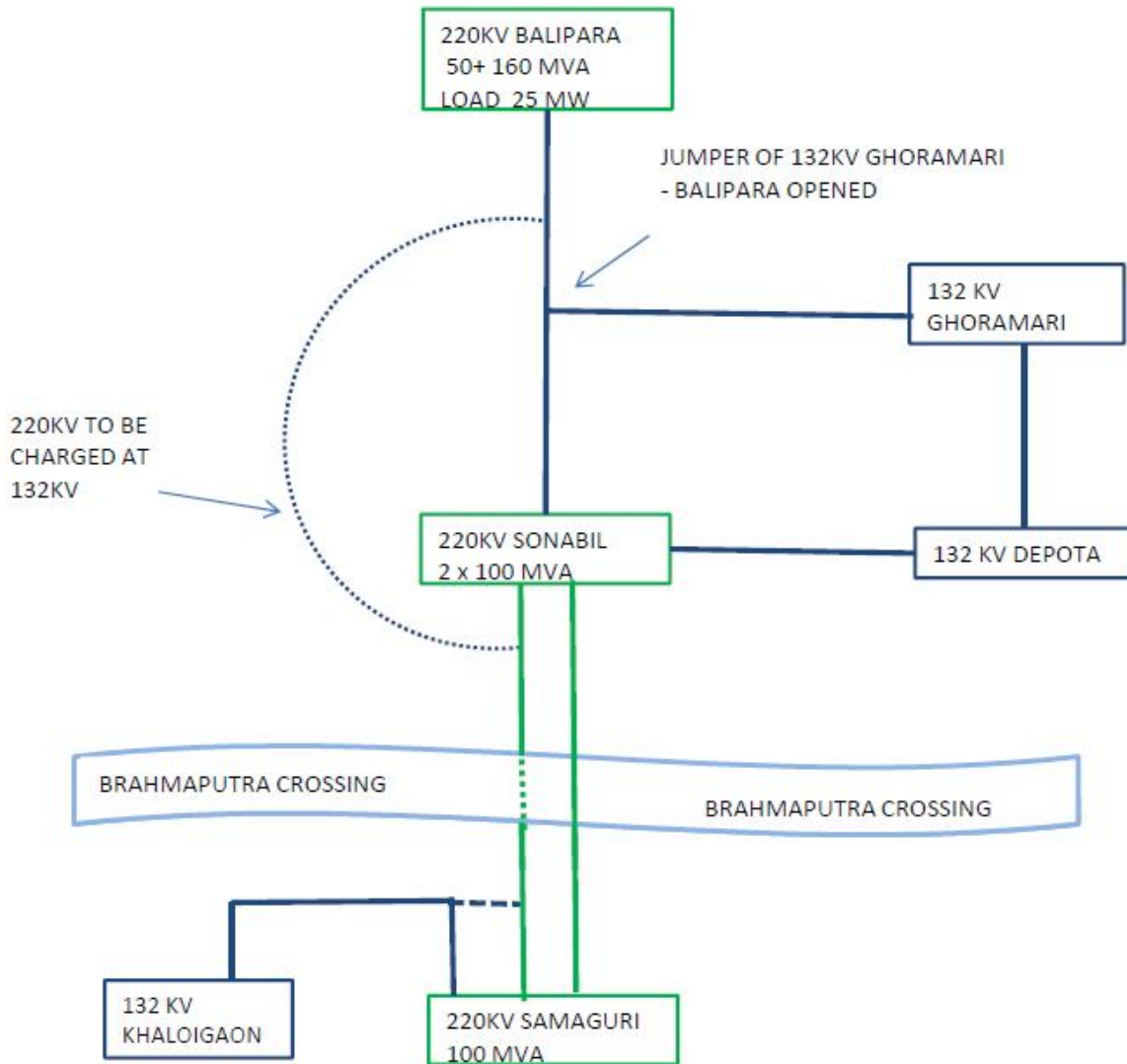
MeECL may please deliberate.

AGENDA FROM AEGCL:

D.20. Connectivity of 132kV Samaguri from 132kV Balipara:

It is proposed to charge 132kv Balipara- Sonabil line through 220kv Sonabil Samaguri line and further it will be connected to Khaloigaon line at 220kv samaguri Substation as per attached diagram. This arrangement is proposed to mitigate the power problem partially at Samaguri Substation.

PRESENT LINE STATUS OF SAMAGURI -SONABIL



AEGCL may please deliberate.

AGENDA ITEMS FROM NERLDC

D.21. Ratification of projected demand and generation for Q3 of 2018-19 (Oct'18 to Dec'18)

In the 3rd Validation Committee meeting for PoC application period Oct'15-Dec'15, held on 30th September 2015, at NLDC conference Hall, CERC had proposed a methodology for ratification of projected data at RPC forum.

Projected demand and generation of NER constituents to be considered in the base case for POC transmission charge and loss calculations for Q3 (Oct'18 to Dec'18) will be presented in the meeting for ratification by the constituents.

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Power Utilities are requested to validate the .sav case file by 15th Aug'18 which is communicated vide email.

NERLDC may please deliberate.

D.22. Status of tests related to +/- 800 kV HVDC Agra - Alipurduar - Biswanath Chariali link

POWERGRID is requested to intimate the status of the following tests related to +/- 800 kV HVDC Agra - Alipurduar - Biswanath Chariali link:

- a. Emergency Power Control (EPC)
- b. Power Oscillation Damping (POD)
- c. Frequency controller.

NERLDC may please deliberate.

D.23. Reversion of configuration of 132 kV Balipara – Sonabil – Ghormari lines

During 144th OCCM, NERLDC informed the forum that it has been observed that there is trend of increase in load at Depota area. So, 132 kV Sonabil- Balipara line is to be LILO'd at Depota to cater to the increased load. NERLDC presented the study result in pictorial form for suggestion regarding LILO of 132 kV Sonabil –Balipara line at Depota. AEGCL was of the view that using HTLS conductor in 132 kV Sonabil – Depota line may solve the issue. However, NERLDC opined that LILO of 132 kV Sonabil- Balipara line at Depota will increase the redundancy as well and will be better option for catering more load of Depota area of Assam Power System. DGM, SLDC, AEGCL informed that the feasibility of proposal made by NERLDC would be studied.

AEGCL may please intimate the status

D.24. Submission of undertaking while returning shutdowns:

This is to inform that NERLDC have received application from NERTS for issuance of successful trial operation of 132 kV Imphal (PG) - Imphal (MSPCL) I line after reconductoring of the line with HTLS conductor vide letter no. NESH/AM/2018-19/F-501/158 dated 27.07.18.

This is to inform the forum that while charging the 132 kV Imphal (PG) - Imphal (MSPCL) I line after reconductoring of the line with HTLS conductor, the information of configuration change was not intimated to NERLDC by NERTS. In order to avoid recurrence, utilities are requested to submit a undertaking to NERLDC that addition or alteration of electrical installation has not been done in "name of element/bay/bus etc's" during the period of shut down alongwith list of works done during the period of shut down.

Members may please discuss.

D.25. RIO clearance for addition or alteration of electrical installation

As per regulation 43 of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations 2010, the owner of any installation of voltage exceeding 650 V who makes any addition or alteration to his installation shall not connect to the supply his apparatus or electric supply lines, comprising the said alterations or additions unless and until such alteration or addition has been approved has been approved in writing by the Electrical Inspector.

As per regulation 30 of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations 2010, where an installation is already connected to the supply system of the supplier or trader, every such installation shall be

periodically inspected and tested at intervals not exceeding five years by the Electrical Inspector.

All the power utilities of NER are requested to comply with the above-mentioned regulations.

Members may please discuss.

D.26. Optimal Utilization of Water for Loktak HEP, NHPC

It has been observed that Loktak HEP, NHPC is having a reservoir facility which can store water with an FRL of 768.5 meters and MDDL of 766.2 meters. NERLDC is of the view that since it is an reservoir based hydel power station, optimal utilization of water has to be done since during the last few years North East Region is having less amount of rainfall.

Members may please discuss.

D.27. Delay in restoring the grid elements after availing OCC approved shutdowns

There have been instances of inordinate delay in returning the OCC approved shutdown of Grid elements by some constituents. In general, the elements approved for availing shutdown are accorded to return in time before the evening peak hours. But due to delay in restoration of the grid elements on many occasions, the grid security during evening peak hours have been reduced to a certain level. Also, on several occasions, the delays have resulted in decrease on demand met of the states.

Members may please discuss.

D.28. Open access co-ordinator from SLDCs

During processing of Short Term Open Access (STOA) applications at NERLDC, there is a need for STOA co-ordinators from SLDC due to the increasing number of applications day by day. Nomination of at least one co-ordinator from each SLDCs would help in smooth processing of STOA applications

Members may please discuss.

D.29. LFO observation in NER GRID

a. Agartala PMU

Continuous oscillations are regularly observed in Agartala PMU. One such instance has been observed and intimated over email on 24/07/2018. As RC Nagar is the closest generating station to the said PMU, RC Nagar generating units may be contributing as the major source of the LFO.

b. Bongaigaon PMU

Oscillation of about 7 kV magnitude was observed in Bongaigaon PMU at 19:53 Hrs and the same persisted till 20:03 Hrs. The said oscillation died down after opening of BgTPP unit-1 at 20:03 Hrs. As BgTPP is the closest generating station to the said PMU and the LFO died down after opening of BgTPP Unit 1, BgTPP generating units may be contributing as the major source of the LFO.

Members may please discuss.

D.30. Round the clock operation required at NEEPCO Control Room, Shillong

In NER, we have 7 Generating Stations (ISGS) of NEEPCO alongwith Monarchak and Turial HEP. Most of the stations are remotely located and communication is very bad. Coordination with 7 stations from NERLDC is difficult especially during night hours. NEEPCO Control room can communicate with them through VSAT on round the clock basis. POWERGRID established RTAMC/ CPCC to co-ordinate with POWERGRID stations which is working 24x7 basis and NERLDC is getting all operation related information from them smoothly and coordination is easier. So from NEEPCO side also one point communication with NERLDC is required for smooth operation of Grid control and this will help in proper & quick decision making process of operation.

Members may please discuss.

D.31. Load Management during Palatana planned S/D from 23/08/18 to 09/09/18

- a. Market sale by States should be done very cautiously during the shutdown period as the entitlement from Palatana would not be available.
- b. All state generations must be maximized up till their full capacity to fulfill the generation shortage in the region
- c. Load reduction if required must be done if RLDC feels the necessity for the same.

Members may please discuss.

D.32. Lack of VOIP connectivity at Control Room of major ISGS like Palatana, BgTPP

VOIP phones are not available at Control Rooms of major ISGS in NER Region like Palatana and BgTPP. This results in the lack of proper communication between the NERLDC control room operators and the ISGS. The mobile phones and landlines are not reliable for important activity like grid operation.

Members may please discuss.

D.33. Standardization of Format of Data Files being sent by Generators/ States

Excel files are being sent by Generators/ States for preparation of various reports on daily basis by NERLDC. As of now NERLDC is preparing the reports by manually entering data in Microsoft Excel, but NERLDC is in the process of migrating to a Web based software for preparation of all such reports. Using this software generators/states can upload their files directly into the web-based software instead of sending them via email. At present the data file formats are not similar, due to which file formats are not uploading when NERLDC is testing the software. It is therefore requested to adhere to the following format for the respective generators/states:

1. State Files Names—

- a. **Assam-** DD-MM-YYYY
- b. **Meghalaya-** DD-MM-YYYY) Please start your data table from Row 1 instead of row 2)
- c. **Tripura-** DD-MM-YYYY)Please keep the sheet name as "Sheet1"

2. Generation File Names-

- a. **Ranganadi-** DD-MM-YYYY (Please DO NOT put any text in water level cell)
- b. **AGTCCPP-** DD-MM-YYYY
- c. **DHEP-** DD-MM-YYYY

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- d. **Loktak**- DD-MM-YYYY (In O and P Columns please insert the hourly data and energy MU of 132 kV Loktak-Rengpang and 132 kV Loktak - Ningthoukong lines respectively)
- e. **Palatana**- DD-MM-YYYY
- f. **AGBPP**- DD-MM-YYYY
- g. **Khandong & Kopili Stg 2**- DD-MM-YYYY (Please start the table from column A instead of column B)
- h. **Kopili**- DD-MM-YYYY

Also it is requested to send all data files for a day, by 01: 00Hrs of the next day in the same time when data is given telephonically.

Members may please discuss.

METERING RELATED ITEMS

D.34. Procurement of additional 70 Laptops:

NERTS-POWERGRID explained the following in 146th. OCC Meeting:

Contract for Procurement of Laptop have been finalized. NOA Placed on 06.07.2018. As per the Contract Delivery Schedule 06(Six) Months i.e. by January-2019. Cost estimate for license for MS Office is under preparation. DGM(AM), NERTS clarified that procurement of MS Office would also be completed by Jan'19.

NERTS may intimate status.

D.35. Installation of new L&T SEMs in NER:

NERTS may intimate status.

D.36. Procurement of DCD:

In the 145th. OCC meeting NERTS intimated status as below:

Issue of Amendment: July-2018

GST LOA: August-2018

Supply: Septemer-2018

Forum requested NERTS to adhere to the target considering shortage of DCD.

NERTS may intimate status.

D.37. Erratic reading of SEM:

In 146th. OCC, NERTS intimated ase below:

- i. Dullavcherra end of SEM : Issue resolved. Problem was not with SEM but with phase association.
- ii. Jiribam (PG) end SEM of Jiribam(State): Checked and found O.K. in 15 min. block Data. The SEM was replaced as recommended by Forum.
- iii. Dimapur(PG) end of Bokajan Feeder: Checked in 15 min. block and found O.K. Variation in recording to be checked.
- iv. Imphal(PG) end of Loktak : Checking details to be intimated by 18.07.2018

Matter checked at NERLDC and found that sl. No. (iv) has been set-right.

Sl. No. (iii) would be checked.
Error persisting in Sl. No. (i) and (ii).

NERTS may intimate status.

D.38. Commissioning of RS-485 scheme in all ISGS of NER:

In view of proposed leapfrog to 5 minute metering, it was decided to drop the project.

NERLDC may please deliberate.

D.39. Time drift in SEMs.

Status of large time drift was discussed in 36th. CCM and matter was referred to OCC.
Status may be discussed.

D.40 Replacement of SEMs.

2 SEMs at Palatana are reported faulty and the same need to be replaced.
It was agreed that two defective SEMs at OTPC, Palatana would be replaced by new Meters. It was also agreed that one spare SEM would be provided to OTPC to enable quick replacement in case of any malfunctioning while providing time correction command.

Status may be discussed.

D.41 Utilization of Laptop for Metering

Fourteen no. of Laptops were distributed for exclusive use in Metering activities in June'17. It is observed that there is no response from Samaguri and 79 Tilla regarding utilisation of the Laptops. For Samaguri & 79 Tilla SEM data are still being downloaded and sent to NERLDC by Powergrid personnel.

In 146th. OCC meeting, TSECL representative stated that there were some issues with Laptop at 79 Tilla and matter could not be resolved by local Powergrid personnel. TSECL was advised to bring the Laptop to Shillong / OCC meeting in case problem cannot be resolved locally.

Status may be discussed.

AGENDA ITEMS FROM OTPC:

D.42 Outage of OTPC plant:

Unit#1 shutdown from 23.08.2018 to 01.09.2018 // Unit#2 shutdown from 31.08.2018 to 10.09.2018 // 31.08.2018 – both the units under shutdown

OTPC may please deliberate.

AGENDA ITEMS FROM NERTS:

D.43 Installation of TLSA in 132kV Lines of POWERGRID as per EPRI Guidelines

During 127th OCCM, POWERGRID has given deliberation on requirement of TLSA in 132kV Lines as per EPRI Guidelines for arresting lightning related trippings of 132kV Lines in NER having high Isokeraunic level. However, POWERGRID informed that they

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are installing limited TLSA on 132kV Khandong - Khliehriat Line # 1, 132kV Badarpur - Khliehriat Line and 132kV Aizawl - Kumarghat Line on experimental basis with following consideration and observe the performance:

- Tower Footing Impedance - Tower locations with relatively higher tower footing impedance were selected.
- Historical data - Tower locations with history of frequent faults (apprehended on account of lightening) were selected.
- Elevation - Towers at relatively higher altitude were selected.

Refer MOM Item No. D.32

Thereafter, in subsequent 18th TCC & NERPC Meeting, in-principle approval for installation of TLSA in 132kV lines of POWERGRID on PoC Mechanism has been accorded (Refer MOM Item No. A.13) by the members subject to improvement of performance of 132kV Khandong - Khliehriat Line # 1, 132kV Badarpur - Khliehriat Line and 132kV Aizawl - Kumarghat Line where TLSA has been installed on experimental basis.

Now, the performance of the above lines are as below:

SN	Line	TLSA Installed	2016	2017	2018 (Jul'18)
1	132 kV Khandong - Khliehriat - I	Nov'16	19	11	10
2	132 kV Khliehriat - Badarpur	Mar'17	24	17	4
3	132kV Aizawl-Kumarghat	Dec'17	21	22	9

Note: Trippings for the period from April to September for each year has been considered, when lightning related tripping is more pronounced.

Thus, a visible reduction in number of lightening related trippings in the above three lines observed during the period under study. Here, it is to mention that installation of TLSA in the above lines was purely on experimental basis (in house assessment of tower locations / not as per EPRI Guidelines) with an idea to assess its impact on reduction in lightning actuated trippings in these lines. Hence, the improvement of performance is obvious if more TLSAs are installed as per EPRI Guidelines.

Hence, it is proposed for installation of TLSA in 132kV Lines of POWERGRID as per EPRI Guidelines on PoC Mechanism.

NERTS may please deliberate.

Any other item:

Date and Venue of next OCC

It is proposed to hold the 148th OCC meeting of NERPC on second week of September, 2018. The date & exact venue will be intimated in due course.
