



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/2019/4092-4129

Dated: August 22, 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 159th OCC Meeting.

Sir/Madam,

Please find enclosed herewith the minutes of 159th OCC Meeting held at Cherrapunjee on the **09th August, 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 159th OPERATION COORDINATION

SUB-COMMITTEE MEETING OF NERPC

Date : 09/08/2019 (Friday)

Time : 10:00 hrs

Venue : "Pala Resort", Sohra.

The List of Participants in the 159th OCC Meeting is attached at **Annexure – I**

Director(C&O), NERPC informed the forum that Sh A.K. Thakur has assumed the charge of Member Secretary, NERPC w.e.f. Aug'19. The forum congratulated him on assumption of charge. Member Secretary thanked the members and hoped that his association would benefit NER Power Sector.

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

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 158th MEETING OF OPERATION SUB-COMMITTEE OF NERPC.

The minutes of 158th meeting of Operation Sub-committee held on 12th July, 2019 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2016/4556-4591 dated 19th July, 2019.

The Sub-committee may confirm the minutes of 158th OCCM of NERPC as no comments/observations were received from the constituents.

ITEMS FOR DISCUSSION

B.1. ACTION TAKEN:

1. IMPLEMENTATION OF PROJECTS FUNDED FROM PSDF:

The status as informed in 159th OCC:

State	R&U scheme	ADMS	Capacitor Installation	SAMAST **	Line Differential Protection
Ar. Pradesh	Station-wise status to be updated *	Could not be updated due to absence of	-	Not approved by TESG.	-

		DoP Ar. Pradesh representative			
Nagaland	Station-wise status to be updated *	TPA, A/C opening & Contract agreement by July'19.	-	Not approved by TESG.	Lines identified. Under DPR preparation stage.
Mizoram	Submitted on 09.08.19	TPA, A/C opening & Contract agreement by July'19.	To reply to TESG queries.	Not approved by TESG.	Lines not yet identified. To be taken up in Sub-group.
Manipur	Station-wise status to be updated *	TPA, A/C opening & Contract agreement by July'19.	To reply to TESG queries.	Not 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 *	TPA, A/C opening & Contract agreement by July'19.	Study to be carried out in consultation with NERLDC.	Not approved by TESG.	Lines not yet identified. To be taken up in Sub-group.
Assam	Submitted on 09.08.19	TPA, A/C opening & Contract agreement by July'19.	-	Appraisal Committee approved.	Lines identified. Under DPR preparation stage.
Meghalaya	MePTCL Station-wise status updated MePGCL - Station-wise status to be updated *	TPA, A/C opening complete. Contract Agreement by July'19	-	Appraisal Committee approved.	Tendering in progress

Signing of Contract Agreement i.r.o. ADMS

As on 01.08.2018 Meghalaya, Manipur and Tripura have signed the contract agreement. The signing of Contract Agreement for DoP Ar. Pradesh, AEGCL, P&ED Mizoram, DoP Nagaland may be discussed in 159th OCCM and subsequently signed on same day.

Deliberation of the sub-Committee:

ADMS

Director, NERPC stated that Contract Agreement for Ar. Pradesh, Assam, Mizoram and Nagaland are yet to be signed, while initiation for TPA is pending for all the states except Meghalaya. The following was informed by the representatives of the respective utilities:

Assam – Contract Agreement to be signed by Aug'19. TPA & A/C opening to be initiated.

Nagaland – Contract Agreement to be signed by Aug'19. TPA& A/C opening to be initiated.

Mizoram – Contract Agreement to be signed by Aug'19. TPA to be initiated. A/C opening govt conveyed approval.

Manipur – TPA & A/C opening to be initiated.

Ar. Pradesh - Certified copies of Bid document is required for contract agreement. TPA& A/C opening to be initiated.

Tripura - TPA& A/C opening to be initiated.

SAMAST

Director NERPC informed that the SAMAST proposal for Manipur & Tripura has also been agreed by PSDF-TEG and the final outcome will be known once the minutes is issued by them. He further informed that for Mizoram, Ar. Pradesh and Nagaland SAMAST is yet to be approved.

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 158 th OCC	Latest status
63MVAR Reactor at Byrnihat to replace with 80MVAR Reactor	MePTCL	SCM approval given. DPR to be submitted to NLDC/NPC.	DPR submitted to NLDC/NPC.
132kV Dimapur - Imphal (out since 25.07.18)	NERTS	In some locations ROW issue there. Rain impediment to construction works.	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.

220kV Sonabil-Samaguri-I	AEGCL	Revised estimate submitted on 25.05.19. River crossing stringing to be done. Detailed steps taken to be submitted	Administrative approval by Aug'19. Subsequently NIT will be floated. One year estimated
220kV Sonabil-Samaguri-II (out since 07.07.2019)	AEGCL	-	Charged on 27.07.19
132kV Srikona-Panchgram(out since 14.01.2019)	AEGCL	-	To be updated

The Sub-Committee noted as above.

Action: MePTCL, NERTS, AEGCL.

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

SN	Name of element	Actions to be taken	Concerned Utilities	Latest status	Status as informed in the 159 th OCC Meeting
1	132 kV AGTCCPP - Agartala D/C	Installation of Line Differential in 132 kV AGTCCPP - 79 Tilla D/C & Review of impedance setting of both ends as a temporary measure.	NERTS/NEEPCO	Tender opening 20 th July'19	For Diff Relay procurement OBD : 10.08.19 Impedance measurement planned by 31.08.19 with s/d of both ckts.
2	132kV AGTCCPP-Kumarghat	GPS to be procured and time synchronization of relay to be done	NEEPCO	LOA by Jul'19	Work awarded.
3	132kV PKBari-Kumarghat	Installation of Line differential relay	NERTS	Tender opening 20 th July'19	OBD 10.08.19

The Sub-Committee noted as above.

Action: NEEPCO, NERTS.

4. Submission of various data pertaining to reliable operation of the grid:

Details of the data required	Name of Utility	Status of submission as per 158 th OCC	Status as informed in the 159 th OCC Meeting
Data for Wind Turbine Generator	All SLDCs	All SLDCs except	P&ED Mizoram

		Assam & Meghalaya to submit the data.	submitted NIL report on 27.05.19 NIL for others. To be dropped
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The Sub-Committee noted as above.

Action: All SLDCs except Meghalaya & Assam.

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

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

NER PERFORMANCE DURING JULY, 2019

States	Energy Met (MU)		w.r.t. June,19 % inc (+) /dec (-)	Energy Reqr. (MU)		w.r.t. June,19 % inc (+) /dec (-)	% inc (+) /dec (-) of energy reqr vs met. In July,19
	July-19	June-19		July-19	June-19		
Ar. Pradesh	68.78	66.30	3.74	69.1	66.67	3.64	-0.46
Assam	899.1	923.50	-2.64	954.53	970.97	-1.69	-5.81
Manipur	74.19	72.13	2.86	74.62	72.65	2.71	-0.58
Meghalaya	171.21	168.51	1.60	171.21	168.84	1.40	0.00
Mizoram	55.61	55.41	0.36	55.94	55.74	0.36	-0.59
Nagaland	69.7	64.97	7.28	70.09	65.42	7.14	-0.56
Tripura	143.56	149.23	-3.80	144.74	159.49	-9.25	-0.82
Region	1482.15	1500.05	-1.19	1540.23	1559.78	-1.25	-3.77

States	Demand Met (MW)		w.r.t. June,19 % inc (+) /dec (-)	Demand in (MW)		w.r.t. June,19 % inc (+) /dec (-)	% inc (+) /dec (-) of energy reqr vs met. In July,19
	July-19	June-19		July-19	June-19		
Ar. Pradesh	134	144	-6.94	137	146	-6.16	-2.19
Assam	1793	1791	0.11	1841	1844	-0.16	-2.61
Manipur	175	182	-3.85	182	188	-3.19	-3.85
Meghalaya	332	367	-9.54	332	367	-9.54	0.00
Mizoram	100	99	1.01	102	101	0.99	-1.96
Nagaland	151	140	7.86	168	144	16.67	-10.12
Tripura	297	311	-4.50	298	320	-6.88	-0.34
Region	2880	2861	0.66	2958	2922	1.23	-2.64

REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU

Month---->	July-19	June-19
Total Generation in NER (Gross)	1725.726	1725.726
Total Central Sector	1582.662	1348.785

AVERAGE FREQUENCY (Hz)

Month---->	July-19	June-19
	% of Time	% of Time
Below 49.9 Hz	7.50	10.08

Generation (Gross)					
Total State Sector Generation (Gross)	480.067	376.941	Between 49.9 to 50.05 Hz	68.62	71.83
Inter-Regional Energy Exchange			Above 50.05 Hz	23.87	20.21
(a) NER-ER	134.25	5.06	Average	50.00	50.00
(b) ER-NER	310.86	337.23	Maximum	50.32	50.31
(c)NER-NR	600.59	370.47			
(d)NR-NER	0.00	0.00			
© Net Import	-423.98	-38.3	Minimum	49.64	49.63

Deliberation of the sub-Committee:

NERLDC gave a presentation on the grid performance for the month of July'19 (**Annexure-B.2**). NERLDC highlighted the Demand Met and Energy Met of July2019. Frequency and Voltage pattern for July2019 were highlighted along with MVAR Vs Voltage graph for Palatana, BgTPP & AGTCCPP.

NERLDC highlighted some such cases involving unwarranted tripping and it was shown that with proper protection coordination blackouts could have been avoided. It was agreed that all States should focus on this. Ar. Pradesh identified three Engineers for protection coordination and they would be trained at Nirjuli S/S by POWERGRID during end of August'19.

Also, Telemetry and Data availability for last few month were shown along with the date of sending of the weekly status report and letter issued by NERLDC on various dates. OCC forum requested NERLDC to wait till November for filling a petition as target date for FO expansion by NERTS is November 2019. After that NERLDC might file petition. Matter to be further discussed in NETST.

The Sub-Committee noted as above.

C. ITEMS- STATUS REVIEW

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

During 159th 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	July'19	Application will be submitted immediately	Aug'19	Already submitted
2	Kameng HEP of NEEPCO two units (2 x 150 MW) Next two units (2x150 MW)	Delayed due to rain. First two units by Oct'19	CEA clearance available	First two units by Sep'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.	Delayed By Oct'19 To be referred to next TCC/RPC	To be submitted to NERLDC.
4	220/132 kV, 160MVA ICT-II at Balipara	Uncertain due to transportation issues i.r.o. damaged ICT. PG to revert back with exact schedule	To be submitted to NERLDC.	Internal inspection is in progress at GE Works. Repairing to be completed by 30.09.19	To be submitted to NERLDC.
5	220/132 kV, 1x160 MVA ICT with GIS Bay at Kopili	ICT July'19 Connected in GIS by Dec'19	To be submitted to NERLDC.	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.
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)	By 31.08.2019	To be submitted to NERLDC.	To be commissioned by 31.08.19	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 BTSPS-Rangia T/L	Jul'19	-	Aug'19	-
11	80MVAR B/R at RHEP by NEEPCO	Final Estimate & DPR to be prepared	-	Final Estimate & DPR to be prepared	-
b. Elements under breakdown/upgradation					
12	Up-gradation of 132 kV	Queries to be submitted by	Not applicable.	Queries to be submitted by	Not applicable.

	Lumshnong-Panchgram line	AEGCL and MeECL		AEGCL and MeECL	
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	ICT by Sep'19. DoCO after GIS commissioning in 2020.	To be submitted to NERLDC	Scheduled Completion : March'2021	To be submitted to NERLDC
16	Upgradation of 132kV Yurembam-Karong by MSPCL	WIP. By July'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	Tender opening 20 th July'19	-	OBD : 10.08.19	
20	Procurement of GPS at AGTCCPP & time synchronization for 132kV AGTCCPP-Kumarghat by NEEPCO	LOA by Jul'19	-	Work awarded	-

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 is given below:

Name of the state /utility	Data Availability(in%)	Issues	Status updated in the 159th OCCM
DoP Ar.Pradesh	Not updated	-	Last month functioning, exact status to be updated. Ziro not reporting. Others erratic.
Assam	Not updated	-	-
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	Not updated	-	Meter hang no data availability
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	Not updated	-	2 out of 8 reporting. Rest not available

Important operational issues:

In 158th OCCM, AE, SLDC, MeECL informed that after TARA devices are connected the SEMs hung. It was decided that NERPC would write to CDAC for Test Bench Study in this regard.

Members may intimate any other operational issues.

Deliberation of the sub-Committee:

Sr.GM(SO-I), NERLDC enquired whether the data is being used in real time eventhough if availability improves it would be futile with no usage of the data. After detailed deliberation it was decided that CDAC would be invited to next OCC meeting to respond to the low data availability under the project. Further, it was decided that O&M procedures are to be finalized and NERPC would write to CDAC in this regard.

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 SMNagar	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

Member Secretary(I/C), NERPC informed that Manipur/Nagaland would be completed in the next phase of UFR inspection.

Deliberation of the sub-Committee:

After detailed deliberation, it was decided that UFR Inspection for Nagaland and Manipur would be completed in Aug-Sep'19.

The Sub-Committee noted as above.

Action: DoP Nagaland, MSPCL, 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.

Deliberation of the sub-Committee:

AEE, MePTCL informed that the concerns regarding security issues have been addressed. The forum gave the go ahead for the pilot project.

The Sub-Committee noted as above.

Action: NERLDC, MePTCL

C.5. DIMAPUR_PG telemetry out since Feb'18.

In 158th 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.

Deliberation of the sub-Committee:

NERLDC informed that the comments for the operational studies have been submitted to NERPC on 2nd August 2019. 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.

The Sub-Committee noted as above.

Action: PRDC/NERPC.

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 158th OCCM NERLDC suggested that for any one circuit(in AEGCL system) shutdown may be given and synchronisation of the line with grid may be done. The forum agreed.

Deliberation of the sub-Committee:

After detailed deliberation 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.

The Sub-Committee noted as above.

Action: AEGCL, DoP Ar. Pradesh

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.

Deliberation of the sub-Committee:

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 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.

Deliberation of the sub-Committee:

After detailed deliberation it was decided that a workshop cum meeting would be convened preferably in the first week of September, 2019.

The Sub-Committee noted as above.

Action: NERPC

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

In 156th OCCM the mock black start schedule was agreed as below:

AGTCCPP completed

LOKTAK After commissioning of 132kV Bus-A – 15.07.19

Khandong completed

KOPILI completed

RHEP to be done in lean season

DOYANG 12th of June'19

AGBPP – NEEPCO to revert back on Black Start using DG.

Deliberation of the sub-Committee:

DGM, AGBPP, NEEPCO stated that though the plant has black start capability in the following difficulties i.r.o. Black Start from AGBPP would have to be considered:

- All the outgoing line from AGBPP are long lines, which will have difficulty in synchronization during black start. Except for 220kV AGBPP-Tinsukia.
- Unit wise black start is not possible. DG power is fed to 6.6kV Bus which is single bus. Hence not possible to segregate unit's auxiliary supplies. Testing/physical black start may be done for the entire plant and during blackout only.

NERLDC insisted that mock black start provision existed in IEGC and hence should be carried out. NEEPCO representative agreed to check and revert back

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.

Deliberation of the sub-Committee:

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.

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 - Sr. Manager, NEEPCO informed that Pantograph and Bus Coupler CB problems still remain, which is delaying the commissioning of Bus-A. The forum decided that a team comprising of members from NERTS, NERLDC & NERPC would visit RHEP in July'19 to assess the works required for commissioning of Bus-A.
- 132kV Bus-2 at Surjamaninagar - Bus Coupler CT connector got burnt on 18.06.2019. After repair of the same the original configuration would be reverted by July 2019.
- 132kV Bus Coupler at PavoI to be commissioned by July'19

Deliberation of the sub-Committee:

- 132kV Transfer Bus at Loktak HEP - No representative from NHPC.
- 400kV Bus A at RHEP - A Committee visited RHEP on 05.08.2019. Based on the Committee report the forum approved the following recommendations:
 - (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-2 at Surjamaninagar - In place as per decided configuration
- 132kV Bus Coupler at PavoI - Bus coupler is in operation. The protection system is yet to be confirmed by Assam

The Sub-Committee noted as above.

Action: NEEPCO/NHPC/NERTS.

C.13 Status review of upcoming projects by Sterlite Grid 4 for strengthening of Southern part of NER Grid by July'19

Status as updated in the 159th OCC Meeting:

1. 400 kV Misa – Silchar D/C by sterlite:

Deliberation of the sub-Committee:

STERLITE - Forest clearance issue persisting. 80 % foundations completed. 60% erection completed. 25% stringing done. Will be ready for charging in 4 months by Sterlite. M/s STERLITE raised concerns on the uncertainty of bay construction at Silchar & Misa.

POWERGRID - NERTS intimated bay completion schedule. Nov'20 as per PGCIL SCOD date.

Forum decided to review progress in Nov'19

2. 400 kV P K Bari(Sterlite) - Surjamaninagar(Sterlite) D/C:

Deliberation of the sub-Committee:

Slated for completion by Dec19, already 60% work has been completed.

3. 400/132 kV, 2x315 MVA ICTs at P K Bari (Sterlite) -

Deliberation of the sub-Committee:

By Dec'19

4.400/132 kV, 2x315 MVA ICTs at Surjamaninagar (Sterlite) -

Deliberation of the sub-Committee:

By Dec'19

5.132 kV AGTPCCPP – P K Bari(TSECL) D/C:

Deliberation of the sub-Committee:

By Dec'19

Also, review of upcoming projects by TSECL for strengthening of Southern part of NER Grid:-

- a. 132 kV P K Bari (TSECL) - P K Bari (Sterlite): *NERPC would write to CMD, TSECL with reference to SCM MoM and also a letter would be sent to CEA/CTU requesting for clarification.*

Deliberation of the sub-Committee:

Director, NERPC informed that clarification has been obtained from CEA which is that TSECL has to construct the 132kV PKBari-PKBari line.

- b. 132 kV Surajmaninagar(TSECL) - Surajmaninagar(Sterlite): *Work order for 132kV Surjamaninagar - Surjamaninagar would be placed alongwith diversion of 400kV Palatana-Surjamaninagar*

Deliberation of the sub-Committee:

NERTS informed that target for completion of 400kV Palatana - SMNagar, 132kV Silchar - PKBari & 132kV SMNagar-SMNagar is July'20. Also it was informed that the since the work has not yet been awarded there are minimal chances of completion prior to that.

Scope of work under POWERGRID(CTU):

For 400kV Silchar-Misa D/C line:

- CTU to provide 2 no. of 400kV line bays each at Silchar (PGCIL) and Misa (PGCIL)
- CTU to provide 80 MVAR bus reactor at Misa (PG) along with GIS bay
- CTU to provide Switchable line reactors, 1x80 MVAR at Misa ends of the each circuit of the Silchar- Misa 400kV D/C line

Deliberation of the sub-Committee:

It was informed by NERTS that Bays and reactors at both ends shall be made ready by Nov'2020 matching with the completion schedule of the line.

The Sub-Committee noted as above.

Action: STERLITE, NERTS, KEC, TSECL.

C.14 Review of relay settings at Karong:

In 156th OCCM it was brought to notice that the flow in the 132kV karong-Kohima is being limited (at 20MW from Karong to Kohima) via relay settings at Karong. The forum noted that this would lead to unwanted trippings of the line and requested MSPCL to review the same.

In 158th OCCM AM, SLDC, MSPCL informed that the restriction of flow via the 132kV Karong-Kohima line was due to the delayed commissioning of 132kV Imphal-Imphal-Ckt#III. CGM, NERLDC requested MSPCL to give load flow studies for limiting load to Kohima by July'19.

Deliberation of the sub-Committee:

Manager, MSPCL informed that the setting has been changed at Karong. The loading limit as per conductor characteristics is 67MW to Kohima. **The forum decided to drop the agenda item.**

The Sub-Committee noted as above.

C.15 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.

Deliberation of the sub-Committee:

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.

The Sub-Committee noted as above.

Action: NERTS

C. 16 Status of recommendations reg GD-Vs on 03rd & 20th April,2019:

Recommendations	Status as informed in the 158 th OCCM	Status as informed in the 159 th OCCM
Review of negative phase sequence relay settings for GBC motor at Monarchak (Scope of NEEPCO)	Settings send to BHEL. No reply yet. NEEPCO to collect necessary motor parameters from BHEL for verification of settings	Rectified. Time delay changed to 2s.
Identification of weak joints for 400kV Palatana-Silchar D/C (Scope NERTS)	Sample of failed conductor sent to NTH(National Testing House) for verification.	Testing of sample taken up by NETC. NERTS completed checking of the entire line and no such weak joints could be detected.
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.	SLDC to submit nodewise MVAR data of 33 kV system as per calculation procedure it deems fit.
Identification of feeders for additional UFR based load shedding under Islanding Scheme-II(Scope of TSECL)	Identification completed upon visit of team to Tripura.	Identification completed upon visit of team to Tripura.
Standalone EL for integration of relay at AGTCCPP by Oct'19(Scope of NEEPCO)	AGTCCPP - Oct'19. Standalone EL at RHEP completed in June'19	AGTCCPP - Oct'19. Standalone EL at RHEP completed in June'19
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.	No declaration submitted as intimated by NERLDC except OTPC. The forum decided that shutdown would not be accorded to utilities not submitting the declaration.	No declaration submitted as intimated by NERLDC except OTPC. The forum decided that shutdown would not be accorded to utilities not submitting the declaration.
NHPC to procure standalone EL for Loktak HEP	Next year supply will be done linked with R&M	To be updated.
NERTS would explore options in consultation with OEM regarding time synchronization issues at Silchar	The problem is suspected to be specific to a make of GPS time synchronizer. The GPS Time Synchroniser at Sichar is replaced with a different make on 03.07.19 and is	No adverse observation made so far. To be dropped

	under observation.	
Upon SPS-2 activation 132kV Bus Coupler Breaker to be opened at Palatana. Old scheme of opening of HV side CBs of ICTs to be disabled/removed (Scope of OTPC)	Original Scheme involving tripping of HV side of ICT to be kept in service.	To be dropped.
Revised SPS-3 scheme offer sought from GE by NERTS	The forum approved the technical offer and requested NERTS to acquire the Budgetary offer so that the same may be approved in the next TCC/RPC.	Budgetary offer will be collected by 31.08.19
Line defects in 400kV Silchar - Azara & 400kV Silchar-Byrnihat T/L to be attended(Scope of NETC)	To be executed in the next shutdown	Shut down proposed from 16th to 23rd Aug'19
Impedance measurement for 400kV Paltana-Silchar D/C, 400kV Silchar-Azara, 400kV Silchar – Byrnihat	On opportunity	On opportunity
Line parameters to be matched at Silchar, Azara and Byrnihat.	Shall be done by 15.07.19	Shall be done by 31.08.19
Spare relay REL 670 to be installed at Byrnihat for 400kV Silchar-Byrnihat(Scope of MePTCL)	By July'19	To be done during shut down proposed from 16th to 19th Aug'19
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	Shall be done during July'19	Shall be done by 31.08.19

The Sub-Committee noted as above.

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

C.17 Status review of upcoming projects for strengthening of Southern part of NER Grid:

Kalparatu by July'20:

- a. 400 kV Imphal – New Kohima D/C
- b. 400 kV New Kohima – Mariani (PG) D/C

- c. 400/220 kV, 2x500 MVA ICTs at New Kohima (Kalpataru)

POWERGRID

- d. 400/220 kV, 2x 500 MVA ICTs at Mariani
Target Completion: **April'2020**
- e. Upgradation of Misa – Mariani D/C at 400 kV
Target Completion: **April'2020**
- f. Upgradation of S M Nagar (TBCB) – Palatana D/C at 400 kV
Target Completion: **July'2020**
- g. Upgradation of P K Bari (TBCB) – Silchar D/C at 400 kV
Target Completion: **July'2020**
- h. LILO of S M Nagar (TSECL) – Palatana D/C at S M Nagar (TBCB)
Target Completion: **July'2020**
- i. LILO of P K Bari (TSECL) - Silchar D/C at P K Bari (TBCB)
Target Completion: **July'2020**

In 158th OCCM Member Secretary(I/C), NERPC requested NERTS to submit the status at the earliest. He also stated that the exact status from the erstwhile M/s Kalpataru is difficult to obtain since the company has disbanded. However, the status would be obtained from CEA.

The Sub-Committee noted as above.

Action: NERTS, Kalpataru

C.18 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 159 th OCCM
1	Unit -1 unit bus incomer breaker to restored at the earliest	Aug'19
2	Providing alternate cooling water source to compressors	

The Sub-Committee noted as above.

Action: NTPC.

C.19 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 158th OCCM NERLDC requested members to give their comments by 31.07.19.

Deliberation of the sub-Committee:

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.

The Sub-Committee noted as above.

Action: All remaining utilities.

C. 20 Metering Status Review:

<i>Agenda Description</i>	<i>Status as informed in 158th OCCM</i>	<i>Status</i>
Distribution of 70 Laptops	NERTS informed in 158th OCC Meeting that distribution of Laptops to Assam, Meghalaya & Tripura are pending.	Status of Distribution and progress discussed. Laptop already distributed are without optical cable and relevant Software. A list of requirement of optical cable may be prepared station wise for procurement. Software not available in Laptop. Free software may be mailed by NERTS to all the concerned for self-installation.
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.	Not yet corrected.	Target date of action to be decided. Dimapur(NAG) end of Dimapur-Dimapur line reading 20% low. Kohima end of Karong: Kohima end reading 98% low. Kopili chk meter sign reversal correction. Imphal(pg) end of loktak: Erratic reading correction. Ningthoukhong end of Imphal

Agenda Description	Status as informed in 158th OCCM	Status
		(PG) : Ningthoukong end reading Zero. Rangia – Deothang sign reversal correction. After road blockade NERTS to visit Mokokchung end of Doyang-Mok feeder for sign reversal correction. By first week of Aug'19 Nirjuli (PG)to visit Lekhi end of Pare-Lekhi end constantly reading less.
SEMs to be Repaired/Procured	Due to inability of Vendor to repair Meters, decision to be taken to procure meter on urgent basis.	Immediate action to be initiated to procure 100 L&T SEMs, 20 DCDs along with 100 cables for Laptop / DCDs on Single Tender Basis to avoid any further Delay
Optical Cable issue at Agia	Action not taken.	Cable handed over to AEGCL in the OCC meeting.

The Sub-Committee noted as above.

Action: All utilities as above.

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	723.6	39.75	1.584	25
Kopili	609.48	257.2	4.68	55
Doyang	315.534	15.2	1.44	11
Loktak	766.85	22.5	1.385	16

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.

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

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

NETC and POWERGRID have submitted the outage data for the month of June, 2019 - July,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

The forum requested all the SLDCs to carry out the TTC/ATC calculations and decided that SLDC Ar. Pradesh would give presentation in the next OCC.

Deliberation of the sub-Committee:

SE(SO&PSC), DoP Ar. Pradesh informed that in view of the shortage of officers to conduct study the proposal for TTC/ATC presentation/study by Ar. Pradesh be dropped. After detailed deliberation it was decided that SLDC Mizoram would present Study on ATC/TTC calculation in the next OCCM.

Regarding User license renewal AEGCL informed that consent has already been sent by mail. NERLDC stated that consent of every utility is required, so that NERLDC may pursue on their behalf. Also the number of licenses required is to be communicated in view of the cost being quantity sensitive. All the state utilities gave their consent and informed that numbers would be communicated shortly. Director, NERPC requested to include the 2 numbers of existing licenses with NERPC.

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.
- On 05.06.19 Palatana & BgTPP couldn't sustain their response and decreased generation in 20-30s. Other generators did not participate at all. Forum requested all CSGS to submit their DAS data.
- NERLDC may highlight any additional events.

Deliberation of the sub-Committee:

NERLDC informed the following:

- As per DAS data received from Palatana the response is correct.
- BgTPP DAS data not received.
- No events.

The Sub-Committee noted as above.

Action: NTPC.

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.

Deliberation of the sub-Committee:

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.

The Sub-Committee noted as above.

Action: NTPC, OTPC, NERLDC.

D.7 Accurate Load forecasting by SLDCs as per IEGC c1.5.3 for better system operation

In 156th OCCM NERLDC presented the RMSE for Mar'19:

% Error with Actual Data (Forecasted by States)							
	Ar Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
Median	11	12	11	11	14	11	10

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

Deliberation of the sub-Committee:

NERLDC informed the status for June 2019 and requested the SLDCs to improve the forecast accuracy.

% Error with Actual Data (Forecasted by States) June 2019							
	Ar Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
Median	11	12	11	11	14	11	10

The Sub-Committee noted as above.

Action: all SLDCs.

D.8 Patrolling protocols/guidelines:

In 158th OCCM, it was decided that a common format would be prepared by NERPC/NERLDC and circulated for comments from all transmission utilities. NERLDC mentioned that patrolling report of elements declared as Important Grid Elements to be submitted on monthly basis. List of Important Grid Elements is available at NERLDC website at <http://nerldc.in/IE.aspx>.

Deliberation of the sub-Committee:

NERLDC presented the draft format (attached at **Annexure-D.8**) prepared during subgroup meeting on 07.08.19. The forum approved the same and requested all

transmission utilities to submit patrolling report in the same. NERTS POWERGRID agreed to submit patrolling report as per format

The Sub-Committee noted as above.

Action: all transmission utilities.

D.9 Better weather forecasting for power sector by IMD:

In 158th OCCM it was decided that a list of stations would be prepared by NERLDC in consultation with the constituents of NER and submitted to IMD for feasibility check. Constituents of NER were requested to send name, address, mobile no, email id of nodal person of each constituents to NERLDC by 31st Jul19.

Deliberation of the sub-Committee:

The respective utilities nominated the following as nodal officers i.r.o. IMD project:

Ar. Pradesh – Sh. Sange Phuntso, EE, SLDC

Assam- Sh. Pran Krishna Saikia, DM, SLDC

Manipur – Sh. L Dinesh Kumar GM, SLDC

Meghalaya- Sh. D. J. Lyngdoh, EE, SLDC

Mizoram- Sh. Benjamin Tlumtea, EE, SLDC

Nagaland - Sh. Rokobeito Iralu, SDO, Kohima

Tripura – Sh. Anil Debbarma, DGM, SLDC

NTPC - Sh. Kangkan Paul, Manager, BgTPP

OTPC – Sh. N.K. Gupta, Manager, Palatana GBPP

NERTS – Sh. H. Talukdar, Sr.DGM

NEEPCO – Sh. Joypal Roy, DGM

NERLDC informed that nodal officer for NHPC(Sh. Deepak Sanaygarh, Sr. Manager(E) has already been communicated.

The Sub-Committee noted as above.

Action: all utilities/ NERLDC.

D.10 Hand Tripping of 132 kV Aizwal - Tipaimukh and 132 kV Jiribam - Tipaimukh at Tipaimukh end

On 21.07.2019, testing work was performed on Tipaimukh S/S without prior intimation to NERLDC and subsequently lines emanating from Tipaimukh S/S i.e 132kV Aizwal-Tipaimukh and 132kV Jiribam-Tipaimukh were hand tripped. This led to a vulnerable situation in Mizoram as the only connectivity to Mizoram was 132kV Aizwal- Kolasib since 132 kV Aizwal - Kumarghat T/L was under planned shutdown and 132 kV

Silchar - Melriat D/C was under forced outage due to tower collapse. Due to this voltage in the Mizoram system went much below IEGC band.

Deliberation of the sub-Committee:

SE(Trans), P&ED Mizoram informed that due to construction of 400kV Silchar - Melriat, the 132kV Bawktlang- Sihmui line has been dismantled. Due to the incident on 21.07.19 Mizoram system was severely threatened. He requested that the work be expedited on emergency basis and to be reviewed in subsequent meetings.

MSPCL clarified that hot spot was detected in the 132kV Bus and due to mal-operation the lines were opened. It was assured that such an incident would not recur in the future.

The Sub-Committee noted as above.

Action: NERTS.

D.11 FSC of 400 kV Balipara-Bongaigaon-IV opening without intimation to NERLDC

It has been observed that FSC has been taken out of service several times without intimation to NERLDC. This decreases the reliability of ER-NER-NR corridor which is not desirable.

Deliberation of the sub-Committee:

Sr.DGM, NERTS informed that due to unbalance currents flowing between the banks the individual banks were interchanged. NERTS informed the forum that the problem has been taken care of and the unwanted opening of FSC would not happen in future. In case of manual opening of FSC, the same is to be intimated to NERLDC.

The Sub-Committee noted as above.

D.12 New Outage Module of NERLDC

New outage module of NERLDC was made live on 12.06.2019. NERTS and Assam have started entering the avail shutdown request on the outage module. All the other utilities are requested to enter the outage request like Pre OCC, Post OCC, Emergency, etc., in order to run the outage module in full-fledged manner.

Deliberation of the sub-Committee:

NERLDC explained the new software for punching of shutdown requisition(s). The forum requested NERLDC to combine all the applications useful for real time grid operation under one URL with different tabs. All the other utilities were requested by NERLDC to enter Shutdown in the Web Based Outage Module. Moreover, NERLDC

informed that D-3 shutdown avail request to be entered in the software along with mail communication for the next 4 months

The Sub-Committee noted as above.

Action: NERLDC

D.13 Frequency and Voltage Oscillation in AGTCCPP

On 15.08.2019 Low Frequency and Voltage Oscillations were observed in Agartala PMU. On increasing the schedule as requested by AGTCCPP the oscillations died down. Whereas On 18.06.2019 Oscillation was observed even when the units of AGTCCPP were run in full generation. NERLDC has requested NEEPCO to take necessary actions vide letter no NERLDC/SO-1/AGTCCPP/2019/56/756 dated 18.07.2019.

Deliberation of the sub-Committee:

After detailed deliberation it was decided that the issue would be monitored after installation of DVAR & PSS at AGTCCPP.

The Sub-Committee noted as above.

D.14 Intra-State lines being kept open

It has been seen the some of the important intrastate lines are kept open on daily basis, compromising the reliability of the NER grid. Some of the lines kept open are as follows:

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

On 18.07.2019 a Grid disturbance occurred in Tripura system leading to blackout of Monarchak and Rokhia and Udaipur Buses. Hence, it was advised that in order to maintain the grid security and reliability 132kV Palatana-Udaipur line needs to be kept closed. But due to over loading in 132kV Monarchak –Rokhia line the Monarchak generation needs to be backed down. Hence 132kV Palatana-Udaipur line has been decided to be kept closed except for two hours during peak.

Also the other mentioned important lines of Assam and Meghalaya kept open needs to be discussed so as to enable keeping these elements in operation.

Deliberation of the sub-Committee:

After detailed deliberation, it was decided that once 132kV Monarchak - SMNagar is commissioned, 132kV Palatana-Udaipur would be kept connected round the clock.

The Sub-Committee noted as above.

D.15 Ratification of PoC data:

Ratification of Technical and Commercial data for computation of PoC Charges and Losses for Oct to Dec'19 (Q3 of 2019-20)

Deliberation of the sub-Committee:

PoC Data was displayed to the forum. All data were agreed except the Monarchak generation. The value submitted for Monarchak generation was 94 MW by NEEPCO and 75 MW by Tripura. NEEPCO said the same will be communicated to NERLDC later. The forum requested NEEPCO to intimate the actual generation target for Monarchak, GBPP.

The Ratified values for Oct to Dec'19 (Q3 of 2019-20) is :-

Generation Projection (Oct- Dec 2019)						
S N	Entities	Region	Projected Generation before normalization w.r.t projected All India Peak Demand	Comments From DICs /Others (if any)	Figure as per Comments / PoC Data	Ratified Data at 159th OCCM
1	AGTPP, NEEPCO	NER	106	As per data given by NEEPCO	110	110
2	Doyang, NEEPCO	NER	62		72	72
3	Kopili, NEEPCO	NER	191		188	188
4	Kopili 2, NEEPCO	NER	25		23	23
5	Khandong, NEEPCO	NER	52		46	46
6	Ranganadi, NEEPCO	NER	413		405	405
7	AGBPP_Kathalguri	NER	236		220	220
8	Loktak, NHPC	NER	105	As per data given by NHPC	105	105

9	Palatana GBPP	NER	680	As per data given by OTPC	680	680
10	Bongaigaon_NTPC	NER	615	As per data given by NTPC	615	615
11	Pare	NER	118	As per data given by NEEPCO	110	110
12	Arunachal Pradesh	NER	No Generation	No Generation	-	-
13	Assam	NER	268	As per data given by Assam	257	257
14	Manipur	NER	No Generation	No Generation	-	-
15	Meghalaya	NER	194	As per data given by Meghalaya	257	257
16	Mizoram	NER	33	As per data given by Mizoram	68	68
17	Nagaland	NER	13	As per data given by Nagaland	24	24
18	Tripura	NER	140	As per data given by Tripura	174	174

DEMAND FORECAST USING PAST 3 YEARS DATA (Oct- Dec 2019)

	Projected Demand for Oct - Dec 2019 before normalization	Comments	Data given by DICs	Ratified Data at 159 th OCCM
Arunachal Pradesh	131	As per data given by Arunachal Pradesh	135	135
Assam	1579	As per data given by Assam	1790	1790
Manipur	219	As per data given by Manipur	227	227
Meghalaya	375	As per data given by Meghalaya	376	376
Mizoram	104	As per data given by Mizoram	99	99
Nagaland	136	As per data given by Nagaland	140	140
Tripura	258	As per data given by Tripura	255	255

The Sub-Committee noted as above.

Action: NEEPCO

D.16 Operating Procedure for NER

In compliance with Regulations 5.1(f) of IEGC, Operating Procedure for North Eastern Region for 2019-20 has been issued on 20th July'19. Password for opening the same can be obtained by mailing to nerldcso2@posoco.in.

Deliberation of the sub-Committee:

NERLDC requested all the constituents to follow the latest operating procedure issued on 20th July'19

The Sub-Committee noted as above.

D.17 Erroneous SCADA data

As per CERC KPI for 2019-20, voltage profile of all 220 kV Stations in NER to be reported in CERC Voltage Deviation Report but it has been observed that SCADA data of many 220 kV stations is erroneous. AEGCL informed that there is communication failure at SLDC Assam due to burning of communication cards. AEGCL is requested to look into the matter and resolve the issue at the earliest. Till such time, SLDC Assam is requested submit the hourly voltage data of the 220 kV nodes to NERLDC on daily basis for onward reporting to CERC.

Deliberation of the sub-Committee:

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.

The Sub-Committee noted as above.

Action: AEGCL

D.18 Expiry of PSSE User License

Maintenance and Support(M&S) Contract for PSS/E User Licenses used by NLDC/RLDCs/SLDCs had expired in 2018. Renewal of the licenses used by POSOCO is in progress. NERLDC vide its letter to SLDCs dated 24.07.19 requested to communicate regarding their approval for renewal of M&S contract by 10th August'19 so that NLDC could negotiate about the same with M/s Siemens on their behalf on a better price.

Deliberation of the sub-Committee:

Pls refer to discussion in **item No. D.4.**

The Sub-Committee noted as above.

Action: All state utilities

D.19 Subsystems not fulfilling N-1

List of Subsystems not fulfilling N-1 criterion is attached as **Annexure D.19**. Upgradation of Transmission System is required to ensure 24x7 supply.

Deliberation of the sub-Committee:

NERLDC showed that list to the forum and noted that there are 45 lines/locations where N-1 is not compliant. After due deliberation it was decided to refer the matter to the next NERSCT.

The Sub-Committee noted as above.

Action: NERPC

D.20 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 as per the enclosed format as **Annexure D.20** from first quarter of 2019-20.

Deliberation of the sub-Committee:

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

The Sub-Committee noted as above.

Action: NERTS.

Metering Agenda

D.21 METER ERRORS:

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

l) Lumshnong end of Panchgram feeder, Lumshnong end reading zero value.

Deliberation of the sub-Committee:

NERLDC requested NERTS to check and rectify the error.

The Sub-Committee noted as above.

Action: NERTS.

D.22 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.22.a**, are not received by NERLDC and **Annexure D.22.b** provides location details of Drift correction action not being done / weekly SEM data not sent.

Deliberation of the sub-Committee:

NERLDC requested all the utilities to submit SEM data by Tuesday noon in line with IEGC.

The Sub-Committee noted as above.

Action: all utilities.

D.23 Data Collection issue at Deothang:

SEM data of Bhutan end is used for accounting by both ER and NER. For the week 22.07.19 to 28.07.19 SEM data of Bhutan end was not sent by Monday.

Issue discussed with PGCIL over phone, but positive response yet to be received. Matter to be discussed and urgent action required for seamless accounting.

Deliberation of the sub-Committee:

NERLDC requested all the utilities to submit the data at the earliest.

The Sub-Committee noted as above.

Action: all utilities.

ADDITIONAL AGENDA ITEMS FROM OTPC

D.24 Shutdown of both the modules at Palatana:

Plan for both unit S/D in 1st Sept 19: From 06:00 Hrs to 17:00 Hrs of 01.09.2019. Outage period may be varied for a day or two from our plan day subjected to real time condition, which will be informed accordingly well in advance.

Deliberation of the sub-Committee:

DM, APDCL opined that in the same period AGBPP one unit would be under shutdown and with outage of both units of Palatana, Assam would have a generation shortage of 300MW. Director, NERPC stated that as decided in the previous meetings, shutdowns of the hydel plants are to be accorded in the peak hydro season. The forum approved the shutdown.

The Sub-Committee noted as above.

Action: OTPC.

D.25 Shutdown of module I at Palatana:

Unit-1 S/D: From 06:00 Hrs of 01.09.2019 to 06:00 Hrs on 11.09.2019 for HRSG-1 Licence renewal and Steam Turbine Minor inspection. Outage period may be varied for a day or two from our plan day subjected to real time condition, which will be informed accordingly well in advance.

Deliberation of the sub-Committee:

The forum approved the shutdown.

The Sub-Committee noted as above.

Action: OTPC.

D.26 Tripping of Module-II at Palatana due to SPS-3 operation:

Tripping of U-2 of OTPC PALATANA due to SPS-3 Operation on dated 2nd Aug 2019 at 17:13 hrs due to tripping of 400 KV SL-Azara and SL-Byrnihat line simultaneously. The RCA must done properly to find root cause and further corrective action to avoid such incident, as these type of tripping causing problems in Machine performance and stability including huge financial loss.

Deliberation of the sub-Committee:

Director, NERPC informed that the tripping of the D/C lines have been discussed in the Sub-group meeting on 07.08.2019, the gist are as follows:

- The lines tripped due to lightning.
- Location was not one of the lightning prone ones where Chemical treatment of tower footing has already been done.
- Due to constructional defects the clearances are reduced and this resulted in tripping of the 400kV Silchar-Azara & 400kV Silchar-Byrnihat.
- These would be rectified in the shutdowns planned in Aug'19
- Also A/R non-operation at Byrnihat would be rectified in Aug'19. Also, non operation of A/R at Azara is to be rectified.
- For 3-phase A/R in both of these lines NERPC would write to POWERGRID/CTU.

NERTS also informed that a party has been approached to develop 400kV TLAs and install on the D/C line on a test basis.

Sr. GM(SO-I), NERLDC made a detailed presentation on the near miss situation in NER Grid on 2nd. August'19 on account of tripping of 400 KV SL-Azara and SL-Byrnihat line simultaneously. The sequence of events was analyzed which provided clear picture of the event. Copy of presentation is attached at **Annexure-D.26**.

The Sub-Committee noted as above.

Action: NERTS, NETC, MePTCL, NERPC.

D.27 Payment Security Mechanism:

Provision of Payment security option in Web Based scheduling system rather than in separate portal.

Deliberation of the sub-Committee:

NERLDC agreed to explore the above.

The Sub-Committee noted as above.

Action: NERLDC

ADDITIONAL AGENDA ITEMS FROM NERTS:

D.27 Continuous shutdown of 220 kV Bus Coupler & 4 x 33 MAV 22/132kV ICT-1 along with associated bays w.e.f 06/09/2019 and shifting of 01 set of 220 kV Bus PT w.e.f 02/09/2019.

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) 200kV ICT – 1 BAY
- (3) 132kV ICT – 1 BAY
- (4) 200kV BUS B
- (5) 200kV 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 02.09.2019 to 05.09.2019 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 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.

Deliberation of the Sub-Committee

NERTS informed that under the Dimapur upgradation project continuous shutdown of old ICT 33x3MVA is required with installation of two new ICTs 2x150 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.

The Sub-Committee noted as above.

Action: DoP Nagaland, MSPCL, NERLDC.

ADDITIONAL AGENDA ITEMS FROM AEGCL:

D.28 Commissioning of 220kV BTPS-Rangia:

AGM, SLDC, AEGCL requested that the modus operandi for pre-commissioning of 220kV BTPS-Rangia be finalized. The forum unanimously decided that since it is an Intra State line, SLDC would decide the charging requirements and procedure. However prior to charging the protection settings would be sent for verification.

The Sub-Committee noted as above.

Action: AEGCL.

ADDITIONAL AGENDA ITEMS FROM NEEPCO/NERPC:

D.29 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.

The Sub-Committee noted as above.

Action: NEEPCO.

D.30 Extension of data beyond wideband station by CSGS:

It was brought to notice that there have been numerous cases where CSGS has been requested to check for data availability at ISTS station beyond the wideband station.

Director, NERPC opined that this is a bad precedent because as per previous discussion in the forum data has to be ensured at wideband station by CSGS. After detailed deliberation it was decided that at the terminal server (in wideband station) the ISGS data should be available. Any deviation from this arrangement is to be informed to NERPC.

The Sub-Committee noted as above.

Action: All ISGS/NERTS.

ADDITIONAL AGENDA ITEMS FROM NERLDC:

D.31 Frequent trippings in Arunachal Pradesh system:

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 15th 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

The Sub-Committee noted as above.

Action: NERTS.

D.32 Opening of 132 kV Rokhia – Monarchak line during S/D of 132 kV Rokhia – Agartala line II:

Sr. GM, NERLDC stated that shutdown of all important grid elements are to be approved in OCC and this is applicable to State lines also. TSECL was asked to follow the process. DGM-SLDC TSECL agreed to the same. Also, it was stated that SLDC should coordinate with RLDC before availing any shutdown.

The Sub-Committee noted as above.

Action: TSECL.

D.33 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.

The Sub-Committee noted as above.

Action: AEGCL.

D.34 Synchronous operation of the grid via the Intra-state 220/132kV networks:

Sr.GM(SO-I), NERLDC informed that on the event dated 02nd Aug,19 inspite of trippings of both the 400kV Silchar-Azara and 400kV Silchar-Byrnihat, there was no disturbance. Thus was possible due to keeping all Intra-state lines in service. The power was diverted via important corridors in the Meghalaya, Manipur, Nagaland system and the 132kV Khandong-Kopili-II line.

He requested for (i) Early restoration of 132kV Khandong-Kopili-I, (ii) Shutdown of 132kV Khandong-Kopili-II (HTLS conductor) only after 132kV Dimapur-Imphal line is restored.

The Sub-Committee noted as above.

Action: NERTS.

D.35 Modification in proposed SPSs for Bangladesh power supply:

Sr.GM(SO-I), NERLDC stated that presently the SPS-2 is failing inspite of correct operation as per design and further resulting in tripping of generators at AGTCCPP, Monarchak. This is due to the excessive MVAR drawal by Bangladesh. After detailed deliberation, it was decided that 400kV SMNagar-Comilla D/C (presently charged at 132kV) is to be tripped in case of tripping of 2x125MVA ICTs at Palatana. Regarding SPS-II, NERPC agreed to write to Member(PS), CEA to enable implementation of Bangladesh SPS at the earliest

The Sub-Committee noted as above.

Action: NERPC.

D.36 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"

Deliberation of the Sub-Committee

The 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.

The Sub-Committee noted as above.

Action: NERTS.

D.37 Critical Elements affecting the reliability of and security of the Grid

NERLDC suggested that a list of critical elements which affects NER/ER TTC/ATC and has the potential to cause major GD have been prepared and the same is to be monitored at every OCC. The forum decided that the count of tripping of the element in the list would be monitored and actions taken to resolve the issues will be monitored in every OCC

The list is given below:-

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

The Sub-Committee noted as above.

Date & Venue of next OCC meeting

It is proposed to hold the 160th OCC meeting of NERPC on second week of September 2019. However, the exact date and venue will be intimated in due course.

ANNEXURE-I			
List of participants in the 159th OCC Meeting on 09.08. 2019			
Sl. No	Name of Participant	Designation	Contact details (email/ph.no)
Arunachal Pradesh			
1	Shri. NangkongPerme	SE (E) SO& PSC	se.sops@gmail.com
ASSAM			
1	Shri. R. Choudhury	GM, APGCL	9435143426
2	Shri. R. Das	DM, Commercial	7896006747
3	Shri. Indrajit Tahbildar	AGM, Commercial, APDCL	9864799857
4	Shri. B.C. Borah	AGM, SLDC	9435111248
5	Shri. T.K Mahanta	CGM, SLDC	9435340383
6	Shri. H.S. Mohan	DGM, SLDC	9635336124
Manipur			
1	Shri. Tapan Kumar Sharma	Manager	8974138850
2	Shri. Roshan Dinam	Manager	9863895281
Meghalaya			
1	Shri. T.Gidon	EE, SLDC, MePTCL	
2	Shri. B. Narry	AEE, MePTCL	908900011
3	Shri. D. Marshariang	AE, SLDC, MePTCL	
4	Shri. M.N. Tariang	JE,SP, Meptcl	
Mizoram			
1	Shri. F. Lalrinpuia	SE	9436143080
Nagaland			
1	Shri. Rokobeito Iralu	S.D.O (Transmission)	9436832020
Tripura			
1	Shri. Anil Debbarma	DGM,SLDC	9612589250
NEEPCO			
1	Shri. Diganta Goswami	DGM (E/M)	9435577655
NERTS (PGCIL)			
1	Shri. U. Katak	Sr. GM (AM)	9435505418
2	Shri. H Talukdar	Sr. GM - AM	9436335237
NERLDC			
1	Shri. S. Shadruddin	Sr. DGM	9436335380
2	Shri. Palash Jyoti Borah	Dpt Manager	8761093397
3	Shri. R. Sutradhar	Sr. GM (SO I)	
4	Shri. S.C. De	GM (SO II)	9436335319
5	Shri. Sorav Mandal	Dy. Mgr	940219384

6	Miss. Bornali Nath	Eng	8414927752
7	Miss. Knitika Debnath	Eng	9436930830
8	Shri. Koshab Borah	Eng	7399276312
OTPC			
1	Shri. Narendra Gupta	Sr. GM - opr	9774233426
NTPC			
1	Shri Himanshu Nayak	DGM (O)	9424140726
2	Shri. Ramakarta Panda	GM (O)	9650991355
ANY OTHER ORGANISATION			
NETC			
2	Shri. Ratan Singh Basnet	DY. Manager	8811072489
3	Shri. Shivendra Singh	Asst.Mgr (sterlite power)	9981110264
NERPC			
1	Shri. A.K. Thakur	MS	9968380242
2	Shri. B. Lyngkhoi	Dir	9436316419
3	Shri. S. Mukherjee	AEE	8794277306
4	Shri. S.M. Aimol	Dy. Director	



उ.पू.क्षे ग्रिड प्रदर्शन

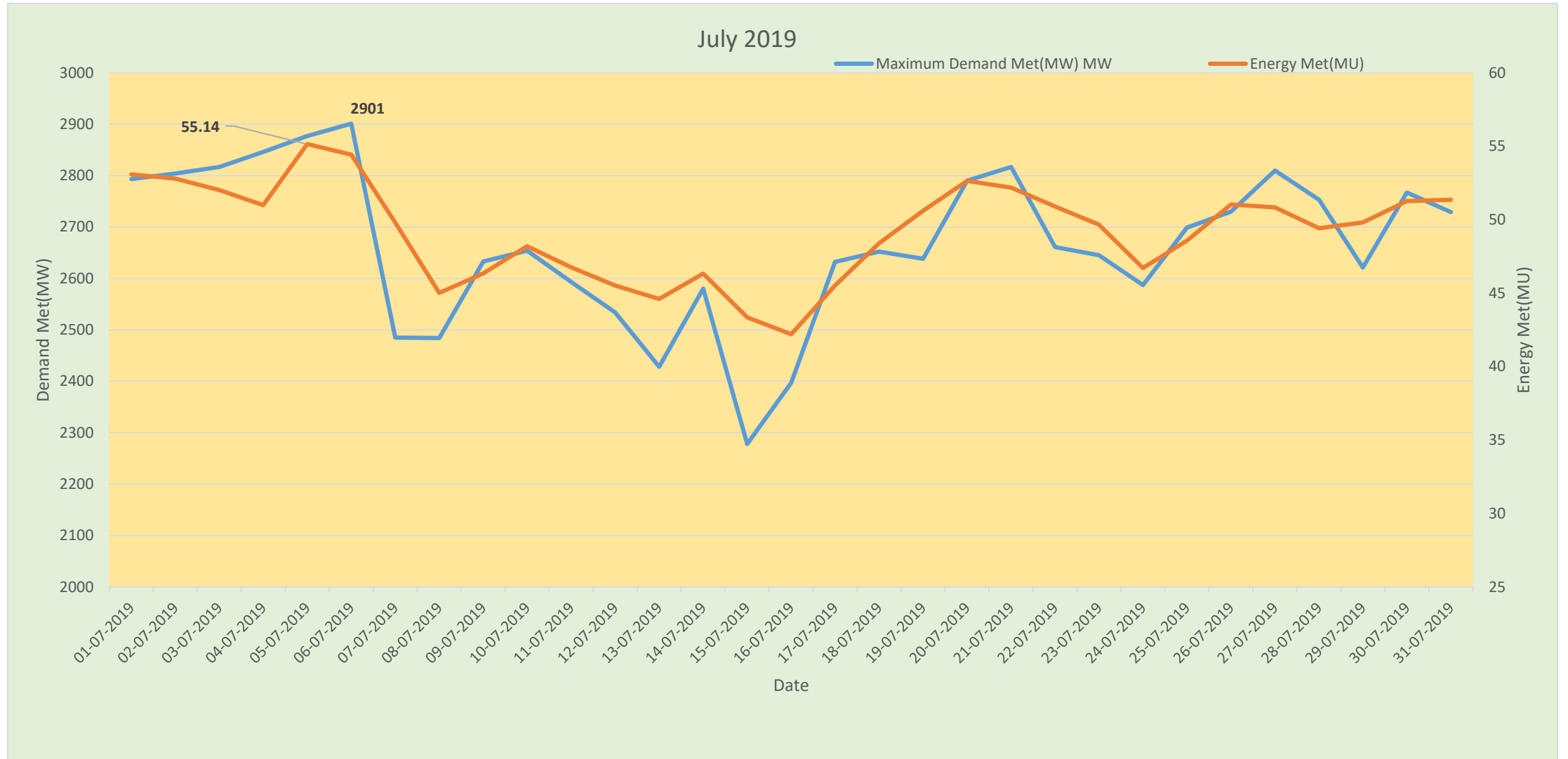
NER GRID PERFORMANCE

For the month July, 2019

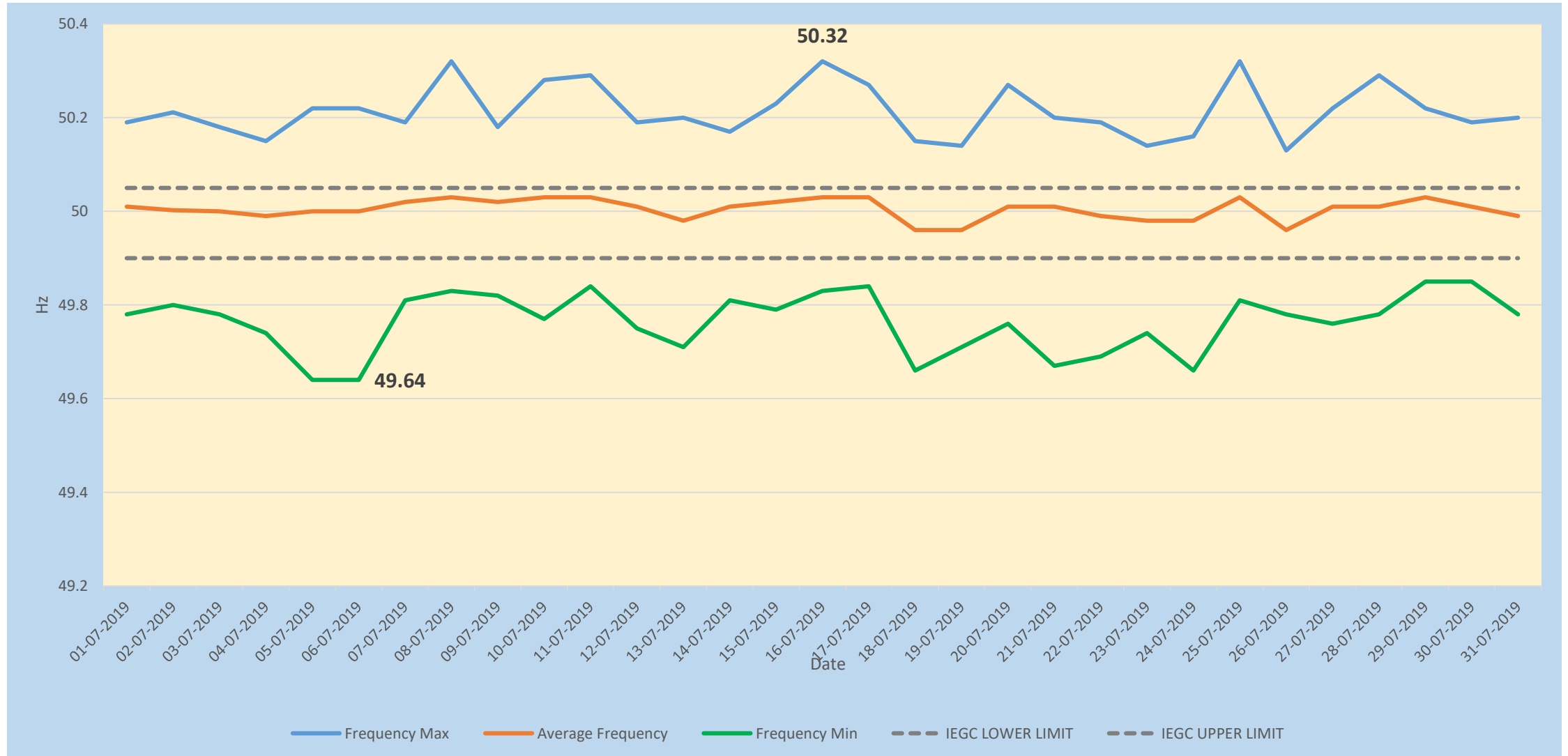
North Eastern Regional Load Despatch Centre

POSOCO, Shillong

Maximum MW and MU in NER: July 2019



Frequency Profile



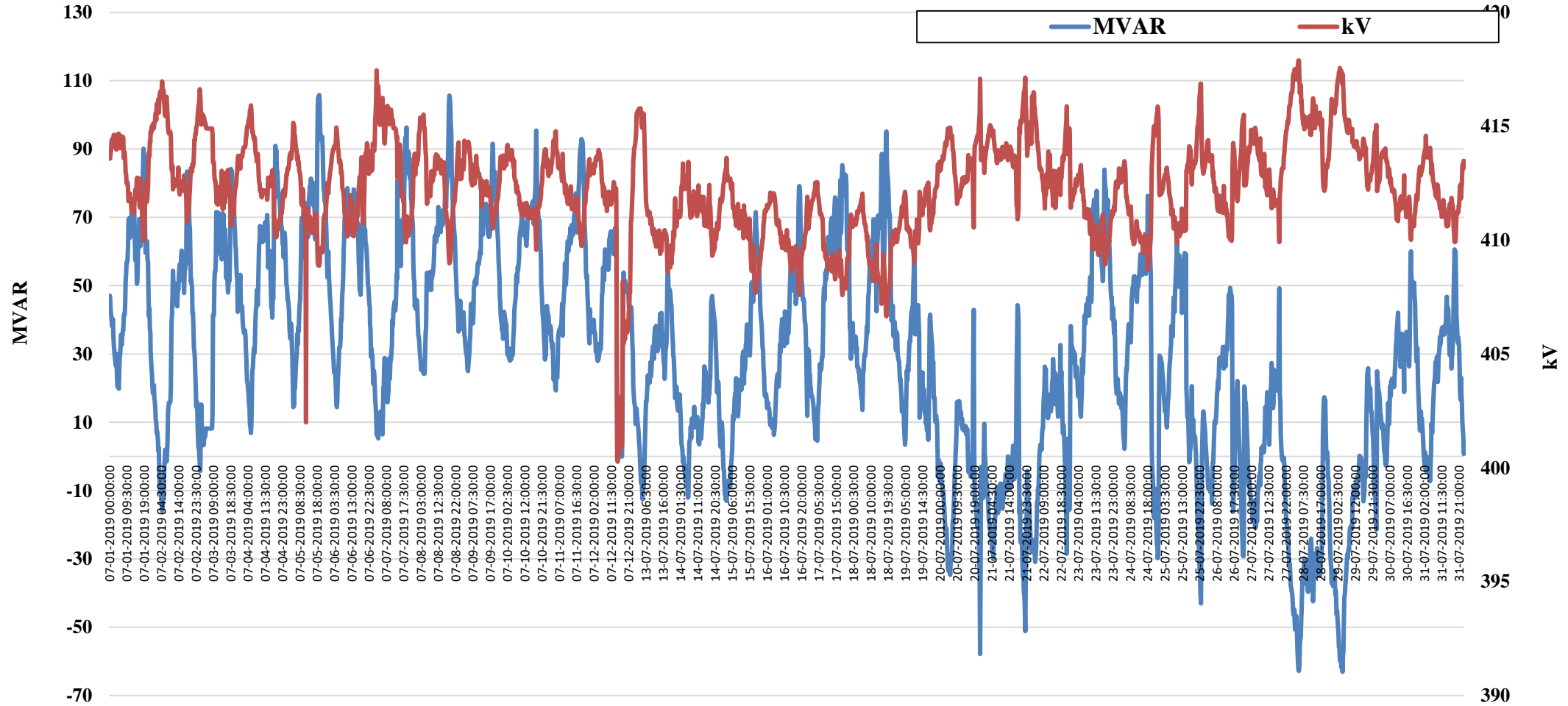


Voltage Issues of NER

Voltage Vs MVAR generation of Palatana



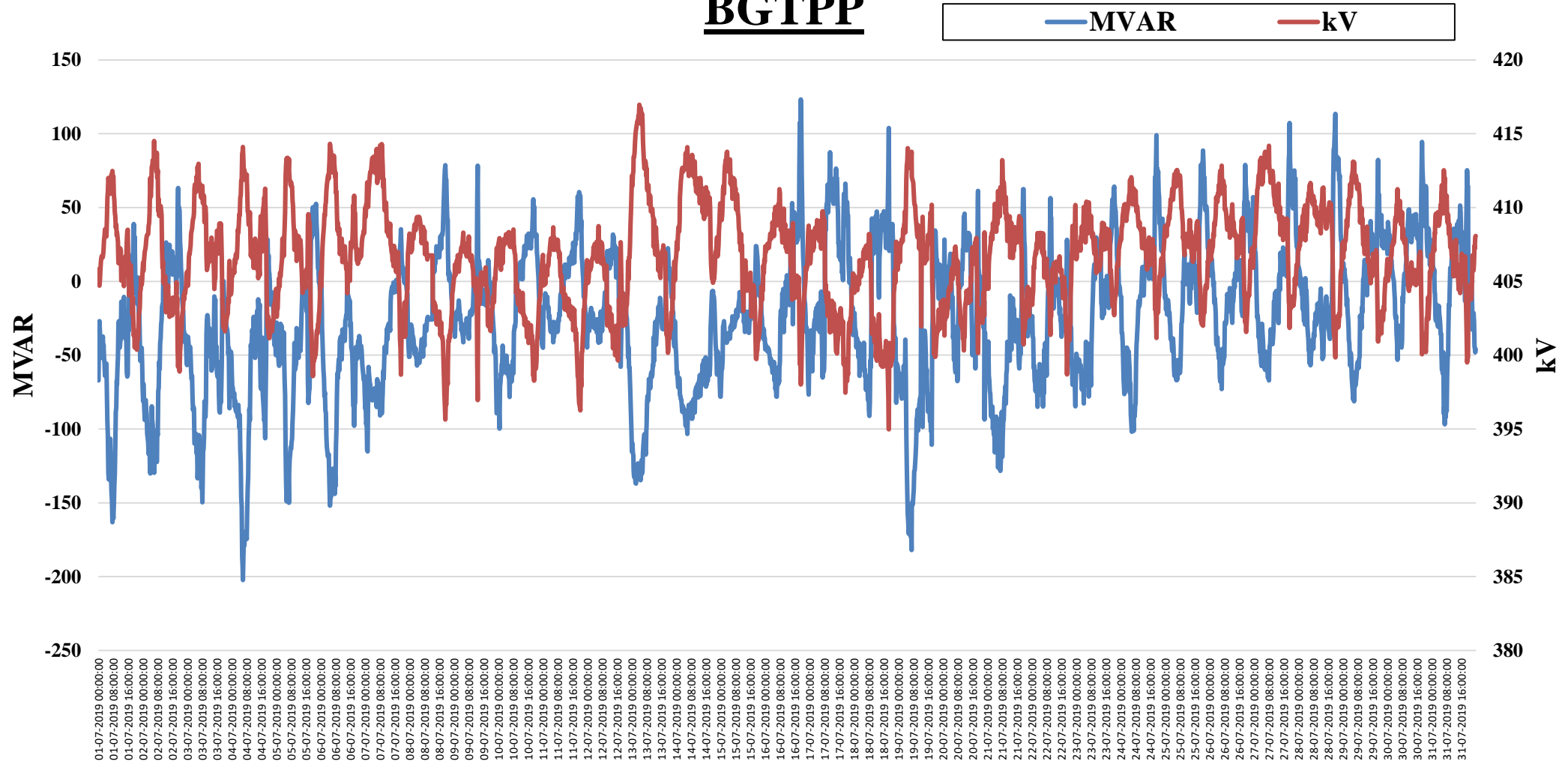
PALATANA



Voltage Vs MVAR generation of BgTPP



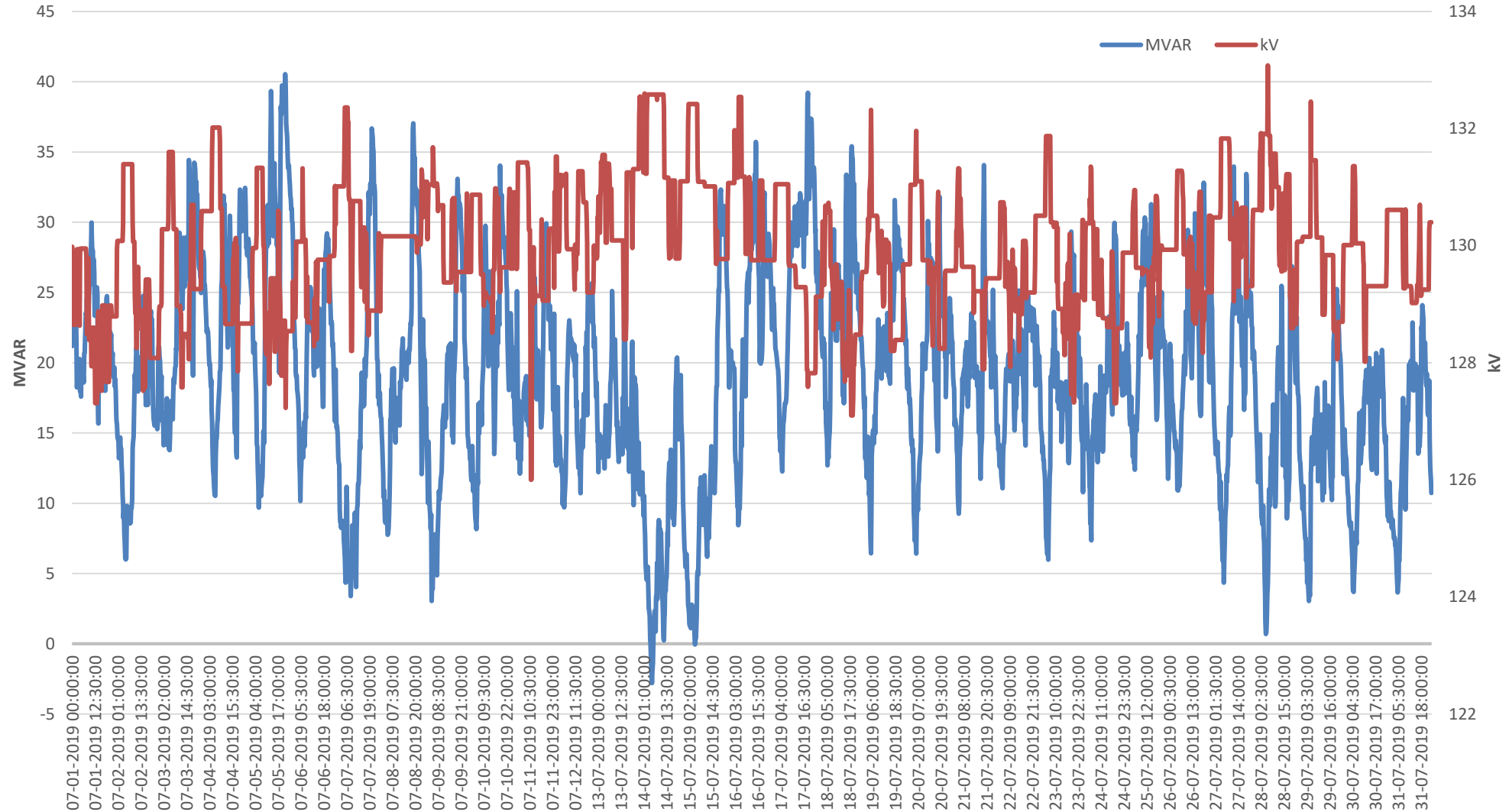
BGTPP



Voltage Vs MVAR generation of AGTCCPP



AGTCCPP



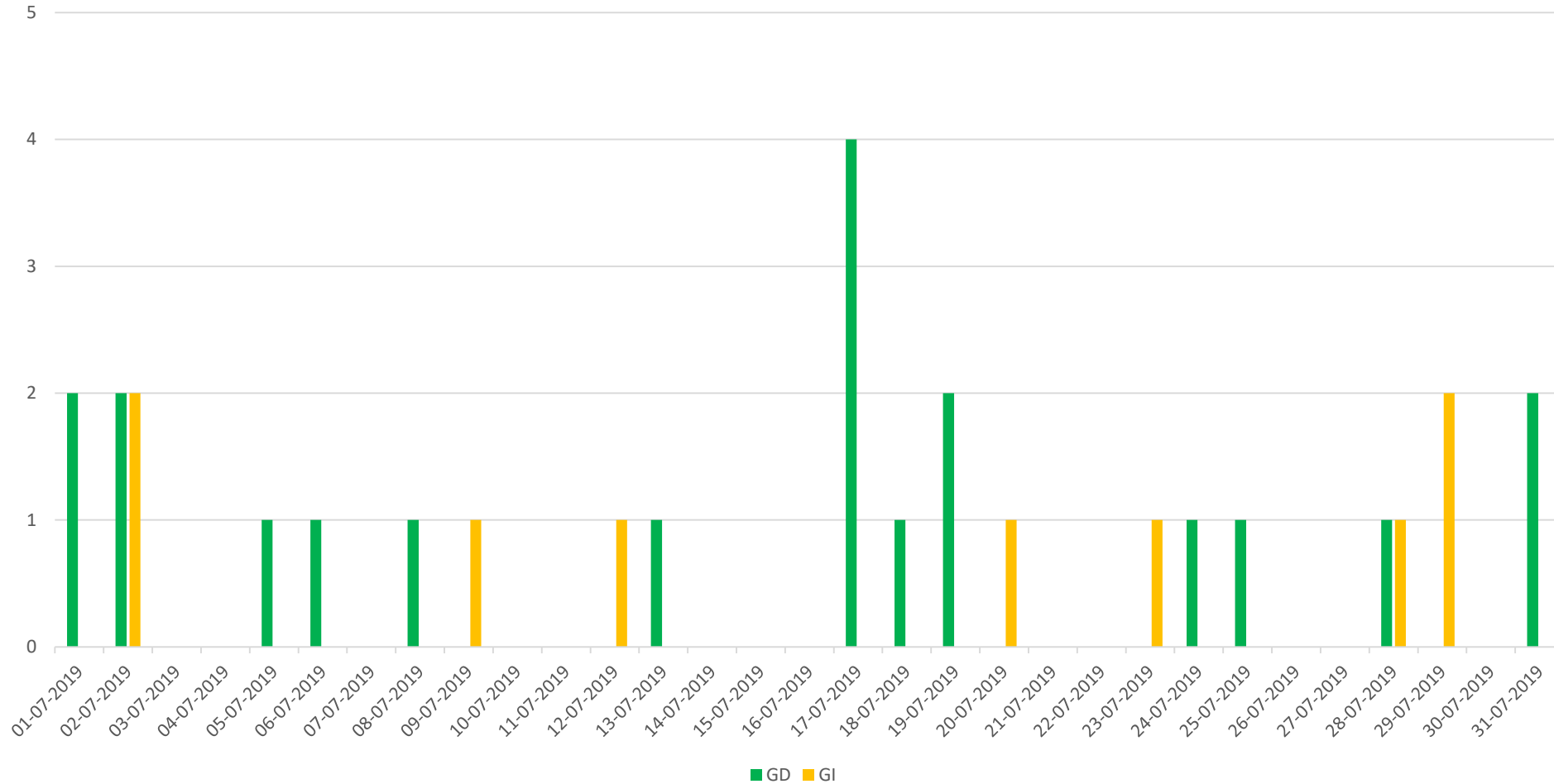


Line Tripping and Grid Disturbance
during July 2019

GD & GI Count for July 2019



Grid Disturbances and Grid Incidences of July 2019



Total GI-9

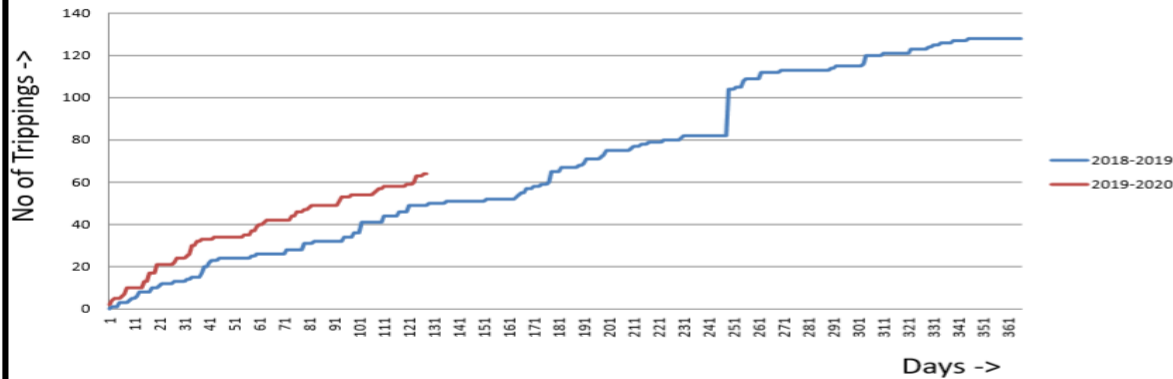
Total GD-20

Note: All the GD belong to category GD1

Line Tripping Comparison

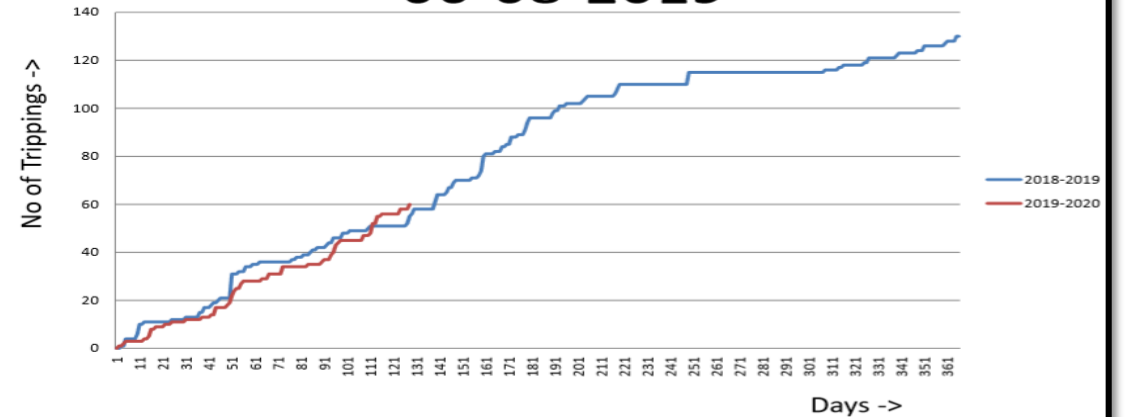


No. of Tripping of 400 kV lines till 06-08-2019



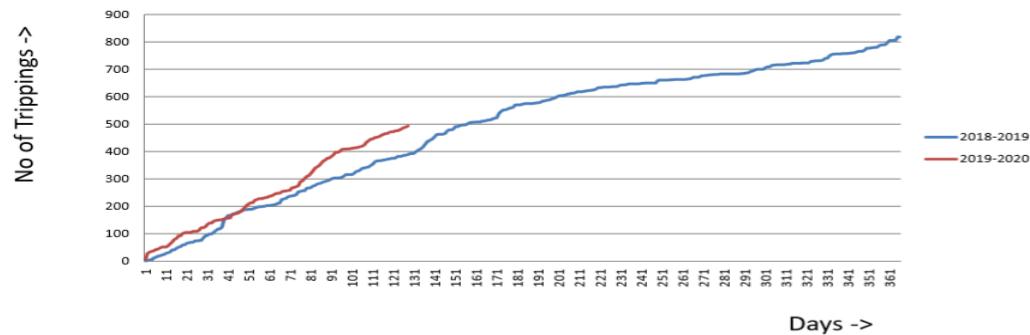
No. of tripping in 2018-2019 as on date: 49
 No. of tripping in 2019-2020 as on date: 64
 (Total No Lines= 26)

No. of Tripping of 220 kV lines till 06-08-2019



No. of tripping in 2018-2019 as on date: 55
 No. of tripping in 2019-2020 as on date: 60
 (Total No Lines= 43)

No. of Tripping of 132 kV lines till 06-08-2019



No. of tripping in 2018-2019 as on date: 389
 No. of tripping in 2019-2020 as on date: 493
 (Total No Lines= 161)

List of Unwanted Line Trippings

Trippings on 05/07/2019 at 05:11 Hrs (Blackout at Itanagar)

At 05:11 Hrs, 132 kV Ranganadi- Itanagar (end 1 : R-Ph , Z2 , 31.27 KM and end2 : No Tripping) and 132 kV Pare- Itanagar (end 1 : O/C , E/F and end2 : No Tripping) T/L tripped.

Sl No.	Element Name	Owner	END 1	END 2
1	132 kV Pare - Itanagar (Chimpu)	NEEPCO & AP	O/C , E/F	No Tripping
2	132 kV Ranganadi - Itanagar (Chimpu)	AP	R-Ph ,Z2, 31.27 Km	No Tripping

Out of the above mentioned lines, the tripping of 132 kV Pare – Itanagar T/L appears unwanted.

Trippings on 07/08/2019 at 14:09 Hrs (Blackout at Rokhia)

At 14:09 Hrs of 07/08/2019, 132 kV Monarchak - Rokhia T/L & 132 kV Rokhia - Agartala I tripped along with Rokhia Unit#7 & Unit#9 causing blackout of 132 kV Rokhia bus.

Sl No.	Element Name	Owner	END 1	END 2
1	132 kV Monarchak - Rokhia T/L	Tripura	DP, Z-III, 29.69 km	No Tripping
2	132 kV Rokhia - Agartala I	Tripura	B-ph, E/F	No Tripping

Out of the above mentioned lines, the tripping of 132 kV Monarchak – Rokhia T/L appears unwanted.

Trippings on 07/08/2019 at 16:06 Hrs (Blackout at Tipaimukh)

At 16:06 Hrs of 07/08/2019, 132 kV Jiribam - Tipaimukh T/L, 132 kV Jiribam – Pailapool T/L, 132 kV Jiribam – Loktak & 132 kV Tipaimukh – Aizwal causing blackout of 132 kV Tipaimukh bus.

Sl No.	Element Name	Owner	END 1	END 2
1	132kV Loktak-Jiribam	POWERGRID	E/F	No Tripping
2	132kV Jiribam-Tipaimukh	POWEGRID	E/F	No Tripping
3	132kV Jiribam-Pailapool	AEGCL & MSPDCL	No Tripping	E/F
4	132kV Aizawl-Tipaimukh	POWERGRID	B-ph, E/F	No Tripping

Out of the above mentioned lines, the tripping of 132 kV Loktak – Jiribam, 132 kV Jiribam – Pailapool, 132 kV Aizwal – Tipaimukh appears unwanted.

Trippings on 08/08/2019 at 12:32 Hrs (Blackout at Lekhi,Nirjuli)

At 12:32 Hrs of 08/08/2019, 132 kV Pare - Lekhi T/L tripped causing blackout of 132 kV Lekhi & Nirjuli bus.

Sl No.	Element Name	Owner	END 1	END 2
1	132 kV Pare – Lekhi	AP& POWERGRID	Y-B ph, O/C	O/C
2	132 kV Lekhi – Nirjuli	AP& POWERGRID	Hand Tripped	Hand Tripped

Out of the above mentioned lines, the tripping of Pare – Lekhi appears unwanted.

Line Tripping Details for July 2019



VoltageLevel (KV)	ElementName	Utility/Owner	No. of times tripped
132	Jiribam - pailapool	Assam & Manipur	8
132	Jiribam-Loktak	POWERGRID	6
132	Loktak - Rangpang	Manipur	5
132	Doyang-Mokokchung (Nag)	NAGALAND	4
132	Aizawl-Tipaimukh	POWERGRID	4
132	KOHIMA-WOKHA	DOP,NAGALAND	4
132	SALAKATI-GELEPHU	POWERGRID	4
400	Silchar-Imphal II	POWERGRID	3
220	Misa-Kopili III	POWERGRID	3
132	DIMAPUR(PG)-DOYANG II	POWERGRID	3
132	KHANDONG-KOPILI II	POWERGRID	3
132	Monarchak - Rokhia	TSECL	3
132	PARE-ITANAGAR	NEEPCO & AP	3
132	RANGIA-MOTONGA	POWERGRID	3

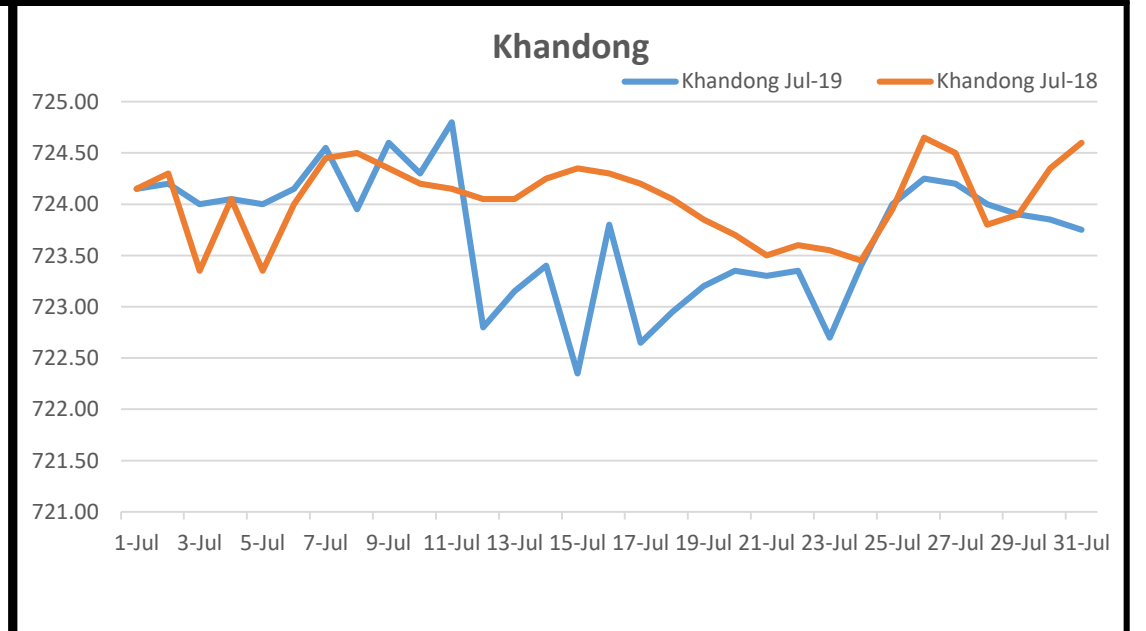
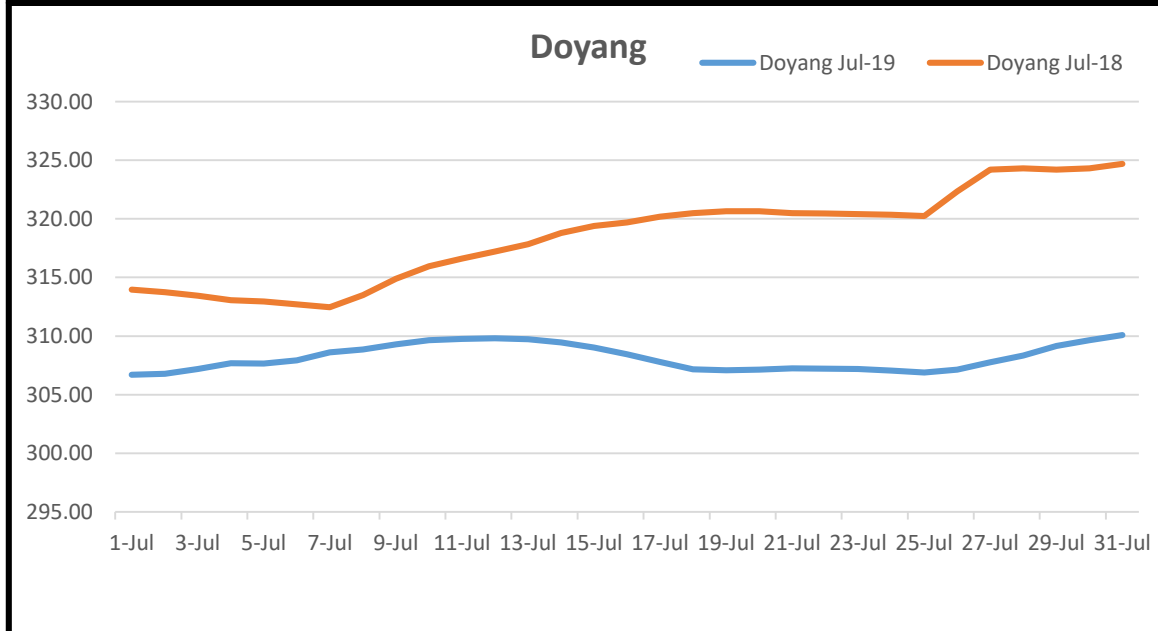
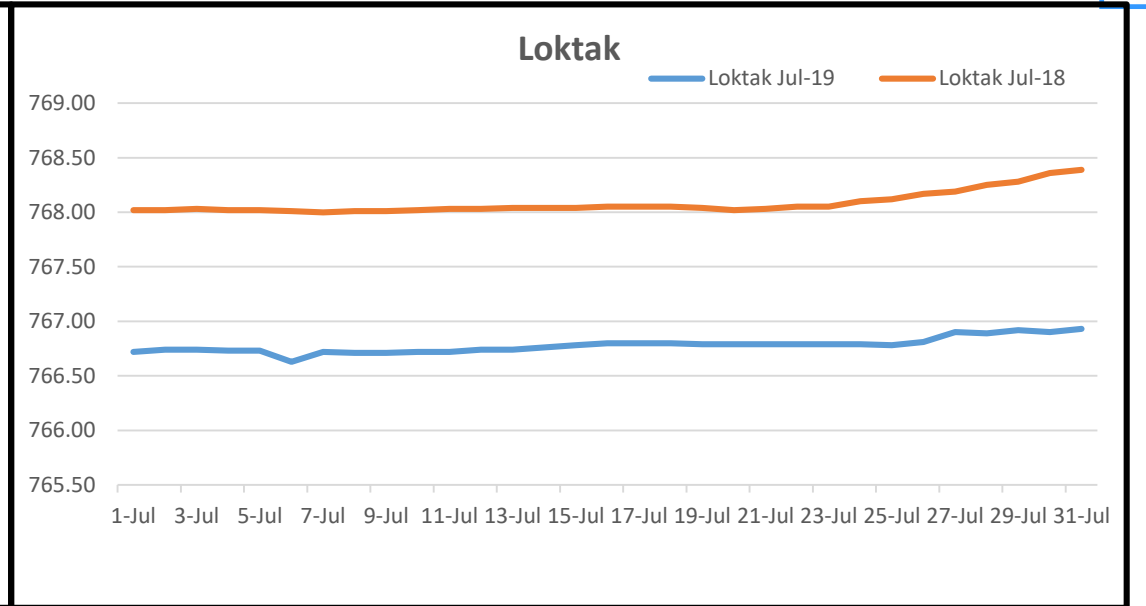
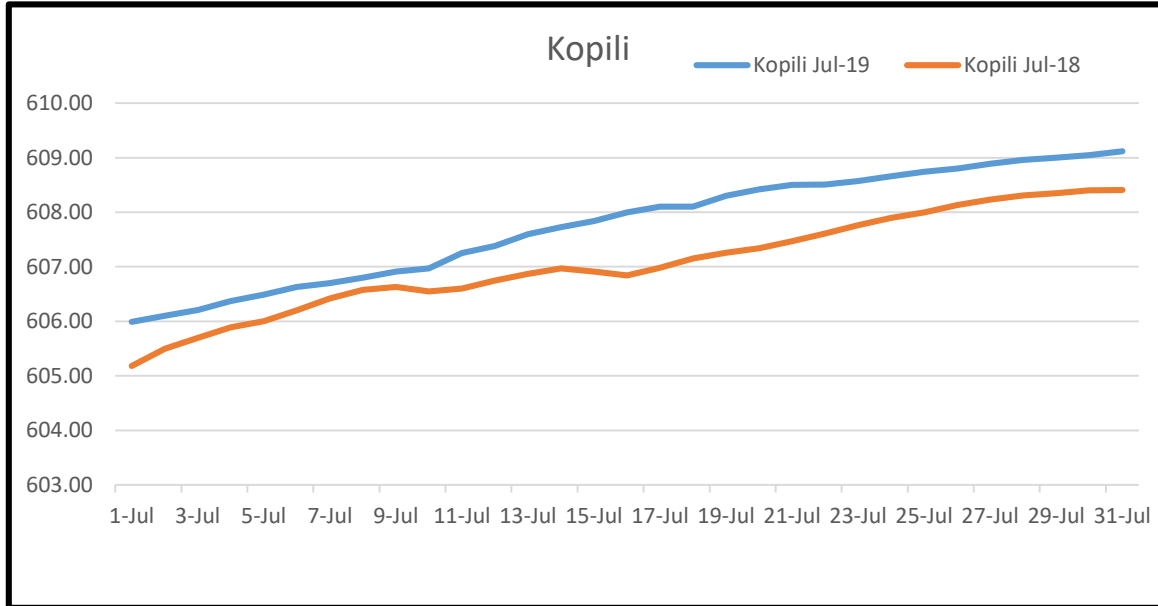
High Number of Tripping needs to be deliberated and concerned entities may explain.

Number of Days as per Current Hydro Generation



Plants	Reservoir Level in meters (as on 05/08/19)	MU Content	Present DC (MU)	No of days as per current Generation
Khandong + Kopili STG II	723.6	39.75	1.080+0.504	25
			1.584	
Kopili	609.48	(98.2+ 4x39.75)	4.68	55
		257.2		
Doyang	315.534	15.2	1.44	11
Loktak	766.85	22.5	1.385	16

Reservoir Level



Agenda C.7 Non Availability/Non functioning of synchronisation facility



Assam may confirm availability of synchronisation trolley in all sub-stations.

It was already discussed and agreed that although synchronisation facility is available/inbuilt in SAS, synchronisation trolley is essential for quick restoration in case of contingency.



Agenda C.11 Tentative schedule for Black Start & Restoration Procedure Mock exercise in NER during the year 2019

- Loktak may confirm Commissioning of Bus A.
- AGBPP- To confirm the Black-start schedule with the help of DG set.



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

- 132kV Transfer Bus at Loktak HEP- **Status**
- 400kV Bus A at RHEP- A Committee has been formed comprising of representatives from NERPC, NERLDC, NERTS & the respective utility where the bus configuration issue needs to be resolved-**Status**
- 132kV Bus-2 at Surjamaninagar - The Bus Coupler CT at SM Nagar Switch yard has already been replaced with new connector. On 07.08.19 the double bus configuration at Surajmaninagar was reverted back.



Agenda C.14: Review of relay settings at Karong

- Shutdown of 132 Yurembam-Karong was taken for strengthening of 132 Kohima-Karong-Imphal(Yurembam) link- **Status**
- Load flow studies by MSPCL to explain reason for limiting load to Kohima



Agenda D.6 - Reactive power capability/injection of generating stations

- Decision in 158th OCCM: OTPC, Palatana – 1st Week of August.
- OTPC has given verbal intimation of the tentative date – 14th August 2019
- OTPC to confirm.

Tentative Schedule of Reactive Capability testing at other Generating Stations

Sl. No.	Generating Station	Tentative Schedule
1	AGBPP	SEPTEMBER'19
2	BGTPP	OCTOBER'19
3	AGTCCPP	NOVEMBER'19
4	DOYANG	DECEMBER' 19
5	KHANDONG & KOPILI STG 2	JANUARY' 20
6	KOPILI	FEBRUARY' 20
7	LOKTAK	MARCH' 20
8	PARE	APRIL' 20
9	RANGANADI	MAY' 20

- Generators may kindly finalize the dates



Agenda D.11: FSC of 400 kV Balipara-Bongaigaon-IV opening without intimation to NERLDC

- FSC has been taken out of service several times without intimation to NERLDC
- Decreases the reliability of ER-NER-NR
- This is a violation of IEGC Regulation 5.2 (b).



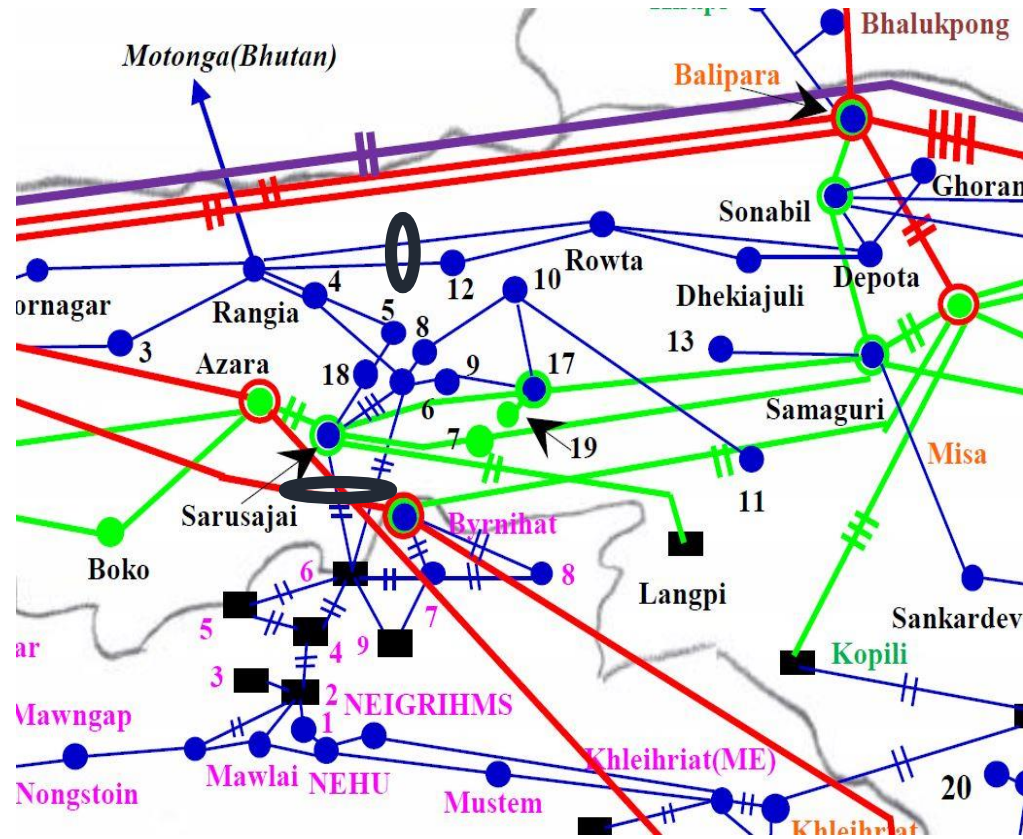
Agenda D.12: Web Based Outage Module of NERLDC

- Web Based outage module of NERLDC was made live on 12.06.2019
- NERTS and Assam – Availing shutdown in the Software
- All utilities are requested to enter the outage request like Pre OCC, Post OCC & Emergency and D-3 avail request in the software

Agenda C.11 and D.13: Frequency and Voltage Oscillation in AGTCCPP

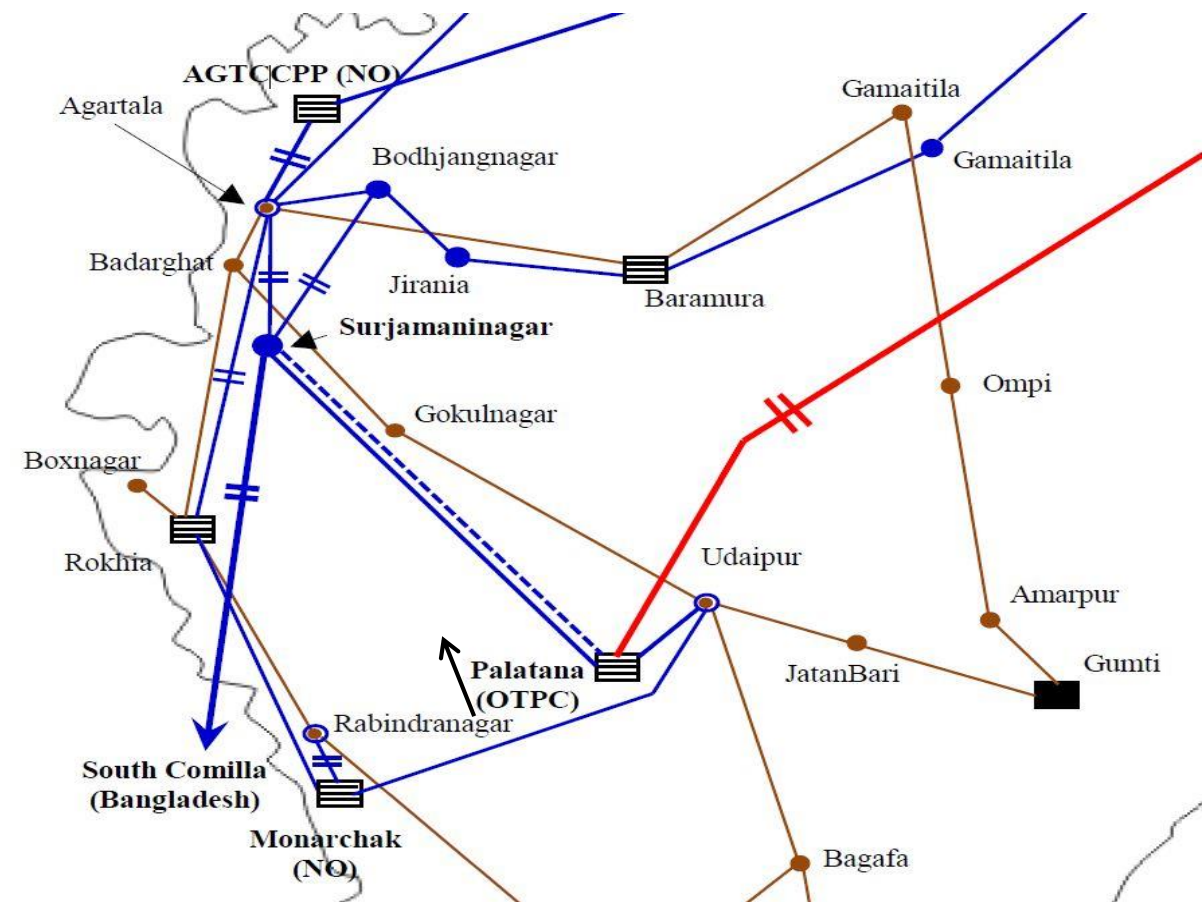
- On 15.08.2019 Low Frequency Oscillations were observed in Agartala PMU. On increasing the schedule as requested by AGTCCPP the oscillations died down.
- On 18.06.2019 Oscillation was observed even when the units of AGTCCPP were run in full generation.
- AGTCCPP is requested to do detailed analysis of root cause of LFO and give the remedial measures for the same.

Agenda D.14: Intra-State lines being kept open



- 132kV Rangia- Rowta
- 132kV Rangia-Siphajhar
- 132kV Sarusajai-Umtru 1, 2
- 132kV Kahilipara-Umtru 1, 2

132kV Palatana-Udaipur (August-Sept: To be kept closed except for two hours during peak)



Agenda D.17 Erroneous SCADA data

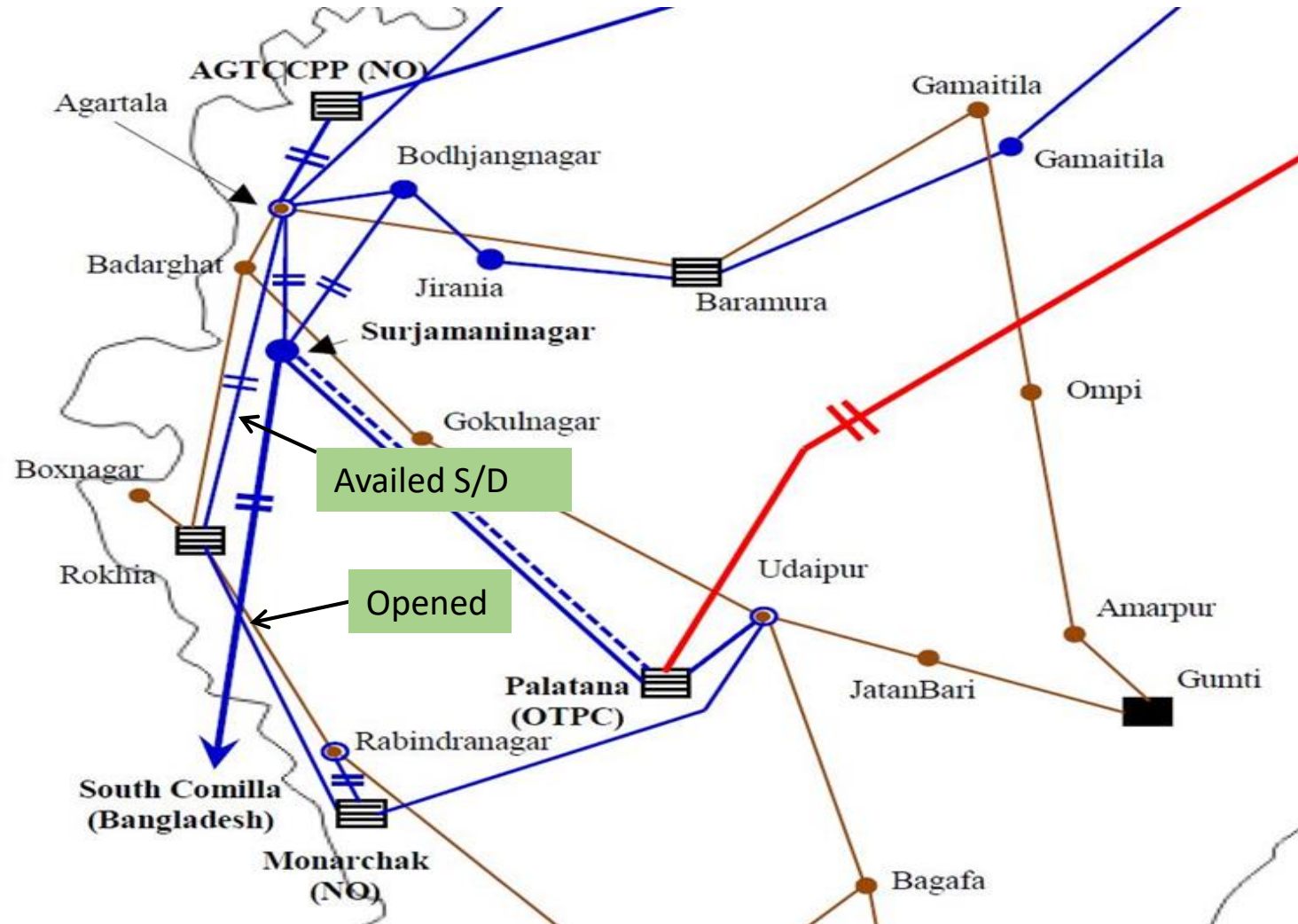
- Voltage profile of all 220 kV Stations in NER to be reported in CERC Voltage Deviation Report
- SCADA data of many 220 kV stations is erroneous
- AEGCL informed that there is communication failure at SLDC Assam due to burning of communication cards
- SLDC Assam is requested to submit the hourly voltage data of the 220 kV nodes

Agenda D.19 Subsystems not fulfilling N-1

- List of Subsystems not fulfilling N-1 criterion is attached as **Annexure D.19**
- Upgradation of Transmission System is required to ensure 24x7 supply

Opening of 132 kV Rokhia – Monarchak line during S/D of 132 kV Rokhia – Agartala line II

- **Violations of IEGC :**
- **Regulation 5.2 (b) & (c)** – Opening of an Important Grid Element without intimation to RLDC.
- **Regulation 5.7.1 (a)** – Availed S/D of an Important Grid Element without approval of OCC forum and without intimation to RLDC
- Threat to security and reliability of NER Grid



Opening of all 220 kV Lines from Samaguri except 220 kV Samaguri-Sonabil line II during E/S/D of Samaguri Bus II

- Threat to security and reliability of NER Grid
- During the S/D all other lines must have been kept in service by shifting all lines to Bus I

Letter addressed to CGM, AEGCL is attached as **Annexure 1**



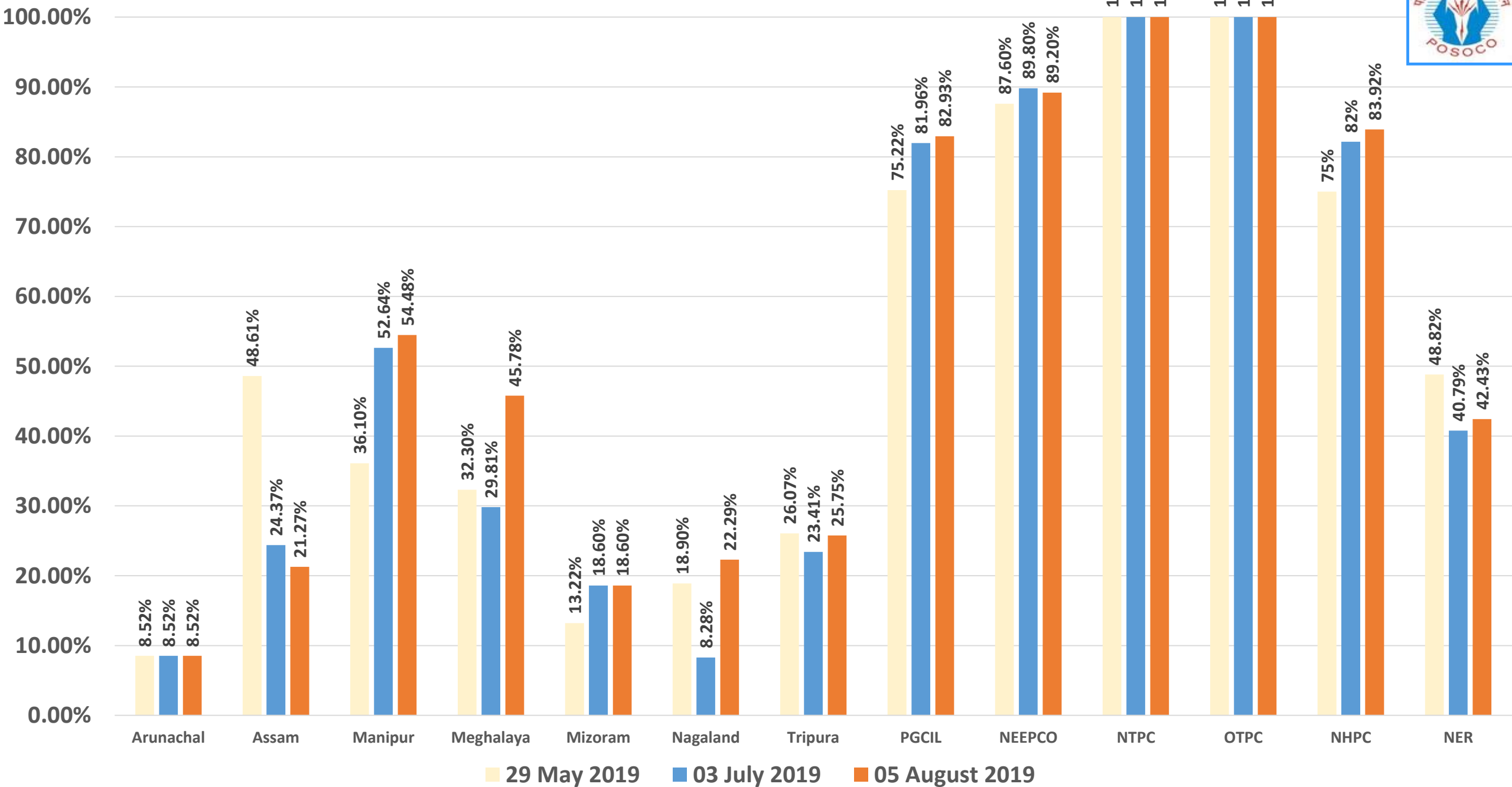
Other Agenda

- D.15 Ratification of PoC data
- D.16 Operating Procedure for NER
- D.18 Expiry of PSSE User License
- D.20 Availability of Hot Spare Units

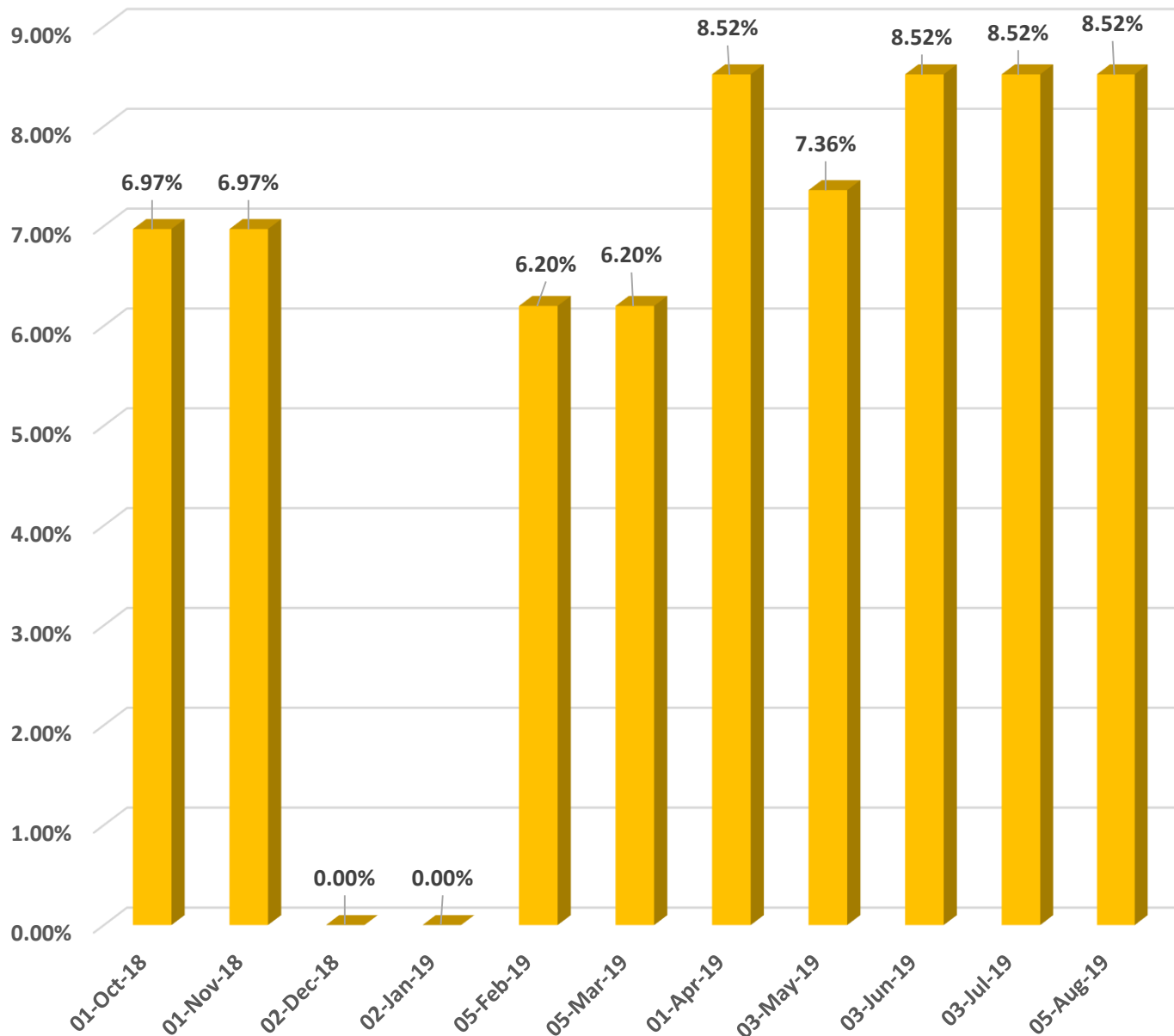


Telemetry and Data Availability

Comparison of Telemetry Availability Statistics



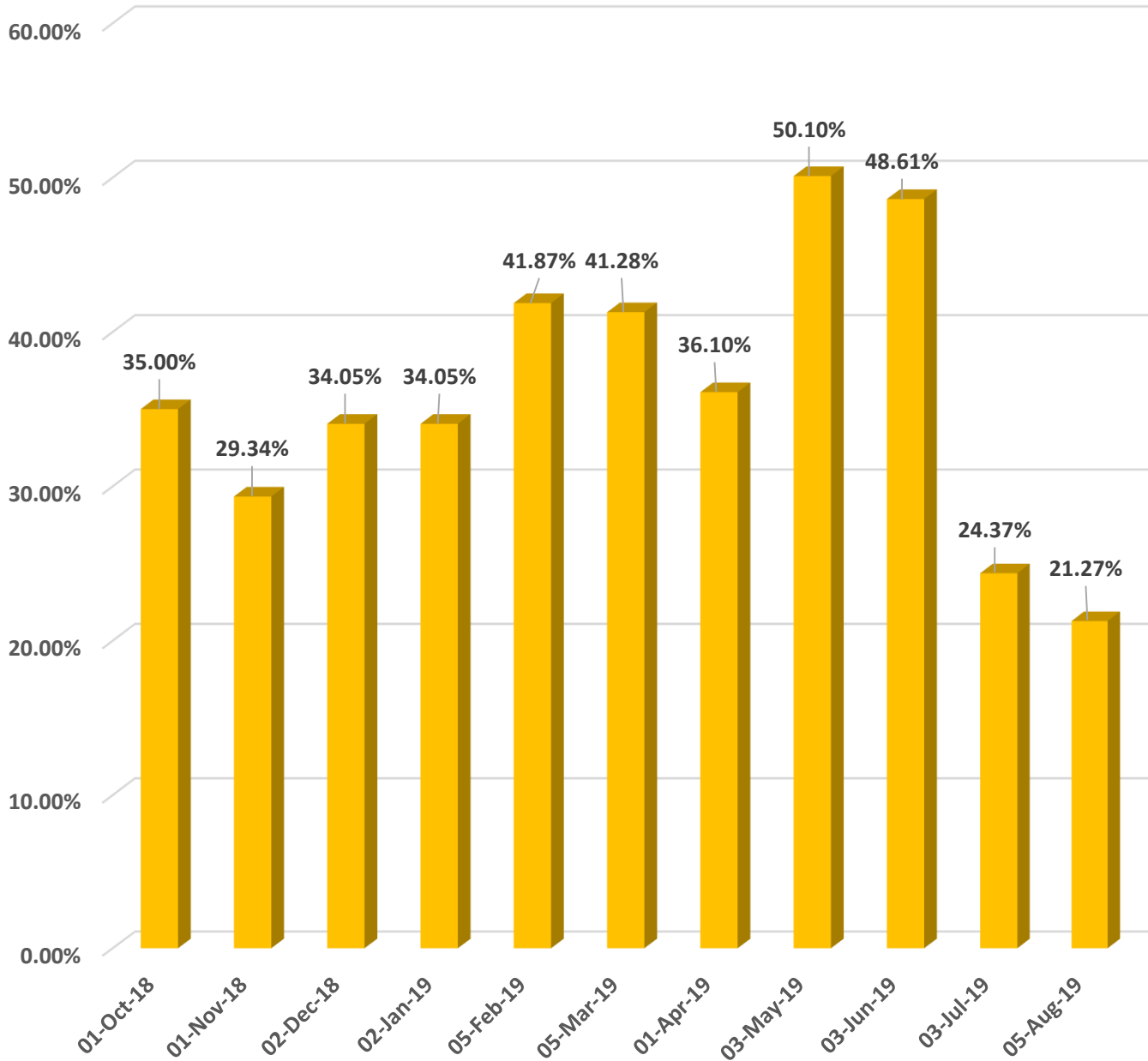
Real Time Data Availability of Arunachal Pradesh State (In %)



Sl. No.	Weekly Report Sent Month	Weekly Report Sent Date
1.	Feb'19	04/02/19, 11/02/19, 18/02/19 and 25/02/19
2.	March'19	05/03/19, 18/03/19, and 26/03/19
3.	April'19	01/04/19, 08/04/19, 16/04/19, 22/04/19 and 30/04/19
4.	May'19	06/05/19, 13/05/19, 21/05/19 and 28/05/19
5.	June'19	04/06/19, 10/06/19, 17/06/19 and 24/06/19
6.	July'19	01/07/19, 08/07/19, 15/07/19, 22/07/19 and 30/07/19
7.	August'19	05/08/19

Sl. No.	Letter sent for data availability (Month)	Letter sent for data availability (Date)
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7.	June'19	10 th June 2019
8.	July'19	04 th July 2019
9.	August'19	05 th July 2019

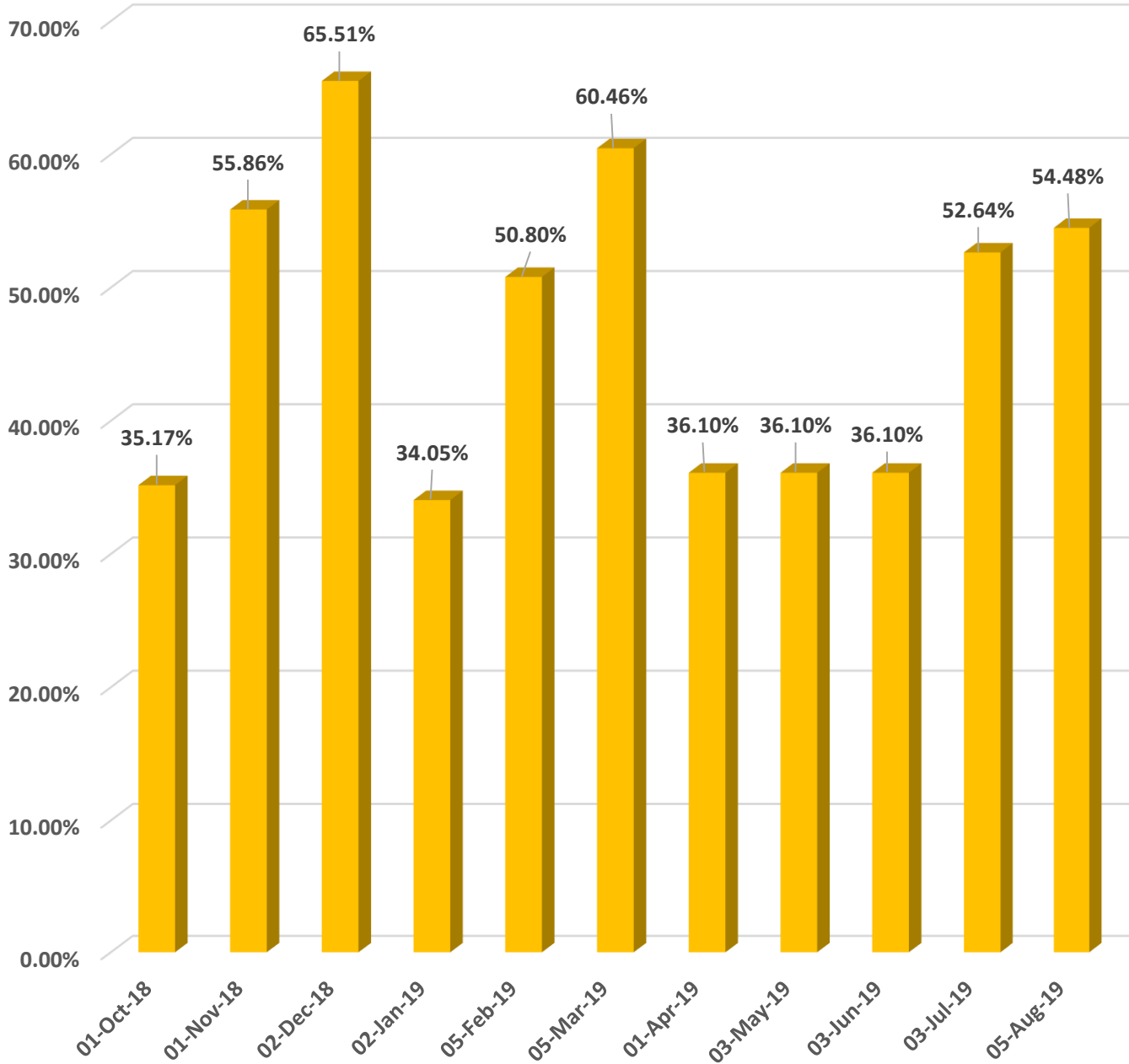
Real Time Data Availability of Assam State (In %)



Sl. No.	Weekly Report Sent Month	Weekly Report Sent Date
1.	Feb'19	04/02/19, 11/02/19, 18/02/19 and 25/02/19
2.	March'19	05/03/19, 18/03/19, and 26/03/19
3.	April'19	01/04/19, 08/04/19, 16/04/19, 22/04/19 and 30/04/19
4.	May'19	06/05/19, 13/05/19, 21/05/19 and 28/05/19
5.	June'19	04/06/19, 10/06/19, 17/06/19 and 24/06/19
6.	July'19	01/07/19, 08/07/19, 15/07/19, 22/07/19 and 30/07/19
7.	August'19	05/08/19

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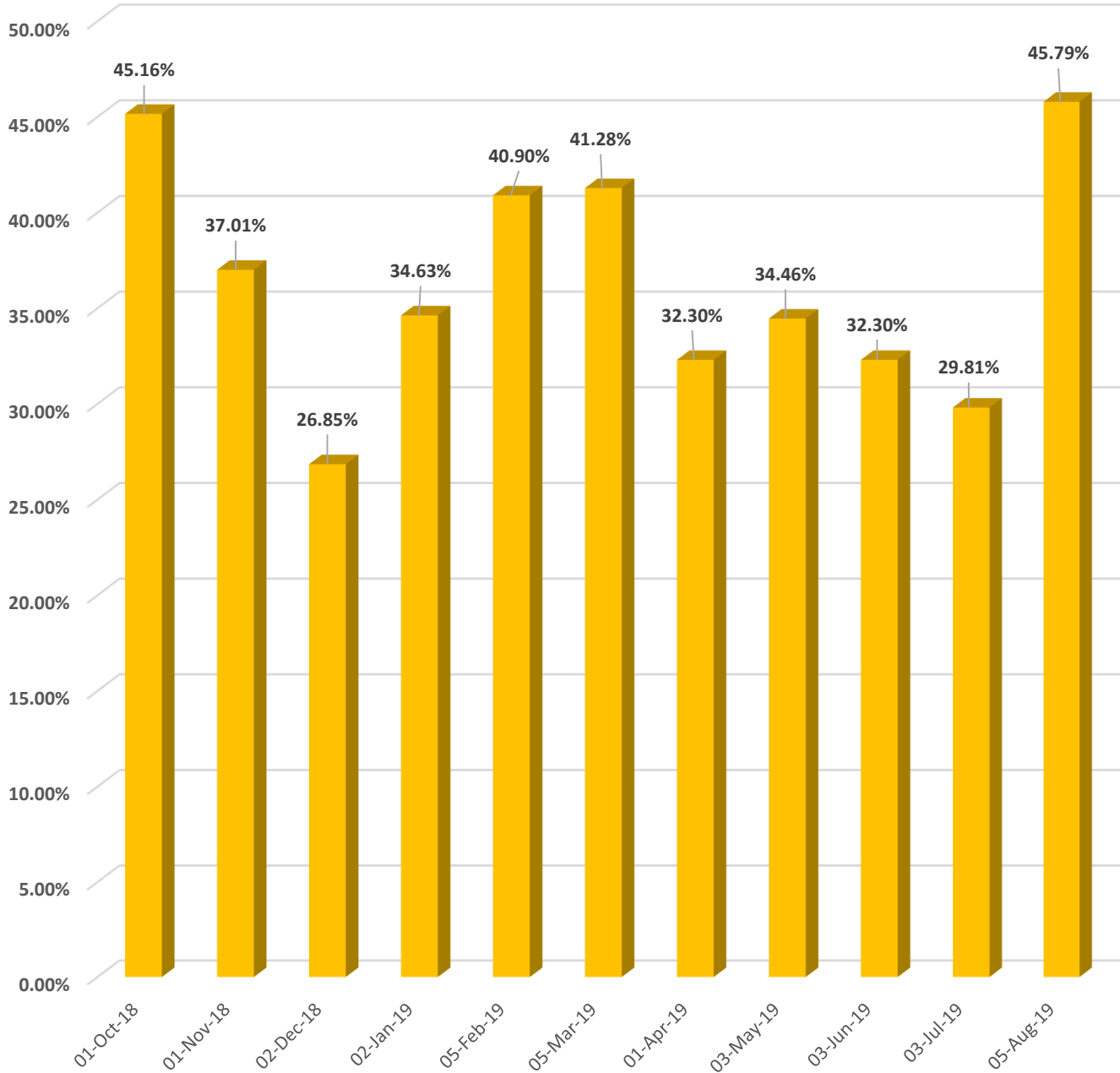
Real Time Data Availability of Manipur State (In %)



Sl. No.	Weekly Report Sent Month	Weekly Report Sent Date
1.	Feb'19	04/02/19, 11/02/19, 18/02/19 and 25/02/19
2.	March'19	05/03/19, 18/03/19, and 26/03/19
3.	April'19	01/04/19, 08/04/19, 16/04/19, 22/04/19 and 30/04/19
4.	May'19	06/05/19, 13/05/19, 21/05/19 and 28/05/19
5.	June'19	04/06/19, 10/06/19, 17/06/19 and 24/06/19
6.	July'19	01/07/19, 08/07/19, 15/07/19, 22/07/19 and 30/07/19
7.	August'19	05/08/19

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9.	August'19	05 th July 2019

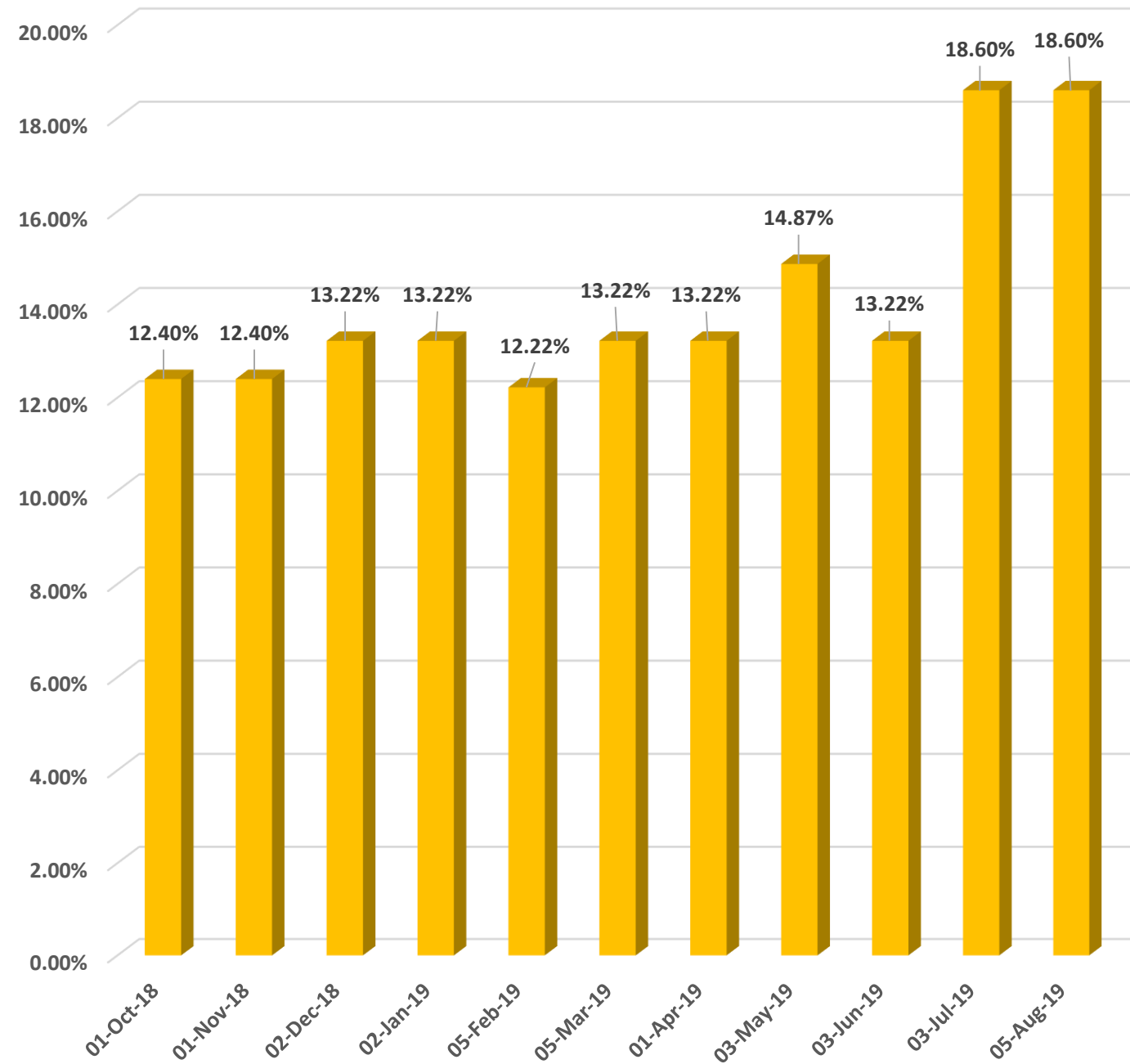
Real Time Data Availability of Meghalaya State (In %)



Sl. No.	Weekly Report Sent Month	Weekly Report Sent Date
1.	Feb'19	04/02/19, 11/02/19, 18/02/19 and 25/02/19
2.	March'19	05/03/19, 18/03/19, and 26/03/19
3.	April'19	01/04/19, 08/04/19, 16/04/19, 22/04/19 and 30/04/19
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5.	June'19	04/06/19, 10/06/19, 17/06/19 and 24/06/19
6.	July'19	01/07/19, 08/07/19, 15/07/19, 22/07/19 and 30/07/19
7.	August'19	05/08/19

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9.	August'19	05 th July 2019

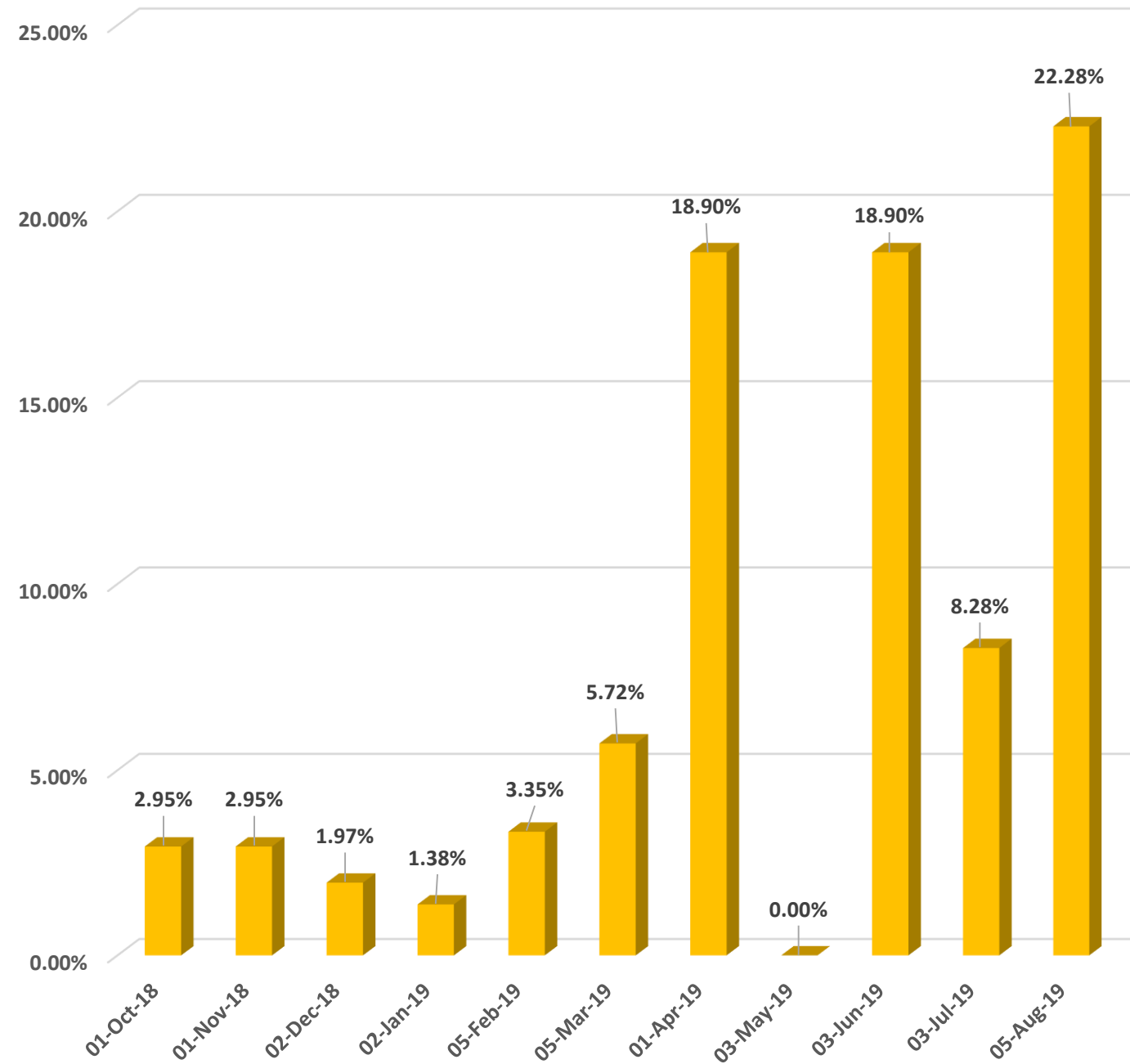
Real Time Data Availability of Mizoram State (In %)



Sl. No.	Weekly Report Sent Month	Weekly Report Sent Date
1.	Feb'19	04/02/19, 11/02/19, 18/02/19 and 25/02/19
2.	March'19	05/03/19, 18/03/19, and 26/03/19
3.	April'19	01/04/19, 08/04/19, 16/04/19, 22/04/19 and 30/04/19
4.	May'19	06/05/19, 13/05/19, 21/05/19 and 28/05/19
5.	June'19	04/06/19, 10/06/19, 17/06/19 and 24/06/19
6.	July'19	01/07/19, 08/07/19, 15/07/19, 22/07/19 and 30/07/19
7.	August'19	05/08/19

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9.	August'19	05 th July 2019

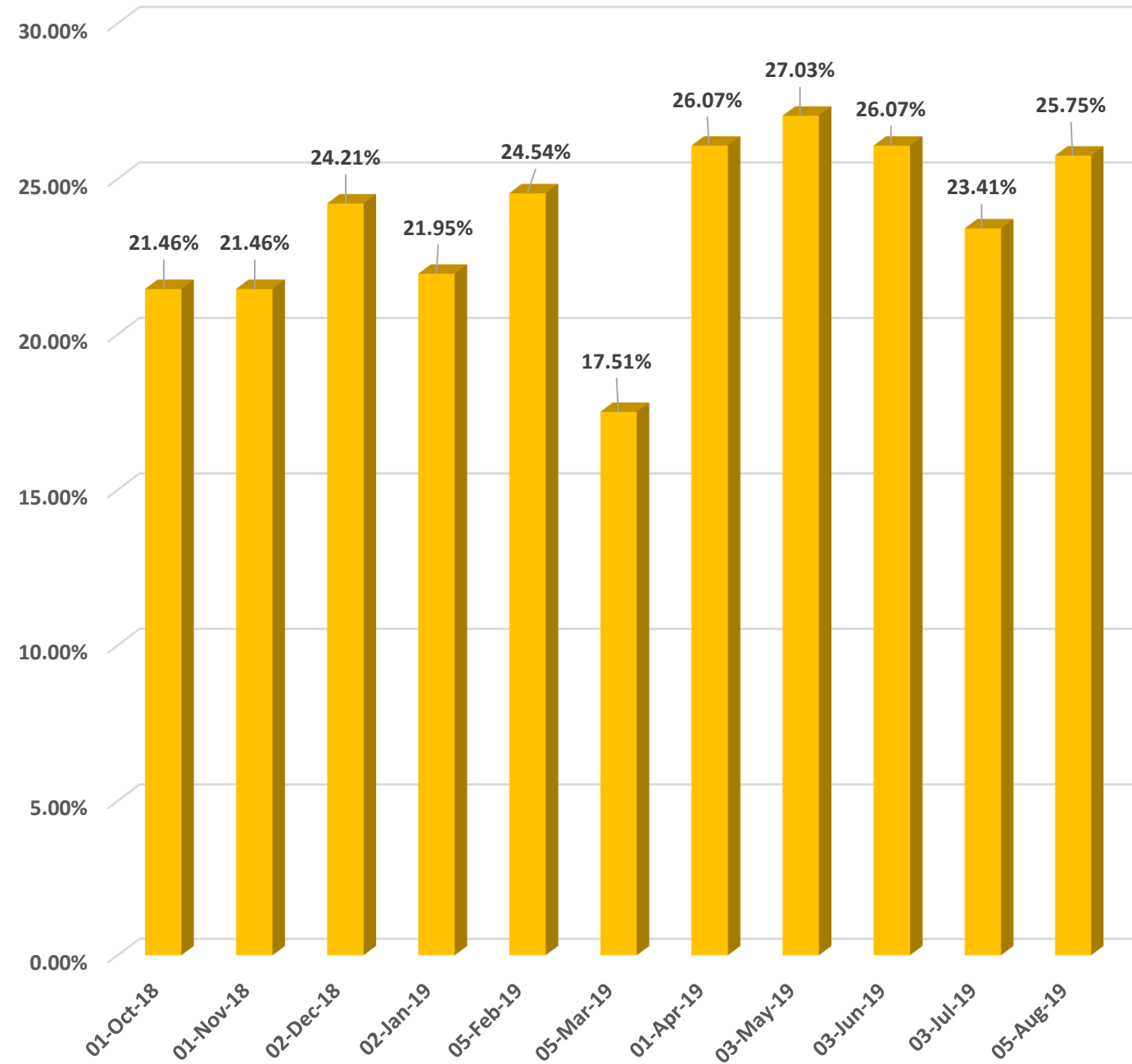
Real Time Data Availability of Nagaland State (In %)



Sl. No.	Weekly Report Sent Month	Weekly Report Sent Date
1.	Feb'19	04/02/19, 11/02/19, 18/02/19 and 25/02/19
2.	March'19	05/03/19, 18/03/19, and 26/03/19
3.	April'19	01/04/19, 08/04/19, 16/04/19, 22/04/19 and 30/04/19
4.	May'19	06/05/19, 13/05/19, 21/05/19 and 28/05/19
5.	June'19	04/06/19, 10/06/19, 17/06/19 and 24/06/19
6.	July'19	01/07/19, 08/07/19, 15/07/19, 22/07/19 and 30/07/19
7.	August'19	05/08/19

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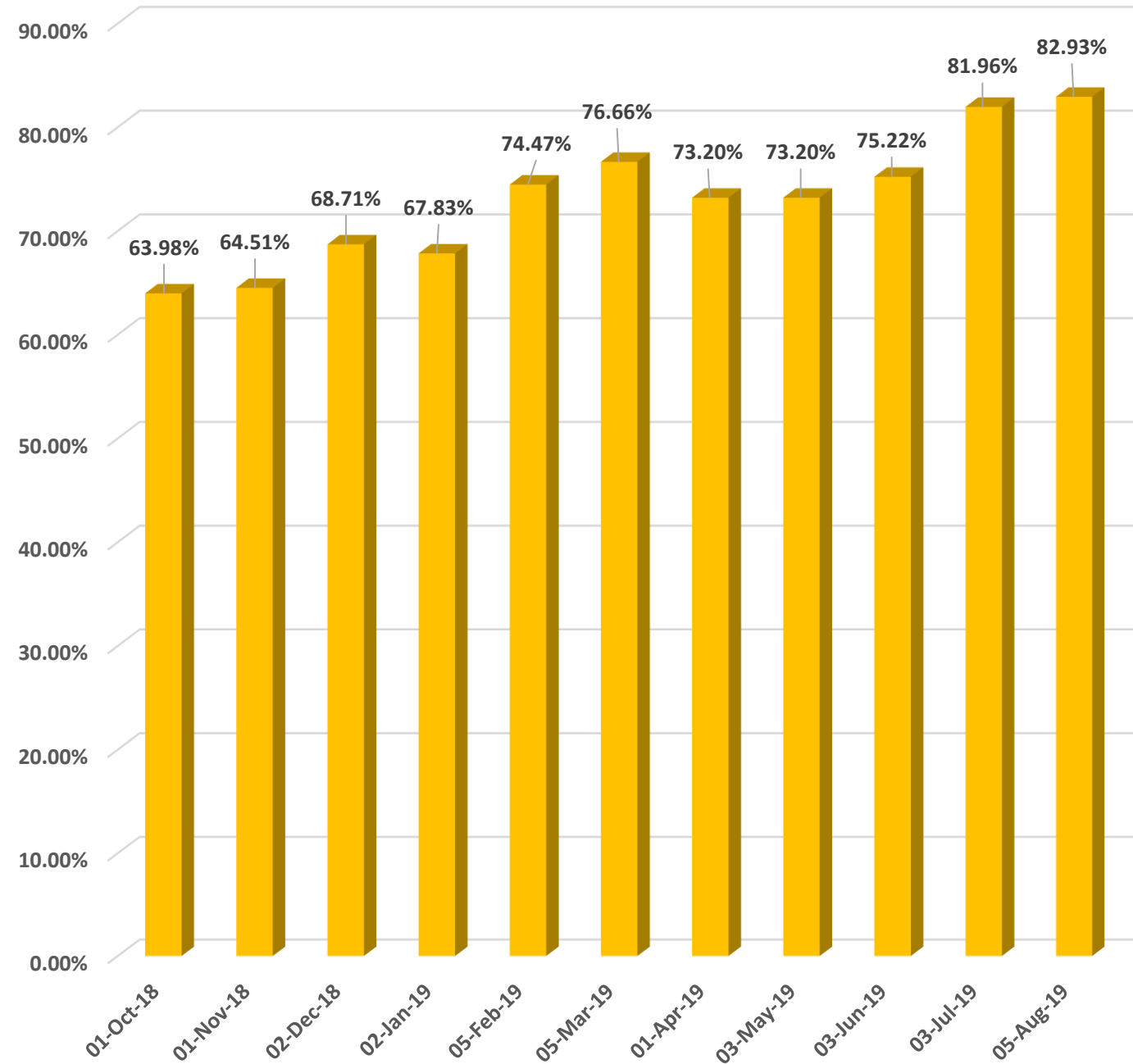
Real Time Data Availability of Tripura State (In %)



Sl. No.	Weekly Report Sent Month	Weekly Report Sent Date
1.	Feb'19	04/02/19, 11/02/19, 18/02/19 and 25/02/19
2.	March'19	05/03/19, 18/03/19, and 26/03/19
3.	April'19	01/04/19, 08/04/19, 16/04/19, 22/04/19 and 30/04/19
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7.	August'19	05/08/19

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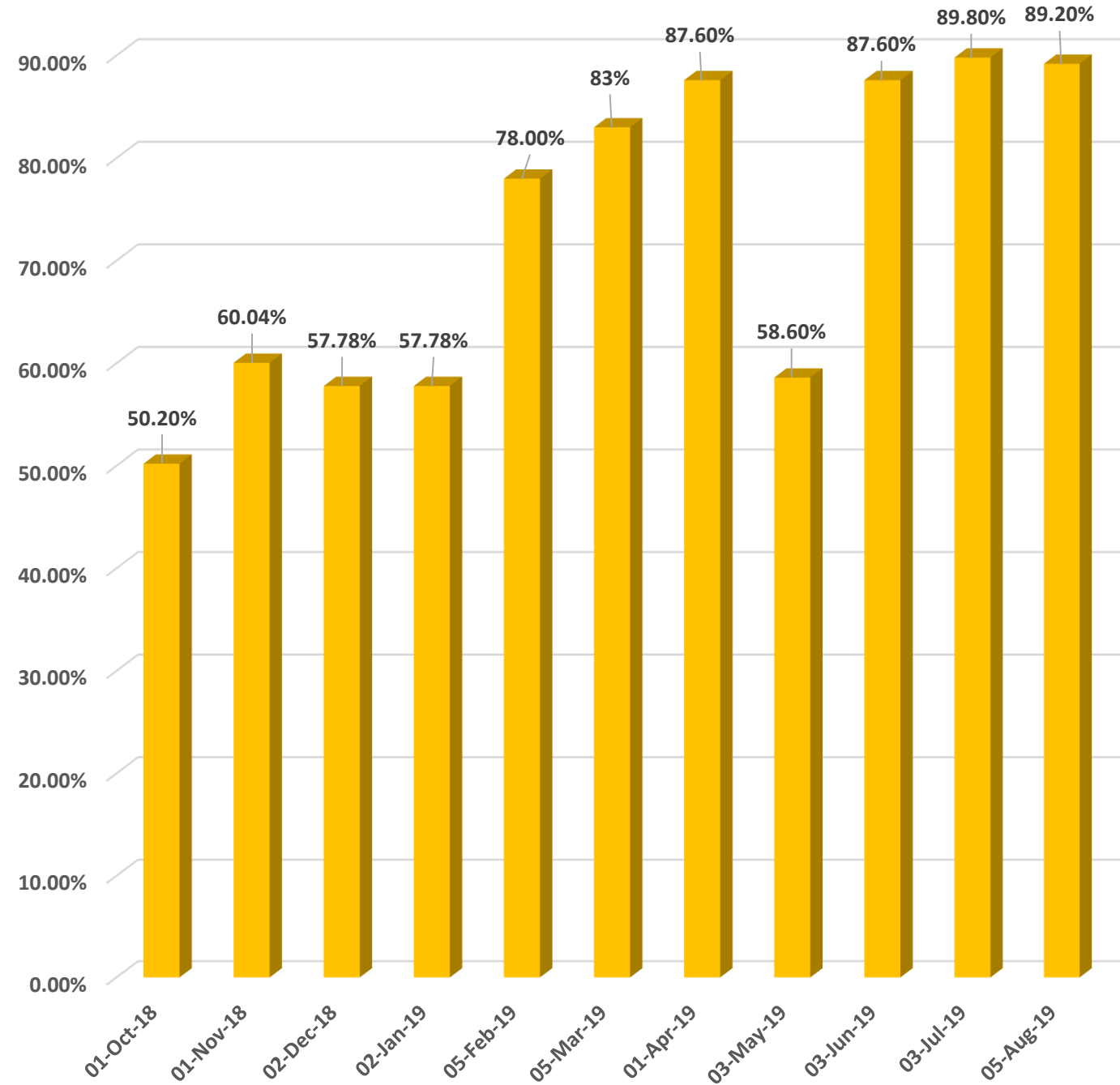
Real Time Data Availability of PGCIL(In %)



Sl. No.	Weekly Report Sent Month	Weekly Report Sent Date
1.	Feb'19	04/02/19, 11/02/19, 18/02/19 and 25/02/19
2.	March'19	05/03/19, 18/03/19, and 26/03/19
3.	April'19	01/04/19, 08/04/19, 16/04/19, 22/04/19 and 30/04/19
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7.	August'19	05/08/19

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8.	July'19	04 th July 2019
9.	August'19	05 th July 2019

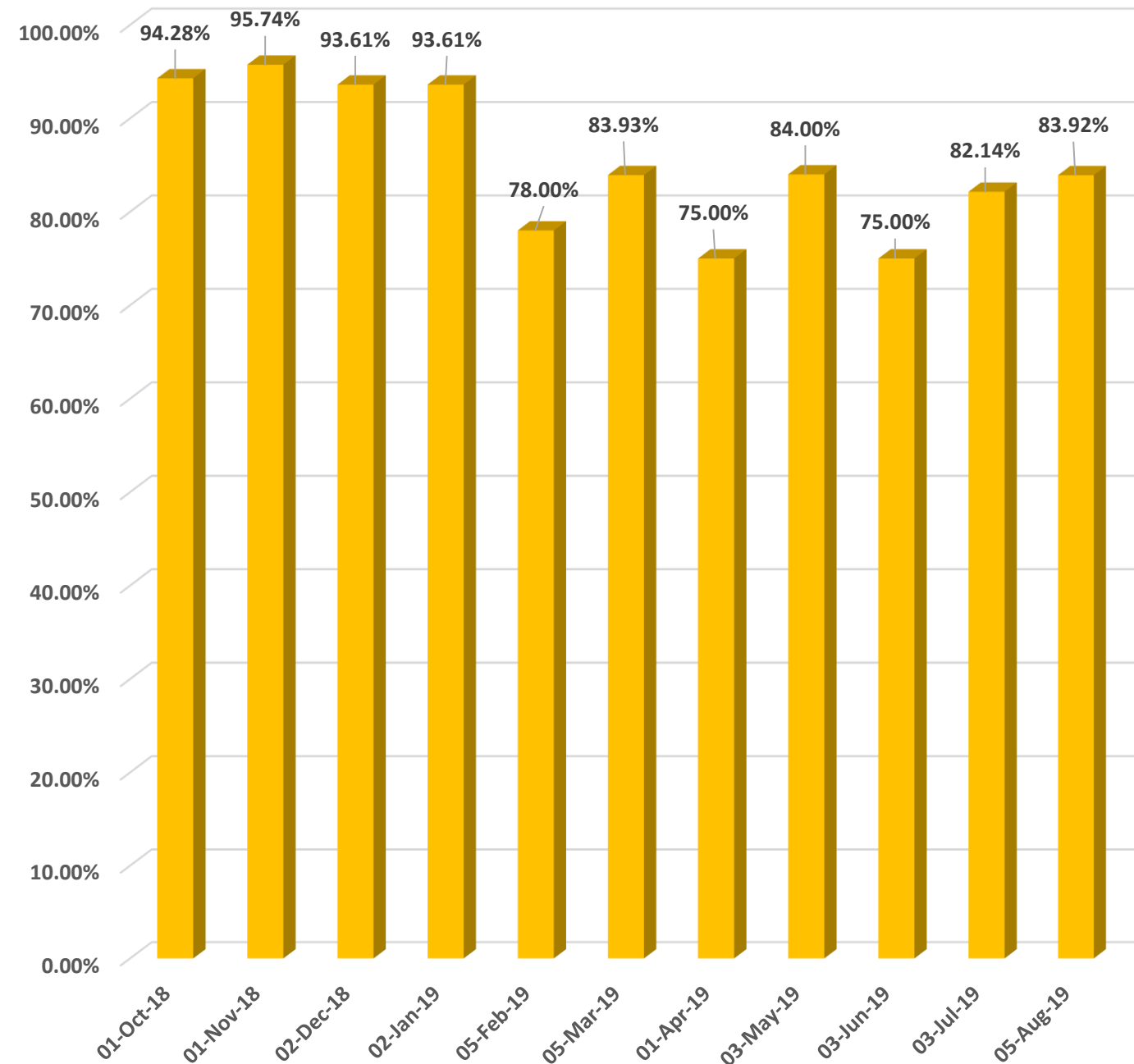
Real Time Data Availability of NEEPCO (In %)



Sl. No.	Weekly Report Sent Month	Weekly Report Sent Date
1.	Feb'19	04/02/19, 11/02/19, 18/02/19 and 25/02/19
2.	March'19	05/03/19, 18/03/19, and 26/03/19
3.	April'19	01/04/19, 08/04/19, 16/04/19, 22/04/19 and 30/04/19
4.	May'19	06/05/19, 13/05/19, 21/05/19 and 28/05/19
5.	June'19	04/06/19, 10/06/19, 17/06/19 and 24/06/19
6.	July'19	01/07/19, 08/07/19, 15/07/19, 22/07/19 and 30/07/19
7.	August'19	05/08/19

Sl. No.	Letter sent for data availability (Month)	Letter sent for data availability (Date)
1.	July'18	23 rd July 2018
2.	September'18	03 rd September 2018
3.	October'18	03 rd October 2018 and 31 st October 2018
4.	March'19	07 th March 2019
5.	April'19	08 th April 2019
6.	May'19	03 rd May 2019
7.	June'19	10 th June 2019
8.	July'19	04 th July 2019
9.	August'19	05 th July 2019

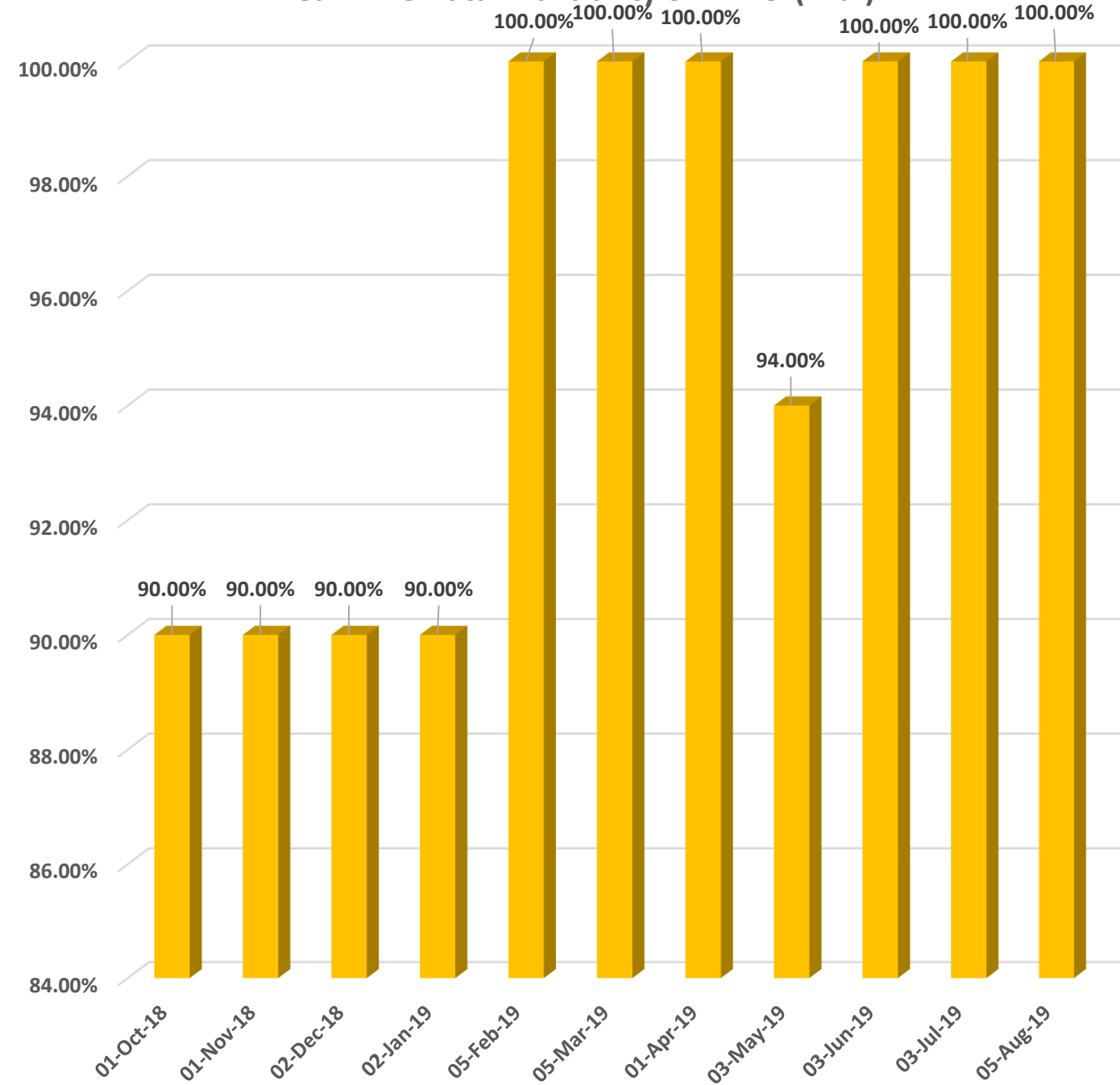
Real Time Data Availability of NHPC (In %)



Sl. No.	Weekly Report Sent Month	Weekly Report Sent Date
1.	Feb'19	04/02/19, 11/02/19, 18/02/19 and 25/02/19
2.	March'19	05/03/19, 18/03/19, and 26/03/19
3.	April'19	01/04/19, 08/04/19, 16/04/19, 22/04/19 and 30/04/19
4.	May'19	06/05/19, 13/05/19, 21/05/19 and 28/05/19
5.	June'19	04/06/19, 10/06/19, 17/06/19 and 24/06/19
6.	July'19	01/07/19, 08/07/19, 15/07/19, 22/07/19 and 30/07/19
7.	August'19	05/08/19

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9.	August'19	05 th July 2019

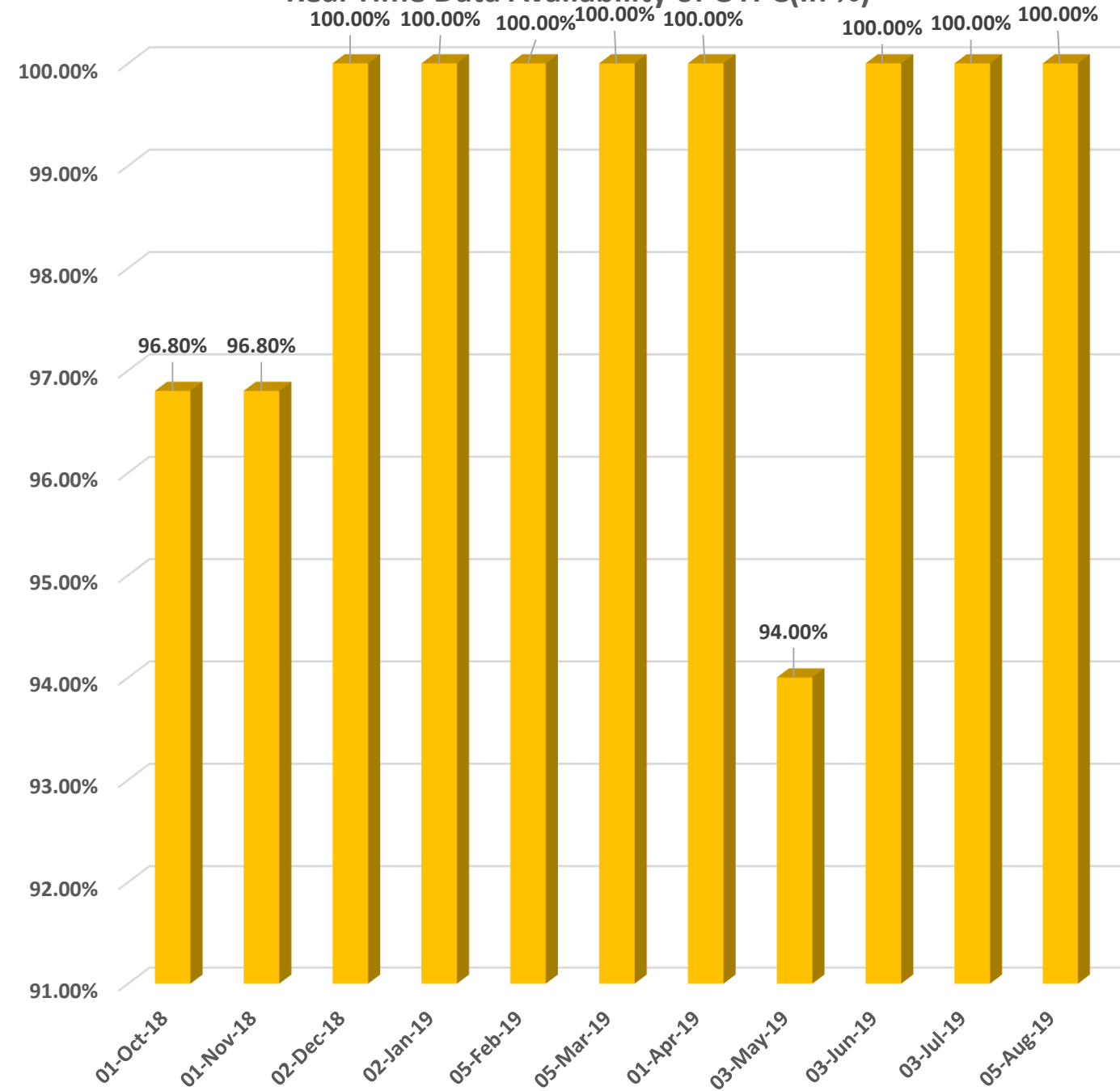
Real Time Data Availability of NTPC (In %)



Sl. No.	Weekly Report Sent Month	Weekly Report Sent Date
1.	Feb'19	04/02/19, 11/02/19, 18/02/19 and 25/02/19
2.	March'19	05/03/19, 18/03/19, and 26/03/19
3.	April'19	01/04/19, 08/04/19, 16/04/19, 22/04/19 and 30/04/19
4.	May'19	06/05/19, 13/05/19, 21/05/19 and 28/05/19
5.	June'19	04/06/19, 10/06/19, 17/06/19 and 24/06/19
6.	July'19	01/07/19, 08/07/19, 15/07/19, 22/07/19 and 30/07/19
7.	August'19	05/08/19

Sl. No.	Letter sent for data availability (Month)	Letter sent for data availability (Date)
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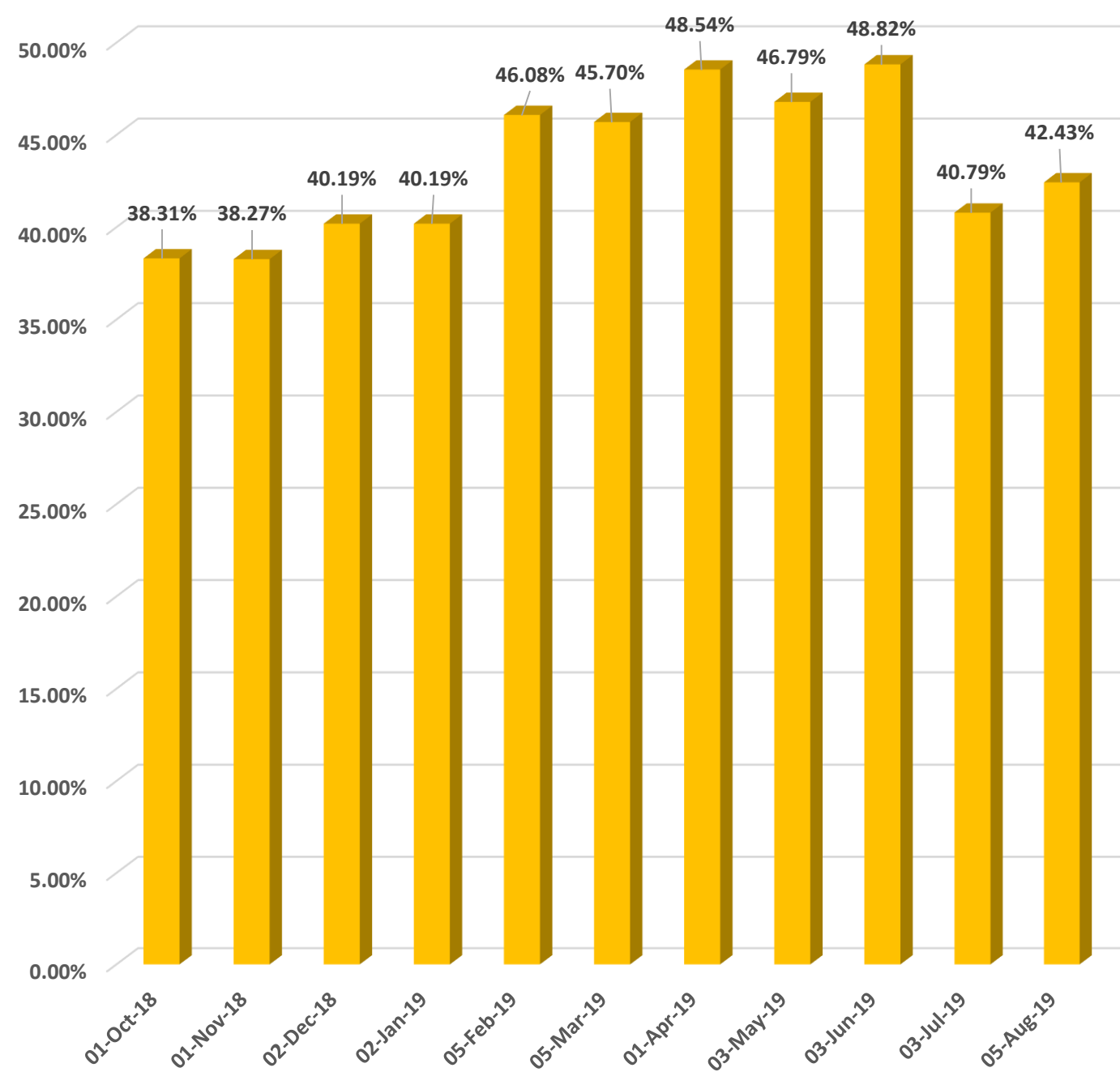
Real Time Data Availability of OTPC(In %)



Sl. No.	Weekly Report Sent Month	Weekly Report Sent Date
1.	Feb'19	04/02/19, 11/02/19, 18/02/19 and 25/02/19
2.	March'19	05/03/19, 18/03/19, and 26/03/19
3.	April'19	01/04/19, 08/04/19, 16/04/19, 22/04/19 and 30/04/19
4.	May'19	06/05/19, 13/05/19, 21/05/19 and 28/05/19
5.	June'19	04/06/19, 10/06/19, 17/06/19 and 24/06/19
6.	July'19	01/07/19, 08/07/19, 15/07/19, 22/07/19 and 30/07/19
7.	August'19	05/08/19

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6.	May'19	03 rd May 2019
7.	June'19	10 th June 2019
8.	July'19	04 th July 2019
9.	August'19	05 th July 2019

Real Time Data Availability of NER(In %)

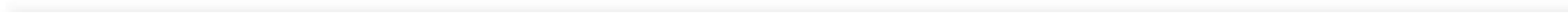


Sl. No.	Weekly Report Sent Month	Weekly Report Sent Date
1.	Feb'19	04/02/19, 11/02/19, 18/02/19 and 25/02/19
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3.	April'19	01/04/19, 08/04/19, 16/04/19, 22/04/19 and 30/04/19
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8.	July'19	04 th July 2019
9.	August'19	05 th July 2019



Thank You



Areas in NER where N-1 is not compliant

1 Arunachal Pradesh			
Sl No	Element	Effect	Cause
1	132 kV Balipara - Bhalukpong- Khupi S/C	Blackout of Bhalukpong and Khupi substation	Radial connection at Balipara
2	132 kV Ranganadi - Ziro S/C	Blackout of Ziro, Daporijo, Along, Pasighat, Roing, Tezu, Namsai	
3	132 kV Ziro - Daporijo S/C	Blackout of Daporijo, Along, Pasighat, Roing, Tezu, Namsai	
4	132 kV Daporijo - Along S/C	Blackout of Along, Pasighat, Roing, Tezu, Namsai	
5	132 kV Along - Pasighat S/C	Blackout of Pasighat, Roing, Tezu, Namsai	
6	132 kV Pasighat - Roing S/C	Blackout of Roing, Tezu, Namsai	
7	132 kV Roing - Tezu S/C	Blackout of Tezu, Namsai	
8	132 kV Tezu - Namsai S/C	Blackout of Namsai	
9	220 kV AGBPP - Deomali S/C	Blackout of Deomali	Radial connection of Deomali with AGBPP
2 Assam			
Sl No	Element	Effect	Cause
1	132 kV Gohpur - North Lakhimpur S/C	Black out of North Lakhimpur, Majilu, Dhemaji	Radial connection at Gohpur
2	132 kV North Lakhimpur - Majuli S/C	Black out of Majuli	Radial connection at North Lakhimpur
3	132 kV North Lakhimpur - Dhemaji S/C	Black out of Dhemaji	Radial connection at Lakhimpur
4	132 kV Dhaligaon - Jogigopa S/C	Black out of Jogigopa	Radial connection at Dhaligaon
5	132 kV CTPS - Bagjhap S/C	Black out of Bagjhap	Radial connection at CTPS (AS)
6	132 kV Samaguri - Khaliogaon S/C	Black out of Khaliogaon	Radial connection at Samaguri
7	132 kV Samaguri - Sankardevnagar S/C	Black out of Sankardevnagar and Diphu	Radial connection at Samaguri
8	132 kV Sankardevnagar - Diphu S/C	Black out of Diphu	Radial connection at Sankardevnagar
9	132 kV Jorhat - Panichokua S/C	Black out of Panichokua and Bokakhat	Radial connection at Jorhat
10	132 kV Panichokua - Bokakhat S/C	Black out of Bokakhat	Radial connection at Panichokua
11	132 kV Nazira - Sibsagar S/C	Black out of Sibsagar	Radial connection at Nazira
12	132 kV Haflong (PG) - Haflong	Black out of Haflong	Radial connection at Haflong (PG)
13			
14			
3 Manipur			
Sl No	Element	Effect	Cause
1	132 kV Loktak - Ningthoukhong S/C	Black out of Ningthoukhong Area of Manipur	132 kV Imphal - Ningthoukhong S/C and 132 kV Kakching - Kongba are kept opened
2	132 kV Kakching - New Moreh S/C	Black out of New Moreh (including Myanmar connection)	Radial connection New Moreh with Kakching
3	132 kV Kakching - Chandel S/C	Black out of Chandel	Radial connection of Chandel with Kakching
4	132 kV Loktak - Rengpang S/C	Black out of Rengpang	Radial connection of Rengpang with Loktak as 132 kV Jiribam - Rengpang S/C is kept opened
5	132 kV Jiribam - Jiribam (MA) S/C	Black out of Jiribam (MA)	Radial connection of Jiribam (MA) with Jiribam as 132 kV Jiribam - Rengpang S/C is kept opened
6	132 kV Yaingangpokpi - Kongba S/C	Black out of Kongba	Radial connection of Kongba with Yaingangpokpi as 132 kV Kakching - Kongba is kept opened.
7	132 kV Yaingangpokpi - Hundung S/C	Black out of Hundung	Radial connection of Hundung with Yaingangpokpi
4 Meghalaya			
Sl No	Element	Effect	Cause
1	132 kV Nangalbibra - Ronkhon	Black out of Ronkhon and Ampati	Radial connection at Nangalbibra
2	132 kV Mawlai - Sohra	Black out of Sohra	Radial connection at Mawlai
3	132 kV Umiam - RNB (ME)	Black out of RNB	Radial connection at Umiam (ME)
4	132 kV EPIP I - Shyam Cement	Black out of Shyam Cement	Radial connection at EPIP -I
5	132 kV EPIP I - Maithan	Black out of Maithan	Radial connection at EPIP -I
6	132 kV EPIP I - Pioneer Carbide	Black out of Pioneer Carbide	Radial connection at EPIP -I

5 Mizoram			
SI No	Element	Effect	Cause
1	132 kV Melriat - Zuangtui S/C	Black out of Zunagtui, Saitual, Khawzawl, Champai, Serchip and Lunglei	Radial connection of Zuangtui with Melriat
2	132 kV Zuangtui - Saitual S/C	Black out of Saitual, Khawzawl and Champai	Radial connection at Zuangtui
3	132 kV Saitual - Khawzawl S/C	Black out of Khawzawl and Champai	Radial connection at Saitual
4	132 kV Khawzawl - Champai S/C	Black out of Champai	Radial connection at Khawzawl
5	132 kV Aizawl - Serchip S/C	Black out of Serchip and Lunglei	Radial connection at Aizawl
6	132 kV Serchip - Lunglei S/C	Black out of Lunglei	Radial connection at Serchip
7	132 kV Kolasib - Bairabi S/C	Black out of Bairabi	Radial connection at Kolasib
8	132 kV Kolasib - Tuirial S/C	Black out of Tuirial	Radial connection at Kolasib
9	132 kV Kolasib - Serlui B S/C	Black out of Serlui	Radial connection at Kolasib

6 Nagaland			
SI No	Element	Effect	Cause
1	132 kV Kohima - Meluri S/C	Black out of Meluri and Kiphire	Radial connection at Kohima
2	132 kV Meluri - Kiphire S/C	Black out of Meluri and Kiphire	Radial connection at Meluri

7 Tripura			
SI No	Element	Effect	Cause
1	132 kV P K Bari - Kailashahar	Black out of Kailashahar	Radial connection at P K Bari

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	SARUSAJAI	REPORT NOT RECEIVED
15	TINSHUKIA	REPORT NOT RECEIVED
16	NAGALAND(S)	REPORT NOT RECEIVED
17	MIZORAM(S)	REPORT NOT RECEIVED
	TRIPURA	
18	SM NAGAR	REPORT NOT RECEIVED
19	79 TILLA	IRREGULAR
	MEGHALAYA	
20	UMTRU	IRREGULAR
21	BYRNIHAT	REPORT NOT RECEIVED
	ARUNACHAL PRADESH	
22	CHIMPU	REPORT NOT RECEIVED
	GENERATION	
23	AGBPP	REPORT NOT RECEIVED
24	DOYANG	REPORT NOT RECEIVED
25	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

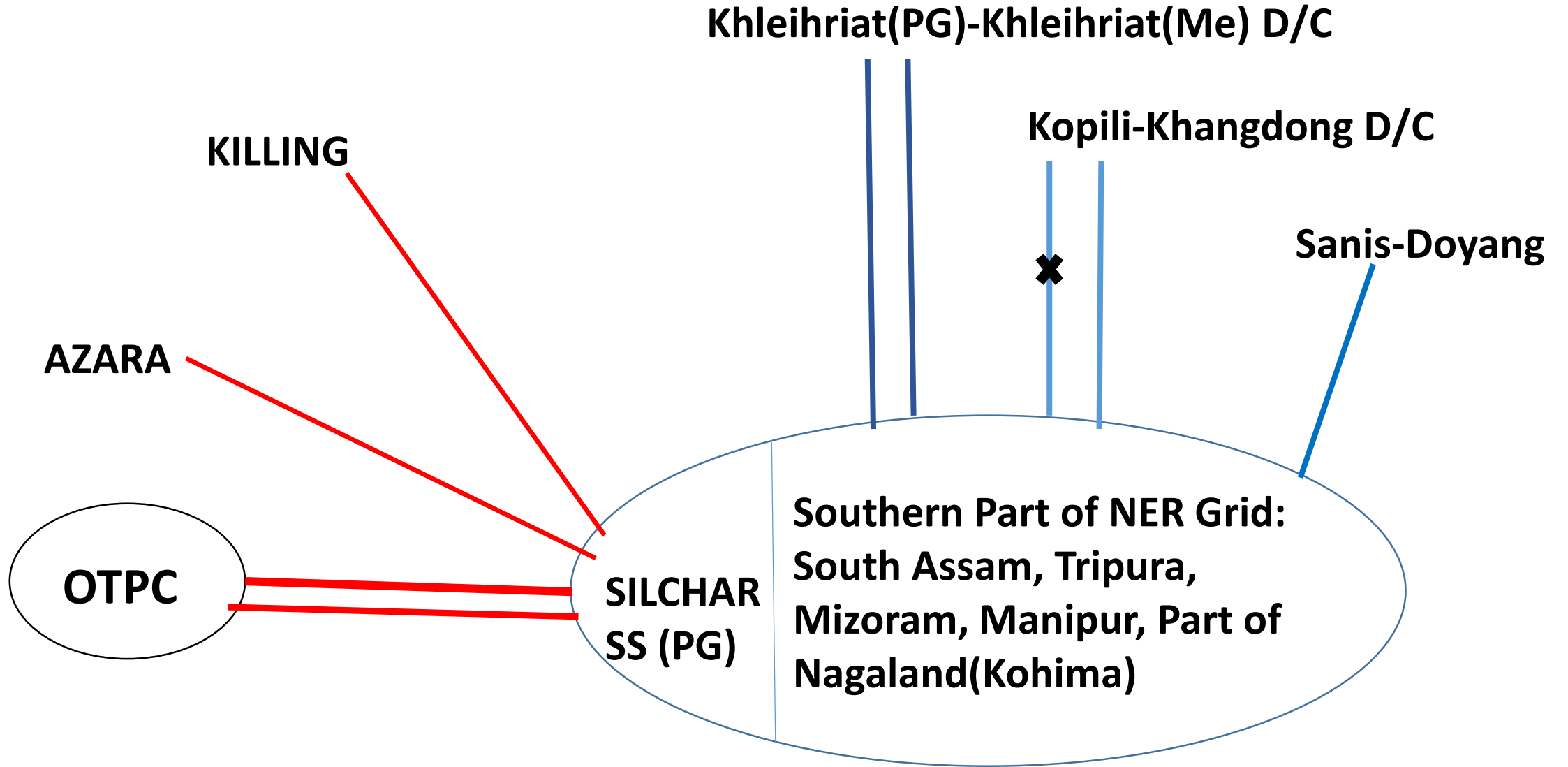
North Eastern Regional Load Despatch Centre
POSOCO, Shillong



Special Protection Scheme-II and III in NER
Recommendations for reliable operation

SPS-III operation: Near Miss situation in NER Grid
17:13 Hrs on 02.08.2019

Southern NER Grid pocket



SPS-III in NER

Trigger:

- (1) Tripping of 400kV Silchar-Killing and 400kV Silchar-Azara lines
- (2) Tripping of one of above, if the other one is under outage.

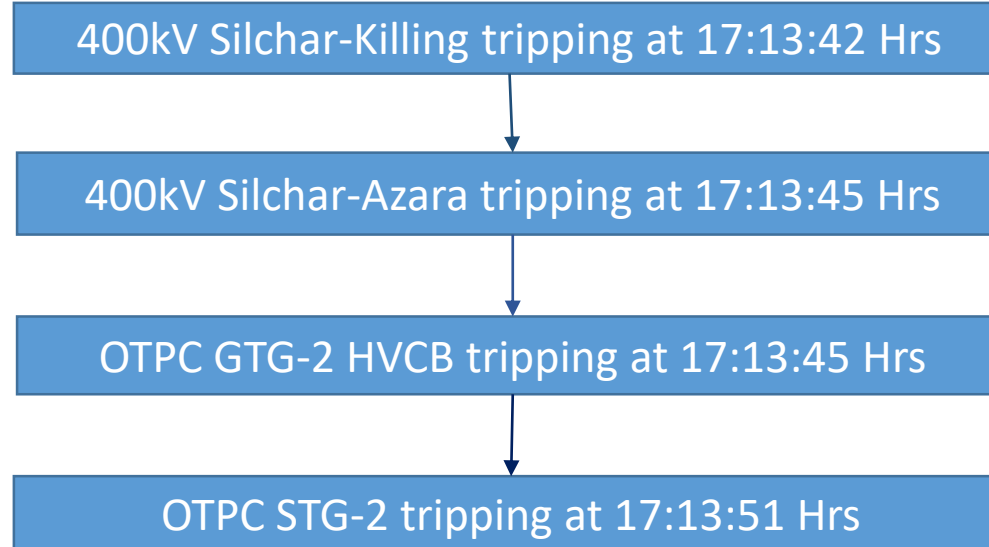
SPS operation:

- (1) Signal will be generated from trip relays of these lines at Silchar end .
- (2) The signal should trip HV side CB of GTG-2 at OTPC.
- (3) GTG-2 will be running in FSNL (Full Speed No Load).

Event Description

400kV Sichar-Azara (*Silchar end:B ph, Z2,322.7km* & *Azara end: Y-B ph,Z1,259km*) & 400kV Sichar-Killing (*Sichar end:B ph, Z2, 217.12km* & *Killing end: B ph,Z1, 109.8km*) lines tripped at 17:13:45 Hrs & 17:13:42 Hrs respectively.

GTG-2 HVCB (OTPC) tripped at 17:13:45 Hrs due to operation of SPS-3. GT-2 which was on full speed no load (FSNL) tripped on high exhaust spread temperature at 17:13:50 Hrs.STG-2 of OTPC tripped at 17:13:51 Hrs due to GT-2 trip protection.



Sequence of Events

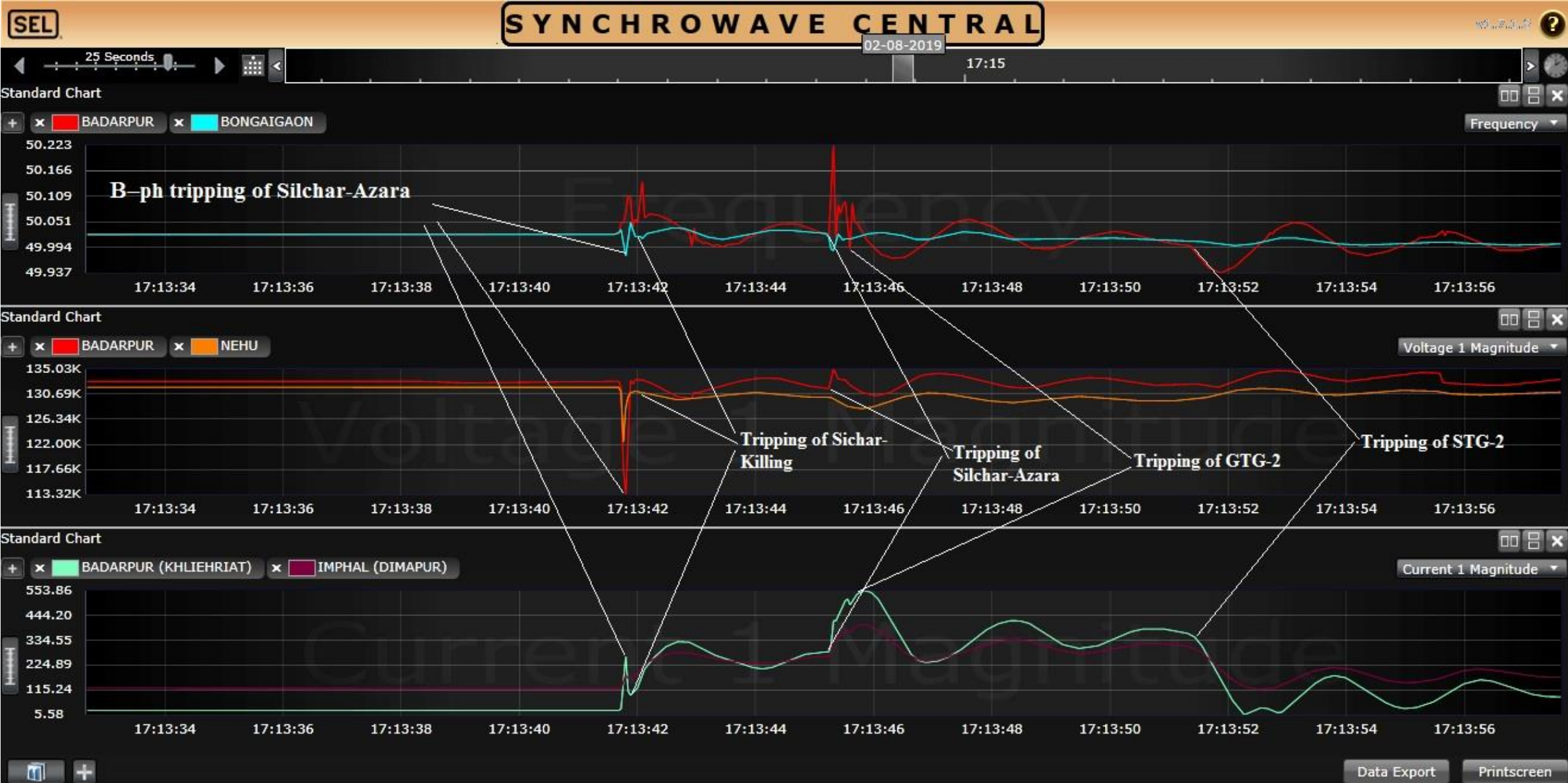
1. 400kV Sichar-Killing & 400kV Sichar-Azara lines tripped at 17:13:42 Hrs & 17:13:45 Hrs respectively. GTG-2 of OTPC tripped at 17:13:45 Hrs due to operation of SPS-3.
2. STG-2 of OTPC tripped at 17:13:51 Hrs.

Name of Generating station/Line	Flow/Generation (MW)	Flow/Generation (MW)	Flow/Generation (MW)
	Antecedent Condition (17:11:45 Hrs)	After event no.1	After event no.2
OTPC	616 (GTG-2: 196, STG2:114)	421(GTG-2: 0 , STG-2: 114)	307(GTG-2: 0 ,STG-2: 0)
400kV Silchar-Azara	193	0	0
400kV Silchar-Killing	155	0	0
132kV Khangdong-Kopili II	52	112	71
132kV Imphal-Kohima	27	75	40
132kV Khleiriat(PG)- Khleiriat(Me) D/C	-6	51	15

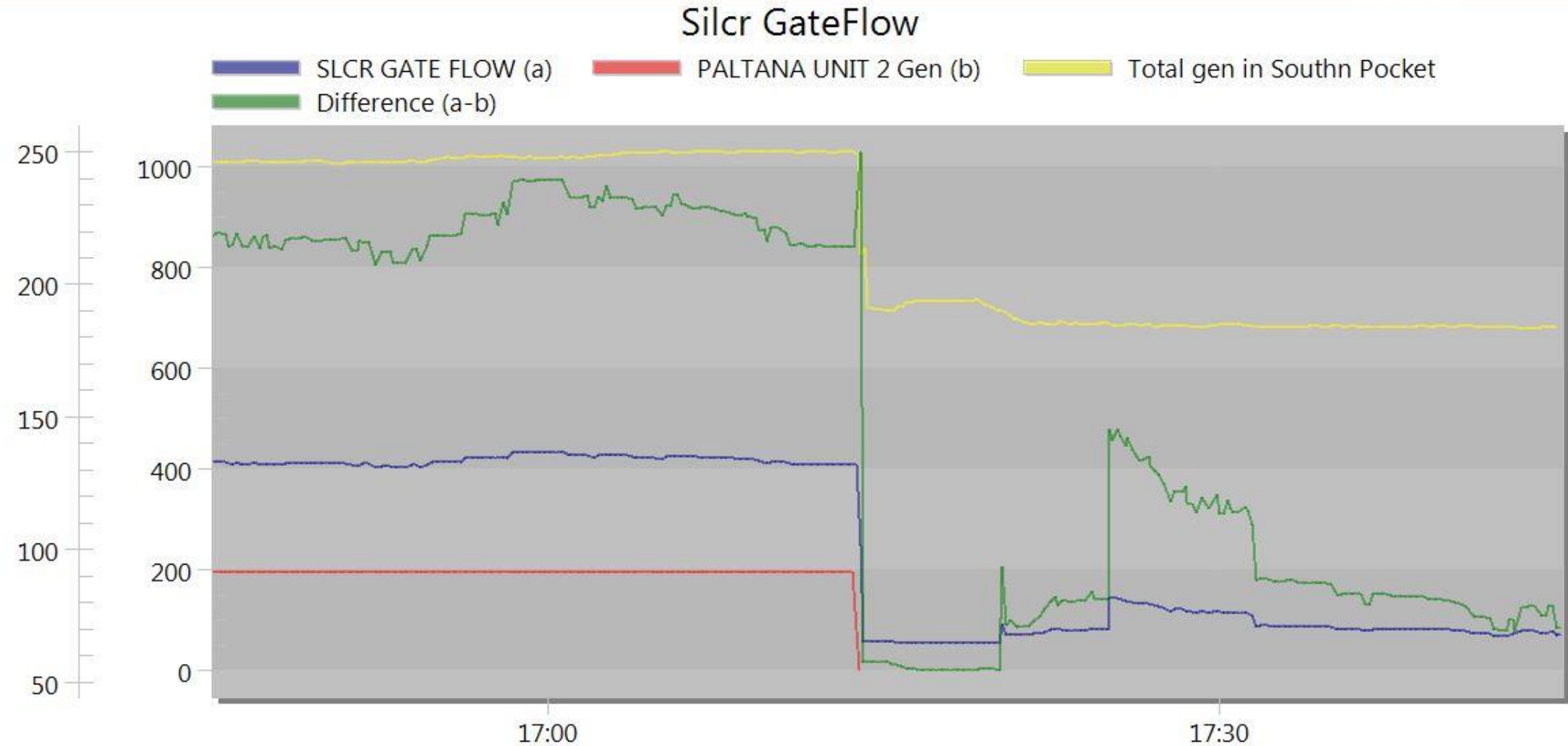
(i) Additional evacuation through Imphal-Kohima-Wokha-Sanis-Doyang: $(75-27) = 48$ MW.

(ii) Additional evacuation through Khlrt-Khlrt-NEHU-Umiam-EPIP-Killing and Khlrt-Khlrt-NEHU-Mawlai-Nongstoin-Nangal-Mendipathar-Agia : $(51+6) = 57$ MW.

Event visualisation in PMU



Monitoring of SPS-III at NERLDC



Aug Fri 2 2019

Before the event: Silchar Gate flow: 421 MW (a) ; Palatana GT-2: 196 MW ; Net flow: 235 MW.

Observations

- **Availability of following loops were crucial in preventing a GD-5:**
- 132kV Imphal-Kohima-Wokha-Sanis-Doyang
- 132 kV Khlrt-Khlrt-NEHU-Umiam-EPIP-Killing
- 132 kV Khlrt-Khlrt-NEHU-Mawlai-Nongstoin- Nangalbibra-Mendipathar-Agia

- **Recommendations:**
- **Early restoration of 132kV Khandong-Kopili I is required to enhance the tie line power evacuation capability and to improve system reliability.**
- **Restoration of 132 kV Imphal-Dimapur is crucial.**
- **Keeping all intra-State lines in operation.**
- **Implementation of graded SPS-III based on MW.**
- **S/D of 132kV Khandong-Kopili II to be allowed only after restoration of Imphal-Dimapur.**

SPS-II operation

Vulnerability and suggested solution

SPS-II in NER

Trigger:

- (1) Tripping of 400kV Palatana-Silchar I & II lines from either one end or both ends.
- (2) Tripping of one of above, if the other one is under outage.

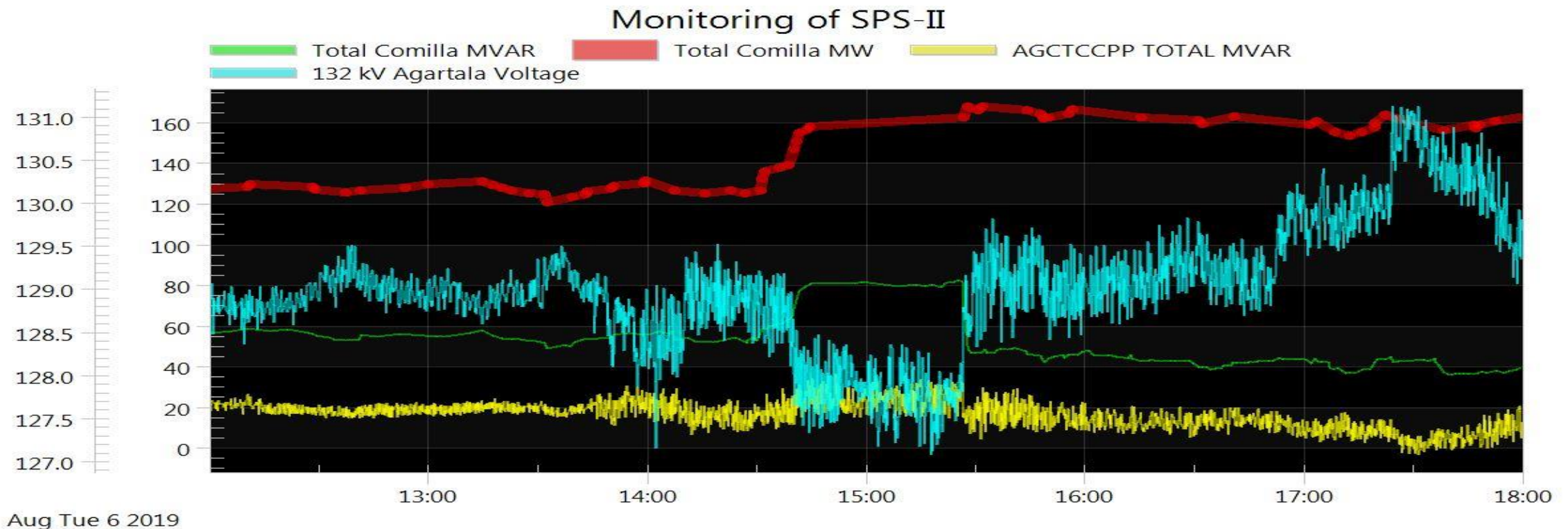
SPS operation:

- (1) Signal will be generated from trip relays of these lines at Palatana end .
- (2) The signal would trip HV side CB of 400/132 KV ICT 1 & 2 at Palatana.
- (3) GTG-1,2 will be running in FSNL (Full Speed No Load).
- (4) Rest portion of Southern part of NER Grid should survive.
- (5) The SPS will also trip 132kV Silchar-Srikona D/C, 132kV Silchar-Hailakandi D/C and 132kV Badarpur-Panchgram lines causing load shedding in South Assam area.

Observations

- **Reason of repeated failure of Southern part of NER Grid subsequent to SPS-II operation:**
- High MVAR drawal by Bangladesh
- Sustained Low voltage condition in SM Nagar, Agartala, AGTCCPP
- Continuous High MVAR generation by AGTCCPP

The above antecedent condition results in further sharp deterioration of voltage after SPS-II operation leading to tripping of generators resulting in system collapse.



Recommendations:

To take care of this, following was agreed in 158th OCC meeting of NERPC:

- Forum agreed in principle on the matter of implementation of the following additional SPS for transfer of 160 MW to Bangladesh through Tripura-Bangladesh link:
- Contingency: Outage of both 400/132 kV, 2x125 MVA ICTs at Palatana
- SPS Action: Tripping of cross border link (132 kV Surajmani Nagar-Comilla D/C), followed by shifting of entire 160 MW load from India Grid to Bangladesh Grid.

In the Joint System Study Meeting on issues referred by 1st NERSCT held on 05.08.2019, forum agreed on the matter of implementation of the above SPS. Also, a letter is to be given to Member (PS) for the implementation of the same.

Recommendations need to be implemented in time bound manner.

Thank You

Annex-A.2**A. Project: NER FO EXPANSION**

Status of “Fibre Optic Cable Package for NR fibre optic expansion (additional requirements) and NER fibre optic expansion under establishment of Fibre Optic Communication system in Northern Region”

A.1 OPGW links

SI No	Link Name	Status as per 13th NETeST	OPGW Stringing status	End Equipment Status	Overall reporting of end stations to NERLDC/ SLDC
	Central Sector				
1	132kV Melriat (PG) ~ Silchar (PG)	Data and voice reported dtd 31.03.2019. SAT Pending	Complete	Complete	Data and voice reported dtd 31.03.2019. SAT Pending
2	132kV Khandong~Halflong (PG)	July19	Complete	Optical connection established over SDH. Data/Voice integration with PDH in progress	August-19
3	132kV Dimapur (PG)~ Doyang (NEEPCO)	July19	-do-	Do	August-19
4	132kV Doyang (NEEPCO)~ Mokokchung (State)	July19	-do-	Do	August-19
5	220kV Mokokchung (PG)~ Mariani (PG)	July19	-do-	Do	August-19
6	400kV Mariani (PG)~ Kathalguri (NEEPCO)	July19	-do-	Do	August-19
7	400kV Surajmaninagar (TSECL) ~ Pallatana (OTPC)	July19	Stringing Completed: 27.967/36.714 Km	Do	August-19
8	132kV Badarpur(PG) ~ Jiribam(PG)	Sept-19	Stringing Completed: 48/67.166 Km	Do	Sept-19
9	Bongaigaon (PG-400 kV) ~ 220kV Salakati-220 kV BTPS	Sept-19	0/4.5 Km	Work on halt due to flood	Sept-19
10	400kV Mirza (Azara) ~ Byrnihat	Aug-19	0/47.208 Km	Installation to be started	Sept-19

11	400kV Silchar ~ Pallatana	Dec-19	Stringing Completed: 61.146/24 7.409 Km/ROW issue	On halt due to flood	Dec-19
12	132kV Agartala(TSECL) ~ RC Nagar (NEEPCO)	July19	Complete	Installation in progress.	Space is provided by NEEPCO IN August only.
13	132kV Jiribam (PG) (Manipur) ~ Loktak (NHPC)	Dec-19	0/82.461Km	Work to be started, Jiribam state end space issue	Dec-19
14	132kV Loktak (NHPC) ~ Imphal (PG)	July19	Complete#	OPGW part completed. Equipment I&C in progress.	August-19
15	PK Bari (TSECL)--LILO of (NETCL) Belonia	Dec-19	0/10.441Km	Work to be started	Dec-19
16	132kV Parey ~ Chimpu	Dec-19	0/31Km	OPGW Supply Completed. Works yet to started for I&C.	Dec-19
Manipur State Sector					
1	132kV Yurembam ~ Yaingangpokpi	Jul-19	Complete#	OPGW part completed (except Approach cable). Installation of Equipment are also completed. WIP	August-19
2	132kV Yaingangpokpi ~ Kongba	Jul-19	Complete#	-do-	August-19
3	132kV Kongba ~ Kakching with LILO at Thoubal	Jul-19	Complete#	-do-	August-19
4	132kV Imphal(State) ~ Karong	Jul-19	45.4/60Km. WIP	OPGW Stringing in progress	Aug-19
5	132kV Kakching ~ Churachandpur	Jul-19	19.60/38 Km. WIP	-do-	Aug-19##
6	132kV Loktak(NHPC) ~ Ningthoukhong	Jul-19	Complete#	OPGW part completed (except Approach cable). Installation of Equipment are also completed. WIP	August-19
7	132kV Yaingangpokpi ~ Hundung	Jul-19	14.5/30Km	OPGW Stringing in progress	Aug-19

8	132kV Kakching ~ Chandel	Jul-19	16.37/25Km	OPGW Stringing in progress	Aug-19
9	132kV Loktak(NHPC) ~ Rengpang	Jul-19	0/47Km	OPGW stringing work yet to start.	Dec-19
10	132kV Jiribam ~ Jiribam state	Jul-19	0/1Km	OPGW stringing work yet to start.	Sept-19
11	132kV Ningthoukhong ~ Churachandpur	Jul-19	16.80/32Km	OPGW Stringing in progress	Aug-19##
Tripura State Sector					
1	132kV Agartala(TSECL) ~ Barumura(GTP)	Data and voice reported dtd 31.03.2019. SAT Pending July19	Complete	Complete	Data and voice reported dtd 31.03.2019. SAT Pending July19
2	66kV 79 Tilla Grid (TSECL) ~ Badharghat	-do-	-do-	-do-	-do-
3	132kV Surajmaninagar(TSECL) ~ Budhungnagar	-do-	-do-	-do-	-do-
4	132kV Agartala(TSECL) ~ SM Nagar (TSECL)	-do-	-do-	-do-	-do-
5	132kV Pallatana(OTPC) ~ Udaipur(TSECL)	July19	-do-	With the completion of SM Nagar-Palatana OPGW, data/voice shall be made reported to SLDC	August-19
6	132kV Udaipur(TSECL) ~ Rokhia GTP	July19	-do-	With the completion of SM Nagar-Palatana OPGW, data/voice shall be made reported to SLDC	August-19
7	66kV Udaipur(TSECL) ~ Gumti HEP	July19	-do-	With the completion of SM Nagar-Palatana OPGW, data/voice shall be made reported to SLDC	August-19
8	66kV Gumti HEP ~ Amarpur(TSECL)	July19	-do-	With the completion of SM Nagar-Palatana	August-19

				OPGW, data/voice shall be made reported to SLDC	
9	66kV Satchand(TSECL) ~ Sabroom(TSECL)	July19	-do-	Islanded link. Neither of Terminal stations is a wideband location	August-19
10	132kV 79 Tilla Grid (TSECL) ~ Dhalabil(TSECL)	July19	-do-	Islanded link. Neither of Terminal stations is a wideband location	August-19
11	132kV Rokhiya (GBPP) ~ Surajmaninagar(TSECL)	Front Not Ready	Supply Complete. Front Not ready (TL under construction)		Link to be deleted. Supply material isto be handed over to TSECL. DOCO will be done with consent from TSECL
12	132kV Surajmaninagar(TSECL) ~ Monarchak (NEEPCO)	Front Not Ready	-do-		
Meghalaya State Sector					
1	132kV Nehu ~ Neigrihms	July19	0/7.7Km	OPGW stringing work yet to start.	Aug-19
2	132kV Khliehriat(PG) ~ Khlehriat (State)	July19	Complete#	OPGW part almost complete (Except Approach cable part).	Aug-19
3	132kV Khliehriat(State) ~ Myntdu Leshka-HEP	July19	24/24.932 Km	OPGW part complete (Except Approach cable part).	Aug-19
4	132kV Khliehriat(PG) ~ Lumshnong (S/C)	July19	2/25.19Km	Work on halt due to rainy season	Aug-19
Nagaland State Sector					
1	132kV Kohima (132KV) ~ Kohima (220KV)	July19	0/25Km	OPGW stringing work yet to start.	Dec19
2	132kv Kohima ~ Wokha	Dec19	0/58Km	OPGW stringing work yet to start.	Dec19
3	132kV Doyang (NEEPCO) ~ Sanis	Dec19	0/10Km	OPGW stringing work yet to start.	Dec19
Mizoram State Sector					
01	Aizawl~Zemabawk I	July19	0/1Km	OPGW stringing work yet to start.	Sept-19

#-Laying of approach cable is pending

##- The stringing delayed due to tower collapse between the link

Note: The completion date mentioned above are subject to clear front availability

A.2

NER FO Expansion Package IV A, SDH Equipment (FIBCOM)- 01.08.2019

NER-REGION	Qty-SDH	Installation SDH	Approved Qty DCPS & Battery	Installation-DCPS	Remarks
NER Central Sec	31	23	24	14	Data reporting will be done in consolidated manner as per targets given
Mizoram	4	1	4	0	
Tripura	14	12	14	9	
Manipur	12	7	12	7	
Nagaland	7	4	6	3	
Meghalaya	5	5	5	5	
Assam	1	1	1	1	
Ar Pradesh	1	1	2	0	
NER Total	75	54	68	39	

A.3 Summary of NER FO Expansion Package IV C, PDH Equipments

NER REGION	No of locations	Supply Qty	Installation	PDH Power on
NER Central Sec	23	50	42	12
Mizoram	4	8	8	0
Tripura	14	29	29	13
Manipur	12	24	24	20
Nagaland	6	12	8	0
Meghalaya	8	16	16	4
Assam	5	11	11	9
Ar Pradesh	2	4	4	0
NER Total	74	154	142	58

Note! A.2 &A.3 are details of terminal equipment which will be connected to end terminals of Links as given in A.1

B. Project: Microwave Vacation OPGW PROJECT -NER

STATUS OF “ESTABLISHMENT OF FIBRE OPTIC COMMUNICATION SYSTEM IN LIEU OF EXISTING ULDC MW LINKS IN NORTH EASTERN REGION”-- equipment are clubbed with NER FO Expansion)

B.1 Status of OPGW Links (as pending)

SN	Link Name	Status as per 13th NETeST	OPGW Stringing status	End Equipment Status	Overall reporting of end stations to NERLDC/ SLDC	Remarks (wrt terminal equipments)
1	132KV Silchar-Srikona	Complete	Complete	Complete	Data reporting	

2	132KV Mariani-Mariani	Complete	Complete	-do-	Data and voice reported dtd 31.03.2019. SAT Pending/Jun19	Completed
3	132KV Nirjuli-Ranganadi with Parey	03 months after ROW is resolved	ROW issue		** 03 months after ROW is resolved	OPGW completed (except Railway/high way diversion part where work is stopped due to ROW)
4	Imphal(PG)-Imphal (State)	June-19	Complete	Equipment commissioning in progress	August-19	MW Vac - Imphal PG FO Exp - Imphal State
5	132KV LILO of Aizawl-Zemabawk-II at Melriat SS	Data and voice reported dtd 31.03.2019 . SAT Pending/June19	Complete	Complete	August-19	MW Vac-Melriat
6	132KV Melriat-Shimui	June-19	Complete	Equipment commissioning in progress	August-19	MW Vac-Melriat FO Exp-Shimui. Shimui end State station not ready-Not charged
7	132KV Mokokchung (PG) - Mokokchung (state)	June-19	Complete	Data Integration & reporting to RLDC/SLDC pending	August-19	FO Exp-Mokokchung PG & Mokokchung State
8	Ranganadi-Gohpur (Part-I)	Data and voice reported dtd	Complete	Complete	Data and voice reported dtd 18.01.2019.	
9	Ranganadi-Gohpur (Part-II)		Complete	Complete		

		18.01.2019 . /june19				
10	Aizawl-Zemabawk-II	June-19	Complete	Installation work at Zemabawk-II is in progress	August-19	MW Vac-Aizawl FO Exp-Zemabawk II
11	Dimapur-Dimapur	June-19	Link Complete	Data Integration & reporting to RLDC/SLDC pending	August-19	MW Vac-Dimapur FO Exp-Dimapur State
12	132kV Ranganadi-Ziro	June-19	Complete	Installation of Equipment(FIBCOM & TEJAS) at Ziro is in progress.	August-19	MW Vac-Ranganadi FO Exp- Ziro
13	132KV Lekhi-Itanagar / Chimpu SLDC	June-19	Complete	I&C-WIP	August-19	MW Vac-Itanagar SLDC FO Exp- Lekhi
14	132KV LILO of Nirjuli-Ranganadi at Lekhi- This is part of SN3	03 months after ROW is resolved	ROW issue	I&C-WIP	03 months after ROW is resolved	MWVac-Nirjuli, Ranagnadi FO Exp- Lekhi OPGW completed (except Railway/high way diversion part where work is stopped due to ROW)

B. 2 Up gradation of ULDC SDH-PDH equipment (as per 15th NERPC) is also clubbed & included in MW Vacation OPGW project.

Sl No	Link Name	SDH Eqpt (ECI Make)	PDH Equipment (ECI Make)	PDH Equipment (Valiant Make)	Status
1	Umium-III	1	0	2	I&C of SDH completed. Integration of PDH in progress.
2	Umium-I	1	0	2	-do-
3	Nehu	1	0	0	Completed
4	Shillong RSCC	1	2	0	Completed
5	Khliehriat	1	0	2	I&C of SDH completed. Integration of PDH in progress.
6	Khandong	1	0	2	-do-
7	Kopili	1	0	2	-do-
8	Dimapur	1	0	2	-do-
9	Imphal	1	0	0	Completed
10	Kohima	1	0	0	Completed
11	Badarpur	1	0	2	I&C of SDH completed. Integration of PDH in progress.
12	Kumarghat	1	0	2	-do-
13	Agartala Gas-RC Nagar NEEPCO	1	0	2	-do-
14	Agartala-79Tilla	1	0	3	-do-
15	Bongaigaon	0	2	0	Completed
16	Repeater between Bongaigaon & Balipara	1	0	0	Space not available in between Trans line at intermediate position/ROW issue for space shelter repeater finalization
17	Umtru	1	2	0	Space & Optical Link issue from MEPTCL is yet to be sorted. Installation of 1 equipment done
18	Misa	0	0	2	-do-
19	Balipara	0	0	2	-do-
Total Upgradation		16	6	25	

NOTE1: Above mentioned communication links got delayed due to certain unavoidable situation like;

- 1) Strike & Protest in Northeast due to GST Amendment bills**
- 2) Strike, Curfew in Ar Pradesh in the month of Feb-19**
- 3) Strike, Curfew in Meghalaya in the month of May-Jun-18**
- 4) Floods in Assam & Manipur –July 17**
- 5) ROW issues (paddy field/ asking additional compensation)**
- 6) Work connected to Trans line connected to Loktak was stopped two times due to miscreants. The same will be restarted soon.**
- 7) Recent flood in June & July19 across upper Assam ,Lower & South Assam has hindered movement of Fibcom team, Tejas team to Tripura, Meghalaya & AP. However teams have been re-mobilized**

NOTE-2:

- 1. All concerned stations (State or ISTS/ISGS) where End equipment being installed are to provide**
 - a) Auxliary power as input to charger of DCPS**
 - b) Air conditioning environment for equipment under LD&C packages ULDC packages**
 - c) PDH space within 20meter of RTU/Gateway if data path is serial type**
 - d) SDH pace within 15-20meter of PDH & SDH is to be placed within 15-20 meter**
 - e) Respective station owner has to arrange of their own-**
 - a) 2wire normal telephone (along with telephone wire from control desk/control room up table) to the PDH/SDH to be provided by user**
 - b) For RTU data also, necessary cable is to be provided by RTU-owner/owner of station.
e.g. one Ethernet cable(shielded) for serial data(if K 101) reporting by RTU & one Ethernet cable(shielded) to be laid & connected (between RTU/GATEWAY up to the Communication equipment-SDH/PDH for data &) by use/owner RTU station**
 - f) State will jointly check with POWERGRID & one dedicated coordinator at State SLDC/Department will be assigned for communication**

C.0 Project: URTDSM PROJECT STATUS

SN	Equip.	Scope		Status				Status / Remarks
		Nos.	Location	Erection	SAT	Reporting/ Commission	Data Validation	
1	SPDC		NERLDC	1	1	1	NA	Completed 26.3.19/PTOC issued after SAVT
2	PDC		Assam	1	1	1	NA	Completed 26.3.19/PTOC issued after SAVT
3	PDC		Meghalaya	1	1	1	NA	Completed 26.3.19/PTOC issued after SAVT
4	PDC		Arunachal	0	0	0		A.12 (By Aug19) Diversion under process Materials delivered in Tripura. Work is targeted completed by 2months(SAT). Additional cost of Rs.43lac (Tax amount) is involved for GST/IGST diversion from one state to other state
	Total	4						
5	PMU	3	Salakati	3	3	2	3	Completed
6	PMU	6	Balipara	6	6	6	6	Completed
7	PMU	6	Bongaigaon	6	6	6	6	Completed
8	PMU	4	BNC	4	4	4	4	Completed
9	PMU	4	Silchar	4	4	4	4	Completed
10	PMU	7	Misa	7	7	7	6	Completed
11	PMU	3	Mariani	3	3	3	3	Completed
12	PMU	5	Dimapur	5	5	5	3	Completed
13	PMU	1	RHEP - NEEPCO	1	1	1	0	By 15.02.2019
14	PMU	2	Kopili - NEEPCO	2	2	2	2	Completed
15	PMU	4	Samaguri – Assam	4	4	4	4	Completed
16	PMU	2	Agia - Assam	2	2	2	2	Completed
17	PMU	2	Mariani – Assam	2	2	2	2	Completed
18	PMU	2	Tinsukia - Assam	2	2	2	2	Completed
		51		51	51	50	47	

Over all Target-URTDSM project(for CS PDC & associated system as diverted to Tripura & UPS:Sept/Dec '19. Other parts completed including analytical.

GE did not mobilize team in July citing safety issues of Flood in South Assam, South Tripura & North Tripura

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