



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

Ph. No: 0364 - 2534039

Fax No: 0364 - 2534040

Website: www.nerpc.nic.in

No. NERPC/SE (O)/OCC/2019/2674-2711

Dated: 16<sup>th</sup> January, 2020

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, Dongtieh-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, Dongtieh, 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 163 OCC Meeting.**

**Sir/Madam,**

Please find enclosed herewith the minutes of 163<sup>rd</sup> OCC Meeting held at “NERLDC Conference Hall”, Shillong on the **17<sup>th</sup> December, 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 163<sup>rd</sup> OPERATION COORDINATION**

**SUB-COMMITTEE MEETING OF NERPC**

**Date** : 17/12/2019 (Tuesday)  
**Time** : 11:00 hrs  
**Venue** : “NERLDC Conference Hall”, Shillong.

The List of Participants in the 163<sup>rd</sup> OCC Meeting is attached at **Annexure – I**

Director, NERPC welcomed the participants attending the meeting in person and also over VC to the 163<sup>rd</sup> OCC meeting. He informed that due to the unavoidable circumstances the full-fledged meeting could not be held in Guwahati. He thanked all the members for attending the meeting and hoped that the 164<sup>th</sup> OCC can be held in normal fashion.

Thereafter Director, NERPC took up the agenda for discussion.

**A. CONFIRMATION OF MINUTES**

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

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

**ITEMS FOR DISCUSSION**

**B.1. ACTION TAKEN:**

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

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

State	R&U scheme	ADMS	Capacitor Installation	SAMAST**	Line Differential Protection
Ar. Pradesh	Package-I NOA issued Finance dept concurrence not given. P-II tender opened. P-III tender by	TPA to be signed by Govt. of Ar. Pradesh by 22.11.2019.	-	Reply against TESG queries to be sent.	-

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

**Deliberation of the sub-Committee:**

Director, NERPC deferred the item for discussion in the next OCCM.

***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 162 <sup>nd</sup> OCC	Status as informed in 163 <sup>rd</sup> OCC
63MVAR Reactor at Byrnihat to replace with 80MVAR Reactor	MePTCL	Agreed by NLDC/NPC	Agreed by NLDC/NPC
132kV Dimapur - Imphal <i>(out since 25.07.18)</i>	NERTS	<p>NERTS updated the following Status:                      Foundation: 23/28                      Erection: 19/28                      Stringing:                      Mobilization done for clearance of vegetation along realigned ROW. Stringing to start from 18<sup>th</sup> Nov 2019.</p> <p>ROW constraint still exists for three locations and associated spans. Continuous rainfall and landslide triggered road blockade, is seriously affecting the pace of work. 04 Nos. Towers at Loc. 355, 358, 366 and 367 damaged in recent times due to heavy landslide. Moreover One No. Newly casted foundation (loc. 377) has been damaged due to landslide. These additional locations too needs reconstruction /</p>	Land survey for relocation of 2 Towers completed by NERTS. Latest survey report to be shared by NERTS.

		<p>rectifications for overall restoration of the line. Sr. GM, NERTS, Misa stated that possibility of soil strata got disturbed due to heavy soil cutting by NHIDCL which has resulted indiscriminate land sliding.</p> <p>EE, DoP Nagaland stated that for Kohima zone Re-survey may be done and further informed that on 20.11.2019 a Special meeting between DoP, Nagaland and NHIDCL has been agreed for discussion regarding re-routing of the line.</p>	
220kV Sonabil-Samaguri-I	AEGCL	NIT by Nov'19	OBD on 26.12.2019.
132kV Srikona-Panchgram (out since 14.01.2019)	AEGCL	Pile foundation may be required. LOI for soil testing soon.	Pile foundation may be required. LOI for soil testing soon.
63MVAR L/R for 400kV Palatana-Silchar Ckt-I (out since Apr'19)	OTPC	By Dec'19	By Dec'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 162 <sup>nd</sup> OCC Meeting	Status as informed in the 163 <sup>rd</sup> OCC Meeting
1	132 kV AGTCCPP - Agartala D/C	Installation of Line Differential in 132 kV AGTCCPP - 79 Tilla D/C & Review of impedance	NERTS/ NEEPCO	LDR: Technical evaluation completed. Under commercial evaluation stage. Award	LDR: Technical evaluation completed. Under commercial evaluation stage. Award

		setting of both ends as a temporary measure.		by Dec, 2019 <u>Impedance Measurement</u> : To be completed by 30.11.19	by Dec, 2019 <u>Impedance Measurement</u> : To be completed by 30.11.19
2	132kV AGTCCPP-Kumarghat	GPS to be procured and time synchronization of relay to be done	NEEPCO	Dec'19	Dec'19
3	132kV P.K. Bari-Kumarghat	Installation of Line differential relay	NERTS	Technical evaluation completed. Under commercial evaluation stage. Award by Dec, 2019	Technical evaluation completed. Under commercial evaluation stage. Award by Dec, 2019

**The Sub-Committee noted as above.**

**Action: NEEPCO, NERTS.**

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

SN	Data reg.	Target deadline	Status as informed in the 162 <sup>nd</sup> OCC Meeting	Status as informed in the 163 <sup>rd</sup> OCC Meeting
1	Furnishing Technical and Commercial data for computation of PoC Charges and Losses for January to March'20 (Q4 of 2019-20)	15.10.19	Manipur, Assam, Meghalaya, Mizoram and Nagaland submitted. Rest 2 states to be submitted. Tripura by Nov,2019, Ar. Pradesh- by Nov'19 end, NHPC & NEEPCO to submit	Manipur, Assam, Meghalaya, Mizoram and Nagaland submitted. Rest 2 states to be submitted. Tripura by Nov,2019, Ar. Pradesh- by Nov'19 end, NHPC & NEEPCO to submit
2	Furnishing details regarding GT Tap Positions of ISGS and other generators. Required for studies related to reactive power capability testing	15.10.19	Pare not submitted. Data from State Generators also required	Pare not submitted. Data from State Generators also required
3	Furnishing Node-wise half hourly data	By 10 <sup>th</sup> of the	Received from Arunachal, Manipur,	Received from Arunachal,

monthly Required for studies pertaining to Real Time Market	month	Mizoram. TSECL will submit by Nov'19. Assam, Meghalaya and Nagaland to submit from next month.	Manipur, Mizoram. TSECL will submit by Nov'19. Assam, Meghalaya and Nagaland to submit from next month.
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**The Sub-Committee noted as above.**

**Action: All utilities as above.**

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

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

**NER PERFORMANCE DURING NOVEMBER, 2019**

States	Energy Met (MU)		w.r.t. Oct,19 % inc (+) /dec (-)	Energy Reqr. (MU)		w.r.t. Oct,19 % inc (+) /dec (-)	% surplus (+) /shortfall (-) of energy In Nov,19
	Nov-19	Oct-19		Nov-19	Oct-19		
Ar. Pradesh	56.07	56.99	-1.61	56.43	57.3	-1.52	-0.64
Assam	699.61	812.59	-13.90	719.77	863.39	-16.63	-2.80
Manipur	73.45	74.06	-0.82	73.96	74.51	-0.74	-0.69
Meghalaya	175.87	173.57	1.33	175.87	173.57	1.33	0.00
Mizoram	63.71	66.76	-4.57	64.07	67.14	-4.57	-0.56
Nagaland	64.62	64.98	-0.55	65.04	65.34	-0.46	-0.65
Tripura	108.96	134.74	-19.13	108.98	134.98	-19.26	-0.02
<b>Region</b>	<b>1242.29</b>	<b>1383.69</b>	<b>-10.22</b>	<b>1264.12</b>	<b>1436.23</b>	<b>-11.98</b>	<b>-1.73</b>

States	Demand Met (MW)		w.r.t. Oct,19 % inc (+) /dec (-)	Demand in (MW)		w.r.t. Oct,19 % inc (+) /dec (-)	% surplus (+) /shortfall (-) of demand In Nov,19
	Nov-19	Oct-19		Nov-19	Oct-19		
Ar. Pradesh	146	137	6.57	146	137	6.57	0.00
Assam	1508	1770	-14.80	1508	1770	-14.80	0.00
Manipur	201	183	9.84	224	197	13.71	-10.27
Meghalaya	350	338	3.55	364	338	7.69	-3.85
Mizoram	107	102	4.90	107	102	4.90	0.00
Nagaland	148	148	0.00	150	150	0.00	-1.33
Tripura	257	291	-11.68	257	291	-11.68	0.00
<b>Region</b>	<b>2639</b>	<b>2878</b>	<b>-8.30</b>	<b>2714</b>	<b>2998</b>	<b>-9.47</b>	<b>-2.76</b>

**REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU**

**AVERAGE FREQUENCY (Hz)**

Month---->	Oct-19	Oct-19	Month---->	Oct-19	Oct-19
Total Generation in NER (Gross)	1400.490	1529.250		% of Time	% of Time
Total Central Sector Generation (Gross)	1001.845	1061.841	Below 49.9 Hz	4.07	3.28
Total State Sector Generation (Gross)	398.645	467.409	Between 49.9 to 50.05 Hz	73.62	77.06
<b>Inter-Regional Energy Exchange</b>			Above 50.05 Hz	22.26	19.66
(a) NER-ER	212.61	6.93	Average	50.01	50.01
(b) ER-NER	<b>40.71</b>	<b>350.22</b>	Maximum	50.27	50.31
(c)NER-NR	<b>37.18</b>	<b>371.27</b>	Minimum	49.65	49.67
(d)NR-NER	<b>183.50</b>	<b>0.00</b>			
© Net Import	-25.58	-27.98			

**Deliberation of the sub-Committee:**

NERLDC highlighted the following points in their presentation:

1. Max/Min Demand met in the Month : 2369 MW/2278 MW
2. Max/Min Energy met in the Month : 43.65 MU/39.49 MU
3. Frequency Issue: Within IEGC band : 73.6 %
4. Voltage issue : Max voltage at 400 kV RHEP – 429 kV. Voltage above 420 kV at 400 kV RHEP-18% of time
5. 63MVAR L/R for 400kV Palatana-Silchar Ckt-I – Out since Apr’19
6. Network Issues: GD – 10 no. of times & GI-6 no. of times
7. 4 no. of times GD has occurred at Ningthoukong area of Manipur due to tripping of 132 kV Loktak – Ningthoukong line 4 no. of times in the month
8. Tripping of important lines: 400 kV Bongaigaon - Byrnihat – 2 no. of times; 400 kV Silchar - Azara – 2 no. of times

***The Sub-Committee noted as above.***

**C. ITEMS- STATUS REVIEW**

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

During 163<sup>rd</sup> OCC meeting, the status as informed by different beneficiaries is as follows:

SN	Items	Status as given in 162 <sup>nd</sup> OCC Meeting		Status as given in 163 <sup>rd</sup> OCC Meeting	
		Timeline for completion	Timeline for completion	Timeline for completion	Furnishing of detail parameters
<b>a. New elements</b>					
1	400/220kV, 315 MVA ICT-1 of NTPC at Bongaigaon	Jan’20	Already submitted	Item was deferred for discussion in the next OCCM.	

2	Kameng HEP of NEEPCO two units (2 x 150 MW)  Next two units (2x150 MW)	Dec'19	CEA clearance available	
3	220/132 kV, 1x160 MVA ICT with GIS Bay at Kopili	Test charging shall be delayed due to damage to the Power House and Switchyard after failure of Penstock at Kopili.	To be submitted to NERLDC.	
4	Dedicated 33kV feeder at Khliehriat Substation from Lumshnong.	Date to be finalized.	Not applicable.	
5	220kV Balipara-Sonabil-2	Dec'19	To be submitted to NERLDC.	
6	Bay at Agia S/S for 132kV Agia-Nangalbibra Ckt #II by AEGCL	ERL panel supplier expect to deliver in 15 days. By Dec'19	To be submitted to NERLDC.	
7	80MVAR B/R at RHEP by NEEPCO	Discussed in 2nd NERSCT	To be submitted to NERLDC.	
<b>b. Elements under breakdown/upgradation</b>				
8	Up-gradation of 132 kV Lumshnong-Panchgram line	TESG queries submitted	Not applicable.	Deferred for discussion in the next OCCM.
9	PLCC Panels at Loktak end of Loktak - Ningthoukhong 132 kV feeder and Loktak - Rengpang 132 kV feeder	Nov'19. NERPC to write to MD, MSPCL for expediency.	Not applicable.	
10	Upgradation of 132 kV Bus Bar at Umiam Stg- III to ACSR Zebra	DPR submitted. Other upgradation works to be included in DPR	Not applicable	
11	Upgradation of 132kV Karong-Kohima (till Mao) by MSPCL	It was decided that MSPCL would upgrade the entire line.	-	

		DoP Nagaland to take up with MSPCL for entire upgradation by MSPCL. Loc.No. 189 to 228 i.e., 9km stringing left. Shutdown applied for.		
12	Installation of LDP for 132kV AGTCCPP-Agartala D/C & 132kV PKBari-Kumarghat by NERTS	Technical evaluation completed. Under commercial evaluation stage. Award by Dec 2019	-	Deferred for discussion in the next OCCM.
13	Procurement of GPS at AGTCCPP & time synchronization for 132kV AGTCCPP-Kumarghat by NEEPCO	Dec'19	-	
14	Diversion of 132kV Bawktlang-Sihhmui	Technical Evaluation completed. Award by 20 <sup>th</sup> Nov 2019. Work completion: 28 <sup>th</sup> Feb 2020	-	

**The Sub-Committee noted as above.**

**Action: All utilities as above.**

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

Data availability as updated in the 162<sup>nd</sup> OCCM is given below:

Name of the state /utility	Data Availability (in%)	Issues	Status as updated in the 162 <sup>nd</sup> OCCM
DoP Ar. Pradesh	Not updated	-	Same problems persisting. CDAC to visit critical
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	locations immediately.
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:**

The item was deferred for discussion in the next OCCM.

***The Sub-Committee noted as above.***

***Action: CDAC/All SLDCs/NERPC***

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

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

Deliberations in the previous meetings:-

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

**TSECL**

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

**DoP Nagaland**

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

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

- UFR Inspection for Manipur in Nov'19.

**Deliberation of the sub-Committee:**

The item was deferred for discussion in the next OCCM.

***The Sub-Committee noted as above.***

***Action: DoP Nagaland, TSECL, MeECL, AEGCL, NERPC.***

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

In 156<sup>th</sup> 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 157<sup>th</sup> 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.

In 160th OCCM Director, NERPC once again requested NERLDC to obtain the approximate cost of the project so that the same may be approved by TCC/RPC.

In 161<sup>st</sup> OCCM NERLDC informed that quotation has been requested from the concerned agency and the cost would be informed in the next OCCM.

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

**Deliberation of the sub-Committee:**

GM(SL), NERLDC informed that Killing VSAT Pilot is expected to commence reporting by end of Dec'19.

***The Sub-Committee noted as above.***

***Action: NERLDC/NERPC/MeECL.***

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

In 161st OCCM NERTS informed that Work is in progress. Data already started reporting. Joint validation to be done by 15.11.19.

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

**Deliberation of the sub-Committee:**

The item was deferred for discussion in the next OCCM.

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

**Deliberation of the sub-Committee:**

Director, NERPC informed that PDMS project would Go Live by second week of Jan'20.

***The Sub-Committee noted as above.***

***Action: PRDC/All utilities.***

**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 – In 161st OCCM AEGCL informed that synchro-check facility is available in all BCUs and as such there is no requirement of Synchrosopes.

Sr. DGM NERTS opined that only in some pockets the synchroscope is required so that manually synchronization may be done with the main grid. Within 35degree, the phasors have to be separated. This intelligence is not given to BCU, so it is required for synchronization in case of post blackout situation. The forum requested AEGCL to proceed for Procurement of Synchrosopes for 13 Stations as per list.

AEGCL agreed to procure Synchronization trolley for 13 locations in Assam

- 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 162nd OCCM Sr.GM, NERTS, Misa stated that in SAS stations BCU fulfills the role and so separate trolley not required. Further, the panels are not suitable for trolley connections. NERLDC informed that during restoration of the system after grid disturbance, synchronization of islands is very important for fast restoration of the

system. In NER there have been few instances of failure of synchronization at SAS stations during restoration process when attempt to synchronize two islands was done remotely but then successful synchronization was achieved locally at the substation by using synch. trolley. Thus, NERLDC has been striving for having local synchronization facility apart from remote synchronization facility in some substations, which are strategically important during restoration process. After detailed deliberation, it was decided that along with the black start testing of AGBPP, demonstration of Synchronization using BCU would be done at Mariani (PG) for which NERLDC will arrange isolation / separation system into two parts and POWERGRID will synchronize the systems in SAS.

DoP Ar. Pradesh intimated that approval for procurement of synch. trolley is expected by Nov'19

**Deliberation of the sub-Committee:**

NERLDC stated that Synchronization facility by means of Synchronizing trolley is not available at 132kV Kolasib S/S. The forum concurred to the requirement and decided to monitor it hereon.

***The Sub-Committee noted as above.***

***Action: AEGCL, DoP Ar. Pradesh, NERLDC, P&ED Mizoram.***

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

In 155<sup>th</sup> 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 156<sup>th</sup> 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 157<sup>th</sup> OCCM Sr. GM(AM), NERTS assured that the complete schedule of works would be prepared by 14<sup>th</sup> June,2019. The forum requested AEGCL to do likewise.

In 158<sup>th</sup> 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 159<sup>th</sup> 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.

The following status was updated by NERTS/AEGCL in the 161<sup>st</sup> OCCM:

- 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.

In 162<sup>nd</sup> OCCM the following status was updated:

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

**Deliberation of the sub-Committee:**

The forum deferred the item for discussion in the next OCCM.

***The Sub-Committee noted as above.***

***Action: AEGCL/NERTS***

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

In 161<sup>st</sup> OCCM the mock black start schedule status was as below:

- LOKTAK - On 31.10.19 Bus-A charged. Tentative date for the Black Start Nov'19.
- AGBPP - NEEPCO informed that segregation of auxiliary supply has been completed. Presently 2-3 mins are required for shifting of generator from one bus to another and minimum 100MW load is required at 132kV level.
- RHEP – To be done after Bus A is restored.

**Deliberation of the sub-Committee:**

The following status was given:

- LOKTAK - Mock Black Start at Loktak and Synchronization test at 132 kV Imphal S/S via 132 kV Lokatak – Imphal line, has been completed successfully on 10-12-2019.
- AGBPP - NEEPCO informed that segregation of auxiliary supply has been completed. Presently 2-3 mins are required for shifting of generator from one bus to another and minimum 100MW load is required at 132kV level.
- RHEP – To be done after Bus A is restored.

***The Sub-Committee noted as above.***

***Action: NEEPCO, NHPC, NERLDC***

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

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

In 158<sup>th</sup> 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 159<sup>th</sup> 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.

In 160<sup>th</sup> OCCM 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 AGTCCPP.

In 161<sup>st</sup> OCCM NEEPCO informed that AGTCCPP has been requesting the vendor i.e. M/s ABB to install DVR & PSS in GTGs one by one, and tentative visit is in Nov'2019.

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

**Deliberation of the sub-Committee:**

DGM, NEEPCO informed that DVR installation was completed in Unit 1, 2, 3 & 4 and PSS has been kept OFF in all DVR panels. NERLDC informed that a team from

NERLDC visited AGTCCPP on 07.12.19 during the installation. NEEPCO further intimated that some data required for PSS tuning has been asked of CTU and tuning would be done on receipt of data. NERTS agreed to co-ordinate with CTU.

***The Sub-Committee noted as above.***

***Action: NEEPCO.***

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

Status as on 162<sup>nd</sup> OCC Meeting:

- 132kV Transfer Bus at Loktak HEP - Charged on 30.10.2019.
- 400kV Bus A at RHEP - elements of Bus-A tested. Report submitted.

Procurement of the following initiated:

- Four sets of Pantograph isolators
- One Set CT(Bus Coupler)
- One set CVT(Bus-A)
- 132kV Bus Coupler at Pavoï - It was informed that 132kV BNC-Pavoï Ckt-I & 132kV BNC-Pavoï Ckt-II protection has been completed by NERTS. However protection transfer to Bus-Coupler (in case of Line CB outage) to be checked by NERTS. This would be completed by Nov'19.

**Deliberation of the sub-Committee:**

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

Target date to be intimated after LOA.

- 132kV Bus Coupler at Pavoï - NERTS mentioned that AEGCL shall replace the old POWERGRID protection panels to SAS enabled panels. The protection transfer would be completed subsequently.

***The Sub-Committee noted as above.***

***Action: NEEPCO/NERTS.***

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

<b>Recommendations</b>	<b>Status as informed in the 162<sup>nd</sup> OCCM</b>	<b>Status as informed in the 163<sup>rd</sup> OCCM</b>
Investigation of conductor failure for 400kV Palatana-Silchar D/C (Scope NERTS)	Report submitted to NERPC. Manufacturing defect. Referred to OEM.	To be discussed in next OCCM.

Study for reactive compensation in Tripura System(scope of TSECL)	NERPC vide letter dated 11.10.2019 has written to CMD, TSECL for forthwith submission of data. No update from TSECL	
Identification of feeders for additional UFR based load shedding under Islanding Scheme-II( Scope of TSECL)	NERPC vide letter dated 11.10.2019 has written to CMD, TSECL for procurement & installation of UFRs. No update from TSECL	
Standalone EL for integration of relay at AGTCPP by Oct'19(Scope of NEEPCO)	By Mar'2020	
All stations to confirm DR downloading facility and it's healthiness at respective stations. A consolidated undertaking by the respective utility in this regard is to be submitted prior to each OCCM.	<b>NERTS</b> The REL-670 relay at Khandong for Kopili – II feeder is planned to be upgraded by Dec'19.	
NHPC to procure standalone EL for Loktak HEP	Under process exact date of LOA to be confirmed	
Revised SPS-3 scheme offer sought from GE by NERTS	M/s GE is yet to submit the detailed breakup. Target: by 30.11.2019	
Impedance measurement for 400kV Paltana-Silchar D/C, 400kV Silchar-Azara, 400kV Silchar – Byrnihat	Impedance measurement shall be completed by 30.11.19.	
Line parameters to be matched at Silchar, Azara and Byrnihat.	The reviewed parameters shall be given to Azara by 30.11.19 for implementation.	
NERTS and AEGCL to jointly visit Azara and check exact cause for delay in appearance of voltage input to relay when charged via Tie Breaker	Joint visit done. But the problem of delayed appearance of voltage while charging through Tie CB could not be identified.  AEGCL to take up with OEM	

**The Sub-Committee noted as above.**

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

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

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

Sl. No.	Recommendation	Status as informed in the 162nd OCCM	Status as informed in the 163rd OCCM
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	Could not be updated.

**The Sub-Committee noted as above.**

**Action: NTPC.**

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

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

In 159<sup>th</sup> 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.

In 160<sup>th</sup> OCCM AEGCL informed that the comments would be sent by 06.09.2019.

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

**Deliberation of the sub-Committee:**

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

**The Sub-Committee noted as above.**

**Action: MePTCL**

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

Decisions/deliberations in the previous meetings:

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

In 162<sup>nd</sup> OCC meeting, NERLDC informed that IMD has visited Assam, Tripura and selected the stations where AWS can be installed. The forum requested the nodal officers from other utilities to co-operate with logistic support so that the same exercise may be carried out at the earliest.

**Deliberation of the sub-Committee:**

The item was deferred for discussion in the next OCCM.

***The Sub-Committee noted as above.***

***Action: All utilities as above.***

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

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

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

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

In 161<sup>st</sup> OCCM EE, SLDC, DoP Ar.Pradesh informed that official order has been issued to the aforesaid officers to attend the training at Nirjuli Station. Sr.GM(AM), NERTS informed that no executives have attended the training at Nirjuli Station. The forum viewed the matter very seriously and requested NERPC to take up the matter with CE, DoP Ar. Pradesh.

In 162nd OCCM DoP Ar. Pradesh representative communicated that SE (SO&PSC), DoP, Ar. Pradesh has committed to send personnel to POWERGRID Biswanath Chariali/Misa for training by Nov'19. The forum requested DoP Ar. Pradesh to coordinate with NERTS RHQ for the same. AEGCL also proposed to arrange training on different numerical relays to officials from DoP AP, MSPCL, DoP Nagaland, P&ED Mizoram & TSECL.

**Deliberation of the sub-Committee:**

The item was deferred for discussion in the next OCCM.

***The Sub-Committee noted as above.***

***Action: DoP Ar. Pradesh/NERTS.***

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

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

In 161st OCCM NERLDC informed that the following stations need to have AGC as per the Country wide plan:

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

Director, NERPC stated that the pilot for BgTPP is in advance stage and only the Communication items are to be installed at plant level. Further, he stated that the matter has been discussed in detail in the 15th NETeST meeting.

In 162nd OCCM NERLDC informed that BgTPP pilot started on 07.10.2019. NERLDC also presented the plant wise communication status till date. The forum noted that Fiber connectivity was discussed in detail in the 15th NETeST and except for Loktak all the plants have Fiber connectivity. All concerned utilities agreed to take timely action as per the relevant order of Hon'ble CERC.

**Deliberation of the sub-Committee:**

The item was deferred for discussion in the next OCCM.

***The Sub-Committee noted as above.***

***Action: NERTS/NERLDC/NEEPCO/NHPC.***

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

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

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

**Deliberation of the sub-Committee:**

The item was deferred for discussion in the next OCCM.

***The Sub-Committee noted as above.***

**Action: OTPC.**

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

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

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

**Deliberation of the sub-Committee:**

DGM, NEEPCO informed that OEM would visit Tuirial shortly for PSS tuning.

***The Sub-Committee noted as above.***

**Action: NEEPCO.**

**C.20 PLCC link issues**

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

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

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

**Deliberation of the sub-Committee:**

The status as updated in the 163<sup>rd</sup> OCC Meeting:

- 132kV Badarpur-Kolasib: PLCC link in place and working.
- 132kV Bairabi - Kolasib: To be intimated by P&ED Mizoram
- 132kV Tural-Kolasib: Restoration by NEEPCO in Dec'19.

***The Sub-Committee noted as above.***

***Action: NEEPCO, P&ED Mizoram.***

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

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

**Deliberation of the sub-Committee:**

Director, NERPC requested all the utilities to submit the LGBR data at the earliest.

***The Sub-Committee noted as above.***

***Action: All utilities.***

**C.22 SCED Refund**

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

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

**Deliberation of the sub-Committee:**

The matter was deferred for discussion to the next OCCM.

**The Sub-Committee noted as above.**

**Action: All DISCOMs.**

**C. 23 Metering Status Review:**

<b>Agenda Description</b>	<b>Status as updated in the 162nd OCC Meeting</b>	<b>Status as updated in the 163rd OCC Meeting</b>
Correction of Meter error: <b>(i) Erratic reading:</b> I. Ningthokhoung end of Imphal, II. Kohima end of Karong, <b>(ii) Sign Change:</b> I. Dimapur I & II state end, II. Motanga end of Rangia III. Mokokchung end of Doyang	In 161st OCC Meeting, NERTS informed that they will look into the matter	To be discussed in the next OCCM.
SEMs to be Procured	In 162nd OCC Meeting, NERTS informed that concurrence had been completed. Tender issue expected by 31.12.19	
Urgent Meter Replacement of 1. Mariani (AS) end of Misa 2. Mariani (AS) end of Kathalguri 3. Mariani (AS) end of 33 kV Changki	In the 162 <sup>nd</sup> OCC Meeting, it was proposed that SEMs 1. Golaghat end of Mariani 2. Golaghat end of Bokajan will be diverted to 1. Mariani end of Misa 2. 33 kV Mariani end of Changki  NERTS informed that they will look into the matter.	

**The Sub-Committee noted as above.**

**Action: NERTS.**

**D. I T E M S FOR DISCUSSION**

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

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

<b>Plants</b>	<b>Reservoirs level in meter</b>	<b>MU content</b>	<b>Present DC (in MU)</b>	<b>No of days as per current generation</b>
Khandong + Kopili stg II			<b>0.588</b>	
Kopili			<b>0</b>	Will be "0" until further intimation.
Doyang			<b>0.462</b>	
Loktak			<b>1.6</b>	

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

**Deliberation of the sub-Committee:**

NERLDC highlighted that due to unavailability of Kopili HEP and Khandong HEP, constituents should plan for procurement of power for proper portfolio management.

NERLDC also highlighted that proper planning of Hydro Generation needs to be done as water available for generation is only for upcoming 2-3 months.

DGM, NEEPCO representative intimated that resumption of Khandong units was being delayed for carrying out various precautionary checks, the power station being very old. He intimated that Khandong units were expected to be restored before 25.12.2019.

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

**Furnishing request of shut down of the element, which was approved by NERPC, by Indenting Agency (ISTS licensees/STUs/Generating Companies) to NERLDC:**

In 160<sup>th</sup> OCCM 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 M<sup>th</sup> 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 5<sup>th</sup> of September, 2019 i.e. 5<sup>th</sup> day of the M<sup>th</sup> 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.

**Deliberation of the sub-Committee:**

***The sub-Committee discussed and approved the transmission line outages proposed by Constituents for January, 2020 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 October, 2019 - December, 2019:**

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

**Deliberation of the sub-Committee:**

NERTS & NETC informed that the outage data has been submitted.

***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.

**Deliberation of the sub-Committee:**

NERLDC informed that if, any issue or clarification required by the states, they can contact NERLDC.

**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.
- For event dated 21.08.2019 DAS data to be submitted by Kopili HEP, Khandong HEP and Palatana GBPP.
- Reasons for non-sustenance of positive generation of Unit –II & III at BgTPP to be furnished.

In 162<sup>nd</sup> OCCM NERLDC informed that on 01<sup>st</sup> November 2019, at 11:16hrs a RGMO event triggered due to loss of generation of the quantum of 1644MW at Akal station. Upon triggering of RGMO the following units demonstrated Positive as well as more than desired response : (i) Loktak Unit 1

The following units demonstrated next to nothing response:

(i) Palatana GTG/STG, (ii) BgTPP Unit 1 (iii) Loktak Unit 3

The following units demonstrated negative response:-

BgTPP Unit 2 & Unit 3

OTPC stated that at that point of time Module-I was in full load operation (Module-II not in service) due to 5% margin initial increase but not sustained because due to dip in frequency the gas compressor drives less gas. The forum requested BgTPP to revert with the reasons for unsatisfactory RGMO operation.

NERLDC informed that DAS data not received from any plant other than Palatana. The forum requested all generators to provide their DAS data whenever required by NERLDC.

**Deliberation of the sub-Committee:**

The item was deferred for deliberation in the next OCCM.

**The Sub-Committee noted as above.**

**Action: NTPC.**

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

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

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

In 160<sup>th</sup> OCCM, 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 3<sup>rd</sup> 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.

In 161<sup>st</sup> OCCM the following status was intimated:-

- Palatana GBPP - OTPC requested for a joint meeting w.r.t. implementation of tap changing suggestion as per the reactive capability testing results.
- BgTPP - Testing completed on 30<sup>th</sup> of Sept. Load angle limiter setting to be increased. NTPC is in the process of consultation with OEM.
- AGTCCPP was requested to suggest a date for the testing at their plant.

In 162<sup>nd</sup> OCCM the following status was intimated:-

- Palatana GBPP - Joint meeting date to finalized mutually by NERLDC & OTPC. Tentatively by Nov'19.
- BgTPP - Matter referred to OEM.
- AGTCCPP - DGM, NEEPCO stated that AGTCCPP is generating maximum MVAR continuously, because of high MVAR drawal by Tripura. So as such Reactive power generation need not be tested. ED, NERLDC empathized with the concern of NEEPCO and informed that reactive power testing is very important at AGTCCPP and requested NEEPCO to explore solutions (if any).

DGM, NEEPCO once again re-iterated that due to continuously high MVAR generation from AGTCCPP, the Excitation system is stressed and may fail beyond measure. He requested the forum to take remedial action in this regard.

**Deliberation of the sub-Committee:**

NERLDC informed the following:

- Palatana GBPP - Joint Meeting of OTPC with NERLDC for GT & UAT tap settings – done on 11.12.19

- BGTPP- NERLDC recommendation during the test to increase the load angle limiter setting.
- AGTCCPP - Testing at AGTCCPP done on 07.12.19

***The Sub-Committee noted as above***

***Action: NTPC, OTPC, NERLDC.***

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

In 160th OCC Meeting 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.

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

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

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

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

***Deliberation of the sub-Committee:***

The matter was deferred for discussion in the next OCCM.

***The Sub-Committee noted as above.***

***Action: NERPC.***

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

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

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

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

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

***The Sub-Committee noted as above.***

***Action: all SLDCs.***

**D.9 Continuous shutdown of 220 kV Bus Coupler & 4 x 33 MVA 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 at Dimapur Substation.**

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

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

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

- (1) 220/132 kV 4 X 33MVA ICT-1
- (2) 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:

- a. Continuous Shutdown of BUS A w.e.f 01.11.2019 to 05.11.2019 for shifting of 1 set of 220 kV Bus PT as above.
- b. Continuous Shutdown of the 220kV/132kV 4x 33 MVA ICT – 1, 220 kV Bus -B and ICT-1 bays (Bay No.203 & 204)w.e.f 06/11/19 till erection, testing and commissioning of the new GIS system.

In 160th OCCM, 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.

In 161st OCCM, NERLDC briefly stated the study results: Outage of ICT (N-1) 114kV at Dimapur with DHEP generation, 108kV at Dimapur without DHEP generation

In view of the low voltage at Dimapur node NERLDC suggested for reduction of load or MW constrained SPS at Nagaland. Further it was informed that the study was not done considering availability of 132kV Imphal-Kohima, 132kV Dimapur-Kohima and 132kV Karong-Kohima

EE, SLDC, DoP Nagaland informed that any spare or backup is not there for Nagaland. First shifting of towers from Kohima to Dimapur is required so that 132kV Dimapur-Kohima line is in service and Dimapur may draw from Kohima (2 towers displaced by landslide).

Further Nagaland may be allowed to draw via Imphal-Kohima( by using the erstwhile D-I line) at Dimapur. This is only in case of exigency.

Also Karong-Kohima shutdown may be deferred because Nagaland draws from Manipur in case of exigency.

The forum decided that no SPS is required and the shutdowns may be granted subject to restoration of 132kV Dimapur-Kohima line and return of shutdown after upgradation of 132kV Karong-Kohima (HTLS).

In 162<sup>nd</sup> OCCM Sr.GM, NERTS, Misa informed that mobilization has already been done by M/S Godrej and Shut Down was applied w.e.f. 02.09.2019 but, till date, shut down is not approved.

He further stated that all such delay may be recorded in MOMs of OCC so that necessary justification of delay in project execution may be furnished to CERC by POWERGRID which is mandatory. The forum agreed to the proposal.

EE, SLDC, DoP Nagaland opined that after Hornbill festival shutdown may be given subject to availability of the two links viz. 132kV Dimapur-Kohima and 132kV Karong-Kohima. He updated the status of the 132kV Dimapur-Kohima line: one tower left. Target Nov'19 may be by 10.12.2019. RoW issue remaining to be resolved.

The forum requested for study of N-1 contingency of 100MVA ICT with availability of 132kV Dimapur-Kohima, 132kV Imphal-Kohima and 132kV Karong-Kohima.

After detailed deliberation the forum agreed upon a tentative schedule for shutdown(s) connected to outage of 220/132kV ICT-1 at Dimapur:

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

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

**Deliberation of the sub-Committee:**

DoP Nagaland informed that the 132kV Dimapur-Kohima is ready for charging, however since the GIS CB at Dimapur(PG) end is non-functional the line cannot be

charged at the moment. NERTS informed that the GIS CB for Kohima line has been restored at Dimapur(PG) on 16.12.2019. The forum requested NERTS and P&ED Mizoram to charge the line as early as possible.

***The Sub-Committee noted as above.***

***Action: NERTS, P&ED Mizoram.***

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

<b>Critical Elements which affect NER/ER TTC/ATC Values and Cause major Grid Disturbance</b>		
<b>Sl No</b>	<b>Name of Element</b>	<b>No of Tripping during Oct'19</b>
1	400 kV Bongaigaon - Byrnihat S/C	2times
2	400 kV Bongaigaon - Azara S/C	NIL
3	400 kV Silchar - Azara S/C	2 times
4	400 kV Silchar - Byrnihat S/C	NIL
5	400 kV Palatana - Silchar Ckt-I	NIL
6	400 kV Palatana - Silchar Ckt-II	NIL
7	400/132 kV, 125 MVA ICT I at Palatana	NIL
8	400/132 kV, 125 MVA ICT II at Palatana	NIL
9	132 kV Palatana - Surajmaninagar S/C	NIL
10	400 kV Balipara - Misa D/C	NIL
11	400/220 kV 1x315 MVA and 1 x 500 MVA ICTs at Misa	NIL
12	132 kV Imphal - Dimapur S/C	NIL
13	132 Khandong - Kopili D/C	NIL

***The Sub-Committee noted as above.***

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

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

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

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

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

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

**Deliberation of the sub-Committee:**

The item was deferred for discussion in the next OCCM.

***The Sub-Committee noted as above.***

**Action: NERPC**

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

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

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

In 161st OCCM it was decided that Member Secretary, NERPC would constitute committee of NERLDC, NERTS and NERPC so that a concise approach may be devised for quick restoration of the links.

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

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

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

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

**Deliberation of the sub-Committee:**

After detailed deliberation it was decided that the 2 nos 220/132kV ICTs are to be immediately cleaned by NEEPCO, with the balance works in the switchyard to be completed by NERTS.

***The Sub-Committee noted as above.***

***Action: NERTS/NEEPCO***

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

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

**Deliberation of the sub-Committee:**

Pls refer to discussion in the item C.7.

***The Sub-Committee noted as above.***

***Action: P&ED Mizoram***

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

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

- (i) Periodic Mock test (frequency once in six months) to be conducted for all SPS. However, the scope would not cover physical tripping of elements/generating units. Prior to a Mock Test the modalities and objectives for testing to be determined by Sub-group.
- (ii) A Special Meeting on SPS would be convened by NERPC in the 3<sup>rd</sup> week of Nov'19 for review of SPS-5 to SPS-9.
- (iii) Testing of SPS-1 to SPS-4 agreed in the 1<sup>st</sup> week of Dec'19 by the team constitutes earlier for mock testing

**Deliberation of the sub-Committee:**

The item was deferred for discussion in the next OCCM.

***The Sub-Committee noted as above.***

**Action: NERTS**

**AGENDA ITEMS FROM NERLDC:**

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

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

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

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

**Deliberation of the sub-Committee:**

Director, NERPC informed that as per discussions in the Sub-group NERTS need to undertake the following remedial actions:-

- Z-I of B/U Impedance relay restart to be investigated.
- VT fuse fail non-operation to be investigated.

***The Sub-Committee noted as above.***

**Action: NERTS**

**D.16 High DSM Outstanding:**

As per clause 10 of DSM Regulation 2014, the DSM payment by the respective Constituents shall be made within 10 days of issuance of DSM statement by NERPC.

In case of default, RLDC may implement clause 25A of Open Access Regulation wherein the respective Constituent will be barred from STOA transactions. Also, addition of penal interest component on outstanding amount may mount higher burden on the Constituents.

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

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

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

***Deliberation of the sub-Committee:***

NERLDC expressed their concern over high DSM outstanding of states Manipur, Mizoram, Nagaland and Arunachal Pradesh. Director-NERPC advised all States of NER to clear their respective DSM outstanding at the earliest, otherwise NERLDC would be forced to curtail open access. He also requested MSPCL to open LC in favour of TSECL for Baramura power. States agreed to initiate necessary action.

***The Sub-Committee noted as above.***

***Action: All state utilities***

**Metering Agenda**

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

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

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

***Deliberation of the sub-Committee:***

The item was deferred for discussion in the next OCCM.

***The Sub-Committee noted as above.***

***Action: NERTS.***

**D.18 Meter Errors:**

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

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

**Deliberation of the sub-Committee:**

The item was deferred for discussion in the next OCCM.

***The Sub-Committee noted as above.***

**ADDITIONAL AGENDA ITEMS FROM NERTS**

**D.19 Breakdown and Restoration of 220KV MARIANI-MOKOKCHUNG LINE # 1**

On 21.11.2019 , at 15:08 HRS 220kV New Mariani - Mokokchung - I TL Tripped with Relay indication as follows: Mariani S/S: Zone 2 , Y- N Fault , 60.07kM and Mokokchung S/S: Z1 , Y –N , 3.813kM , 1.8kA.

On Investigation it was found that the Y-Phase EHV cable connecting GIS to AIS Bushings got damaged during foundation work for Kohima (New) Bay under NERPSIP construction project.

The Y-Phase EHV cable which suffered the damage was passing below the earmarked foundation for Kohima (New) Bay under construction and hence shall require Re-routing that shall involve excavation , dismantling of cables , new cable laying , Roof arrangement and Termination works , SF6 GAS recovery and Filling works.

For rerouting of EHV cable for the 220kV New Mariani - Mokokchung - I TL under following work schedule is estimated as below:

1. Excavation works : Work under progress
2. Dismantling of existing cables and laying of new cable: 20<sup>th</sup> Dec 2019 to 10<sup>th</sup> Jan 2020
3. Roofing arrangement : 20<sup>th</sup> Dec 2019 to 10<sup>th</sup> Jan 2020
4. SF6 gas recovery Works ( during dismantling ) : December 2019
5. Cable Termination Kit ( to be manufactured and sent from China ): 3 Months ( upto Feb 2020)
6. Cable termination work : 3 – 4 weeks ( in March 2020 )
7. SF6 Filling works : March 2020.

8. Restoration of the 220kV New Mariani - Mokokchung - I TL : 31st Mar 2019.

Now, since the occurrence of the incident was beyond the control of POWERGRID, it is requested to consider the outage under “Forced Majeure Condition” Category.

**Deliberation of the sub-Committee:**

NERTS, POWERGRID informed that 220 kV New Mariani – Mokokchung I Line is out of service since 21-11-2019 as two nos of 220 kV XLPE cables of R & Y phase connecting the line to GIS bay got damaged.

In order to restore the line, a temporary arrangement was proposed for utilising the 220kV Bay for 31.5 MVAR Bus Reactor as 220 kV New Mariani – Mokokchung I Line Bay and connecting / utilising the 31.5 MVAR Bus Reactor as a non swichable line reactor with 220 kV New Mariani – Mokokchung I at Mokokchung Substation.

Forum approved the temporary arrangements to facilitate early restoration of the line.

***The Sub-Committee noted as above.***

***Action: NERTS.***

**D.20 Shutdown of 132 kV Main Bus for dismantling of Bus Coupler Bay and Transfer Bus at Kumarghat S/S.**

Under the NERSS VIII, SS01 package awarded to M/s Shandong Taikai and M/s Godrej and Boyce, the 132 kV Kumarghat Substation shall be upgraded from AIS to GIS.

The existing 132 kV Kumarghat substation is an AIS substation having 132 kV bays with Single Main and Transfer Bus Schemes. Under the NERSS VIII project, all the existing 132 kV AIS Bays shall be changed to GIS Bays (Double Main Bus Scheme) in the same existing Switchyard by creating space for 132 kV GIS building after dismantling the existing tower/ beams/ equipment’s along with structures. During this up gradation period, 132 kV bay shall be operated on Single bus system.

As per the proposed up-gradation and dismantling, only Single Main Bus will be in service. For construction of 132kV GIS building following assets at Kumarghat substations shall be required to be dismantled.

1. 132 kV Bus Coupler Bay (106)
2. Transfer Bus.

The substation layout diagram is attached for further reference.

The existing 132 kV Bus Coupler Bay is installed where the 132 kV GIS building is proposed to be constructed. As such Bus Coupler Bay to be dismantled and equipments & its accessories are to be shifted to a convenient location.

After shifting of the Bus Coupler Bay equipments to the new location, dismantling works of the transfer Bus will be commence.

Once the above shutdown is approved, the dismantling work and shifting of materials shall be carried out.

Considering the above, it is proposed for availing the Shutdown to concerned authority for the following:

- I. Dismantling of 132 kV Bus Coupler Bays equipments & its accessories.**
- II. Dismantling of a section of transfer Bus with gantry.**

The complete schedule of shutdown is requested in the 163<sup>rd</sup> OCC Shutdown requisition list.

**Deliberation of the sub-Committee:**

The forum approved the shutdown.

***The Sub-Committee noted as above.***

***Action: NERTS.***

**D.21 Shutdown of 132 kV Main Bus for dismantling of Transfer Bus and Bus Coupler at 132KV Haflong S/S.**

Under the NERSS VIII, SS02 package awarded to M/s Shandong Taikai and M/s Godrej and Boyce, the 132 kV Haflong Substation shall be upgraded from AIS to GIS. The existing 132 kV Haflong substation is an AIS substation having 132 kV bays with Single Main and Transfer Bus Schemes. Under the NERSS VIII project, all the existing 132 kV AIS Bays shall be changed to GIS Bays (Double Main Bus Scheme) in the same existing Switchyard by creating space for 132 kV GIS building after dismantling the existing tower/ beams/ equipment's along with structures. During this up gradation period, 132 kV bay shall be operated on Single bus system.

As per the proposed up-gradation and dismantling, only Single Main Bus will be in service. For construction of 132kV GIS building following assets at Haflong substations shall be required to be dismantled.

1. 132 kV Bus Coupler Bay (104)
2. Transfer Bus.

The SLD of Haflong Ss is attached for further reference.

The existing 132 kV Bus Coupler Bay is installed where the 132 kV GIS building is proposed to be constructed. As such Bus Coupler Bay to be dismantled and equipments & its accessories are to be shifted to a convenient location.

After shifting of the Bus Coupler Bay equipments to the new location, dismantling works of the transfer Bus will be commence.

Once the above shutdown is approved, the dismantling work and shifting of materials shall be carried out.

Considering the above, it is proposed for availing the Shutdown to concerned authority for the following:

- (i) **Dismantling of 132 kV Bus Coupler Bays equipments & its accessories.**
- (ii) **Dismantling of a section of transfer Bus with gantry.**

The complete schedule of shutdown is requested in the 163<sup>rd</sup> OCC Shutdown requisition list.

**Deliberation of the sub-Committee:**

The forum approved the shutdown subject to 132kV Haflong(AEGCL) be fed from 132kV Umrangso by directly jumpering 132 kV Haflong-Umrangso line with 132 kV Haflong-Haflong Line.

***The Sub-Committee noted as above.***

***Action: NERTS.***

**D.22 Daytime Shutdown of 132 kV Main Bus for dismantling a section of Transfer Bus at JiribamS/S.**

Under the NERSS VIII, SS02 package awarded to M/s Shandong Taikai High Voltage Switchgear Co. Ltd. and M/s Godrej and Boyce Mfg. Co. Ltd, the 132 kV Jiribam Substation shall be upgraded from AIS to GIS.

The existing 132 kV Jiribam Substation is an AIS substation having 132 kV bays with Single Main and Transfer Bus Schemes. Under the NERSS VIII project, all the existing 132 kV AIS Bays shall be changed to GIS Bays (Double Main Bus Scheme) in the same existing Switchyard by creating space for 132 kV GIS building after dismantling the existing tower/girders/equipment's along with structures. For

commencement of this upgradation work, 3 numbers of 132 kV bays (104- Pailapool bay, 105- Tipaimukh bay and 107- ICT bay) shall be operated on Single bus system only.

As per the proposed up-gradation and dismantling, only Single Main Bus will be in service. For commencement of construction of 132kV GIS building following assets at Jiribam Substations shall be required to be dismantled.

**1. A section of transfer bus along with jack bus**

The substation layout diagram is attached for further reference.

The existing portion of 132 Transfer kV Bus is installed where the 132 kV GIS building is proposed to be constructed. As such it has to be dismantled and along with other equipments& its accessories.

Once the above shutdown is approved, the dismantling work and shifting of materials shall be carried out.

Considering the above, it is proposed for availing the Shutdown to concerned authority the following:

**I. Dismantling of a section of transfer Bus with towers and girders.**

The complete schedule of shutdown is requested in the 162<sup>nd</sup> OCC Shutdown requisition list.

**Deliberation of the sub-Committee:**

The forum approved the shutdown.

***The Sub-Committee noted as above.***

***Action: NERTS.***

**D.23 Regarding up gradation of Bay control and Relay panels of POWERGRID by constituents under PSDF fund for SCADA integration.**

Up-gradation of conventional Bay Control and Relay panels by BCU based control panels for SCADA communication being carried out in some locations by Assam and other constituents under PSDF funds. This shall result in dismantling of existing POWERGRID C/R panels. Power grid suggest that the spare C/R panels to be utilized as regional spare and kept at the dismantled station. Also, Since the BCU based C/R panels shall be controlled from local SCADA which is unique to each station, the commissioning and maintenance of new C/R panels such upgraded shall

be responsibility of constituents. Powergrid shall still continue to maintain the bay switchyard equipments.

**Deliberation of the sub-Committee:**

The item was deferred for discussion in the next OCCM

***The Sub-Committee noted as above.***

***Action: NERTS.***

**ADDITIONAL AGENDA ITEMS FROM AEGCL**

**D.24 Request for Bay re-location for 220kv Mariani — New Mariani line at New Mariani GSS of PGCIL**

The two no. of bays proposed to be allotted for AEGCL at New Mariani GSS of PGCIL for termination of 220kv Mariani — New Mariani D/C line need to re-located since it will be highly difficult to approach the proposed bays as the D/C line will have to cross three major D/C lines at the same narrow area— viz. 400kv MISA- New Mariani D/C, 220kv New Mariani Kathalguri D/C & 220kv New Mariani Mokukchung D/C. For such an arrangement the surveyor has suggested 'line crossing gantries' which will obviously require a large plot of land to be procured for construction of security fencing etc. Further, as per the survey report, the ground clearance of 220kv New Mariani — Mokukchung D/C line is also not enough to allow the new line to pass under it. Under such circumstances it may be advisable to re-locate the AEGCL bays by way of suitable interchange of the bays at New Mariani

**Deliberation of the sub-Committee:**

The item was deferred for discussion in the next OCCM

***The Sub-Committee noted as above.***

***Action: AEGCL.***

**D.25 Application from AEGCL for first time charging of 400/220/33 kV, 315 MVA ICT-1 at BgTPP (NTPC)**

NERLDC informed that application from AEGCL has not been received. AEGCL was advised to avail internet facility in POWERGRID Bongaigaon S/S for sending application.

***The Sub-Committee noted as above.***

***Action: AEGCL.***

**ADDITIONAL AGENDA ITEMS FROM NERPC**

**D.26 Upgradation of 132kV Karong-Kohima**

MSPCL informed that NERTS is upgrading the portion of Karong to Mao of 132 KV Karong-Kohima line under NERPSIP. It was discussed and agreed that upgradation (from existing Panther conductor to HTLS) of Mao-Kohima section of 132kV Karong-Kohima is required and same may be included under NERPSIP. DoP Nagaland was requested to initiate revision of NERPSIP scope in this regard.

***The Sub-Committee noted as above.***

***Action: DoP Nagaland.***

**ADDITIONAL AGENDA ITEMS FROM P&ED MIZORAM**

**D.27 Drawal of Mizoram at Zemabawk from Melriat**

After detailed deliberation; it was decided that shutdown will be availed by NERTS from 1100 to 1300 Hrs on 18.12.2019 for shifting of CT core from 300/1 to 600/1 at Melriat to enable removal of restriction in Mizoram drawal.

***The Sub-Committee noted as above.***

***Action: NERTS.***

**ADDITIONAL AGENDA ITEMS FROM NERLDC**

**D.28 SCADA availability in NER**

GM(SL), NERLDC pointed out that the availability of telemetry data is very important for grid operation and constituent s should have plan for improvement of their telemetry availability. In this regard he pointed out that for states like Arunachal Pradesh where only 1 out of 10 stations are reporting to NERLDC, there is no plan for data integration of other substations. The data updation is highly intermittent and performance is poor where GPRS schemes has been implemented in 04 stations of Arunachal Pradesh viz., bhalukpong, khupi, lekhi and Along. The telemetry availability for Mizoram is only 18% and for Nagaland is around 28% and need major improvement. Only one out of five stations is reporting in case of Mizoram and GPRS integration works are pending for long. He also informed that Manipur data availability is presently 50% and 04 stations of Manipur has been integrated with FO links recently. The remaining stations of Manipur reporting through GPRS/PLCC is highly intermittent. Manipur replied that they will be going for alternate GPRS service providers.

Telemetry availability of POWERGRID is around 86%. GM, SL enquired about status of VSAT communication works approved in RPC meeting in the location of Roing, Tezu and Namsai. Sr.GM(AM), NERTS informed that the procurement proposal is under approval stage and target date for completion is 1st week of January, 2020. GM, SL also emphasized that overall telemetry availability is only 46 %, in which state telemetry is relatively lower than central sector. Thus, state telemetry need to be improved for better visibility and ease of Grid operation at the state levels. Telemetry status is as per Annexure.

***The Sub-Committee noted as above.***

***Action: All utilities.***

**D.29 Availability of real time data and telemetry status in NERLDC website**

NERLDC intimated that the real-time SCADA data is available in tabular and graphical forms in the website and same is being updated every minute.

Also, Real-time telemetry data statistics monitoring is available in the website.

It was informed to the constituent that user login credentials shall be shared with all constituents for accessing the real-time data.

***The Sub-Committee noted as above.***

**D.30 Collection of SEM data:**

NERLDC intimated that due to disruption of internet services, many locations have not transmitted SEM data. It was requested that such locations should approach nearest location where internet is available for sending data. Locations of POWERGRID S/s may be used for this.

***The Sub-Committee noted as above.***

***Action: All utilities***

**D.31 Spare SEMs in NER:**

NERTS intimated that LOA for SEM is being issued shortly and meters are likely to be in place in one month time.

NERTS also agreed to initiate action for installation of SEMs pertaining to new ICT at BgTPP.

***The Sub-Committee noted as above.***

***Action: NERTS***

**Date & Venue of next OCC meeting:**

It is proposed to hold the 164<sup>th</sup> OCC meeting of NERPC on third week of January, 2019. However, exact date and venue will be intimated in due course.

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**Annexure-I****List of Participants in the 163<sup>rd</sup> OCC Meeting held on 17<sup>th</sup> December, 2019**

<b>SN</b>	<b>Name &amp; Designation</b>	<b>Organization</b>	<b>Contact No.</b>
1.	Sh. T.K. Mahanta, CGM, SLDC	Assam through VC	9435340383
2.	Sh. Dipesh Ch. Das, AGM (SLDC)	Assam through VC	9954110254
3.	Sh. Bimal Ch. Borah, AGM, SLDC	Assam through VC	9435119248
4.	Sh. A.K. Sinha, DM, SLDC	Assam through VC	9706881736
5.	Ms. B. Kashyap, AM, SLDC	Assam through VC	9706692773
6.	Sh. R. Pakhumate, AM, SLDC	Assam through VC	6002256402
7.	Sh. K. Shyam, JM, SLDC	Assam through VC	9954581635
8.	Sh. I. Borah, JM, SLDC	Assam through VC	7896482483
9.	Ms. Laishram Ritu, DGM, SLDC	Manipur through VC	9612882984
10.	Ms. Khoishnam Steela, DGM, SLDC	Manipur through VC	8730831103
11.	Ms. Jayela Wahengbam, AM, SLDC	Manipur through VC	9856875084
12.	Sh. N. Romeo Singh, DM, SLDC	Manipur through VC	9612657280
13.	Sh. D. Chakraborty, SDO, SLDC	Nagaland through VC	7577950317
14.	Sh. Tekatemjen Walling, JE, SLDC	Nagaland through VC	7005636717
15.	Sh. Kewielie Mepfuo, JE, SLDC	Nagaland through VC	9862849727
16.	Sh. P Tiakaba Yimchunger, JE, SLDC	Nagaland through VC	8974020151
17.	Sh. Benjamin L. Tlumtea, Sr.EE, SLDC	Nagaland through VC	9436151424
18.	Sh. Jacob Lalrinfela, AE, SLDC	Mizoram through VC	8787688235
19.	Sh. Lalremruata Sailo, JE, SLDC	Mizoram through VC	9612614372
20.	Sh. David Lalnunpuia, JE, SLDC	Mizoram through VC	9436135889
21.	Sh. Anil Debbarma, DGM, SLDC	Tripura through VC	9612589250
22.	Sh. Debabrata Paul, Sr. Mgr.	Tripura through VC	9436500244
23.	Sh. Carlos Chen, AEE, SLDC	Meghalaya through VC	9863093311
	<b>No Representatives</b>	<b>Arunachal Pradesh</b>	
24.	Sh. Joypal Roy, DGM (E/M)	NEEPCO	9435577726
25.	Sh. U.Kataki, Sr. GM (I/c-AM)	PGCIL	9435505418
26.	Sh. H. Talukdar, Sr. DGM (A.M)	PGCIL	9436335237
27.	Sh. B. Lyngkhoi, Director	NERPC	8132994419
28.	Sh. Farooq Iqbal, Dy. Director	NERPC	8700450141

29.	Sh. S. Mukherjee, AD	NERPC	8794277306
30.	Sh. V. Suresh, ED	NERLDC	9449599156
31.	Sh. Rajib Sutradhar, Sr. GM (S.O-1)	NERLDC	9436302714
32.	Sh. Amaresh Mallick, Sr. GM (S.O-2)	NERLDC	9436302720
33.	Sh. M.K. Ramesh, Sr. GM (S.L)	NERLDC	9449599174
34.	Sh. S.C. De, GM (S.O-2)	NERLDC	9436335369
35.	Sh. M.P. Nath, CM (MO)	NERLDC	9436335374
36.	Sh. Babul Roy, DGM (MO)	NERLDC	9436335377
37.	Sh. Sourav Mandal, Dy. Mgr(S.O-1)	NERLDC	9402102354
38.	Sh. Palash J. Borah, Dy.Mgr(S.O-2)	NERLDC	9366435631
39.	Sh. Tapobrata Paul, Dy.Mgr(S.L)	NERLDC	7085012850