



भारत सरकार Government of India

विद्युत मंत्रालय Ministry of Power

उत्तर पूर्वी क्षेत्रीय विद्युत समिति

North Eastern Regional Power Committee

एन ई आर पी सी कॉम्प्लेक्स, डोंग पारमाओ, लापालाङ, शिल्लोंग-७९३००६, मेघालय
NERPC Complex, Dong Parmaw, Lapalang, Shillong - 793006, Meghalaya

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No. NERPC/SE (O)/OCC/2019/4876-4913

Dated: September 19, 2019

To,

1. Managing Director, AEGCL, Bijuli Bhawan, Guwahati – 781 001
2. Managing Director, APDCL, Bijuli Bhawan, Guwahati – 781 001
3. Managing Director, APGCL, Bijuli Bhawan, Guwahati – 781 001
4. Director (Generation), Me. PGCL, Lumjingshai, Short Round Road, Shillong – 793 001
5. Director (Distribution), Me. ECL, Lumjingshai, Short Round Road, Shillong – 793 001
6. Director(Transmission), Me. PTCL, Lumjingshai, Short Round Road, Shillong – 793 001
7. Managing Director, MSPDCL, Secure Office Bldg. Complex, South Block, Imphal – 795 001
8. Managing Director, MSPCL, Electricity Complex, Keishampat, Imphal – 795 001
9. Director (Tech.), TSECL, Banamalipur, Agartala -799 001.
10. Director (Generation), TPGCL, Banamalipur, Agartala -799 001.
11. Chief Engineer (WE Zone), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791111
12. Chief Engineer (EE Zone), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791111
13. Chief Engineer (TP&MZ), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791111
14. Engineer-in-Chief (P&E), Department of Power, Govt. of Mizoram, Aizawl – 796 001
15. Chief Engineer (P), Department of Power, Govt. of Nagaland, Kohima – 797 001
16. CGM, (LDC), SLDC Complex, AEGCL, Kahilipara, Guwahati-781 019
17. Group General Manager, NTPC, Bongaigoan Thermal Power Project, P.O. Salakati, Kokrajhar- 783369
18. ED, NERTS, PGCIL, Dongtiah-Lower Nongrah, Lapalang, Shillong -793 006
19. ED (O&M), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
20. ED (Commercial), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
21. ED (O&M), NHPC, NHPC Office Complex, Sector-33, Faridabad, Haryana-121003
22. Vice President (Plant), OTPC, Badarghat Complex, Agartala, Tripura - 799014
23. GM, NERLDC, Dongtiah, Lower Nongrah, Lapalang, Shillong -793 006
24. Member Secretary, ERPC, 14 Golf Club Road, Tollygunge, Kolkata-700033
25. Chief Engineer, GM Division, Central Electricity Authority, New Delhi – 110066
26. Chief Engineer (NPC), NRPC Complex, Katwaria Sarai, SJSS Marg., New Delhi - 110016

Sub: Minutes of 160th OCC Meeting.

Sir/Madam,

Please find enclosed herewith the minutes of 160th OCC Meeting held at Guwahati on the **04th September, 2019** for your kind information and necessary action. The minute is also available on the website of NERPC, **www.nerpc.nic.in**.

Any comments/observations may kindly be communicated to NERPC Secretariat at the earliest.

Encl: As above

भवदीय / Yours faithfully,

B. Lyngkhoi
Director/ SE

Copy to:

1. CGM, AEGCL, Bijuli Bhavan, Guwahati - 781001
2. CGM, APGCL, Bijuli Bhavan, Guwahati - 781001
3. CGM, DISCOM, Bijuli Bhavan, Guwahati - 781001
4. Head of SLDC, Me.ECL, Lumjingshai, Short Round Road, Umjarain, Shillong – 793 022
5. Head of SLDC, Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791 111
6. Head of SLDC, Department of Power, Dimapur, Nagaland
7. Head of SLDC, Electricity Department, Govt. of Manipur, Keishampat, Imphal – 795 001
8. Head of SLDC, Department of Power, Govt. of Mizoram, Aizawl – 796 001
9. Head of SLDC, TSECL, Agartala – 799 001
10. Chief Engineer(Elect), Loktak HEP, Vidyut Vihar, Kom Keirap, Manipur- 795124
11. Addl. GM (EED), NTPC Ltd., Bongaigoan Thermal Power Project, P.O. Salakati, Kokrajhar- 783369
12. DGM (C&M), OTPC, 6th Floor, A-Wing, IFCI Tower -61, Nehru Place, New Delhi – 110019.



Director/ SE

North Eastern Regional Power Committee

MINUTES OF THE 160th OPERATION COORDINATION

SUB-COMMITTEE MEETING OF NERPC

Date : 04/09/2019 (Wednesday)
Time : 10:00 hrs
Venue : "Hotel Nandan", Guwahati.

The List of Participants in the 160th OCC Meeting is attached at **Annexure – I**

Member Secretary, NERPC welcomed all the participants to the 160th OCC meeting. He particularly noted the absence of representative from Manipur, Mizoram and Nagaland. Further, he requested all the utilities especially Arunachal Pradesh to avail funds from PSDF at the earliest, otherwise the same may get lapsed.

Thereafter, Member Secretary requested Director, NERPC to take up the agenda for discussion.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 159th MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 159th meeting of Operation Sub-committee held on 9th August, 2019 at Sohra were circulated vide letter No. NERPC/SE (O)/OCC/2016/4556-4591 dated 21st August, 2019.

OTPC vide mail dated.26.08.2019 requested for the following correction:

Item D-2 of 159th OCC Minutes, Regarding 400 KV Palatana-Silchar Line -1 & 2 S/D.

OTPC Representative informed to forum that "any S/D in 400 KV Palatana-Silchar Line -1 & 2 is subjected to No backing down of OTPC generation".

Deliberation in the meeting:

Manager, OTPC informed that on 29th August,2019 the 400kV Palatana-Silchar-I shutdown was accorded and Palatana generation(only one Module running) was also reduced as per instruction from NERLDC. He stated that since SPS-2 continues to be in service and has 100% successful and correct operation, there was no need for backing down of generation.

NERLDC cited the decisions taken in the Special Meeting held at Palatana, Tripura on 02nd May, 2019. The relevant portion of MoM is extracted below:

"B.8. Modalities to be followed for allowing S/D of 400 KV Palatana-Silchar line.

....The forum decided that for granting of shutdown to either of 400kV Palatana-Silchar D/C lines, pro-rata reduction in generation may be done for generators viz. Palatana, Monarchak, AGTCCPP; Rokhia, Baramura.

Before allowing shut-down, NERLDC would carry out system study and advice appropriate backing down requirement to all concerned."

Further NERLDC informed the following:

- a. Shutdown availing request was not given on D-3 basis by OTPC, rather it was mailed on D-2. The study results for generation reduction was shared on D-1.
- b. Though SPS-2 is operating reliably and accurately, the purpose is not being served due to the high MVAR drawal by Bangladesh and subsequent failure of Tripura /Southern grid on low voltage.
- c. Data has not yet been received for Reactive study from Tripura.

Sr.GM(SO-II), NERLDC thanked Palatana for the MVAR support on 29.08.19. He opined that issues would be resolved after implementation of SPS-4 associated with Bangladesh Power Supply coupled with SPS-2 of Palatana.

OTPC highlighted to the forum that failure of SPS-2 and subsequent grid disturbances is due to gross indiscipline and non-compliance by Tripura. He requested the forum that OTPC should not be made to suffer for indifference/negligence on part of Tripura.

DGM, SLDC, TSECL informed that CMD, TSECL has already instructed DISCOM to install capacitor bank in 11kV level.

It was decided that NERPC would write to CMD, TSECL for submission of nodewise voltage and MVAR data required for study reg. Capacitor bank installation.

Member Secretary, NERPC proposed that:-

A committee be constituted to look into generation backing down, high MVAR generation, the voltage problem in Tripura/Southern grid and suggest recommendations for any of the outage proposals of OTPC/NETC/POWERGRID (for NETC lines) in future and submit the report to the forum for further discussions.

Assam, Meghalaya, NERTS, NERPC would be members. The nominated members from the said utilities can co-opt other members. NERLDC, NEEPCO and OTPC to share relevant data in this regard.

NERTS nominated Sh. H. Talukdar, Sr.DGM, NERTS to the Committee.

It was also agreed unanimously by the forum that until the Bangladesh SPS-4 is implemented and linked with SPS 2, planned outage of 400 kV Silchar -Palatana Line 1 & 2 will not be approved.

The Sub-committee confirmed the minutes of 159th OCCM of NERPC with the above modifications as no other 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 160th OCC:

State	R&U scheme	ADMS	Capacitor Installation	SAMAST **	Line Differential Protection
Ar. Pradesh	TPA still not signed. Package-I NOA issued Finance dept concurrence not given. P-II tender to be opened on 22.09.19. thereafter P-III tender will be done. Station-wise status to be updated *	Bid document handed over. TPA, A/C opening & Contract agreement by Sep'19.	-	Yet to be approved by TESG.	-
Nagaland	Submitted	Contract agreement completed. TPA, A/C opening & by Sep'19.	-	Yet to be approved by TESG.	Lines identified. Under DPR preparation stage.

Mizoram	Could not be updated due to absence of representative	Contract agreement signed. TPA, A/C opening & by Sep'19.	To reply to TESG queries.	Yet to be approved by TESG.	Lines not yet identified. To be taken up in Sub-group.
Manipur	Could not be updated due to absence of representative	Contract agreement signed. TPA, A/C opening & by Sep'19.	To reply to TESG queries.	Yet to be approved by TESG.	Lines identified. LDP for 132kV Imphal-Imphal and 132kV Jiribm-Jiribam proposed. Meghalaya DPR to be shared.
Tripura	Station-wise status to be updated *	Contract agreement signed. TPA, A/C opening & by Sep'19.	Study to be carried out in consultation with NERLDC.	Yet to be approved by TESG.	Lines not yet identified. To be taken up in Sub-group.
Assam	Submitted	TPA, A/C opening & Contract agreement by Sep'19.	-	Appraisal Committee approved.	Lines identified. Under DPR preparation stage.
Meghalaya	MePTCL Station-wise status updated MePGCL - Station-wise status to be updated *	Contract agreement signed, A/C opened. TPA, by Sep'19.	-	Appraisal Committee approved.	Tendering in progress

Deliberation of the sub-Committee:

Director, NERPC appraised the forum that FAT for the equipments to be supplied under ADMS would be done on the 26th & 27th September, 2019 at Delhi. He requested all the utilities to participate in the programme.

Regarding SAMAST he informed that that the final cost of scheme for Manipur and Tripura is likely to be approved by TESG. The QR, QCBS and other tender conditions were finalised in the meeting of SAMAST members on 30.08.19 as well as the splitting of the tender into two components:(i) Meter+AMR, (ii)IT Infrastructure and Software at SLDC.

The OCC forum ratified the same.

The Sub-Committee noted as above.

Action: All state utilities/NERPC.

2. Long Outage of Important Grid Elements:

Name of the Element	Name of Utility	Status as informed in 159 th OCC	Status as informed in 160 th OCC
63MVAR Reactor at Byrnihat to replace with 80MVAR Reactor	MePTCL	DPR submitted to NLDC/NPC.	DPR submitted to NLDC/NPC.
132kV Dimapur - Imphal (out since 25.07.18)	NERTS	Foundation : 18/27 Erection : 15/27 Stringing: Yet to start. Work is in progress at 5 Locations for foundation work and 1 Location for erection work.	Referred to TCC/RPC
220kV Sonabil-Samaguri-I	AEGCL	Administrative approval by Aug'19. Subsequently NIT will be floated. One year estimated	NIT by Sep'19
132kV Srikona-Panchgram(out since 14.01.2019)	AEGCL	To be updated	To be updated
63MVAR L/R for 400kV Palatana-Silchar Ckt-I (out since Apr'19)	OTPC	-	By Oct'19

The Sub-Committee noted as above.

Action: MePTCL, NERTS, AEGCL, OTPC.

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

SN	Name of element	Actions to be taken	Concerned Utilities	Status as informed in the 159 th OCC Meeting	Status as informed in the 160 th OCC Meeting
1	132 kV AGTCCPP - Agartala D/C	Installation of Line Differential in 132 kV AGTCCPP - 79 Tilla D/C & Review of	NERTS/ NEEPCO	For Diff Relay procurement OBD : 10.08.19 Impedance measurement planned by	<u>LDR procurement</u> : Bids opened and is under evaluation <u>Impedance</u>

		impedance setting of both ends as a temporary measure.		31.08.19 with s/d of both ckts.	measurement: = Test kit is in use at Misa S/S and shall be spared after 10.09.19
2	132kV AGTCCPP-Kumarghat	GPS to be procured and time synchronization of relay to be done	NEEPCO	Work awarded.	Dec'19
3	132kV PKBari-Kumarghat	Installation of Line differential relay	NERTS	OBD : 10.08.19	LDR procurement Bids opened and is under evaluation

The Sub-Committee noted as above.

Action: NEEPCO, NERTS.

B.2. OPERATIONAL PERFORMANCE AND GRID DISCIPLINE DURING AUGUST, 2019

As per the data made available by NERLDC, the grid performance parameters for August, 2019 are given below:

NER PERFORMANCE DURING AUGUST, 2019

States	Energy Met (MU)		w.r.t. July, 19 % inc (+) /dec (-)	Energy Reqr. (MU)		w.r.t. July, 19 % inc (+) /dec (-)	% surplus (+) /shortfall (-) of energy In Aug, 19
	Aug-19	July-19		Aug-19	July-19		
Ar. Pradesh	67.2	68.78	-2.30	67.63	69.1	-2.13	-0.64
Assam	1070.59	899.1	19.07	1118.49	954.53	17.18	-4.28
Manipur	74.6	74.19	0.55	75.06	74.62	0.59	-0.61
Meghalaya	166.61	171.21	-2.69	166.61	171.21	-2.69	0.00
Mizoram	64.75	55.61	16.44	65.21	55.94	16.57	-0.71
Nagaland	72.86	69.7	4.53	73.55	70.09	4.94	-0.94
Tripura	153.79	143.56	7.13	160.21	144.74	10.69	-4.01
Region	1670.4	1482.15	12.70	1726.76	1540.23	12.11	-3.26

States	Demand Met (MW)		w.r.t. July, 19 % inc (+) /dec (-)	Demand in (MW)		w.r.t. July, 19 % inc (+) /dec (-)	% surplus (+) /shortfall (-) of demand In Aug, 19
	Aug-19	July-19		Aug-19	July-19		
Ar. Pradesh	152	134	13.43	155	137	13.14	-1.94
Assam	1956	1793	9.09	2051	1841	11.41	-4.63
Manipur	184	175	5.14	207	182	13.74	-11.11
Meghalaya	333	332	0.30	333	332	0.30	0.00
Mizoram	91	100	-9.00	91	102	-10.78	0.00
Nagaland	169	151	11.92	192	168	14.29	-11.98
Tripura	300	297	1.01	300	298	0.67	0.00
Region	3023	2880	4.97	3095	2958	4.63	-2.33

REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU

AVERAGE FREQUENCY (Hz)

Month---->	Aug-19	July-19	Month---->	Aug-19	July-19
Total Generation in NER (Gross)	1744.980	1725.726		% of Time	% of Time
Total Central Sector Generation (Gross)	1388.350	1582.662	Below 49.9 Hz	7.28	7.50
Total State Sector Generation (Gross)	356.630	480.067	Between 49.9 to 50.05 Hz	72.67	68.62
Inter-Regional Energy Exchange			Above 50.05 Hz	20.05	23.87
(a) NER-ER	14.09	134.25	Average	50.00	50.00
(b) ER-NER	528.17	310.86	Maximum	50.32	50.32
(c)NER-NR	467.61	600.59	Minimum	49.5	49.64
(d)NR-NER	0.00	0.00			
© Net Import	46.47	-423.98			

Deliberation of the sub-Committee:

NERLDC gave a presentation on the grid performance for the month of August'19. NERLDC highlighted the Demand Met and Energy Met of August, 2019. Frequency and Voltage pattern for August, 2019 were highlighted along with MVAR Vs Voltage graph for Palatana, BgTPP & AGTCCPP.

NERLDC expressed concern over high number of GDs in the Region (21 nos. of GDs in August'19) and large numbers of line trippings in the region (Net 745 nos of tripping of 132 kV and above lines from April '19 till 31st August '19)

Forum recalled that the issue was discussed in the 53rd PCC Meeting and concern utilities were requested to attend the issues pertaining to the protection systems in a time bound manner. Forum requested that corrective actions which are not requiring fund to be attended within 3 months and which require fund to be attended within 6 months.

The Sub-Committee noted as above.

C. ITEMS- STATUS REVIEW

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

During 160th OCC meeting, the status as informed by different beneficiaries is as follows:

SN	Items	Status as given in 158 th OCC Meeting		Status as given in 159 th OCC Meeting	
		Timeline for completion	Furnishing of detail parameters	Timeline for completion	Furnishing of detail parameters

a. New elements

1	400/220kV, 315 MVA ICT-1 of NTPC at Bongaigaon	Aug'19	Already submitted	By 15.09.19	Already submitted
2	Kameng HEP of NEEPCO two units (2 x 150 MW) Next two units (2x150 MW)	First two units by Sep'19	CEA clearance available	Nov'19 or Dec'19	CEA clearance available
3	132kV Monarchak – Surjamaninagar D/C of TSECL	Delayed By Oct'19 To be referred to next TCC/RPC	To be submitted to NERLDC.	By Dec'19, tower erected 128/145 foundation completed 145/152. stringing 15.5 km completed.	To be submitted to NERLDC.
4	220/132 kV, 160MVA ICT-II at Balipara	Internal inspection is in progress at GE Works. Repairing to be completed by 30.09.19	To be submitted to NERLDC.	30.09.19	To be submitted to NERLDC.
5	220/132 kV, 1x160 MVA ICT with GIS Bay at Kopili	ICT to be test charged by 14.08.19. To be put in to service through GIS by 15.09.19.	To be submitted to NERLDC.	Idle charging of ICT by 15.09.19 Power Flow by 30.09.19	To be submitted to NERLDC.
6	Dedicated 33kV feeder at Khliehriat Substation from Lumshnong.	A date will be fixed NERPC, MeECL and NERTS will visit	Not applicable.	A date will be fixed NERPC, MeECL and NERTS will visit	Not applicable.
7	Replacement of 315 MVA ICT-II with 500 MVA ICT at Misa (PG)	To be commissioned by 31.08.19	To be submitted to NERLDC.	400/220 kV 500 MVA ICT-III put into service on 27.08.19	To be submitted to NERLDC.
8	220kV Balipara-Sonabil-2	Estimate under process	To be submitted to NERLDC.	Estimate under process	To be submitted to NERLDC.
9	Bay at Agia S/S for 132kV Agia-Nangalbibra Ckt#II by AEGCL	LOA issued on 27.06.19. By Sep'19	To be submitted to NERLDC.	LOA issued on 27.06.19. By Sep'19	To be submitted to NERLDC.
10	220kV BTPS-Rangia T/L	Aug'19	-	Charged	-

11	80MVAR B/R at RHEP by NEEPCO	Final Estimate & DPR to be prepared	-	NEEPCO requested for revision of 1st NERSCT MoM. FE 40Cr approx.	-
b. Elements under breakdown/upgradation					
12	Up-gradation of 132 kV Lumshnong-Panchgram line	Queries to be submitted by AEGCL and MeECL	Not applicable.	TESG queries submitted	Not applicable.
13	PLCC Panels at Loktak end of Loktak - Ningthoukhong 132 kV feeder and Loktak - Rengpang 132 kV feeder	Aug'19.	Not applicable.	Aug'19.	Not applicable.
14	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	DPR submitted. Other upgradation works to be included in DPR	Not applicable
15	220/132 kV 30 MVA ICT at Mokokchung	Scheduled Completion : March'2021	To be submitted to NERLDC	March' 2021	To be submitted to NERLDC
16	Upgradation of 132kV Yurembam-Karong by MSPCL	WIP. By Aug'19	-	WIP. By Aug'19	-
17	Upgradation of 132kV Lekhi-Chimpu and Lekhi bus by DoP Ar. Pradesh	Mar'2020	-	Mar'2020	-
18	Upgradation of CT at Lekhi for 132kV Lekhi-Chimpu by DoP Ar. Pradesh	Mar'2020	-	Mar'2020	-
19	Installation of LDP for 132kV AGTCCPP-Agartala D/C & 132kV PKBari-Kumarghat by NERTS	OBD : 10.08.19	-	LDR procurement Bids opened and is under evaluation	-

20	Procurement of GPS at AGTCCPP & time synchronization for 132kV AGTCCPP-Kumarghat by NEEPCO	Work awarded	-	Dec'19	-
21	Diversion of 132kV Bawktlang-Shihmui	By July'19	-	Status: OBD on 18.09.19 By Nov'19	-

The Sub-Committee noted as above.

Action: All utilities as above.

C.1. Update on Real Time Energy Assessment for Effective Grid Management:

Data availability as updated in the 160th OCCM is given below:

Name of the state /utility	Data Availability(in%)	Issues
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 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.	-

Deliberation of the sub-Committee:

Director, NERPC informed that even though CDAC had confirmed its participation in the 160th OCCM, they are conspicuously absent. He assured that the concerns of the members viz. operational problems and maintenance procedures would be taken up CDAC.

The Sub-Committee noted as above.

Action: All SLDCs/NERPC

C.2. 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:-

- Inspection for Mawphlang completed.
- Inspection for Sankardevnagar, Rangia and Rowta under Assam was completed in April'2019.
- UFR Inspection and Testing for TSECL Stations as well as UFRs under Islanding Scheme No.2 carried out in June'19.

In 158th OCCM, DGM, SLDC, TSECL informed the following status:

For all existing UFR except S.M. Nagar	To be replaced by Sep'19
UFR at SMNagar	By Aug'19
Additional UFR under Islanding Scheme-II	Planning to be complete by Aug'19

- In 159th OCCM it was decided that UFR Inspection for Nagaland and Manipur would be completed in Aug-Sep'19.

Deliberation of the sub-Committee:

DGM, SLDC, TSECL informed the following:-

UFR details	Status as informed in the 159th OCCM.	Status as informed in the 160th OCCM.
For all existing UFR except SMNagar	To be replaced by Sep'19	By Oct'19
UFR at SMNagar	By Aug'19	By Sep'19
Additional UFR under Islanding Scheme-II	Planning to be complete by Aug'19	Latest status**

** The forum requested NERPC that the report on additional UFR under Islanding Scheme-II be enclosed in the letter to CMD.

Director, NERPC informed that the UFR Inspection for Nagaland would be completed in Sep'19 and thereafter for Manipur.

The Sub-Committee noted as above.

Action: DoP Nagaland, MSPCL, TSECL, NERPC.

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

In 156th OCCM CGM, NERLDC informed that KPTCL has committed to go ahead with the Pilot Project. The readiness for immediate execution of the same will be communicated.

MePTCL raised apprehensions regarding the possibility of Cyber Security breach at Killing as fallout of this pilot. NERLDC informed that the same has already been taken care of, which will be addressed by GM(SL), NERLDC. In 157th OCCM, CGM, NERLDC informed that the queries have already been addressed by NERLDC. He also informed that Cyber Security aspects are taken care by the firewall. MePTCL requested that the same may be intimated to EE, Killing.

In 158th OCC Meeting it was informed that EE, Killing, MePTCL would resolve the issues with ABB at the earliest.

The 159th OCC forum approved implementation of the pilot project upon resolution of the security concerns.

Deliberation of the sub-Committee:

Director, NERPC once again requested NERLDC to obtain the approximate cost of the project so that the same may be approved by TCC/RPC.

The Sub-Committee noted as above.

Action: NERLDC, MePTCL

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

In 159th OCCM NERTS informed that LOA was placed on 06.05.2019. The target for completion is Nov'19.

Deliberation of the sub-Committee:

NERTS informed that target for completion is Nov'19.

The Sub-Committee noted as above.

Action: NERTS

C.6 Update on PDMS:

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

- SAT for Assam system completed. Data collection for Meghalaya, Tripura & Mizoram completed.
- In 158th OCCM NERLDC highlighted that details of transmission lines, Bus Reactors and Line Reactors mentioned in the report seem to vary from the data available with NERLDC. NERLDC agreed to submit the detailed report to NERPC by July'19.
- In 159th OCCM Director(C&O), NERPC informed the forum that the prospective Go Live for the project is October'2019. He also intimated that data collection for Ar. Pradesh, Manipur and Nagaland is pending.

Deliberation of the sub-Committee:

Director, NERPC opined that in order for timely completion of project; data collection has to be completed for Arunachal, Manipur and Nagaland. However, in case of Arunachal R&U works are yet to take off and maximum 132kV stations under NERPSIP are yet to be commissioned. He suggested that data collection for existing stations under DoP Ar. Pradesh may be done at present and once the stations are renovated/commissioned the database would be updated (upon site visit by M/s PRDC). The forum approved.

With concurrence of EE, SLDC, DoP Ar. Pradesh, Sh. Hibu Bama, EE(Transmission), DoP Ar. Pradesh was nominated as the nodal officer for Ar. Pradesh i.r.o. PDMS project.

The Sub-Committee noted as above.

Action: PRDC/NERPC/DoP Ar. Pradesh/MSPCL/DoP Nagaland.

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

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

- AEGCL – AEGCL informed that as per report from MRT division CR panels has check-sync facility available and no separate procurement of synchroscope is necessary.
- DoP Ar. Pradesh –Lekhi S/S no Sync check relay is available while for Chimpu relay is available. The procurement for trolley/synchroscope is being initiated and exact date for implementation would be intimated later on. But, they will have Synchronization facility latest by Oct 2019.

- In 159th OCCM it was decided that Synchronising trolley (one no. for each station) is to be procured for strategically located substations. Further, it was decided that wiring is to be completed for important feeders for the critical stations.

Deliberation of the sub-Committee:

DGM, SLDC, AEGCL informed that as per report of MRT wing, AEGCL; no synchronizing trolley would be required and synchro-check relay would be sufficient. CGM, NERLDC reiterated that Synchronizing trolleys are necessary in blackout conditions. After detailed deliberation, it was decided that a meeting would be convened amongst NERTS, AEGCL, NERLDC and NERPC in Sep'19 for detailed discussion on the necessity of the trolleys. NERLDC circulated a list of important stations (13nos) for Assam attached at **Annexure C.7**.

The Sub-Committee noted as above.

Action: AEGCL, DoP Ar. Pradesh, NERPC.

C.8 Phase shift errors in PMU:

In 155th OCCM Director, NERPC informed that in the Sub-group meeting held on 05.04.19, it was agreed that the matrix of phase comparison for each of the stations vs Bongaigaon will be prepared by NERLDC. NERLDC informed that work is underway and would be completed by April'19.

In 156th OCCM, NERLDC informed that the matrix has been prepared, with deviations being categorized in three groups: (i) +120 deviation, (ii) -120 deviation, (iii) matching w.r.t Bongaigaon.

Sr.GM(AM), NERTS informed that for some ASEB stations 90 deg deviation is present which has to be checked

Within one week the data w.r.t. connection changes will be collected by NERTS in conjunction with AEGCL and rectification would be completed by May'19 for substations with +/- 120 degree and planning of activities to correct the phase shift of - 90 or +150 degree group shall be made by May 2019.

In 157th OCCM Sr. GM(AM), NERTS assured that the complete schedule of works would be prepared by 14th June, 2019. The forum requested AEGCL to do likewise.

In 158th OCCM NERTS informed that schedule of works has been prepared and the works would be completed by Aug'19. AEGCL was requested to prepare the schedule of works in consultation with NERTS.

In 159th OCCM Sr.DGM, NERTS informed that action plan shall be submitted within 31.08.19. AGM, SLDC, AEGCL informed that after commissioning of SAS there is no spare panel, TB. So the CT, CVT terminals have to be brought from Kiosk to CR. After detailed deliberation, it was decided that NERTS would visit and analyze for Samaguri the pre-requisites for changing the connections.

Deliberation of the sub-Committee:

The following status was updated by NERTS/AEGCL:

- Bongaigaon - Completed except for New Siliguri-2 feeder.
- Misa - 220 kV Side Completed.
- Dimapur, Mariani, Silchar, Salakati - yet to be started, possible completion by 30.09.19.
- Samaguri sub-station under upgradation under PSDF. Re-connection to the PMU will be done after completion of upgradation work.

The Sub-Committee noted as above.

Action: AEGCL/NERTS

C.9 Compensation for Heat Rate degradation and Auxiliary Energy Consumption in case of gas based power plants:

In 158th OCCM Member Secretary(I/C), NERPC informed that the meeting could not be held due to unavoidable circumstances. He informed that the procedure being followed in other RPCs have been sought. After receipt of the same the meeting would be convened immediately.

In 159th OCCM it was decided that a workshop cum meeting would be convened preferably in the first week of September, 2019.

Deliberation of the sub-Committee:

Director, NERPC informed that he has discussed with other RPCs in this context. He stated that comments/calculation procedure has been sent by these RPCS to CERC for clarifications. After finalization of the procedure, same may be discussed for implementation. The forum decided to drop the agenda item in the meantime and review later on.

The Sub-Committee noted as above.

C. 10 Tentative schedule for Black Start & Restoration Procedure Mock exercise in NER during the year 2019

In 159th OCCM the mock black start schedule status was as below:

AGTCCPP completed

LOKTAK After commissioning of 132kV Bus-A

Khandong completed

KOPILI completed

RHEP to be done in lean season

DOYANG could not be completed due to synchronization problem in 132kV DHEP-Dimapur-I.

AGBPP – As per NEEPCO Unitwise blackstart not possible. Testing/ physical black start may be done for the entire plant and during blackout only. NERLDC insisted for mock black start.

Deliberation of the sub-Committee:

DHEP - Black start successful, but synchronization failed. The entire procedure would be repeated in the next mock exercise.

AGBPP - Emergency service board 6.6kV has UPS, STG connection. With STG in service, STG auxiliaries being fed from the emergency board.

When STG not in service black start can be done. Segregation of aux supply from emergency board would be taken up internally by NEEPCO.

NERLDC mentioned that the mock black start exercises are very important for ensuring preparedness during restoration after grid disturbances and it is mandated as per regulations. With the present configuration, mock exercise at AGBPP shall be carried out when STGs are not in service. NEEPCO assured that all efforts would be made to segregate the aux supply of the STGs from the emergency service board and provisions would be made for black start exercise at AGBPP.

The Sub-Committee noted as above.

Action: NEEPCO, NHPC, NERLDC

C. 11 DVAR and PSS at AGTCCPP:

In 156th OCCM Sr. Manager, NEEPCO informed that installation and commissioning would be complete by July'19.

In 158th OCCM Sr. Manager, NEEPCO informed that the work would start from July'19, during s/d of Unit 4. Since Unit #4 is having Coupling problem the DVAR & PSS installation is expected to be complete for Unit #4 by Oct'19. For other units the installation would be done subsequently.

In 159th OCCM DGM, NEEPCO informed that OEM Engineering would visit AGTCCPP shortly. It was requested to intimate NERLDC/NERPC during OEM presence to enable visit by a team.

Deliberation of the sub-Committee:

DGM, NEEPCO informed that the GTG-IV is still under S/D due to load coupler problem. M/s ABB visited Plant and did some partial work of DVAR of the Unit. They will again visit in the month of Sept'19 and accordingly NERLDC/NERPC will be informed. NERLDC requested NEEPCO to intimate the action plan for installation of DAVR/PSS in the other units at AGTCPP.

The Sub-Committee noted as above.

Action: NEEPCO.

C. 12 Bus Configuration issues for various sub-stations:

Status as on 158th OCC Meeting:

- 132kV Transfer Bus at Loktak HEP - CEA Inspection Applied For.
- 400kV Bus A at RHEP - (i)NEEPCO to procure new 400kV CB for Bus Coupler Bay including mandatory spares.
(ii) NEEPCO to check /ensure the healthiness of all the elements required to take Bus-A into service. Followings bay equipments to be checked:
 - Two sets of Center Break Isolator(Bus Coupler)
 - Four sets of Pantograph isolators
 - One Set CT(Bus Coupler)
 - One set CVT(Bus-A)
- 132kV Bus Coupler at Pavoil Bus coupler is in operation. The protection system is yet to be confirmed by Assam

Deliberation of the sub-Committee:

- 132kV Transfer Bus at Loktak HEP - CEA clearance obtained. Manpower engaged in Unit-III restoration. To be completed by Oct'19
- 400kV Bus A at RHEP - Shutdown was requested by NEEPCO. OCCM gave in-principle of the shutdown on 22.09.19 & 23.09.19 tentatively. However, exact date would be based on in-flow conditions and consent of DoP Ar. Pradesh in real time.
- 132kV Bus Coupler at Pavoil - Bus coupler is in operation. The protection system is yet to be confirmed by Assam.

The Sub-Committee noted as above.

Action: NEEPCO/NHPC/AEGCL.

C.13 Distance Relay Settings Revision at Deothang in Bhutan:

In 158th OCCM Member Secretary(I/C), NERPC informed that settings at Deothang (presently reach settings set at zero) would be be revised ASAP as has been communicated by Bhutan.

In 159th OCCM Sr.DGM, NERTS informed that engineer would visit Deothang on 09.08.19 for SEM issues. Further, he informed that SOTF at Rangia would be disabled till visit of OEM. Regarding relay reach settings at Deothang, Director NERPC intimated that the same has been taken up with BPC and is expected to be corrected by 15.08.19.

Deliberation of the sub-Committee:

Sr.DGM(AM), NERTS informed that Engineer from NERTS visited Rangia and Deothang on 09.08.19, however BPC Bhutan did not allow correction of SEM connection on load. The work would be done on next opportunity. He further informed that at Rangia, the SOTF feature of 132 kV Motonga (now Deothang) feeder has been disabled on 09th August, 2019.

Director, NERPC informed that even after repeated emails there has been no confirmation from BPC Bhutan regarding the rectification of the relay reach settings at Deothang. He assured that the matter would be taken up again.

The Sub-Committee noted as above.

Action: NERTS/NERPC

C. 14 Status of recommendations reg GD-Vs on 03rd & 20th April,2019:

Recommendations	Status as informed in the 159 th OCCM	Status as informed in the 160 th OCCM
Identification of weak joints for 400kV Palatana-Silchar D/C (Scope NERTS)	Testing of sample taken up by NETC. NERTS completed checking of the entire line and no such weak joints could be detected.	Sample already sent to NTH.
Study for reactive compensation in Tripura System(scope of TSECL)	SLDC to submit nodewise MVAR data of 33 kV system as per calculation procedure it deems fit.	NERPC to write to CMD, TSECL for forthwith submission of data.
Identification of feeders for additional UFR based load shedding under Islanding Scheme-II(Scope of TSECL)	Identification completed upon visit of team to Tripura.	Status of procurement, installation to be submitted.
Standalone EL for integration of relay at AGTCCP by Oct'19(Scope of NEEPCO)	AGTCCPP - Oct'19. Standalone EL at RHEP completed in June'19	Under Process. Delayed tender at least 1+6 months. From date of LOA to be monitored

<p>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.</p>	<p>No declaration submitted as intimated by NERLDC except OTPC. The forum decided that shutdown would not be accorded to utilities not submitting the declaration.</p>	<p>NEEPCO except Doyang HEP all other Stations have the DR downloading facility. In case of DHEP, order placed to M/s ABB, for all the machines, lines, bus etc. Retrofitting shall be done from Dec'19 to April'20. After completion of the same regular uploading of DR/EL in the tripping portal shall be done.</p> <p>Khandong- Kop-II bay of NERTS, DR downloading not explained to NEEPCO. Kopili end under renovation Khandong end - DR downloading to be explained in sub-group</p>
<p>NHPC to procure standalone EL for Loktak HEP</p>	<p>To be updated.</p>	<p>Under process exact date of LOA to be confirmed</p>
<p>Revised SPS-3 scheme offer sought from GE by NERTS</p>	<p>Budgetary offer will be collected by 31.08.19</p>	<p>GE intimated approximate cost to be about Rs 1 Crore. Detailed break up to be submitted yet. Generation reduction would be decided with OTPC</p>
<p>Line defects in 400kV Silchar - Azara & 400kV Silchar-Byrnihat T/L to be attended(Scope of NETC)</p>	<p>Shut down proposed from 16th to 23rd Aug'19</p>	<p>Defects attended by availing the shut down as proposed. AR successfully operated on 02.09.19** 400kV TLA to be installed</p>
<p>Impedance measurement for 400kV Paltana-Silchar D/C, 400kV Silchar-Azara, 400kV Silchar - Byrnihat</p>	<p>On opportunity</p>	<p>The Impedance Measuring Kit is on use at Misa S/S now. Shall be diverted to Agartala by 10.09.19</p>
<p>Line parameters to be matched at Silchar, Azara and Byrnihat.</p>	<p>Shall be done by 31.08.19</p>	<p>To be done on or after 10.09.19</p>
<p>NERTS and AEGCL to jointly visit Azara and check exact cause for delay in appearance of voltage input to relay when</p>	<p>Shall be done by 31.08.19</p>	<p>Joint visit done. But the problem of delayed appearance of voltage while charging through Tie CB could not be</p>

charged via Tie Breaker		identified. However, the problem of non operation of Auto Reclosure has been attended.
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**NERLDC informed the forum that there was an incident of simultaneous tripping of 400 kV Silchar – Azara line & 400 kV Silchar – Byrnihat line on 2nd Sep'19 and both lines successfully auto reclosed. After detailed deliberation, forum agreed that there is a requirement of installation of TLSA in the high lightning prone locations of these lines. NETC was requested to install pilot TLSAs in the Khliehriat area at the earliest.

The Sub-Committee noted as above.

Action: NERTS, AEGCL, TSECL, MePTCL, NEEPCO, NETC.

C.15 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 159th OCCM	Status as informed in the 160th OCCM
1	Unit -1 unit bus incomer breaker to restored at the earliest	Aug'19	By Sep'19
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

The Sub-Committee noted as above.

Action: NTPC.

C.16 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 159th OCCM NERLDC informed that comments have been received from OTPC and SLDC Meghalaya. AGM, SLDC, AEGCL informed that comments of SLDC Assam would

be sent shortly. Meghalaya presented the study done by them on Tap Optimization Study to NERPC and NERLDC. Their effort of study was appreciated by the forum. Members requested NERLDC to send reminder mail.

Deliberation of the sub-Committee:

AEGCL informed that the comments would be sent by 06.09.2019.

The Sub-Committee noted as above.

Action: All remaining utilities.

C.17 Better weather forecasting for power sector by IMD:

Decisions/deliberations in the previous meetings:

- IMD to conduct survey for each of the individual utilities.
- Nodal officers for all the utilities nominated in the 159th OCCM.
- Utilities to furnish the list of substations where AWS can be installed.

Deliberation of the sub-Committee:

NERTS submitted the list of stations for installation of AWS (attached at **Annexure-C.17**). The forum requested other utilities to submit the same at the earliest.

The Sub-Committee noted as above.

Action: All remaining utilities.

C.18 Erroneous SCADA data i.r.o. AEGCL

NERLDC requested Assam to give a time frame for correction of the card Issue. AGM, SLDC, AEGCL informed that at present the voltage data is being sent by SLDC in the form of Excel file. The CARDS of RTU are in the process of replacement.

Deliberation of the sub-Committee:

AEGCL informed that administrative approval has been received. ECI would be given LOA by this week. At least 3 months would be required for supply and installation. NERLDC requested SLDC Assam to submit the hourly voltage data block-wise for calculation of VDI for the period w.e.f Apr'19 to Jul'19 for onward transmission to CERC.

The Sub-Committee noted as above.

Action: AEGCL.

C.19 Availability of Hot Spare Units

CERC vide their communication on 6th July'19 directed POSOCO to collect the availability of Hot Spare Units installed in various stations on quarterly basis from all

ISTS Licensees. NERLDC vide its letter to NERTS dated 01.08.19 requested to submit the data from first quarter of 2019-20.

In 159th OCCM NERLDC requested all the utilities to submit the data before next OCCM.

Deliberation of the sub-Committee:

NERTS informed that data pertaining to NERTS submitted on 02.09.19. Also, NERTS, POWERGRID clarified that other spares excluded from the submitted list like spare at Tezu, Namsai, Roing, Ziro etc. which are cold spares. The forum decided to drop the agenda item.

The Sub-Committee noted as above.

C. 20 Metering Status Review:

Agenda Description	Status as informed in 159th OCCM	Status
Distribution of 70 Laptops	In 159 th OCC Meeting, NERTS informed that distribution of Laptops have been completed. Free software will be mailed by NERTS to all the concerned for self-installation.	<p>Few locations have not received the laptops yet. It was requested to contact NERTS for distribution of Laptops. Assam informed that 3 laptops for Srikona, Dullavchera and Hailakandi will be received from Badarpur(PG) after rectification of software issues.</p> <p>Also Meghalaya requested NERTS to despatch the laptop from Misa to Shillong so that Meghalaya can take from NERTS,Shillong.</p> <p>Also software for self installation will be mailed by NERTS to all the concerned within 2- 3 days as informed by NERTS.</p>

Agenda Description	Status as informed in 159th OCCM	Status
<p>Correction of Meter error at Lekhi, Ningthoukhong, Kohima, Dimapur(s), Deothang end and Silicon Factory end, Mokokchung end, Kopili end check meter, Imphal(PG) end.</p>	<p>Not yet corrected. Annexure C.20.c</p>	<p>Lekhi : Sign Reversal issue has been resolved. But reading of Lekhi end of 132 kV Pare-Lekhi is erroneous.</p> <p>Imphal(PG end): Imphal(PG) end of 132 kV Loktak-Imphal(PG) is reading less as compared to Loktak reading.</p> <p>Deothang: BPC did not allowed the meter correction on load condition. Both Deothang and Silicon Factory end are having sign reversal problem.</p> <p>The errors at other locations are still pertaining.</p>
<p>SEMs to be Procured</p>	<p>Procurement of 100 L&T SEMs, 20 DCDs along with 100 cables for Laptop / DCDs on Single Tender Basis.</p>	<p>Budgetary offer sought from M/s L&T, yet to be received.</p> <p>NERTS informed that the procurement will be completed By Oct'19</p>

The Sub-Committee noted as above.

Action: All utilities as above.

C.21 Procurement of 100SEMs:

In 158th OCC the issue of SEM repair / procurement was discussed and approved by the forum. Subsequently it was intimated by NERTS-Powergrid that L&T - the meter manufacturer has expressed difficulty in repairing the identified meters. Considering the precarious Status of Spare SEM Stock position following additional Agenda may please be taken up in the 159th OCCM -

"Procurement of 100 L&T SEMs and 20 DCDs on Single Tender Basis" - In 158th OCC the issue of SEM repair / procurement was discussed and approved by the forum. Subsequently it was intimated by NERTS-Powergrid that L&T - the meter manufacturer has expressed difficulty in repairing the identified meters.

Considering the precarious Status of Spare SEM / DCD Stock position the Forum may discuss / approve - "Procurement of 100 L&T SEMs and 20 DCDs on Single Tender Basis"

The 159th OCC forum noted the difficulty in repairing the 78 SEMS, so new SEMs are to be procured. It was unanimously decided that immediate procurement is to be done without any delay. The forum requested NERTS to procure 100 SEMs and 20 DCDs from a single source – L&T considering urgent requirement and good performance of L&T make.

Deliberation of the sub-Committee:

Pls refer to discussion in **item No. C.20.**

The Sub-Committee noted as above.

Action: NERTS

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	717.6	21.93	1.44	15
Kopili	609.22	185.92	4.608	40
Doyang	315.65	13.5	0.2049	66
Loktak	766.86	23	0.2265	102

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

The Sub-Committee discussed and approved 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.

In the Special Meeting held at Palatana, OTPC on 02.05.19 it was decided that no shutdown would be granted to utilities not submitting DR/EL regularly.

For shutdown of 400kV Palatana-Silchar Ckt#I or Ckt#II OTPC agreed to back down generation by 300MW subject to good weather conditions and sharing of study results.

Also NERLDC informed the Forum that S/D application to be submitted strictly by D-6. Where, D is the date of OCC meeting. And no further applications will be entertained for the applications/revisions.

Deliberation of the sub-Committee:

NERLDC presented a report on the shutdown approval timeline(s) followed in OCC of other regions. It was observed that M+2 month's shutdown was approved in Mth month. For eg. shutdowns from 01.11.2019 to 30.11.2019 is approved in the OCC of September, for which requisition has to be submitted by 5th of September, 2019 i.e. 5th day of the Mth Month, M being the month in which OCC Meeting is held. By following this practice there will be no overlapping of shutdown dates as happening at present. Members unanimously agreed to the practice in other RPCs. Since in the 160th OCC shutdown is approved upto 31.10.2019, it was decided that in order to regularize and follow the new procedure; shutdown from 01.11.2019 to 31.12.2019 would be taken up for consideration in the next OCCM. The forum requested all the utilities to submit the shutdown requisition for the period (01.11.2019 to 31.12.2019) by 05th October, 2019 positively.

The sub-Committee discussed and approved the transmission line outages proposed by Constituents for September, 2019- October, 2019 which is available in the website of NERPC.

The Sub-Committee noted as above.

Action: All utilities.

D.3 Estimated Transmission Availability Certificate (TAC) for the month of July, 2019 - August,2019:

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

The Sub-Committee noted as above.

Action: NERTS/NETC.

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.

Decisions as per previous meetings:

- SLDC Mizoram would present Study on ATC/TTC calculation in the next OCCM.
- Number of licenses required to be communicated by all the utilities.

Deliberation of the sub-Committee:

NERLDC presented the ATC/TTC calculation done on behalf of all the states and requested states to give their comments by 20-Sep-19:

TTC figure as per NERLDC studies are as follows:

- Arunachal Pradesh - Peak 216MW, Off-Peak 208MW
- Assam- Peak 1675MW, Off-Peak 1639MW
- Manipur - Peak 256MW, Off-Peak 254MW
- Meghalaya - Peak 45MW, Off-Peak 65MW
- Mizoram - Peak 124MW, Off-Peak 123MW
- Nagaland - Peak 170MW, Off-Peak 154MW
- Tripura - Peak 113MW, Off-Peak 129MW

The forum thanked NERLDC for conducting the study.

The Sub-Committee noted as above.

Action: All state utilities.

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.
- The frequency response characteristic for tripping of 400 KV Dikchu -Rangpo & 400 KV Teesta III- Dikchu resulting in total black out at 400 KV Dikchu and 400 KV Teesta III, generation loss of 1364 MW of Teesta III-1260MW and Dikchu-104 MW has been prepared and analysis will be presented in the meeting.

Deliberation of the sub-Committee:

NERLDC informed that an event occurred at 00:02hrs on 21st August,2019 with 1364 MW generation loss which resulted in drop in all India grid frequency by around 0.12 Hz. FRC to the event was 2.2% and only 2MW reduction in NER import was observed. Further NERLDC highlighted the response of different generators.

BgTPP

Unit- II & III initially gave a positive response but could not sustain the same. Thus resulting in inadequate performance.

KHEP

Both Kopili, Khandong performance not satisfactory. DGM, NEEPCO informed that the water level at Umrong reservoir is very low and further guide vane was at 100%, so higher response not possible.

OTPC

Negative response was observed for both the modules of OTPC. Manager, OTPC informed that GTG was operating on base load and since compressor output depends on frequency, generation could not be increased(beyond a certain amount) for fall of frequency.

NERLDC informed the forum that the RGMO analysis is being done as per the conditions given in Regulation 5.2 (f) and Regulation 5.2 (h) of IEGC. It was requested to all ISGS to provide maximum possible response as per the above mentioned regulations of IEGC in order to increase the response of NER as only 2.2 % response is very poor in comparison to other regions. Proper support in primary response from all generators is needed for maintaining all India frequency as close to 50 Hz as possible at all times.

NERLDC requested all the generating utilities to submit the DAS data for proper analysis. For the above mentioned event, DAS data was provided only by BgTPP.

The Sub-Committee noted as above.

Action: NEEPCO, NHPC, NTPC, OTPC.

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

In 158th OCCM, it was decided that by Aug 1st week reactive capability testing would be done for Palatana and subsequently schedule for testing for other ISGS will be prepared.

In 159th OCCM, NERLDC informed that Palatana is absorbing and generating MVAR as per grid requirement. The testing would be done on 14th August, 2019. NERLDC requested NTPC to give a schedule of reactive testing for BgTPP.

Deliberation of the sub-Committee:

NERLDC informed that the reactive capability testing for Palatana was successfully completed on 14.08.19. All the recommendations and decisions during the testing and recorded in MoM are to be implemented by OTPC at the earliest. It was decided that testing for BgTPP would be done in the 3rd week of Sep'19. NEEPCO and OTPC in unison informed the members that AGTCCPP is generating continuous MVAR in limit of their capability. This is highly undesired as it is causing undue stress on the machine as well as excitation system. Member Secretary, NERPC informed that the matter would be taken up by the Committee and measures would be suggested by the same.

The Sub-Committee noted as above.

Action: NTPC, OTPC, NERLDC, NERPC.

D.7 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 July'19 is as follows:

% Error with Actual Data (Forecasted by States)							
Day	Ar. Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
Median	23	15	9	11	34	11	15

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

Deliberation of the sub-Committee:

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.

The Sub-Committee noted as above.

Action: all SLDCs.

D.8 Continuous shutdown of 220 kV Bus Coupler & 4 x 33 MAV 220/132kV ICT-1 along with associated bays w.e.f 06/09/2019 and shifting of 01 set of 220 kV Bus PT at Dimapur w.e.f 02/09/2019.

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

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

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

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

The substation layout diagram is attached for further reference.

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

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

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

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

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

In 159th OCCM, NERTS informed that under the Dimapur upgradation project continuous shutdown of old ICT 33x3MVA is required with installation of two new ICTs 2x160 MVA. In the meantime Dimapur load will be fed from 100MVA ICT till Feb'21.

Director, NERPC stated that N-1 criterion would not be fulfilled if Dimapur is supplied with one ICT.

The forum felt that till 132kV Dimpur-Imphal line and 132kV Yurembam –Karong is restored the shutdown may not be granted. After detailed deliberation, members were requested to study the proposal so that the matter may be discussed in the next OCCM.

Deliberation of the sub-Committee:

NERLDC informed that during the period of shutdown, power restriction in Nagaland might be required in peak hours and hence concurrence of Nagaland will be necessary to approve the shutdown.

Further, NERLDC informed that as per system studies there will be severe low voltage problem in case of outage of other ICT in service at Dimapur. NERLDC opined that this shutdown would be allowed after restoration of the 132 kV Dimapur – Imphal line. NERTS requested NERLDC to check whether the low voltage issue could be avoided by changing the tap position of the ICTs in Nagaland Power System.

Director, NERPC requested NERLDC to conduct a detailed study so that the matter may be discussed in detail in the next OCCM in presence of officers from DoP Nagaland.

The Sub-Committee noted as above.

Action: NERLDC, MSPCL, NERTS.

D.9 Outage of lines and ICT at RHEP for replacement of breakers:

Director, NERPC informed the forum that during the Committee visit to RHEP on 05th August, 2019 it was brought to notice that all hydraulic CBs at RHEP are to be replaced

due to non-availability of spares. Considering the urgency of the work, NEEPCO has already given the order and materials are deemed to be delivered shortly. He requested for the views of the forum keeping in view the power supply condition to Arunachal Pradesh. SE(SO&PSC), DoP Ar. Pradesh stated that 132kV RHEP-Ziro line is the life line for the state and it is not possible to grant shutdown of the line. After detailed deliberation it was decided that NEEPCO would be requested to explore the option of keeping at least one 400/132kV ICT in service and 132kV RHEP-Ziro in service (by means of Transfer Bus and Bus Coupler) at all times.

Deliberation of the sub-Committee:

In view of delayed delivery of equipment, the forum deferred the item for discussion in the next OCCM.

The Sub-Committee noted as above.

D.10 Opening of all lines at Samaguri:

NERLDC informed that all lines at Samaguri except 220kV Samaguri-Sonabil-II opened during Emergency Shutdown of 220kV Samaguri-Bus-II on 02.09.19.

AGM, SLDC, AEGCL informed that all the lines are not connected to both the buses at Samaguri. However, a detailed report in this regard would be submitted before next OCCM.

Deliberation of the sub-Committee:

AEGCL is yet to submit detailed report to NERLDC. The detailed report would be submitted before next OCCM.

The Sub-Committee noted as above.

Action: AEGCL

D.11 Overdrawal of Tripura

On 20.08.2019, several violation messages were issued to SLDC Tripura but consistent over-drawal was seen even when the frequency dropped to 49.549Hz at 19:19hrs. Such incident is a Non-compliance of NERLDC instruction and violation of clause 5.2(m) of IEGC.

Deliberation of the sub-Committee:

DGM, SLDC, TSECL informed that Tripura is presently facing curtailing over-drawal, this is primarily due to the unregulated high drawal by Bangladesh. He assured that the matter is being taken with Govt. of Tripura as well as Bangladesh via NLDC.

NERLDC mentioned that Tripura must maintain their drawl (inclusive of Bangladesh Load) from the grid as closer to their drawl schedule as possible at all times. In the period of exigencies in the grid like low frequency, ATC violation, strict compliance of NERLDC instruction to reduce OD is expected from Tripura and all other constituents.

Tripura agreed to adhere to instructions of NERLDC at all times especially during grid exigencies.

The Sub-Committee noted as above.

Action: NERLDC, NERPC, TSECL.

D.12 Blackout of Lekhi-Nirjuli on 15.08.2019

A grid disturbance on 15.08.2019 at 19:27hrs led to blackout of Nirjuli and Lekhi S/S as the power is fed from Pare HEP. The unwanted tripping of Pare Bus-coupler led to such grid disturbance. NERLDC requested NEEPCO to analyse the event and furnish the reasons of such tripping vide letter no NERLDC/SO-I/Pare/2019 dated 16.08.2019

Deliberation of the sub-Committee:

DGM, NEEPCO informed that the Bus –Coupler mal-tripping is being analyzed by ANDRIZ Hydro (OEM & AMC party). The forum noted and referred the matter to the next Sub-group for detailed discussion.

NERLDC once again reiterated on the fact that increasing number of unwanted trippings due to relay mal-operations and improper protection coordination is resulting in large number of GDs in the Region.

The Sub-Committee noted as above.

Action: NEEPCO, NERPC.

D.13 Impact of Doyang HEP generation due to tripping of Mokokchung ICT-1 & 2

On 12.08.2019, 13:35hrs Tripping of Mokokchung ICT-1 & 2 at Mokokchung led to initiation of Oscillation in the system which resulted in Tripping of two units of Doyang. NERLDC requested NERTS, POWERGRID to analyse and furnish the reason of tripping of ICTs at Mokokchung vide letter no NERLDC/SO-I/NERTS/2019 dated 14.08.2019.

Deliberation of the sub-Committee:

The forum noted and referred the matter to the next Sub-group for detailed discussion.

The Sub-Committee noted as above.

Action: NERPC.

D.14 Manual opening of all 132kV lines at AGTCCPP during contingency situation in NER grid

On 13.08.2019 at 03:13hrs all 132kV lines from AGTCCPP were handtripped without any prior intimation to NERLDC. NERLDC requested NEEPCO to furnish the reason of hand tripping vide letter no NERLDC/SO-I/AGTCCPP/2019 dated 13.08.2019.

Deliberation of the sub-Committee:

NERLDC informed that all the healthy lines were hand-tripped without any code from NERLDC. Stating that this was in violation of IEGC and a bad precedent, NERLDC requested for strict action. DGM, NEEPCO informed that on 13.08.19, initially bus was charged but station power was not available due to tripping of SST. When SST was tried to be charged(via GTG-3 generation) again it did not stand, hence the operator hand-tripped all the lines as per Station procedure. The forum noted very strongly, advised NEEPCO/other utilities to desist from such action and always take code from NERLDC before any real time operation. No important grid element should be taken out of service without the permission of NERLDC in real time.

The Sub-Committee noted as above.

Action: NEEPCO, all utilities.

D.15 Training for FTC software

First Time Charging Software developed by C-DAC is being procured by NERLDC and is planned to be deployed by next month. Hence, C-DAC will be conducting SAT for the FTC software and training for the NER Power Utilities in the next month. Exact schedule will be shared later. Once this process is completed, all the power utilities are requested to apply for first time charging of elements through this FTC web portal.

The Sub-Committee noted as above.

Action: all utilities.

D.16 Monitoring of Critical Elements affecting the reliability of and security of the Grid

Critical Elements which affect NER/ER TTC/ATC Values and Cause major Grid Disturbance		
SI No	Name of Element	No of tripping during Aug' 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 3	
4	400 kV Silchar - Byrnihat S/C 3	

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

Deliberation of the sub-Committee:

NERLDC presented the count of trippings of the above elements:

SI No	Element	No of trippings
1	400 kV Azara - Silchar Line	3
2	400 kV Byrnihat - Silchar Line	3
3	125 MVA, 400/132 kV ICT 1 at Palatana	1
4	125 MVA, 400/132 kV ICT 2 at Palatana	1
5	132 kV Khandong - Kopili 2 Line	1
6	132 kV Palatana - Surjamaninagar 1 Line	1

It was noted that on 02nd September a major GD was averted due to the successful operation of AR for both the 400kV Silchar-Azara and 400kV Silchar-Byrnihat. The forum thanked NERTS, AEGCL and MePTCL for timely completion of the AR scheme for both the lines. The forum requested NERPC to take up the matter in the Sub-group meeting for detailed analysis.

The Sub-Committee noted as above.

Action: all utilities/NERLDC.

D.17 Requirement of model data for simulation of power system stability and dynamics

NLDC vide letter dated 27th Aug 2019 to NPC and RPCs highlighted the requirement of inclusion of new formats in addition to the existing formats by CTU and STU/SLDCs for collection of data pertaining to dynamic parameters of new generators and other equipment. In case of already connected plants, SLDC/STU may issue the necessary instruction to the concerned generator with modified template and request them to furnish the information latest by Dec 2019.

Deliberation of the sub-Committee:

CGM, NERLDC stated for new elements being commissioned the data may be submitted to NERLDC and for old generators the available data is also to be submitted.

The Sub-Committee noted as above.

Action: All utilities.

D.18 Furnishing of Transmission Line parameters and Relay Settings for development of PMU Analytic Tools by IIT Bombay under URTDSM Project

IIT Bombay is in the process of developing PMU Analytics Tools under URTDSM Project. The team from IIT Bombay visited NERLDC, Shillong on 8th July 2019. The required Transmission Line parameter and Relay Settings of all the feeders where PMUs are installed under URTDSM project has not been received yet from SLDC, Assam. It is requested to furnish the same at the earliest to develop the Analytics Tool.

Deliberation of the sub-Committee:

After detailed deliberation, the forum noted that the data is already available for the control areas of Assam, Meghalaya, Tripura, Mizoram as part of PDMS project. NERLDC would reference the same.

The Sub-Committee noted as above.

Action: NERLDC/NERPC.

Metering Agenda

D.19 METER ERRORS:

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

- I) Panchgram end of Lumshnong feeder, Panchgram end reading erratic.
- II) Panchgram end of Badarpur feeder, Panchgram end reading zero value

Deliberation of the sub-Committee:

The errors at Panchgram end of 132 kV Panchgram-Lumshnong line and Panchgram end of 132 kV Badarpur-Panchgram line is persisting. NERLDC requested NERTS to take necessary action at the earliest.

EE, SLDC, Meghalaya informed about the difference in Meter reading of 400kV Silchar-Byrnihat and Agia – Mendipathar.

The Sub-Committee noted as above.

Action: NERTS.

D.20 High SEM Time Drift:

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

The compliance report of many locations as detailed in **Annexure D.20.a**, are not received by NERLDC and **Annexure D.20.b** provides location details of Drift correction action not being done / weekly SEM data not sent.

Deliberation of the sub-Committee:

NERLDC requested concerned utilities to do time drift corrections on regular basis and also asked to send time drift report on regular basis. Assam mentioned that the time drift of Tinsukia meter is very high (approx. 25 minutes).

Regarding Time drift at Azara, Assam informed that person from Bongaigaon(PG) once came and corrected the time drift by 1 minute and after that it was not done. SLDC Assam requested NERTS to take necessary action for correcting the time drift at Azara S/S of Assam.

NERLDC requested Tripura to send Udaipur meter readings and asked Tripura to coordinate with Agartala(PG) for any issues.

NERLDC also highlighted that Sonabil station of Assam is not sending meter readings and requested SLDC Assam to take necessary action for sending the meter readings.

EE, SLDC, Meghalaya enquired as to whether time drift can be corrected using laptop. NERTS agreed to revert back.

The Sub-Committee noted as above.

Action: All utilities.

D.21 Urgent Meter Replacement:

Three SEMs need to be replaced on urgent basis at the following ends:

1. Mariani (AS) end of Misa
2. Mariani (AS) end of Kathalguri (AGBPP)
3. Chanki end of 33kV Mariani PG

Deliberation of the sub-Committee:

Urgent replacement of meters at Mariani (As) end of Misa, AGBPP and Chanki end of Mariani (PG) feeders was deliberated. NERTS was requested to look into the matter at the earliest.

The Sub-Committee noted as above.

Action: NERTS.

D.22 Trial Run of Cooling towers at BgTPP:

Trial runs for PG test of Cooling Towers of all three units of BgTPP are planned from 10th of Sept'19 one by one. For this the corresponding unit needs to be run at full load. Accordingly, a Schedule of at least 480 MW (with 3 units running) for 6 hours daily (from 10 am to 4 pm) is required for 4-5 days from 10-9-2019. PG tests of Cooling Tower shall be taken up after successful completion of these test runs.

Since conducting the PG test is a contractual obligation, we may please be allowed a Schedule of at least 480 MW for 6 hrs daily for 4-5 days from 10-09-2019. The exact date of commencement of trial run shall be intimated 2 days in advance.

Deliberation of the sub-Committee:

After detailed deliberation, it was decided that NERPC/NERLDC would co-ordinate in real time with NTPC & constituents.

The Sub-Committee noted as above.

Action: NERPC, NERLDC, NTPC.

D.23 Dismantling of 132kV S/C Dimapur - Imphal transmission line on account of highway construction by NHIDCL at Nagaland - POWERGRID

During the deliberation of special meeting held at Imphal on 25.09.2018 in connection with dismantling of 132KV Dimapur - Imphal S/C Transmission Line of POWERGRID to facilitate construction of Dimapur-Kohima 4-lane Highway, it was discussed and decided that POWERGRID would dismantle the line in various stretches involving 32 nos. of locations to clear the front to NHIDCL for construction of the Highway. Further, POWERGRID agreed to restore the line within 31.01.2019 subject to resolution of all RoW issues in time by Nagaland State Administration immediately on occurrence.

During the 155th OCC meeting, POWERGRID stated that although the foundation & erection works for diversion of the line has been taken up by POWERGRID with adequate mobilization, Right of Way issues along the new route involving 28 nos. of locations had become deterrent to the progress as those are taking considerable time to get resolved. In the said meeting, POWERGRID also raised concern over the

apprehended uncongenial working conditions during the Monsoon period leading to further spillage of the work.

Considering all above stated facts, the subcommittee agreed to consider the outage of 132kV Dimapur – Imphal Line under “*Force Majeure Condition*” till completion of restoration.

Now, as on date, following critical issues are still pending with state administration:

- a. Finalization of compensation of ROW for balance 2 locations in Kohima District & 1 location in Dimapur District.
- b. Finalization of compensation for Surface damage for all the new spans in Kohima District.

POWERGRID is pursuing continuously with the Administration to resolve above issues at the earliest.

It may also be mentioned here that heavy rain fall & landslides during the last few months at various locations along the Dimapur-Kohima highway has adversely affected the pace of the ongoing work even as physical movement of working personnel & carriage of construction materials to new locations have been hampered on account of breakdown of communication to the locations. Meanwhile, 2 No. existing towers viz. loc.355 & 356 of the line have collapsed on account of severe landslide along the Dimapur-Kohima highway. Apparently it seems that due to massive soil excavation on account of highway construction the soil Strata might have got disturbed resulting severe landslides along the highway.

Currently, adverse weather conditions & frequent breakdown of communication on account of landslides, as stated above has gravely impacted the restoration work.

Despite all the obstructions, POWERGRID is making all out efforts for restoration of the line at the earliest. However, considering the present conditions, it is expected that it would be possible to restore the line overcoming all the Force Majeure Conditions by November-2019 only. This is however subject to clearance of ROW issues at the balance locations.

Present Status : Foundation : 19/28
Erection : 17/28
Stringing : Yet to be started

It is pertinent to mention here that a section of the 132KV Dimapur-Imphal line (from Imphal to Kohima) is presently under use by DoP, Nagaland for feeding power to Kohima as requested by DoP, Nagaland & subsequently agreed in the 158th OCC meeting (which is an interim arrangement for 6 months).

Deliberation of the sub-Committee:

After detailed deliberation, it was decided to refer the matter to the next TCC/RPC meeting.

The Sub-Committee noted as above.

Action: NERPC, NERLDC, NTPC.

D.24 Consultancy services to Government of Arunachal Pradesh for the execution of (a) 132 kV Ziro- Daporijo-Along transmission system and (b) 220 kV Kathalguri-Deomali transmission system – release of over due fund to POWERGRID under consultancy agreements dtd. 14.03.2000

An amount of Rs. 3.434 Crore is outstanding from Department of Power, Arunachal Pradesh against the following works executed by POWERGRID under consultancy services to DoP, Arunachal Pradesh.

- a. Construction of 132KV S/C Ziro-Daporijo Transmission line along with Substation at Daporijo.
- b. Construction of 132KV S/C Daporijo-Along Transmission line along with Substation at Along.
- c. Construction of 220KV S/C Kathalguri-Deomali Transmission line along with Substation at Deomali.

The above works were completed by POWERGRID progressively by May'2007.

POWERGRID has been pursuing the matter with DoP, Arunachal Pradesh since long for payment of the outstanding amount. However, as on date, the same is yet to be paid by DoP, AP.

Deliberation of the sub-Committee:

The forum requested DoP Ar. Pradesh to liquidate the dues at the earliest.

The Sub-Committee noted as above.

Action: DoP Ar. Pradesh.

D.25 Cold Spare transformer requirement for Northern Eastern Region

Presently, POWERGRID is maintaining 950 nos. of 765/400kV, 400/220kV and 220/132kV ICT units. A reasonable level of spares has to be maintained in order to ensure the reliability of the grid and to reduce downtime in case of any failure/outage.

CERC had set up a Committee on dated 15.03.2018 consisting of representatives from CERC, NLDC, CEA & POWERGRID under the Chairmanship of the Chief (Engineering) of the CERC to assess the requirement of regional spares including bus reactors, line reactors, ICTs, etc. The committee has recommended the following norms:

- 3.1 For 1Ø 400kV and 765kV rated equipment – One 1Ø spare transformer for each type in each rating in each state;
- 3.2 For 3Ø 400kV rated equipment where population is less than 20 nos. – One 3Ø spare transformer for each type in each state;
- 3.3 For 3Ø 400kV rated equipment where population is more than 20 nos. – At least two 3Ø spare transformer in each state;
- 3.4 For 3Ø 220kV and below rated equipment – One 3Ø spare transformer with highest MVA rating in each state.
- 3.5 In view of the report of aforesaid committee with regard to regional cold spares, the requirement of 765/400kV, 400/220kV and 220/132kV transformers pertaining to Northern Eastern Region has been prepared considering the number of transformer/ reactor installed, cold spare available and the same is given below:

Transformer/ Reactor MVA Rating and Phase	Voltage Rating (KV)	Spare Qty Required as per norms	Available Spare	Qty proposed for procurement	Remarks
Transformer 3Ø- 50MVA	220/132	1	0	1	Installed in 01 state (Salakati, ASSAM)
Shunt Reactor 3Ø-50MVAR	420	1	0	1	Installed in 01 state (Balipara, Assam)

Deliberation of the sub-Committee:

The forum approved in-principle and referred the matter to the next TCC/RPC for approval.

The Sub-Committee noted as above.

Action: DoP Ar. Pradesh.

D.26 Diversion of existing 400 kV D/C Silchar-Imphal Transmission Line on account of Railways:

Diversion of existing section from loc.372/0 to loc.385/0(involving foundation, erection & stringing at 18 new locations) of 400KV D/C Silchar-Imphal line has been taken up by POWERGRID at the request of NF Railways for facilitating their Railway yard construction. At present, foundation work at all locations stands completed & balance activities viz. erection & stringing too are now progressing at a rapid pace. The following constraints have pushed the work beyond originally targeted schedule:

- Delay in the railway clearance has been a major issue which has affected the work. The clearance was received only in January/2019 subsequent to which foundation works could be expedited.
- Further, severe ROW issues have been encountered during the course of the foundations works which could be resolved by constant persuasion and active support by the District Administration.
- No transporter of repute was willing to ship the materials with the perception of the law and order situation and road blockades preceding General elections , Bandhs in the wake of CAB and the anticipated situation during General elections that followed. This has delayed the supply of materials. However, POWERGRID actively pursued with the transporters and the suppliers and, owing to their persuasion, all the materials have successfully reached site.

POWERGRID has taken up the erection work in spite of the unfavourable weather conditions and paddy cultivation with an endeavour to complete the work by October 19. However, in the event of severe opposition by the cultivators, part of the work may spill over beyond the cultivation season.

Deliberation of the sub-Committee:

The forum approved in-principle and requested NERTS to expedite the pace of works.

The Sub-Committee noted as above.

Action: NERTS.

ADDITIONAL AGENDA FROM NERPC:

D.27 3-phase Auto-reclosure for 400kV Silchar-Azara & 400kV Silchar - Byrnihat:

NERPC informed that in view of repeated 2-ph/3-ph tripping of 400kV Silchar-Azara & 400kV Silchar-Byrnihat due to back flashover, the 3-ph AR is imperative to be implemented. Sr.GM(SO-II), NERLDC opined that in case of simultaneous tripping of

both of these lines, chances of successful 3-ph AR would be remote due to islanding of the Southern grid from NER grid(different frequency). After detailed deliberation it was decided that in order to increase the reliability of the system, 1-ph & 3-ph AR would be implemented for both the 400kV Silchar-Azara and 400kV Silchar-Byrnihat. Forum requested NERLDC to give suggestion regarding which end check sync and dead sync to be implemented. NERPC informed that this would be further referred to CTU & CEA for concurrence.

The Sub-Committee noted as above.

Action: NERLDC, NERTS, AEGCL, MePTCL.

ADDITIONAL AGENDA FROM OTPC:

D.28 Exemption of OTPC Palatana Project from Peak/Off-Peak Operation under CERC Tariff Regulations due to inability of Fuel Gas supplier to provide fuel at variable flow rates:

While notifying the Tariff Regulations 2019-24, CERC has maintained that to meet the future grid requirements, conventional (Coal & Gas) generators will need to generate more power during peak hours and may be required to reduce generation upto 55% of Machine Continuous Rating (MCR) during off-peak hours. Therefore, in the tariff regulations for 2019-24, CERC has introduced the concept of Peak and Off-Peak hours of operations of a generating station, which shall be operationalized by RLDCs from 1st April 2020.

OTPC had hence written to the fuel gas supplier for Palatana Project to provide flexible gas supply at variable flow rates to Palatana during the day in line with the CERC Tariff Regulation (for higher generation during peak hours and lesser generation off-peak hours).

However, the fuel gas supplier has expressed its inability to provide gas at variable flow rates due to the facts as stated below:

- a. Gas production facilities at Tripura are on a standalone basis from gas fields in Tripura and are not connected to any external gas grid,
- b. Being landlocked there is no provision of gas import/export in and out of Tripura,
- c. The gas supply facilities have no storage facilities,
- d. The wells and other gas production and transportation infrastructure created in Tripura does not permit production or supply of gas at variable rates of flow and
- e. The gas supplies have been created on Gas to Wire concept

As a gas based power stations is solely dependent on fuel supply to ramp up/ramp down generation, the inability of the gas supplier to provide gas at variable flow rates will mean that Palatana Project will not be able to maintain the desired peak/off-peak hours operation as per CERC Tariff Regulations.

In view of the above, it is kindly requested that Palatana Project may be exempted from Peak/Off-Peak Operation under CERC Tariff Regulations due to inability of the Fuel Gas supplier to provide fuel at variable flow rates.

Deliberation of the sub-Committee:

The forum agreed in-principle and referred the matter to the next TCC/RPC meeting for deliberation.

The Sub-Committee noted as above.

Action: NERPC/OTPC.

D.29 Load reduction of OTPC during 400 KV Palatana – Silchar line-1 or Line-2 S/D

Load reduction of OTPC during 400 KV Palatana – Silchar line-1 or Line-2 S/D, "In order to ensure reliability and security of the Grid during the course of shutdown Considering N-1 contingency of 400 kV Silchar- Palatana Ckt. Action plan to be established as during both unit running of OTPC, it will not be feasible to reduce generation on the tune of 230 MW.

Deliberation of the sub-Committee:

Pls refer to discussion in **item No. A.**

The Sub-Committee noted as above.

Action: NERTS.

D.30 Tripping of OTPC 400/132 KV 125 MVA ICT-1 & 2

ICTs tripped on E/F protection due to unbalance current, during tripping and Charging of 132 KV S.M Nagar –Comilla line on dated 27th Aug 2019 at 05:18 and 05:30 hrs, Proper RCA required.

Deliberation of the sub-Committee:

NERLDC informed that prima-facie it appeared mal-operation of E/F relay of ICT and not due to fault in 132kV SMNagar-Comilla line. After detailed deliberation the forum referred the matter to the next Sub-group meeting for deliberation.

The Sub-Committee noted as above.

Action: NERPC.

ADDITIONAL AGENDA FROM NERLDC:

D.31 Increasing trend of tripping of Important Grid Elements of NER

There were about not less than 1000 nos. of tripping of grid elements for a period of Jan'19 to Jun'19 which is matter of concern and questions the maintenance practices followed by the utilities of NER. Tripping of 400 kV & 132 kV lines increased drastically this year. This situation is alarming and lack of analysis & quick implementation of corrective actions by constituents is contributing to the repeated tripping which is putting the grid in a vulnerable condition.

Grid Disturbance for the period Apr-July'19 is 93 nos. and in Apr-July'18 it was 92 nos. even though weather condition was much favorable in this year compared to last year. Repeated disturbances in Tripura, Nagaland, AP & Mizoram is a matter of concern as Capital is getting affected multiple times and international power supply is getting affected in case of Tripura.

This issue was discussed in the 53rd PCC Meeting and concern utilities were requested to attend the issues pertaining to the protection systems in a time bound manner. Forum requested that corrective actions which are not requiring fund to be attended within 3 months and which require fund to be attended within 6 months.

Deliberation of the sub-Committee:

The forum noted with great concern the high number of trippings and requested the Sub-group to clearly identify the Root Cause and suggest recommendations. CGM, NERLDC stated that the same is not possible due to non-submission of DR/EL in majority cases. The forum requested all utilities to submit DR/EL within 24hrs and TSECL (within 48hrs).

Forum also requested NERPC to strongly take up with higher official of P&ED Mizoram and DoP AP on frequent disturbances at Kolasib area of Mizoram and Chimpu/Itanagar/Nirjuli/downstream of Pasighat – Roing area of Arunachal Pradesh.

The Sub-Committee noted as above.

Action: All utilities/NERPC.

D.32 Grid Disturbance of CEA Category GD-V on 03rd & 20th April,2019:

Two grid disturbances occurred on 03.04.2019 and 20.04.2019 affecting Southern Part of the NER grid. Tripping of 400kV Palatana-Silchar-II line on account of conductor failure while 400kV Palatana-Silchar-I line was under emergency shutdown initiated the Grid Disturbance on 03.04.2019. Simultaneous tripping of 400kV Byrnihat –

Silchar line and 400kV Azara – Silchar line triggered the Grid Disturbance on 20.04.2019.

Root Cause Analysis of these Grid Disturbances discussed in subgroup meeting of NERPC on 02.05.19 & 16.05.19 and several remedial measures were suggested. It is to mention that there was a near miss situation in NER Grid on 2nd. August'19 on account of tripping of 400 kV Silchar – Azara line and Silchar - Byrnihat line simultaneously. Implementation of several remedial measures are being delayed and this is affecting the reliable operation of southern part of NER grid.

Early implementation of remedial measures against GD-V needs to be expedited.

Deliberation of the sub-Committee:

Pls refer to the status as updated in **item No. C.14.**

The Sub-Committee noted as above.

Action: NERPC.

D.33 Submission of FIR, DR output & EL output and Tripping Report of elements connected to Grid Substation/Generating Station

It is observed that very few FIR, DR and EL outputs are received mainly from state utilities due to which proper analysis of the events cannot be done to find the root cause and suggest timely remedial measures. Delay in finding the root cause shall lead to repeated tripping and even result in Grid Incidents/ Disturbances. Non – furnishing of these details is considered as violation of the Regulations 5.2 (r) & 5.9.6 (c) of the IEGC. This matter was discussed in various PCC meetings of NERPC.

It is requested to upload FIR, DR and EL output and Tripping Report for tripping of each element in Tripping Portal of NERLDC within the timeline as stipulated in the regulations.

Deliberation of the sub-Committee:

Pls refer to the status as updated in **item No. C.14.**

The Sub-Committee noted as above.

Action: NERPC.

D.34 Status and action plan for implementation of recommendations of various Protection Audits in NER

The 1st phase of 3rd Party Protection Audit of NER substations has been completed on 29.11.17. 69 Nos. of Substations has been audited in the 1st phase. In the subgroup

meeting on 6th Dec'17, after detailed deliberation, it was decided to form a committee to study the protection audit findings and data collected from site. Protection audit of 6 substations of NER was conducted by Tetrabel (Consultancy firm to review the status of implementation of recommendation of Enquiry Committee on Grid Disturbance and Protection Audit) in Jun-Sep'2016.

In the 51st PCCM, NERPC updated the status of the third-party protection audit and informed that a comparative summary (detailing 2012-13 audit status & 2017-18 audit) has been circulated to all the utilities, for updating latest status and timeline. The forum requested all the utilities to submit the status and timeline for completion of suggested remedial actions by 31.08.2018.

The timeline given by various utilities for submission of compliance status (Third Party Audit + Tractabel Audit) as per 53rd PCCM is as below:

Name of utility	Status given in 53 rd PCC
TSECL	By 15.07.19
DoP Nagaland	By 15.07.19
NERTS-POWERGRID(Tractabel Audit)	By 15.07.19
DoP Ar. Pradesh	By 15.07.19
P&ED Mizoram	By 15.07.19
NTPC	By 15.07.19

Above utilities are requested to intimate their status and action plan against the compliance of recommendations of various protection audits.

Deliberation of the sub-Committee:

NERPC informed that inspite of repeated persuasion the status of the recommendations was not received from the utilities. The forum once again requested the concerned utilities to submit the status of recommendations.

The Sub-Committee noted as above.

Action: All utilities as above.

D.35 Opening of grid elements without intimation to NERLDC:

Date	Incident	Description
21.07.2019	Hand Tripping of 132 kV Aizwal - Tipaimukh and 132 kV Jiribam - Tipaimukh at Tipaimukh end	Testing work was being performed at Tipaimukh S/S without prior intimation to NERLDC and subsequently lines emanating from Tipaimukh S/S i.e 132kV Aizawal-Tipaimukh and 132kV Jiribam Tipaimukh were hand tripped. This led to a vulnerable situation in Mizoram due to outage / shutdown of 132 kV Aizwal - Kumarghat T/L and 132 kV Silchar - Melriat D/C.
27.07.2019	Opening of 132 kV Rokhia - Monarchak line during S/D of 132 kV Rokhia - Agartala line II	132 kV Rokhia-Monarchak line was opened during the shutdown of 132 kV Rokhia-Agartala line II without any prior intimation to NERLDC. Even the S/D was availed without approval of OCC forum and without intimation to RLDC.
06.08.2019	Opening of all 220 kV Lines from Samaguri except 220 kV Samaguri-Sonabil line II during E/S/D of Samaguri Bus II	All 220kV lines were opened except 220kV Samaguri-Sonabil II during emergency shutdown of 220 kV Samaguri Bus II. While availing shutdown of any bus, all feeder should have been kept energized and in operating condition through the other bus.
10.08.2019	Manual Opening of 220 kV Agia-BTPS D/C lines at BTPS S/S	At 18:18 hrs of 10.08.2019, 220 kV Salakati-BTPS D/C & 220 kV NTPC-BTPS lines tripped. At 18:21 hrs, 220 kV BTPS-Agia D/C lines were hand tripped from BTPS end, which resulted in blackout of BTPS S/S along with other 132kV downstream S/S which is undesirable.

12.08.2019	Manual opening of all 132kV lines at AGTCCPP during contingency situation in NER grid	On 12.08.2019 at 03:13hrs all 132kV lines from AGTCCPP were hand-tripped without any prior intimation to NERLDC thereby compromising system reliability.
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Members may discuss.

Deliberation of the sub-Committee:

The forum requested utilities to desist from switching on/off grid elements without prior intimation/availing code from NERLDC.

The Sub-Committee noted as above.

Action: All utilities as above.

D.36 Constraints in system operation:

1. Long outage of 132 KV Imphal-Dimapur line
2. Upgradation of CT to 600/1 at Lekhi for 132kV Lekhi-Chimpu upgradation of 132kV Lekhi bus by DoP Ar. Pradesh
3. Long Outages of 132kV Srikona-Panchgram and 220kV Samaguri –Sonabil I
4. Installation of Reactor at RHEP to contain overvoltage and to prevent opening of lines.
5. Availability of synchronization trolley in important sub-stations.
6. Long Outage of 63 MVAR Reactor at Byrnihat and replacement of same to 80 MVAR. and Long outage of 63 MVAR L/R at Palatana end of 400 kV Silchar- Palatana –I

The Sub-Committee noted as above.

Action: All utilities as above.

D.37 Intra State Lines being kept open

Important intrastate lines are being kept open, compromising the reliability of the NER grid. Some of the lines kept open are as follows:

- a. 132kV Rangia- Rowta
- b. 132kV Rangia-Siphajhar
- c. 132kV Sarusajai-Umtru 1, 2
- d. 132kV Kahilipara-Umtru 1, 2

The matter was deliberated in 159th OCC Meeting. Action plan to mitigate the issues leading to opening the above mentioned lines is to be discussed so that these lines may be kept in service round the clock.

Deliberation of the sub-Committee:

SLDC, AEGCL informed that the 132kV Rangia - Rowta and 132kV Rangia-Sipajhar is being kept open due to system constraints. NERPC informed that for items c & d above issue will be resolved after LILO at Killing. NERLDC requested for joint study along with Assam for a & b above.

The Sub-Committee noted as above.

Action: All utilities as above.

D.38 Non-availability of Data with non-compliance of agreed points recorded in Minutes-of-Meeting with Assam.

A meeting was held between Assam and NERLDC, from 27-29th March 2019, and certain action points with corresponding deadlines were tabulated. The corresponding points are attached as Annexure. No significant improvement is observed. It is a constraint to the state as well as regional grid operators for monitoring grid parameters.

Deliberation of the sub-Committee:

After detailed deliberation the forum referred the matter to the next NETeST meeting for deliberation.

The Sub-Committee noted as above.

D.39 Non-availability of Data with non-compliance of agreed points recorded in Minutes-of-Meeting with Meghalaya.

A meeting was held between Meghalaya and NERLDC, from 27-28th May 2019, and certain action points with corresponding deadlines were tabulated. The corresponding points are attached as Annexure. No significant improvement is observed. It is a constraint to the state as well as regional grid operators for monitoring grid parameters.

Deliberation of the sub-Committee:

After detailed deliberation the forum referred the matter to the next NETeST meeting for deliberation.

The Sub-Committee noted as above.

D.40 Non-availability of Data with non-compliance of agreed points recorded in Minutes-of-Meeting with Nagaland.

A meeting was held between Nagaland and NERLDC, on 08th July 2019, and certain action points with corresponding deadlines were tabulated. The corresponding points are attached as Annexure. No significant improvement is observed. It is a constraint to the state as well as regional grid operators for monitoring grid parameters.

Deliberation of the sub-Committee:

After detailed deliberation the forum referred the matter to the next NETeST meeting for deliberation.

The Sub-Committee noted as above.

D.41 Delay in completion of FO projects under execution.

A meeting on the above referred matter has been done between NERTS, POWERGRID and NERLDC, POSOCO on 18-06-2019. The list of undergoing FO projects along with its time-line extension accorded in the past several NETeST meetings can be referred from Annexure.

Deliberation of the sub-Committee:

After detailed deliberation the forum referred the matter to the next NETeST meeting for deliberation.

The Sub-Committee noted as above.

D.42 Special Protection Scheme at RHEP

Discussion in the subgroup meeting of NERPC held on 07.08.19 as follows:

NERPC informed that as per decision in the 158th OCCM a team visited RHEP on 05.08.19 and suggested the following SPS:

(i)With tripping of one ICT, one unit of RHEP is to be tripped.

(ii)SPS to be taken into service when all 3 units of RHEP are generating.

NEEPCO requested that tripping of one unit of Pare HEP to be included in the SPS when both units at Pare are generating.

The matter was referred to OCC for approval.

Deliberation of the sub-Committee:

Forum agreed in principle and requested NEEPCO to implement the SPS.

The Sub-Committee noted as above.

Action: NEEPCO

D.43 Upgradation of 220 kV Sakalati – BTPS D/C with HTLS conductor

Deliberation of the sub-Committee:

NERLDC informed the forum that loading of single circuit of 220 kV Sakalati – BTPS D/C had gone more than 203 MW. Thermal capacity of ACSR zebra conductor is 560 Amps corresponds to 203 MW at 0.95 pf. This is affecting the safe operation of NER

grid. NERLDC proposed to upgrade the present ACSR Zebra conductor with HTLS conductor for 220 kV Sakalati – BTPS D/C. Forum agreed in principle and referred to next NERSCT.

The Sub-Committee noted as above.

Action: NERPC

ADDITIONAL AGENDA FROM NEEPCO

D.44 PPA of Kameng HEP.

DGM, NEEPCO informed that of the first two units (2x150 MW) of Kameng HEP, PPA has been signed for 253MW, 36MW is free power and for the rest 11MW there is no PPA. He requested for resolution of the 11MW power from first two units.

Deliberation of the sub-Committee:

The forum requested all the states to sign PPA for the 11MW power. NEEPCO further informed that the expected tariff is 4Rs/unit.

The Sub-Committee noted as above.

Date & Venue of next OCC meeting

It is proposed to hold the 161st OCC meeting of NERPC on third week of October 2019. However, the exact date and venue will be intimated in due course.

Annexure-IList of Participants in the 160th OCC Meeting held on 04th September, 2019

SN	Name & Designation	Organization	Contact No.
1.	Sh. Sange Phuntso, EE (E)	Ar. Pradesh	09436041217
2.	Sh. Purik Buchi, A.E (E)	Ar. Pradesh	09402936916
3.	Sh. T.K. Mahanta, CGM, SLDC	Assam	-
4.	Sh. H.S. Mohan, DGM, SLDC	Assam	09435336124
5.	Sh. Dipesh Ch. Das, AGM (LDC)	Assam	09954110254
6.	Sh. Bimal Ch. Das, AGM, SLDC	Assam	09435119248
	No Representatives	Manipur	-
7.	Sh. T. Gidon, EE, SLDC	Meghalaya	09774479956
8.	Sh. R. Biam, AE, SLDC	Meghalaya	08794327510
9.	Sh. C.W. Chen, AEE, SLDC	Meghalaya	09863093311
10.	Sh. Y. Kharपुरi, AE	Meghalaya	09774507325
11.	Sh. R. Khongmalai, AE (MRT)	Meghalaya	08014137268
	No Representatives	Mizoram	-
	No Representatives	Nagaland	-
12.	Sh. Anil Debbarma, DGM, SLDC	Tripura	09612589250
13.	Sh. Joypal Roy, DGM (E/M)	NEEPCO	08837200069
14.	Sh. Krishna Kant Rai, Manager	NEEPCO	07005564565
15.	Sh. Diganta Goswami, DGM (E/M), O&M	NEEPCO	09435577655
16.	Sh. V. Suresh, CGM	NERLDC	09449599156
17.	Sh. Subhash Kumar, Asst. Manager	NERLDC	09485185844
18.	Sh. Amaresh Mallick, Sr. GM (SO-II)	NERLDC	09436302720
19.	Sh. Jerin Jacob, Asst. Manager (SO-II)	NERLDC	09602120113
20.	Sh. Ankit Jain, Manager	NERLDC	09436335381
21.	Sh. Keshab Borah, Engineer	NERLDC	07002323608
22.	Sh. Samar Chander De, GM	NERLDC	0943633549
23.	Sh. Sourav Mandal, Dy. Mgr.	NERLDC	0960212353
24.	Sh. U. Kataki, Sr. GM (I/c-AM)	PGCIL	09435505418
25.	Sh. H. Talukdar, Sr. DGM	PGCIL	09436335237
26.	Sh. Pulak Deka, Manager (E)	NHPC	06900178738

27.	Sh. Narendra Kumar Gupta, Sr. Mgr. (O)	OTPC	09774233426
28.	Sh. Sushil Kumar, Asst. Mgr. (O)	OTPC	08794716817
29.	Sh. Subhashish Guha, AGM (O)	NTPC	09435026737
30.	Sh. B. Choudhury, AGM (EEMG)	NTPC	09435503167
31.	Sh. Ratan Singh Basnet, Dy. Mgr.	NETC	08811072489
32.	Sh. A.K. Thakur, Member secretary	NERPC	-
33.	Sh. B. Lyngkhai, Director (O&P)	NERPC	09436163419
34.	Sh. S.M. Aimol, DD	NERPC	08974002106
35.	Sh. S. Mukherjee, AD	NERPC	08794277306
36.	Sh. S. Ranjan, AD	NERPC	08794277306

पावर सिस्टम ऑपरेशन करपोरेशन लिमिटेड
(भारत सरकार का उद्यम)
POWER SYSTEM OPERATION CORPORATION LIMITED
(A Government of India Enterprise)



उत्तर पूर्वी क्षेत्रीय भार प्रेषण केंद्र : लोअर नंगरा, लापालांग, शिलांग-793006, (मेघालय)
North Eastern Regional Load Despatch Centre: Lower Nongrah, Lapalang, Shillong - 793006, (Meghalaya)
Ph : 0364-2537470, 2537427, Fax - 2537486 Website : www.nerldc.org, Email - nerldc@posoco.in, CIN : U40105DL2009GOI188682

संदर्भ / Ref: NERLDC/SO-1/Assam/2019/

दिनांक / Date: 23.08.2019

To
CGM(SLDC), AEGCL
SLDC Complex, Kahilipara
Guwahati-781019, Assam

विषय /Sub: Regarding Availability of synchronising trolley at Important sub-stations of AEGCL.

Sir,

As per the deliberation in 159th OCCM (C.7 of 159th OCCM), to maintain at least one no. of synchronising trolley for strategically located substation in Assam system, a detailed list of important substations have been prepared taking into account fast restoration after disturbance and to ensure reliable operation of NER grid.

The list of important substations is as follows:

1. 220 kV Sarusajai.
2. 220 kV Mariani.
3. 220 kV Boko.
4. 220 kV Agia.
5. 220 kV Bongaigaon
6. 220 kV Sonapur.
7. 132 kV Pavoi.
8. 132 kV Gohpur.
9. 132 kV Rangia.
10. 132 kV Panchgram.
11. 132 kV Pailapool.
12. 132 kV Hailakandi.
13. 132 kV Kahelipara.

Therefore, necessary action for compliance of deliberation in 159th OCCM from AEGCL may please be ensured.

Thanking You,

Yours sincerely,

(आर. सूत्रधर / R. Sutradhar)

व. महाप्रबंधक (एस.ओ.-I) / Sr. GM (SO-I)

उ.पू.क्षे.भा.प्रे.के/NERLDC

Copy To:

- 1) प्रबंध-निदेशक, ए.ई.जी.सी.एल /MD, AEGCL
- 2) सदस्य सचिव, उ.पू.क्षे.वि.स/MS, NERPC

POWERGRID stations for installation of Weather Station.

Annexure-C.17

Sl. No.	Name of Substation	Voltage Level	Geographical Co-ordination		State	District
			Latitude	Longitude		
1	Balipara	400/220/33 kV	26°52'30.2"	92°46'04.8"	Assam	Sonitpur
2	Biswanath Chariali	400/132 kV	26°44'24"	93°13'08"	Assam	Biswanath
3	Bongaigaon	400/220/33 kV	26°27'41.2"	90°22'18.6"	Assam	Kokrajhar
4	Misa	400/220/33 kV	26°08'48.8"	92°46'56.7"	Assam	Hojai
5	Silchar	400/132/33 kV	24°49'35.2"	92°43'25.9"	Assam	cachar
7	Dimapur	220/132 kV	25°53'07.4"	93°44'35"	Nagaland	Dimapur
8	Mokokchung	220/132 kV	26°16.6142N	94°28.6119E	Nagaland	Mokokchung
9	Mariani (PG)	220 kV	26°37'15.8"	94°20'35.8"	Assam	Jorhat
10	Salakati	220/132 kV	26°27'59.1"	90°22'11.2"	Assam	Kokrajhar
11	Aizawl	132 kV	23°44'53.31228"	92°40'51.01752"	Mizoram	Aizawl
12	Badarpur	132 kV	24°52'11.3"	92°35'01.5"	Assam	Hailakandi
13	Haflong	132 kV	25.1985492	93.0166342	Assam	DIMA HASAO
14	Khliehriat	132 kV	25°20'42.7"	92°22'11.4"	Meghalaya	East Jaintia Hills
15	Kumarghat	132/33 kV	24°08'44.9"	92°01'19"	Tripura	Unakoti
16	Jiribam	132/33 kV	24°47'24"	93°07'38"	Manipur	Jiribam
17	Melriat	132 kV	23°77'29.5"	93°65'82.9"	Mizoram	Aizawl
18	Namsai	132/33 kV	27°41'34.0"	95°53'56.3"	Arunachal Pradesh	NAMSAI
19	Nirjuli	132/33 kV	27°07'34.84"	93°45'2.24"	Arunachal Pradesh	Papum Pare
20	Roing	132/33 kV	28°09'19.30"	95°49'55.11"	Arunachal Pradesh	Lower Dibang Valley
21	Tezu	132/33 kV	27°55'49.05"	96°11'11.7"	Arunachal Pradesh	Lohit
22	Ziro	132/33 kV	27°03'1.37"	93°50'99.3"	Arunachal Pradesh	Lower Subansiri

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
	ASSAM	
13	DULLAVCHERRA	REPORT NOT RECEIVED
14	TINSHUKIA	REPORT NOT RECEIVED
15	NAGALAND(S)	REPORT NOT RECEIVED
16	MIZORAM(S)	REPORT NOT RECEIVED
	TRIPURA	
17	SM NAGAR	REPORT NOT RECEIVED
18	79 TILLA	IRREGULAR
	MEGHALAYA	
19	BYRNIHAT	REPORT NOT RECEIVED
	ARUNACHAL PRADESH	
20	CHIMPU	REPORT NOT RECEIVED
	GENERATION	
21	AGBPP	REPORT NOT RECEIVED
22	DOYANG	REPORT NOT RECEIVED
23	PALATANA	IRREGULAR

Time Drift Corrective Action Not taken

SL NO	ENTITY	LOCATION	TIME DRIFT STATUS(MIN)	REMARKS
1	ASSAM	AZARA-BONG	-3:55	Meter replaced due to high time drift but due to inaction drift >3
2	ASSAM	AZARA-SIL	-4:24	Meter replaced due to high time drift but due to inaction drift >4
3	ASSAM	DULLAVCHERRA	+2:20	No action taken

Locations not sending weekly SEM data

SLN O	LOCATION NOT REPORTING	STATUS
1	UDAIPUR(TR)	DATA NOT SENT
2	SONABIL(AS)	DATA NOT SENT