

North Eastern Regional Power Committee

MINUTES OF THE 166th OPERATION COORDINATION

SUB-COMMITTEE MEETING OF NERPC

Date : 06/03/2020 (Friday)
Time : 10:00 hrs
Venue : “Hotel Nandan”, Guwahati.

The List of Participants in the 166th OCC Meeting is attached at **Annexure – I**

Shri A.K. Thakur, Member Secretary, NERPC welcomed the participants to the 166th OCC meeting. He thanked the members for participating in good numbers in the meeting. He informed that the Technical Evaluation for SAMAST tender for IT Solution at SLDCs was successfully completed on 5th March, 2020 at Guwahati. Thereafter the financial bid would be opened on 9th March, 2020 at NERPC Secretariat Shillong. He requested all the members nominated for Financial Evaluation to be positively present on 9th March, 2020. He then requested Shri B. Lyngkhoi, Director(O&P), NERPC to take up the agenda items for discussion.

A. CONFIRMATION OF MINUTES

**CONFIRMATION OF MINUTES OF 165th MEETING OF OPERATION COORDINATION
SUB-COMMITTEE OF NERPC.**

The minutes of 165th meeting of Operation Sub-committee held on 14th February, 2020 at Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2019/2674-2711 dated 28th February, 2020.

NERLDC comments: In the deliberation against agenda no. B.1.1., the clarification sought by SE(SO&PSC), DoP Ar. Pradesh from POSOCO had been clarified by NERLDC during the 165th OCC meeting and thus the issue may be considered as closed.

The Sub-committee confirmed the minutes of 165th OCCM of NERPC with the above modification as no other comments/observations received from the constituents.

ITEMS FOR DISCUSSION

B.1. ACTION TAKEN:**1. IMPLEMENTATION OF PROJECTS FUNDED FROM PSDF:**The status as informed in 166th OCC:

State	R&U scheme	ADMS	Capacitor Installation	SAMAST**	Line Differential Protection
Ar. Pradesh	Package-I Materials supplied. P-II(for PLCC & communication) Contract signed P-III LOA by Mar'20. Station-wise status to be updated *	TPA to be signed by Mar'20	-	All TESG queries replied to. except BoD approval	-
Nagaland	All completed except for PLCC package. By Feb'20 Station-wise status to be updated.	First tranche of 20% funds released and requisition for second tranche of 60% to be submitted.	-	Reply against TESG queries sent except BoD approval.	Lines identified. Under DPR preparation stage.
Mizoram	Completed. 10% remaining claim by Mar'20 Station-wise status to be updated.	Original TPA to be sent to NLDC. By Feb'20	To reply to TESG queries.	To reply to TESG queries.	Lines identified for installation of DPR viz. 132kV Aizawl - Luangmual and 132kV Kawmzawl - Khawiva.
Manipur	Package-II: completed Package-I: WIP Status report to be submitted	TPA signed.	Approval awaited for NIT	Reply against TESG queries sent except BoD approval.	Lines identified. LDP for 132kV Imphal-Imphal and 132kV Jiribm-Jiribam proposed. Under DPR preparation stage.
	33kV System Integration with SLDC	In Tendering stage.			

	Reliable Communications for Grid Connectivity	In Tendering stage.			
Tripura	Work completed. 10% remaining claim by Mar'20 Station-wise status to be updated *	Contract agreement signed. TPA to be signed by Mar'20	Study results to be submitted alongwith DPR.	Reply against TESG queries sent except BoD approval.	Lines not yet identified. To be taken up in Sub-group.
Assam	LOA issued. Portion of remaining 60% to be claimed. Station-wise status to be submitted.	TPA signed. Requisition for 30% to be submitted.	-	Appraisal Committee approved.	Lines identified. Under DPR preparation stage.
Meghalaya	MePTCL R&U works Completed. Final 10 % released MePGCL - 10% claim by Mar'20. Station-wise status to be updated.	Second tranche of funds disbursed. Work completed. Final 10% requisition to be submitted.	-	Appraisal Committee approved.	WIP. 10% requisition to be submitted by Mar'20.

Deliberation of the sub-Committee:

The forum requested the concerned utilities to issue LOAs, submit Utilization Certificate by March'2020 so that funds are not de-allocated.

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 165 th OCC	Status as informed in 166 th OCC
63MVAR Reactor at Byrnihat to replace with 80MVAR Reactor	MePTCL	Sanction order received.	LoA is in progress.
132kV Dimapur - Imphal (out since 25.07.18)	NERTS	Present status Foundation: 22/35 Erection : 22/35 Stringing:6.6/14.6Km DC, Kohima has been instructed to assist NERTS. PG may follow up.	Foundation: 26/35 Erection : 22/35 Stringing:7.04/14.6Km By May'20

220kV Sonabil-Samaguri-I	AEGCL	Tender floated. Completion time 3 months. By 01.03.20 LOA.	WO by Mar'20. Tentative Completion by July'20.
132kV Srikona-Panchgram (out since 14.01.2019)	AEGCL	Srikona-Panchgram delayed due to two river crossings	Delayed due to two river crossings
63MVAR L/R for 400kV Palatana-Silchar Ckt-I (out since Apr'19)	OTPC	PPM value for moisture still high. 15.03.2020	By 31.03.2020
OTPC Module-I (out since 07.10.2019)	OTPC	By 31.03.2020	Rotor received on 03.03.20. By 15th Mar'20 to be restored.
50 MVAR L/R at Misa of 220 kV Misa – Mariani	NERTS	The Old Mariani Line Reactor is taken in to service on 25.01.20 and the New Mariani Line Reactor is taken in out of service, which is expected to come in to service by 31.03.20	By May'20
132kV Jiribam – Rengpang	MSPCL	-	By Mar'20

The Sub-Committee noted as above.

Action: MePTCL, NERTS, AEGCL, OTPC.

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

SN	Name of element	Actions to be taken	Concerned Utilities	Status as informed in the 165 th OCC Meeting	Latest status
1	132 kV AGTCCPP - Agartala D/C	Installation of Line Differential in 132 kV AGTCCPP - 79 Tilla D/C & Review of impedance setting of both ends as a temporary measure.	NERTS/ NEEPCO	LOA to be placed by 29.02.20	Award to M/s GE by Mar'20
2	132kV AGTCCPP-Kumarghat	GPS to be procured and time synchronization of relay to be done	NEEPCO	By Feb'2020	Completed. STG unit relay to be replaced due to absence of Ethernet port. By Jun'20

3	132kV P.K. Bari-Kumarghat	Installation of Line differential relay	NERTS	LOA to be placed by 29.02.20	Award to M/s GE by Mar'20
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The Sub-Committee noted as above.

Action: NEEPCO, NERTS.

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

SN	Data reg.	Target deadline	Status as informed in the 165 th OCC Meeting	Status as informed in the 166 th OCC Meeting
1	Furnishing Technical and Commercial data for computation of PoC Charges and Losses for January to March'20 (Q4 of 2019-20)	15.10.19	Manipur, Mizoram, Nagaland & NEEPCO submitted	Submitted. To be dropped.
2	Furnishing details regarding GT Tap Positions of ISGS and other generators. Required for studies related to reactive power capability testing	15.10.19	State generators data not received	MePGCL – by Mar'20. Other State GENCOMs to expedite.
3	Furnishing Nodewise half hourly data monthly Required for studies pertaining to Real Time Market	By 10 th of the month	From 01.04.20 the RTM would be introduced. Meghalaya to submit to SO-II	Being submitted regularly. To be dropped.
4	RE Generation details. Data for both RE under operation & RE under planning is required.	-	All state generators data not received	To be requested as per format.

The Sub-Committee noted as above.

Action: All utilities as above.

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

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

NER PERFORMANCE DURING FEBRUARY, 2020

States	Energy Met (MU)		w.r.t. Jan,20 % inc (+) /dec (-)	Energy Reqr. (MU)		w.r.t. Jan,20 % inc (+) /dec (-)	% surplus (+) /shortfall (-) of energy In Feb,20
	Feb-20	Jan-20		Feb-20	Jan-20		
Ar. Pradesh	63.91	69.12	-7.54	64.18	69.43	-7.56	-0.42
Assam	647.84	685.07	-5.43	660.97	700.17	-5.60	-1.99

Manipur	76.13	82.78	-8.03	76.64	83.22	-7.91	-0.67
Meghalaya	210.09	194.22	8.17	216.7	209.12	3.62	-3.05
Mizoram	51.67	55.67	-7.19	51.97	55.99	-7.18	-0.58
Nagaland	64.14	69.23	-7.35	64.65	69.64	-7.17	-0.79
Tripura	158.53	170.37	-6.95	158.54	170.8	-7.18	-0.01
Region	1272.31	1326.46	-4.08	1293.65	1358.37	-4.76	-1.65
	Demand Met (MW)		w.r.t. Jan,20	Demand in (MW)		w.r.t. Jan'20	% surplus (+) /shortfall (-) of demand In Jan,20
States	Feb-20	Jan-20	% inc (+) /dec (-)	Feb-20	Jan-20	% inc (+) /dec (-)	
Ar. Pradesh	130.4	117.24	11.22	158	125	26.40	-17.47
Assam	1370.1	1366.46	0.27	1381	1366	1.10	-0.79
Manipur	216.4	218.21	-0.83	226	221	2.26	-4.25
Meghalaya	369.9	371.49	-0.43	370	371	-0.27	-0.03
Mizoram	132.5	126.92	4.40	132	127	3.94	0.38
Nagaland	150.0	158.5	-5.36	165	182	-9.34	-9.09
Tripura	222.3	229	-2.93	222	229	-3.06	0.14
Region	2591.7	2587.82	0.15	2812	2746	2.40	-7.83

REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU

AVERAGE FREQUENCY (Hz)

Month---->	Feb-20	Jan-20	Month---->	Feb-20	Jan-20
Total Generation in NER (Gross)	1039.7 67	1334.1 56		% of Time	% of Time
Total Central Sector Generation (Gross)	872.08	1068.9 87	Below 49.9 Hz	7.06	6.48
Total State Sector Generation (Gross)	167.687	265.169	Between 49.9 to 50.05 Hz	73.95	75.01
Inter-Regional Energy Exchange			Above 50.05 Hz	18.99	18.51
(a) NER-ER	25.78	106.62	Average	50.00	50.00
(b) ER-NER	528.52	39.84	Maximum	50.33	50.27
(c) NER-NR	270.18	0.17	Minimum	49.68	49.69
(d) NR-NER	53.85	228.27			
© Net Import	286.41	161.32			

Deliberation of the sub-Committee:

NERLDC highlighted the following points in their presentation. The presentation is attached as **Annexure B.2** :

1. Max/Min Demand met in the Month: 2463 MW/2184 MW
2. Max/Min Energy met in the Month: 42.75 MU/36.99 MU
3. Frequency Profile: Within IEGC band: 74 %
4. Voltage issue: Max voltage at 400 kV RHEP – 433 kV. Voltage above 420 kV at 400 kV RHEP-20.67 % of time
5. Network Issues: GD – 3 no. of times & GI-8 no. of times

6. **Preparation for RTM Implementation:** The implementation works of RTM as discussed during the RTM workshop dated 13/02/2020 are in progress. All constituents were requested to be prepared for the Mock Trials of the RTM process which shall be conducted before the actual the date of implementation i.e. 01/04/2020.
7. **Generation forecast on D-2 basis for computation of TTC/ATC:** NERLDC informed that the same is being received only from: LRPP, LTPS, Doyang, RHEP, AGBPP, AGTCCPP and Tripura state generations. All ISGS were again requested to furnish their forecasted generation by 10 hrs on D-2 basis as approved in 164th OCCM.

The Sub-Committee noted as above.

C. ITEMS- STATUS REVIEW

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

During 166th OCC meeting, the status as informed by different beneficiaries is as follows:

SN	Items	Status as given in 165 th OCC Meeting		Status as given in 166 th OCC Meeting	
		Timeline for completion	Furnishing of detail parameters	Timeline for completion	Furnishing of detail parameters
a. New elements					
1	Kameng HEP of NEEPCO two units (2 x 150 MW) Next two units (2x150 MW)	Feb'20	CEA clearance available	Delayed due to vibration problems in both units	CEA clearance available
2	220/132 kV, 1x160 MVA ICT with GIS Bay at Kopili	Damage assessment done on 07.02.20.	To be submitted to NERLDC.	Tied with restoration of Kopili switchyard	To be submitted to NERLDC.
3	Dedicated 33kV feeder at Khliehriat Substation from Lumshnong.	Date to be finalized.	Not applicable.	Joint visit of MeECL& NERPC, NERTS in Mar'20	Not applicable.
4	220kV Balipara-Sonabil-2	Less sanction than DPR. By June'20 the work would be completed.	To be submitted to NERLDC.	Financial sanction awaited	To be submitted to NERLDC.
5	Bay at Agia S/S for 132kV Agia-Nangalbibra Ckt #II by AEGCL	By Feb'20	To be submitted to NERLDC.	By Oct'20	To be submitted to NERLDC.

6	80MVAR B/R at RHEP by NEEPCO	Tender by May'20	To be submitted to NERLDC.	Tender by May'20	To be submitted to NERLDC.
7	160MVA 220/132kV ICT-1 at Balipara	-	-	By Mar'20	Already submitted to NERLDC.
b. Elements under breakdown/upgradation					
8	Up-gradation of 132 kV Lumshnong-Panchgram line	TESG queries submitted	Not applicable.	TESG approval awaited.	Not applicable.
9	PLCC Panels at Loktak end of Loktak - Ningthoukhong 132 kV feeder and Loktak - Rengpang 132 kV feeder	By Feb'20	Not applicable.	Matter being pursued with respective agencies for early completion.	Not applicable.
10	Upgradation of 132 kV Bus Bar at Umiam Stg- III to ACSR Zebra	Revised DPR to be submitted	Not applicable	TESG approval awaited.	Not applicable.
11	Upgradation of 132kV Karong-Kohima (till Mao) by MSPCL	By Feb'20	To be submitted to NERLDC.	By Mar'20	To be submitted to NERLDC.
12	Installation of LDP for 132kV AGTCCPP-Agartala D/C & 132kV PKBari-Kumarghat by NERTS	LOA to be placed by 29.02.20	-	Order to be placed by Mar'20	-
13	Procurement of GPS at AGTCCPP & time synchronization for 132kV AGTCCPP-Kumarghat by NEEPCO	By Feb'20	-	Completed. To be dropped.	-
14	Diversion of 132kV Bawktlang-Sihmui	Tower materials awarded to M/s Skipper. Expected by : May'20	-	By Jun'20	

The Sub-Committee noted as above.

Action: All utilities as above.

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

Data availability as updated in the 166th OCCM is given below:

Name of the state /utility	Data Availability (in%)	Status as updated in the 165 th OCCM	Status as updated in the 166 th OCCM
DoP Ar. Pradesh	0%	-	Total 7 devices, for 2 meters TARA device not installed. For 5 devices rebooted but still not reporting
Assam	55%	-	TARA device installed for 31 out of 35 feeders. 17 are reporting. Network problem suspected.
Manipur	100%	(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 reporting after replacement of adapter	100% reporting. Installation for Ckt#III to be done.
Meghalaya**	0% detailed report to be submitted	Same problems persisting. CDAC to visit critical locations immediately.	Not reporting. 4 SIMs hence deactivated.
Mizoram	67%		Installed for 6 feeders. only 4 reporting, 2 stations not charged.
Nagaland	87.5%		Out of 8, 7 are reporting
Tripura	25%.		Out of 8 , 2 reporting.

Deliberation of the sub-Committee:

Representative from CDAC suggested the following solution:-

- To prevent frequent hang of SEMs, the device has to be disabled at the time of SEM reading by DCD/laptop. Simultaneous meter data downloading disrupts the SEM functioning.
- SIMs have to be activated with running subscription always.
- For only device problem, the same has to be rebooted. If the problem is still persisting, CDAC engineer would visit the site.

The forum requested CDAC to install the TARA device for 132kV Imphal-Yurembam-Ckt#III at Yurembam at the earliest.

The Sub-Committee noted as above.

Action: CDAC/All SLDCs/NERPC

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

In 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:-

- Status of recommendations subsequent to UFR Inspection:

TSECL

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

DoP Nagaland

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

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

- UFR Inspection for Manipur in March'2020.

Deliberation of the sub-Committee:

- Status of recommendations subsequent to UFR Inspection:

TSECL

UFR location, No. of feeders	Recommendation	Status as updated in the 166 th OCC meeting
132/33kV Surjamaninagar, 1no 33kV feeder	Relay to be replaced.	To be taken up with highest authority of Tripura by NERPC for early completion.

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

DoP Nagaland

UFR location, No. feeders	Recommendation	Status as updated in the 166 th OCC meeting
132/66/33kV Dimapur, 2nos 33kV feeder	Relays to be retrofitted.	As panels are very old, retrofitting is difficult. Same would be done during restoration. Item to be reviewed later on

The Sub-Committee noted as above.

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

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

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

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

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

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

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

In 165th OCCM NERLDC informed that Killing VSAT is reporting and the expenditure has been waived off. The forum thanked NERLDC for the same.

Deliberation of the sub-Committee:

ED, NERLDC informed that the VSAT for Killing is in monitoring stage with the demo ending on 9th March, 2020. EE (System Protection), MePTCL requested for time extension for Demo so that the effectiveness of VSAT in cloudy weather may be assessed. The forum requested NERLDC to explore the possibility of the same.

The Sub-Committee noted as above.

Action: NERLDC/MeECL.

C.5 Update on PDMS:

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

- Go Live of the project done on 14.02.2020.
- The user details station-wise to be shared by the nodal officers of Ar. Pradesh, Nagaland, TSECL and NERTS at the earliest for creation of login credentials.
- The login credentials for PDMS would be shared with all the nodal officers.
- Training on PSCT, PDMS would be arranged in all the states starting with Meghalaya.
- A focused training on Fault level calculation and Overcurrent, E/F settings calculation and co-ordination studies would be held in Mar'20.

Deliberation of the sub-Committee:

EE(System Protection), MePTCL informed that as per discussion with M/s PRDC, the dates for training have been agreed to be tentatively from 23rd Mar'20 to 27th Mar'20.

Director(O&P), NERPC requested nodal officers of Ar. Pradesh, Nagaland, TSECL and NERTS to submit the user details so that login credentials for PDMS may be created for their officers.

The Sub-Committee noted as above.

Action: PRDC/All utilities.

C.6 Non-availability/ Non-functioning of synchronization facility at numerous stations

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

- AEGCL – along with the black start testing of AGBPP, demonstration of Synchronisation using BCU would be done at Mariani (PG) for which NERLDC

will arrange isolation / separation system into two parts and POWERGRID will synchronize the systems in SAS. Remote Synchronization using BCU to be tested alongwith mock black start of AGBPP by March 2020.

- DoP Ar. Pradesh –Synchro check Trolley procurement at Lekhi S/S and Chimpu S/S. LoA: Jan'20. Target Completion Mar'2020.
- P&ED Mizoram - Procurement of synchronization trolley and installation of synchronization facility at 132kV Kolasib S/Sn would be taken up with higher authorities.

Deliberation of the sub-Committee:

The status as updated by different utilities:

- AEGCL - Testing to be completed by 3rd week of Mar'20.
- DoP Ar. Pradesh - LoA by Jan'20. Target Completion Mar'2020.
- P&ED Mizoram - NERTS to assist P&ED Mizoram in procurement i.r.o vendor details.

The Sub-Committee noted as above.

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

C.7 Phase shift errors in PMU:

The following status as updated in previous meeting(s):

- Phase shift errors have been rectified for all the PMUs in NERTS stations
- Phase shift problems still persist for AEGCL stations
- PMUs at Tinsukia, Mariani, Samaguri not reporting

Deliberation of the sub-Committee:

NERLDC informed the following status:-

- At MisaPMU not reporting of 220kV Killing-Ckt #2 and 220kV Bus-2.
- For PMUs at Tinsukia(AS), Mariani(AS), Dimapur(PG) phase shift error persisting.
- Samaguri PMU non-reporting.

AEGCL informed that the Samaguri PMU panel would be replaced under Upgradation works and the same shall be completed by Apr'2020. After detailed deliberation it was decided that for PMU maintenance, respective utility where the PMUs are installed shall maintain the same. AEGCL, TSECL agreed to the same subject to proper documentation and technical support from NERTS in the future.

The Sub-Committee noted as above.

Action: AEGCL/NERTS/NERLDC

C. 8 Tentative schedule for Black Start & Restoration Procedure Mock exercise in NER during the year 2019

In 164th OCCM the mock black start schedule status was as below:

- AGBPP - NERLDC proposed split bus at AGBPP, with charging of one bus by black starting one unit with 220kV AGBPP-Mariani line to be connected to the same bus. Further Bus to be split at Mariani and Bus Reactor to be used as Line Reactor. The Bus Coupler would be used to test for synchronization at Mariani. Limit of Reactive power absorption by the AGBPP unit shall be required to be kept at 5-8MVAR or as per capability curve as inrush would be around 18MVAR after synchronisation of the island, as per study. The forum approved the procedure and suggested that the same may be carried out by Mar'2020.
- RHEP – Machine to be synchronized at 132kV and units brought in other bus and done by Mar'20.
- Pare – Mock black start was successful at Pare HEP on 24.01.2020 however there was delay in Synchronization at RHEP during Mock Black start at Pare. The issue of Synchronization at RHEP has been resolved and the same would be tested during any of the upcoming mock black start exercises.

Deliberation of the sub-Committee:

- AGBPP - By Mar'2020.
- RHEP – By Apr'2020
- Pare - Item **to be dropped.**

The Sub-Committee noted as above.

Action: NEEPCO, NERLDC

C. 9 DVAR and PSS at AGTCCPP:

In 163rd OCCM DGM, NEEPCO informed that DVR installation was completed in Unit 1, 2, 3 & 4 and PSS has been kept OFF in all DVR panels. NERLDC informed that a team from NERLDC visited AGTCCPP on 07.12.19 during the installation. NEEPCO further intimated that some data required for PSS tuning has been asked of CTU and tuning would be done on receipt of data. NERTS agreed to co-ordinate with CTU.

In 164th OCCM DGM, NEEPCO informed that data requirement has been shared with NERTS. Further he stated that as per prevalent regulations PSS is not mandatory for units less than 25MW. So he requested that AGTCCPP be excused from turning ON PSS. NERLDC clarified that PSS is to be turned ON for AGTCCPP as per grid requirement in view of repeated occurrence of oscillations.

In 165th OCCM DGM, NEEPCO informed that the requisite data has still not been received from CTU. The forum requested NERTS to take up the matter with CTU.

Deliberation of the sub-Committee:

NERTS informed that the requisite data would be furnished by CTU within Mar'2020.

The Sub-Committee noted as above.

Action: NEEPCO, NERTS.

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

Status as on 164th OCC Meeting:

- 132kV Transfer Bus at Loktak HEP - Charged on 30.10.2019.
- 400kV Bus A at RHEP - Procurement of the following initiated:
 - Four sets of Pantograph isolators
 - One Set CT(Bus Coupler)
 - One set CVT(Bus-A)
 Tender by Mar'20. Implementation by Dec'21.
- 132kV Bus Coupler at Pavoi - Old PGCIL panels to be replaced by SAS enabled panels. Protection transfer would be completed subsequently. By 31.03.2020

Deliberation of the sub-Committee:

- 400kV Bus A at RHEP - Technical details/specifications submitted to HoP, RHEP. The collection of budgetary offers would be done subsequently with tendering in May'2020
- 132kV Bus Coupler at Pavoi - By 31.03.2020

The Sub-Committee noted as above.

Action: NEEPCO/AEGCL.

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

Recommendations	Status as informed in the 165th OCCM	Status as informed in the 166th OCCM
Study for reactive compensation in Tripura System(scope of TSECL)	Not completed.	Matter to be taken with highest authority of TSECL by NERPC.
Identification of feeders for additional UFR based load shedding under Islanding Scheme-II(Scope of TSECL)	Not procured. Target to be communicated in next meeting.	Matter to be taken with highest authority of TSECL by NERPC.

Standalone EL for integration of relay at AGTCPP by Oct'19(Scope of NEEPCO)	By Mar'2020	DPR to be completed by June'20
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.	NERLDC informed that all utilities are submitting the undertaking.	Item to be dropped.
NHPC to procure standalone EL for Loktak HEP	By Mar'2020	By June'21 tied up with R&M.
Revised SPS-3 scheme offer sought from GE by NERTS	Detailed break up to be submitted and order to be given by NERTS	Pls refer to discussions in the Special Meeting held on 20.02.2020
Impedance measurement for 400kV Paltana-Silchar D/C, 400kV Silchar-Azara, 400kV Silchar – Byrnihat	Results submitted to NERLDC on 12.02.20	Relay setting to be changed. Referred to Sub-group.
Line parameters to be matched at Silchar, Azara and Byrnihat.	Azara provided the existing settings on 13.02.20. The same are under examination	Under examination. By Mar'20.
NERTS and AEGCL to jointly visit Azara and check exact cause for delay in appearance of voltage input to relay when charged via Tie Breaker	AEGCL informed that the reason could not be ascertained. However the matter would be under observation for recurrence.	Matter under observation

The Sub-Committee noted as above.

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

C.12 Tripping of all units of BgTPP:

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

Sl. No.	Recommendation	Status as informed in the 165th OCCM	Status as informed in the 166th OCCM
1	Providing alternate cooling water source to compressors	Unit-1 overhead tank connection made, when unit-2 will go under s/d then connection would be completed. By May'2020	By May'2020

The Sub-Committee noted as above.

Action: NTPC.

C.13 Better weather forecasting for power sector by IMD:

Decisions/deliberations in the previous meetings:

- The report regarding site selection for Automatic Weather Station submitted by IMD Department
- ISGS stations to be visited by IMD on urgent basis.
- Minute by minute data is to be shared by IMD with all utilities.
- IMD visited 3 PG stations and remaining to be visited by Mar'20.
- NERLDC to share the location of all CSGS with IMD

Deliberation of the sub-Committee:

NERLDC informed that MePTCL stations are yet to be visited. Also multiple stations of TSECL have been declared by IMD to be unsuitable for installation of weather station. The forum requested NERLDC to invite IMD to the next OCC so that the same may be clarified alongwith updation of Project status.

The Sub-Committee noted as above.

Action: NERLDC.

C.14 PSS tuning testing for AGTCCPP and Tuirial

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

Status as per previous meeting:

- AGTCCPP - after receipt of data from CTU
- Tuirial - By 15th Mar'20 after visit of OEM.

Deliberation of the sub-Committee:

DGM, NEEPCO informed that the tuning at Tuirial HEP has been completed and for AGTCCPP will be done by Mar'20.

The Sub-Committee noted as above.

Action: NEEPCO.

C.15 PLCC link issues

- a. Presently, there is no communication link with Deomali. It is proposed to establish PLCC link between Deomali and AGBPP at the earliest for tele-protection and SCADA data. The approved VSAT for Arunachal Pradesh may be

kept in Deomali. In 165th OCCM SE(SO&PSC), DoP Ar. Pradesh informed that 7 stations have been identified for VSAT. Materials for the same has been already delivered and about to be commissioned. The forum requested that one PMU be installed at Deomali as pilot.

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

- 132kV Badarpur-Kolasib: PLCC link in place and working.
- 132kV Bairabi - Kolasib: Matter taken up with higher authorities.
- 132kV Tuirial-Kolasib: Rectified and functioning

Deliberation of the sub-Committee:

For item at (a), AE, SLDC, DoP Ar. Pradesh informed that LOA has been placed on January, 2020 with slated completion for seven stations by July'20.

For item at Sl. No.(b) SE, SLDC, P&ED Mizoram requested NERPC to provide a brief write-up detailing usage and utility of PLCC.

The Sub-Committee noted as above.

Action: DoP Ar. Pradesh, P&ED Mizoram.

C.15 Shutdown of plant

In 164th OCCM OTPC informed that high demand season for NER has been fixed from August- September. However the present tariff regulation has disincentivised taking shutdown during high demand season. Since the shutdown period for gas plants has already been decided in previous OCC, it was requested to provide relief.

In 165th OCC forum requested NERPC to take up the matter with Hon'ble CERC.

Deliberation of the sub-Committee:

Director(O&P), NERPC informed that NERPC would be writing to CERC shortly.

The Sub-Committee noted as above.

Action: NERPC.

C.16 Auto recloser in 132 kV Rangia – Motonga line & 132 kV Salakati - Gelephu line (International lines connecting Bhutan Power System):

As per the discussions in the 5th Operational Coordination Meeting between India and Bhutan, Bhutan informed that gang operated circuit breaker at Gelephu station has

been replaced with independent pole CB for the 132 kV Salakati – Gelephu line and single-phase auto recloser can be operationalized at any time. Bhutan requested India to replace 3 phase gang operated CB mechanism with single phase CBs at Salakati end. In 132 kV Rangia – Motonga line Single Phase Auto Recloser (SPAR) is ready at Bhutan (Motonga) end but not ready at India end due to the same reason. POWERGRID to look in to this matter.

In 164th OCC meeting it was decided that 3 phase GO CB at Salakati and Rangia is to be converted to Single Pole CB. However NERTS stated that shutdown for the same is required. The forum requested NERTS to prepare the proposal and place it for ratification in the next TCC/RPC with the expenditure being shared under PoC mechanism.

Deliberation of the sub-Committee:

Sr.DGM(AM), NERTS informed that action has been initiated for procurement / diversion for CBs. However, he stated that for 132kV Rangia - Motonga shutdown would be required for at least 20 days if foundation has to be made afresh. The forum requested NERTS to explore the possibility of using the existing foundation, NERTS agreed to revert back with the exact schedule of installation and commissioning. NERTS stated that for 220kV Gelephu-Salakati, no long term outage would be there. The work would be completed in 8-10 days with the protection transferred to BC breaker. The forum decided to put up the matter in next TCC/RPC meeting for expenditure sharing.

The Sub-Committee noted as above.

Action: NERTS/NERPC.

C.17 Diversion of CT from Aizawl to Kolasib:

In 165th OCCM NERLDC informed that as per report of the Committee which visited 132kV Kolasib S/Sn, the CT for 132kV Bairabi feeder is to be replaced. NERTS informed that spare CT is available at 132kV Aizawl S/Sn and same may be provided to P&ED Mizoram on loan basis. However P&ED Mizoram has to arrange for the diversion and installation. The forum approved and requested P&ED Mizoram to do the needful.

Deliberation of the sub-Committee:

SE, SLDC, P&ED Mizoram informed that diversion of CT to Kolasib has been completed, installation pending. Sr. GM, NERTS informed that 24 nos of 400/1A 132kV CTs has been declared as spare. A sufficient number of them may be requisitioned by the NER States. Director(O&P), NERPC welcomed the offer and suggested that 6nos CT may be given to Assam and 3 nos to each of the remaining states. NERTS informed that the same would be confirmed by next OCCM.

The Sub-Committee noted as above.

Action: NERTS/All state utilities.

C.18 Auto-reclosure issues at Azara:

In 165th OCCM AEGCL informed that at present single phase AR is not working for 400kV Silchar-Azara at Azara. This is due to communication channel problem at Azara with both Channel-1&2 blocked in PLCC panel. NERTS shared the number of the concerned maintenance firm with AEGCL with the request to get the work done, the cost for the same would be re-imbursable.

Deliberation of the sub-Committee:

DGM, AEGCL informed that PLCC link is in working condition at present. The forum requested AEGCL to check the following for 400kV Silchar-Azara:

1. Channel matching with 400kV Silchar
2. Reclosing of Main CB and non-reclosing of TIE CB is indicative of issue with reclose circuit of TIE CB. AEGCL to check the healthiness of TIE CB reclose Circuit.

NERLDC requested the forum to draw special attention to the issue of high number of lightning related trippings in the 400 kV Silchar – Azara and 400 kV Silchar – Byrnihat. In view of the upcoming monsoon season, the A/R of 400 kV Silchar – Azara must be rectified as early as possible to avoid tripping of same. Also, NERLDC highlighted the fact that tripping of both the circuits together have caused GD of category – V in the recent past and thus, as agreed in 160th OCC Meeting of NERPC, 400 kV TLSA must be installed in these lines. The forum approved the same and suggested NETC to install the 400 kV TLSA in 400 kV Silchar – Azara and 400 kV Silchar – Byrnihat lines.

The Sub-Committee noted as above.

Action: AEGCL.

D. I T E M S FOR DISCUSSION

D.1 Generation Planning (ongoing and planned outages)

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

Plants	Reservoirs level in meter	MU content	Present DC (in MU)	No of days as per current generation
Khandong + Kopili stg II	707.45	3	0	-

Kopili	-	-	0	Will be “0” until further intimation.
Doyang	310.55	6	0.1759	34
Loktak	767.48	59	0.7	84

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

Deliberation of the sub-Committee:

NERLDC highlighted that due to unavailability of Kopili HEP and Khandong HEP, constituents should plan for procurement of power for proper portfolio management. NERLDC also highlighted that proper planning of Hydro Generation needs to be done as water available for generation is only for upcoming 2 months.

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:

In 160th OCCM NERLDC presented a report on the shutdown approval timeline(s) followed in OCC of other regions. It was observed that M+2 month's shutdown was approved in Mth month. For eg. shutdowns from 01.11.2019 to 30.11.2019 is approved in the OCC of September, for which requisition has to be submitted by 5th of September, 2019 i.e. 5th day of the Mth Month, M being the month in which OCC Meeting is held. By following this practice there will be no overlapping of shutdown dates as happening at present. Members unanimously agreed to the practice in other RPCs.

Deliberation of the sub-Committee:

DGM, NEEPCO informed that the breaker(s) for 220kV Deomali at AGBPP would go for overhauling as presently there is one trip coil which is insufficient. He requested for the

shutdown to be accorded accordingly. The forum requested NEEPCO to apply in the next OCCM.

The sub-Committee discussed and approved the transmission line outages proposed by Constituents for April, 2020 which is available in the website of NERPC.

The Sub-Committee noted as above.

Action: All utilities.

D.3 Estimated Transmission Availability Certificate (TAC) for the month of December, 2019 - January,2020:

NETC and POWERGRID have submitted the outage data for the month of December, 2019 - January,2020. So the attributability of outage of the said elements may please be finalized.

The Sub-Committee noted as above.

D.4 3-phase Auto-reclosure for 400kV Silchar-Azara & 400kV Silchar - Byrnihat:

In 160th OCC Meeting NERPC informed that in view of repeated 2-ph/3-ph tripping of 400kV Silchar-Azara & 400kV Silchar-Byrnihat due to back flashover, the 3-ph AR is imperative to be implemented. Sr.GM(SO-II), NERLDC opined that in case of simultaneous tripping of both of these lines, chances of successful 3-ph AR would be remote due to islanding of the Southern grid from NER grid(different frequency). After detailed deliberation it was decided that in order to increase the reliability of the system, 1-ph & 3-ph AR would be implemented for both the 400kV Silchar-Azara and 400kV Silchar-Byrnihat. Forum requested NERLDC to give suggestion regarding which end check sync and dead sync to be implemented. NERPC informed that this would be further referred to CTU & CEA for concurrence.

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

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

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

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

Deliberation of the sub-Committee:

Director(O&P), NERPC informed that NERPC has written to CE, PSPA, CEA vide letter dated. 26th February, 2020 requesting for opinion. It has been communicated by CEA that studies would be carried out by CEA, CTU, POSOCO and based on the results of the study, a decision would be taken.

The Sub-Committee noted as above.

Action: NERPC.

D.5 Continuous shutdown of 220 kV Bus Coupler & 4 x 33 MVA 220/132kV ICT-1 along with associated bays w.e.f 06/09/2019 and shifting of 01 set of 220 kV Bus PT at Dimapur w.e.f 02/09/2019 at Dimapur Substation.

Decisions/deliberation in previous meeting(s):

- Continuous Shutdown of BUS A w.e.f 01.02.2020 to 06.02.2020 for shifting of 1 set of 220 kV Bus PT as above is required by NERTS.
- Continuous Shutdown of the 220kV/132kV 4x 33 MVA ICT – 1, 220 kV Bus coupler and ICT-1 bays (Bay No.203 & 204)w.e.f 06.02.2020 till erection, testing and commissioning of the new GIS system - required by NERTS
- Nagaland requires N-1 conditions to be met with support from 132kV Bokajan-Dimapur. Assam to support upto 25-30MW.
- A study would be carried out by NERLDC to determine the quantum of power that can be supplied considering return of 132kV Dimapur-Kohima, return of 132kV Karong-Kohima with higher capacity and support from Bokajan.

Deliberation of the sub-Committee:

SDO, DoP Nagaland informed that 85MW demand is to be met at Dimapur and long term load shedding is unacceptable. In case of exigency of 100MVA ICT, 45MW from Karong end and 40MW from Bokajan. MSPCL agreed to the same, while AEGCL declined stating that such high demand cannot be met from Bokajan due to transmission constraints.

NERLDC stated that amongst 132kV Dimapur – Dimapur communication is available in one circuit. Further ED, NERLDC opined that in case of outage of 100MVA ICT-2 few

feeders may be immediately disconnected by means of a SPS. Then manual load shedding may be done if required.

SDO, DoP Nagaland suggested that 132kV Imphal-Kohima-Dimapur connectivity can be maintained with Imphal end kept open.

NERLDC opined that even if the connectivity is present, power flow cannot be instantaneous as manually closing the breaker at Imphal end and opening the breaker from Kohima end will cause some time delay that may lead to Grid disturbance. So SPS is required to prevent Grid Disturbance in the event of tripping of ICT-2 as SPS operation will be automatic and its operation will have considerably less time of operation.

Sr.GM (Group-in-Charge), Misa, NERTS expressed concern over the issue of long pending shut down since August 2019 for which project cost is going to rise because of IDC and all the concerned constituents are going to have the impact. He requested NERLDC to expedite the study and allow the shut down at the earliest.

After detailed deliberation the following were decided:-

- NERLDC to conduct a fresh study considering maximum possible support from Karong side, 15-20MW support from Bokajan and temporary reconfiguration of 132kV Kohima-Dimapur into 132 kV Imphal – Dimapur. DoP Nagaland to identify load for SPS based shedding based on the study by NERLDC.
- NERTS to divert protection coupler to Dimapur(PG).

The Sub-Committee noted as above.

Action: NERTS, DoP Nagaland, NERLDC.

D.6 Restoration of Assets damaged at Kopili HEP due to failure of Penstock:

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

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

Decisions/status as per deliberation in the previous meeting(s):

- 220kV Switchyard at Kopili HEP to be cleared by NEEPCO within Jan'20.
- C&R Panels to be diverted from Silchar to Kopili
- Misa-Khandong-Kopili link to be restored at the earliest.
- Site report submitted by NERTS and tentative completion time is 18months.

- Task Force to discuss ways to expedite the restoration of the switchyard.

Deliberation of the sub-Committee:

Sr.GM (Group-in-Charge), Misa, NERTS informed that the restoration of transmission system of Kopili HEP involves (a) Procurement, (b) Diversion and (c) Construction of small control for which timeline will be 18 to 24 months.

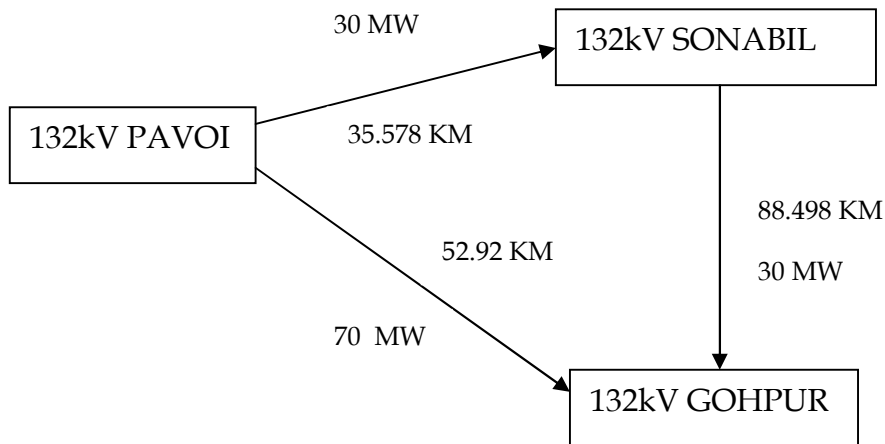
After detailed deliberation it was decided that the Task force to visit the site tentatively in the second week of March, 20 to assess & explore possibility of any temporary restoration.

The Sub-Committee noted as above.

Action: NERTS, NEEPCO.

D.7 Shorting of 132kv Pavoil-Sonabil & Sonabil-Gohpur at 186th location

It was observed that during summer of 2019, power flow in 132kV Sonabil - Gohpur is around 30 MW and 70 MW flows in 132kV Pavoil – Gohpur , which creates loading issues in Gohpur, Nalkata, Majuli and Dhemaji (around 110 MW).



AGM, SLDC proposes shorting of 132kV Pavoil - Sonabil & 132kV Sonabil - Gohpur at 186th location to mitigate this issue. After doing so, line length of Pavoil - Sonabil - Gohpur will reduce from 124.076 km (35.578km + 88.498 km) to 55 km.

Deliberation of the sub-Committee:

AGM, SLDC, AEGCL informed that the 132kV Pavoil to 132kV Gohpur direct connectivity is required bypassing Sonabil (CB, isolator opened). This would be temporary arrangement only till 132kV Biswanath Chariali - Itanagar LILo at Gohpur comes into service.

M/s STERLITE informed that 132kV Biswanath Chariali - Gohpur line would be ready by May'20 with the bay at Gohpur constructed by STERLITE on deposit work.

The forum agreed in-principle with necessary change in protection settings at Pavoi & Gohpur. Also, clearance from Electrical Inspectorate is required to be obtained by AEGCL after any change such configuration. It was also decided that upon commissioning of 132kV Biswanath Chariali-Gohpur, AEGCL would revert back to the original configuration of 132kV Pavoi-Sonabil-Gohpur. Also, it was advised to AEGCL by the forum that during the period of the temporary arrangement, the line should not be closed from Sonabil, even in case of any exigencies.

The Sub-Committee noted as above.

Action: AEGCL.

D.8 Tertiary loading of 400/132kV substation at Surajmaninagar & P.K.Bari

M/s NER II Transmission Limited is constructing 400/132kV Substation at Surajmaninagar & P.K.Bari under this scheme, for Station auxiliary supply of each substation two nos. auxiliary transformer shall be provided out of which one shall be connected with SEB supply and other one shall be connected to tertiary of 400/132kV Transformer.

In this regard kindly suggest us the following:

- a. Meter specifications for tertiary transformer and the approval for tertiary Loading of 400/132kV Substation at Surajmaninagar & P.K.Bari.
- b. Connectivity proposal for power drawl from transformer tertiary for station auxiliary supply as there is no prevailing case in the state of Tripura.

Necessary approval may please be accorded for the loading of tertiary transformer for station auxiliary supply at 400/132kV Surajmaninagar substation & 400/132kV P.K.Bari Substation.

Deliberation of the sub-Committee:

After detailed deliberation it was decided that TSECL would decide the modus operandi for metering, billing etc. It was also decided that the two tertiary nodes of ICTs would be considered as drawal point for Tripura.

The Sub-Committee noted as above.

Action: TSECL.

D. 9 Reactive power capability/injection of generating stations:

Decisions/deliberations in the previous meetings:

- Loktak testing to be done in first week of Mar'20
- Kameng HEP – testing First week of Mar'20.

Deliberation of the sub-Committee:

Kameng HEP: NEEPCO informed that the commissioning activities at Kameng is getting delayed due to vibration problem in both machines. The reactive power capability testing at Kameng will be conducted during the trial run of the units. 5

NERLDC also requested NEEPCO to change the GT Tap position at Kameng from 2 to 4 in order to control the high voltage issues in 400 kV System in Northern NER Grid.

Loktak HEP: NHPC requested the same to be conducted in 2nd week of April'2020.

The Sub-Committee noted as above.

Action: NHPC, NEEPCO, NERLDC.

D.10 Automatic Generation Control(AGC) in Indian Grid:

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

Stations in NER to have AGC:

BgTPP, AGBPP, Loktak

Kopili, Doyang, Khandong(kept in abeyance).

Discussions in the 165th OCCM:

- FO communication path is available for all stations except Loktak HEP. However route redundancy/ alternate path is not available for any of the stations.
- Communication link availability status to be discussed in next NETeST meeting
- NHPC informed that necessary equipments for AGC would be ordered by Mar'20 with delivery/installation by July'20.

Deliberation of the sub-Committee:

NERLDC requested the concerned generating stations to expedite the AGC implementation.

The Sub-Committee noted as above.

Action: NHPC, NEEPCO, NTPC.

D.11 Proposal for Installation of PMUs in the strategic locations of State Power Systems

NER grid is expanding very fast and most of NER states will be connected to the grid through 400 kV system in the near future. For the better monitoring and visualization of the grid, it is proposed to install PMUs in the strategic locations of State Power Systems.

In 165th OCCM NERLDC suggested that PMUs may be installed unit wise for all the ISGSs for proper analysis of oscillations. After detailed deliberation the forum decided that usage of DAS data for oscillation analysis would be explored.

Deliberation of the sub-Committee:

NERLDC informed that DAS data cannot be used in place of PMU data as phasor data is unavailable in DAS. Also, real time transmission and visualization will not be possible in DAS as in case of PMU. After detailed deliberation; it was decided that the practice in other regions would be referred to in this regard.

The Sub-Committee noted as above.

Action: NERLDC/NERPC.

D.12 Accurate Load forecasting by SLDCs as per IEGC c1.5.3 for better system operation:

RMSE for actual data in comparison to that forecasted data by the states for the month of Jan'20 is as follows:

Day	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
Median (Jan'20)	13	6	7	24	22	9	11

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

Deliberation of the sub-Committee:

ED, NERLDC requested SLDCs of Arunachal Pradesh, Meghalaya & Mizoram to reduce the RMSE error.

The Sub-Committee noted as above.

Action: All SLDCs.

D.13 Low voltage in Manipur Power System in case of tripping/outage of 400 kV Silchar – Imphal D/C:

To avoid low voltage situation in Manipur Power System, it is proposed to automatically disconnect 420 kV Bus Reactor at Imphal in case of tripping/outage of any one or both circuit of 400 kV Silchar – Imphal D/C at Imphal.

Deliberation of the sub-Committee:

After detailed deliberation; it was decided that NERLDC would provide the time delay and triggering voltage and other observations to NERTS. Subsequently NERTS would take up the same with POWERGRID-HQ and revert back.

The Sub-Committee noted as above.

Action: NERLDC/NERTS.

D.14 Restoration of 132 kV Jiribam (MSPCL) – Rengpang line

Healthiness of 132 kV Loktak – Rengpang – Jiribam (MSPCL) – Jiribam (PG) link is vital for the reliable operation of Manipur Power System. 132 kV Jiribam (MSPCL) – Rengpang line is under long outage (since 20th Nov'19 as per NERLDC records).

MSPCL is requested to intimate the tentative schedule for the restoration of 132 kV Jiribam (MSPCL) – Rengpang line.

Deliberation of the sub-Committee:

Pls refer to item No. **C.1**.

The Sub-Committee noted as above.

Action: MSPCL.

D.15 Submission of RIO clearance for 400 kV Silchar – Imphal D/C:

It is seen that the RIO clearance is provisional for 2 months, Status of obtaining final RIO clearance may be submitted by NERTS.

Deliberation of the sub-Committee:

Sr.DGM(AM), NERTS informed that to obtain final RIO clearance, NERTS has applied to DET,PTCC , Kolkata for clearance on 25.02.20. NERTS also approached BSNL, Imphal for NoC. In turn, BSNL, Imphal requested PTCC, Kolkata for a site inspection, which is still pending. NERTS is continuously pursuing the matter with DET, PTCC, Kolkata.

NERLDC requested NERTS to obtain RIO clearance due to change in configuration of the System.

The Sub-Committee noted as above.

Action: NERTS.

D.16 Charging of Khupi-Kimi (Kameng) line at 132 kV voltage level

In the 54th PCCM, it was decided:

- 132kV line charged at 33kV presently shall be converted to 132kV.
- 132kV Seppa bay at Khupi to be used for 132kV Khupi-Kimi (Kameng).
- Insulator, line inspection to be carried out by DoP, Arunachal Pradesh.

NEEPCO & DoP AP are requested to intimate the tentative schedule for the works involved.

Deliberation of the sub-Committee:

AE, SLDC, DoP Ar. Pradesh informed that DoP Ar. Pradesh would be maintaining the 132kV Khupi Station from April'20 onwards. The works would be carried out subsequently.

The Sub-Committee noted as above.

Action: DoP Ar. Pradesh.

D.17 Conversion of all T-connection in 132 kV Balipara – Tenga – Khupi link to LILO

In the 54th PCCM, forum requested DoP Arunachal Pradesh to submit a plan for the conversion of all T connections to LILO before next OCCM.

The forum advised NERLDC to tally SEM figures. As per SEM data, mismatch of ~12 MW was observed between Balipara & Tenga.

Deliberation of the sub-Committee:

Director(O&P), NERPC informed that the matter was taken up in the meeting with Commissioner(Power), DoP Ar. Pradesh on 27.01.2020. The minutes of the same would be issued shortly.

The Sub-Committee noted as above.

Action: DoP Ar. Pradesh.

D.18 HTLS reconductoring of 132 kV Umiam I– Umiam III D/C and 132 kV Badarpur – Panchgram line

N-1 contingency is not satisfied for 132 kV Umiam I– Umiam III D/C during low generation and high demand in Southern Part of NER and Capital & Khliehriat Area of Meghalaya Power System. Also, during outage of 132 kV Umiam I– Umiam III D/C, overloading of 132 kV Badarpur – Panchgram line is observed. (Study Results are attached in **Annexure D.18**)

It is therefore proposed to reductor the lines 132 kV Umiam I– Umiam III D/C and 132 kV Badarpur – Panchgram with HTLS conductor to increase the load ability of these lines.

Deliberation of the sub-Committee:

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

The Sub-Committee noted as above.

Action: NERPC.

D.19 Correction of Meter error

Correction of Meter error:

(i) Erratic reading:

I. Ningthokhoung (NP-9521-A) end of Imphal,

- II. Kohima (NP-9703-A) end of Karong,
- III. Imphal(S) (NP-9546-A) end of Imphal(PG)-II
- IV. Dullavchera (NP-9438-A) end of Dharmanagar

(ii) Sign Change:

- I Rengpang end of Loktak
- II. Mokokchung end of Doyang
- III. PK'Bari end (NP-9709-A) of 132 kV Silchar-1

As discussed Both end Sample data of all five lines had been provided by NERLDC for further analysis.

Deliberation of the sub-Committee: NERTS informed that all the meter errors would be rectified by 31st March'2020.

Rengpang end of Loktak: MSPDCL informed to concern for sign correction of Rengpang.

PK'Bari end (NP-9709-A) of 132 kV Silchar-1: TSECL will inform the concern for n/a.

Mokokchung end of Doyang : Nagaland informed, corrective action had been carried out, have to co-ordinate with the concern if problem persisted.

The Sub-Committee noted as above.

Action: NERTS.

D.20 SEMs to be Procured

In 165th OCC Meeting, NERTS intimated that M/s L& T has sought some extra time (up to 26.02.20) to submit their bid.

Order may be placed to L&T and supply expected by end of Feb'2020

Deliberation of the sub-Committee:

NERTS informed that M/L&T has submitted their bid, which has been opened and is under evaluation. Effort is made to finalise the contract as soon as possible and get some SEMs in advance from L&T.

It was also decided that consolidated list for cable, DCD requirement to be prepared by the states and sent to NERLDC.

The Sub-Committee noted as above.

Action: NERTS/all state utilities.

D.21 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 attached as per **Annexure-D.21**

Deliberation of the sub-Committee:

NERTS informed that all the time drift issues would be rectified by 31st March'2020.

NERLDC informed that most of the substations are facing problems in collection of data via Laptop due to issues with downloading software or non-availability of data downloading cable or both. Most of the DCDs are old and facing problem in time drift correction and data downloading.

SLDCs were requested to submit all the laptop related issues collectively to NERLDC for the corrective actions, as individual reporting from the substations are hard to resolve.

Members concurred.

The Sub-Committee noted as above.

Action: NERTS.

D.22 Meter Replacement:

- i. Meter no. NP-8492-A i.e Sarusajai end Umtru II feeder (defective for long time)
 - ii. Meter no. NP-9456-A i.e Azara end of Bongaigaon feeder
 - iii. Meter no. NP-9457-A i.e Azara end of Silchar feeder
 - iv. Meter no. NP-9546-A i.e Imphal end Imphal (PG) –II fdr
 - v. Meter no. NP-9438-A i.e Dullavchera – Dharmanagar fdr
- (Note: ii. to v. all meters have time drift of more than 5 min)

Timeline of replacement: Feb,2020

Deliberation of the sub-Committee:

NERTS informed that all the above meters would be replaced by 31st March'2020.

The Sub-Committee noted as above.

Action: NERTS.

D.23 Collection of SEM data before availing Shutdown:

In 165th OCC Meeting, Sr.DGM(AM), NERTS informed that if any feeder is currently under shutdown voltage of any phase active PT secondary supply may be extended from the nearest panel to energize the meter and data may be collected thereafter.

In case of SS shutdown, extension of PT supply is not possible. Such problem is faced during 132 kV Dharmanagar main bus continuous shutdown w.e.f. 02.02.20.

Deliberation of the sub-Committee:

NERLDC stated that in case of bus shutdown (if extension of active PT secondary supply not available to energize the meter) the data is to be collected before availing the shutdown. Members concurred

The Sub-Committee noted as above.

Action: all utilities.

ADDITIONAL AGENDA FROM NERPC:

D.24 Status of important elements under construction:

Director(O&P), NERPC stated that few elements upon being commissioned would make SPS-2&3 redundant. He enquired the status of these important elements from M/s STERLITE & NERTS:

Elements Critical to removal of SPS-2	Status
Upgradation of 132kV Palatana-Surjamaninagar to 400kV	400kV line presently
400kV bay at SMNagar(TBCB)	31 st July,2020
400kV bay at Palatana	April'2020
400kV SMNagar- P.K.Bari	June'2020
Upgradation of 132kV Silchar-P.K.Bari to 400kV	400kV line presently
400kV bay at Silchar	Material delivery delayed
400kV bay at P.K.Bari(TBCB)	31 st Mar'2020
Elements critical to removal of SPS-3	Status
400kV Silchar-Misa	Nov'20
400kV Bay at Silchar	Material delivery delayed
400kV Bay at Misa	Material delivery delayed

Other elements being commissioned by STERLITE	Status
132kV AGTCCPP-P.K.Bari with bays	June'20
132kV BNC-Gohpur-Itanagar	May'20

The forum decided to monitor the status of the above elements henceforth under item **No. C.1.**

The Sub-Committee noted as above.

Action: M/s STERLITE, NERTS.

ADDITIONAL AGENDA FROM NERTS:

D.25 Request for Bay re-location for 220kv Mariani — New Mariani line at New Mariani GSS of PGCIL

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

Under such circumstances it may be advisable to re-locate the AEGCL bays by way of suitable interchange of the bays at New Mariani

In 164th OCCM NERTS informed that feasibility has been checked and two towers may need to be constructed to terminate at the new bays. Relay may be exchanged including other C&R instruments. The forum approved the same and referred the matter to the next SCM.

Deliberation of the sub-Committee:

NERTS informed that the additional cost for the two towers have to be borne by AEGCL. The forum agreed in-principle and referred the matter to the next SCM for deliberation.

The Sub-Committee noted as above.

Action: NERPC

ADDITIONAL AGENDA FROM NERLDC:

D.26. Discrepancy towards payment of NERLDC Fees & Charges Supplementary bills for tariff period FY 2014 to 2019 from APDCL/AEGCL

Supplementary bills had been raised to the NERLDC users on 23.08.19 in accordance with Honorable CERC order of petition no. 344/MP/2018 along with IA 26/2019 dtd. 10.06.2019 and the orders of RLDC PLI Petitions as per provision of RLDC F&C Regulations 2015.

APDCL (Registered user of NERLDC) had been billed to “The Chief General Manager (F&A), AEGCL” as per the billing address for tariff period FY 2014 to 2019. T&C of payment like rebate, late payment surcharge etc. was as per relevant provisions of CERC RLDC F&C Regulations 2015.

AEGCL intimated that billed sum would be paid by APDCL, as from April’19 onward all RLDC bills cleared from APDCL though the bills are pertaining to earlier periods. APDCL also intimated that bills would be cleared after getting the bill from AEGCL through their internal process.

Finally APDCL pay the bill amount on 30.12.19 after deducting 1.5% rebate and 10% TDS. As per APDCL the bill submitted by AEGCL to APDCL on 25.12.19 so, they availed the rebate amount. However, according to NERLDC, the bill date was on 23.08.19 and the payment process was their internal matter, so APDCL is not eligible for availing the rebate. Infact, the payment was made beyond 69 days (after consideration of grass period of 60 days) which accrued interest as per the provision of Regulations.

Deliberation of the sub-Committee:

The forum advised APDCL to pay back the Rebate availed as deliberated by NERLDC above. Also, the forum requested NERLDC not to raise the surcharge bill.

The Sub-Committee noted as above.

Action: APDCL

D.27. High DSM outstanding:

As per clause 10 of DSM Regulation 2014, the DSM payment by the respective Constituents shall be made within 10 days of issuance of DSM statement by NERPC. In case of default, RLDC may implement clause 25A of Open Access Regulation wherein the respective Constituent will be barred from STOA transactions. Also, addition of penal interest component on outstanding amount may mount higher burden on the Constituents.

The status of DSM outstanding as on 28/02/2020 and up to Week-46 (10/02/20 to 16/02/20) is as below:

REGIONAL ENTITY	O/S PAYABLE TO POOL	O/S PAYABLE >13 WEEKS
Ar. Pradesh	20.38 Crores	16.65 Crores
Assam	4.73 Crores	Nil
Manipur	8.83 Crores	7.94 Crores
Meghalaya	4.96 Crores	Nil

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

Deliberation of the sub-Committee:

REGIONAL ENTITY	STATUS
Ar. Pradesh	Fund requisition sent to Ministry from the office of Chief Engineer, Western Electrical Zone The forum requested Ar. Pradesh to give highest priority to DSM payment.
Manipur	Will be cleared by 31 st March 2020

The Sub-Committee noted as above.

Action: As above

D.28. DSM, RRAS, FRAS & Reactive Quarterly Reconciliation:

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

Same are also available in NERLDC website on the following links

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

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

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

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

Status: BNC, Nagaland, NHPC, OTPC and NEEPCO-Reconciled

Deliberation of the sub-Committee:

Signed reconciliation statement may be sent to NERLDC at the earliest.

The Sub-Committee noted as above.

Action: All utilities

D.29. Restoration of 220 kV Mariani – Mokokchung 1 line as per original configuration

In 165th OCC Meeting, NERTS mentioned that the line will be restored to its original configuration by end of Feb' 2020.

Deliberation of the sub-Committee:

NERTS informed that the same is getting delayed due to ongoing Coronavirus threat as the damaged cable and other equipments are being delivered from China.

The Sub-Committee noted as above.

Action: NERTS

D.30 Outage of FSC of 400 kV Balipara – Bongaigaon IV:

In 165th OCC Meeting, NERTS had informed that the FSC automatically goes out of service/ bypassed due to unbalance current and the same has been studied and is due to harmonics generated by HVDC.

Deliberation of the sub-Committee:

NERLDC requested NERTS to incorporate the points in SCADA such that the outage of FSC may be monitored and recorded at NERLDC during real time operations.

NERTS agreed to explore the possibilities of the same. NERTS also agreed to inform NERLDC control room as and when the FSC trips in real time, over phone.

The Sub-Committee noted as above.

Action: NERTS

Date & Venue of next OCC meeting:

It is proposed to hold the 167th OCC meeting of NERPC on second week of April 2020. However, exact date and venue will be intimated in due course.

Annexure-I

List of Participants in the 166th OCC Meeting held on 06.03.2020

SN	Name & Designation	Organization	Contact No.
1.	Sh. Purik Buchi, AE (E)	Ar. Pradesh	09402936916
2.	Sh. J.B. Toko, JE (E)	Ar. Pradesh	09402030014
3.	Sh. Ch. Sharma, CGM (SLDC), AEGCL	Assam	09864150106
4.	Sh. H.S. Mohan, DGM (SLDC)	Assam	09435336126
5.	Sh. G.K. Bhuyan, DGM (O&M)	Assam	09854015601
6.	Sh. Bimal Ch. Borah, AGM (SLDC)	Assam	09435119248
7.	Shri. A.J. Choudhury, AGM (HQ)	Assam	08011881965
8.	Sh. Rupanka K. Goswami, AGM (SLDC)	Assam	09613146565
9.	Sh. Mriganka Bhuyan, AGM (SLDC)	Assam	09601302916
10.	Smti. Khoisnam Steela, DGM (SLDC)	Manipur	08730831103
11.	Sh. H. Debeswar Singh, Manager	Manipur	09436201742
12.	Sh. B. Nikhla, EE, MePTCL	Meghalaya	09436314163
13.	Sh. T. Gidon, EE (SLDC)	Meghalaya	-
14.	Sh. W. Khyriem, EE (GSPD)	Meghalaya	09856007107
15.	Sh. M.N. Tariang, JE, SP	Meghalaya	07005620013
16.	Sh. C.W. Chen, AEE (SLDC)	Meghalaya	09863093311
17.	Sh. Lalbiaksanga, SE (SLDC)	Mizoram	09436140932
18.	Sh. Vanlalhrema, EE (SLDC)	Mizoram	09436370843
19.	Sh. Rokobeito Iralu, SDO (T), Dimapur	Nagaland	09436837020
20.	Sh. Shuwato Katiry, JE (SLDC)	Nagaland	07005599689
21.	Sh. Anil Debbarma, DGM (SLDC)	Tripura	09612589250
22.	Sh. Diganta Goswami, DGM (E/M)	NEEPCO	09435577655
23.	Sh. V. Suresh, ED	NERLDC	09449599156
24.	Sh. S.C. De, GM	NERLDC	09436335369
25.	Sh. M.P. Nath, Ch. Manager	NERLDC	09436335374
26.	Sh. Sourav Mandal, Dy. Mgr (SO-I)	NERLDC	09402102354
27.	Sh. Palash Jyoti Borah, Dy. Manager	NERLDC	08761093397
28.	Sh. Ratul Sharma, Dy. Mgr	NERLDC	09859011229

29.	Sh. U. Kataki, Sr. GM (AM)	PGCIL	09435505418
30.	Sh. P. Kanungo, Sr.GM-Misa	PGCIL	09436302823
31.	Sh. H. Talukdar, Sr.DGM (AM)	PGCIL	09436335237
32.	Sh. Saurav Das, Asst. Manager	NHPC	09777594787
33.	Sh. Narendra Kumar Gupta, Sr. Mgr (O)	OTPC	09774233426
	No Representative	NTPC	-
	No Representative	NETC	-
34.	Sh. D. Sidhartha, Project Engineer, CDAC	STERLITE	-
35.	Sh. Vivek Karthikeyan, Manager	STERLITE	08966903034
36.	Sh. Mahesh Bhagat, Ex. Engineer	STERLITE	09206682124
37.	Sh. A.K. Thakur, Member secretary	NERPC	-
38.	Sh. B. Lyngkhoi, Director	NERPC	09436163419
39.	Sh. S. Mukherjee, Dy. Director	NERPC	08794277306



उ.पू.क्षे ग्रिड प्रदर्शन

NER GRID PERFORMANCE

For the month February, 2020

North Eastern Regional Load Despatch Centre

POSOCO, Shillong

Discrepancy towards payment of NERLDC Fees & Charges **Supplementary bills for tariff period FY 2014 to 2019 from** **APDCL/AEGCL**

- Supplementary bills had been raised to the NERLDC users on 23.08.19 in accordance with Honourable CERC order of petition no. 344/MP/2018 along with IA 26/2019 dtd. 10.06.2019 and the orders of RLDC PLI Petitions as per provision of RLDC F&C Regulations 2015.
- APDCL (Registered user of NERLDC) had been billed to “The Chief General Manager (F&A), AEGCL” as per the billing address for tariff period FY 2014 to 2019. T&C of payment like rebate, late payment surcharge etc. was as per relevant provisions of CERC RLDC F&C Regulations 2015.
- AEGCL intimated that billed sum would be paid by APDCL as from April’19 onward all RLDC bills cleared from APDCL though the bills are pertaining to earlier periods. APDCL also intimated that bills would be cleared after getting the bill from AEGCL through their internal process.
- Finally APDCL has paid the bill amount on 30.12.19 after deducting 1.5% rebate and 10% TDS. As per APDCL the bill was submitted by AEGCL to APDCL on 25.12.19 so, they availed the rebate amount. However, according to NERLDC, the bill date was on 23.08.19 and the payment process was their internal matter, so APDCL is not eligible for availing the rebate. In fact, the payment was made beyond 69 days (after consideration of grace period of 60 days) which accrued interest as per the provision of Regulations.
- The matter was discussed with APDCL and they had requested to discuss the issue in TCC/OCC forum.

Billing and Realization details as under:

Bill Date	Bill Amt (₹)	Amt Received	Date of Receipt	Rebate availed	TDS	Out standing
23-08-19	30673384	27145944	30-12-19	460101	3067338	460102

- Forum may discuss for resolution of the discrepancy

**Highlights of
the Month**

**Frequency
Profile**

**Voltage
Related Issues**

**Transmission
Element Issues**

**Operational
Issues**

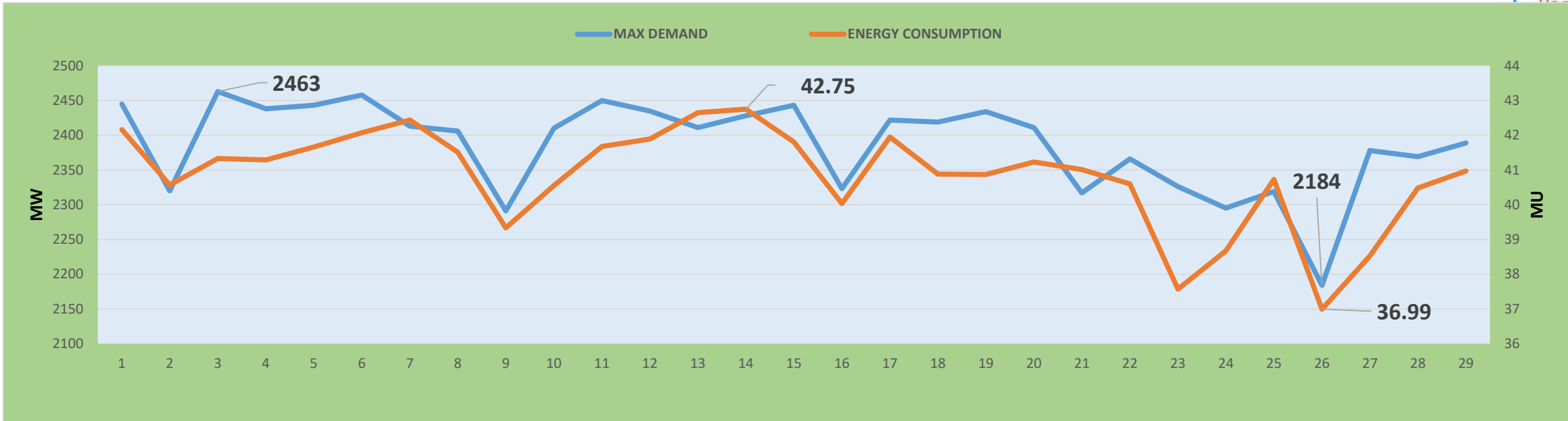
Network Issues

**Protection
Issues**

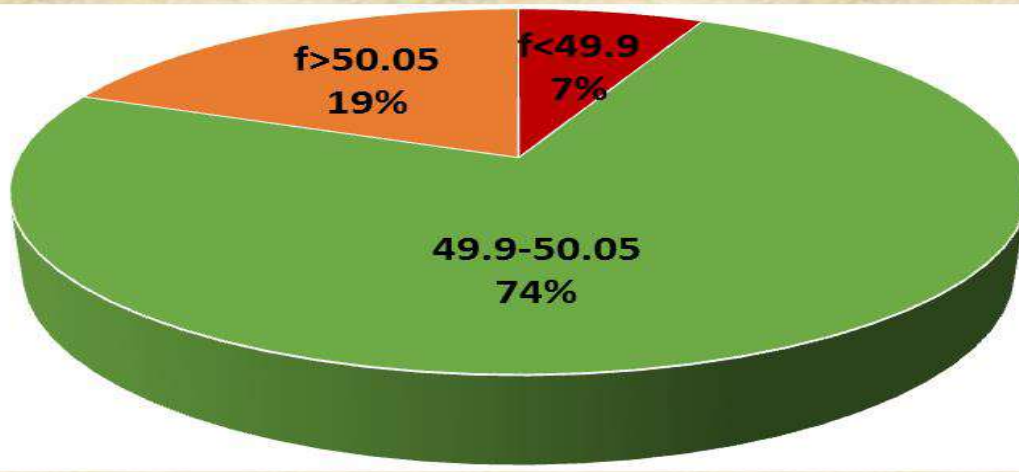
**Hydro
Reservoir
Levels**

**Communication
Issues**

Maximum MW and MU in NER: February 2020



FREQ PROFILE FOR FEB'20

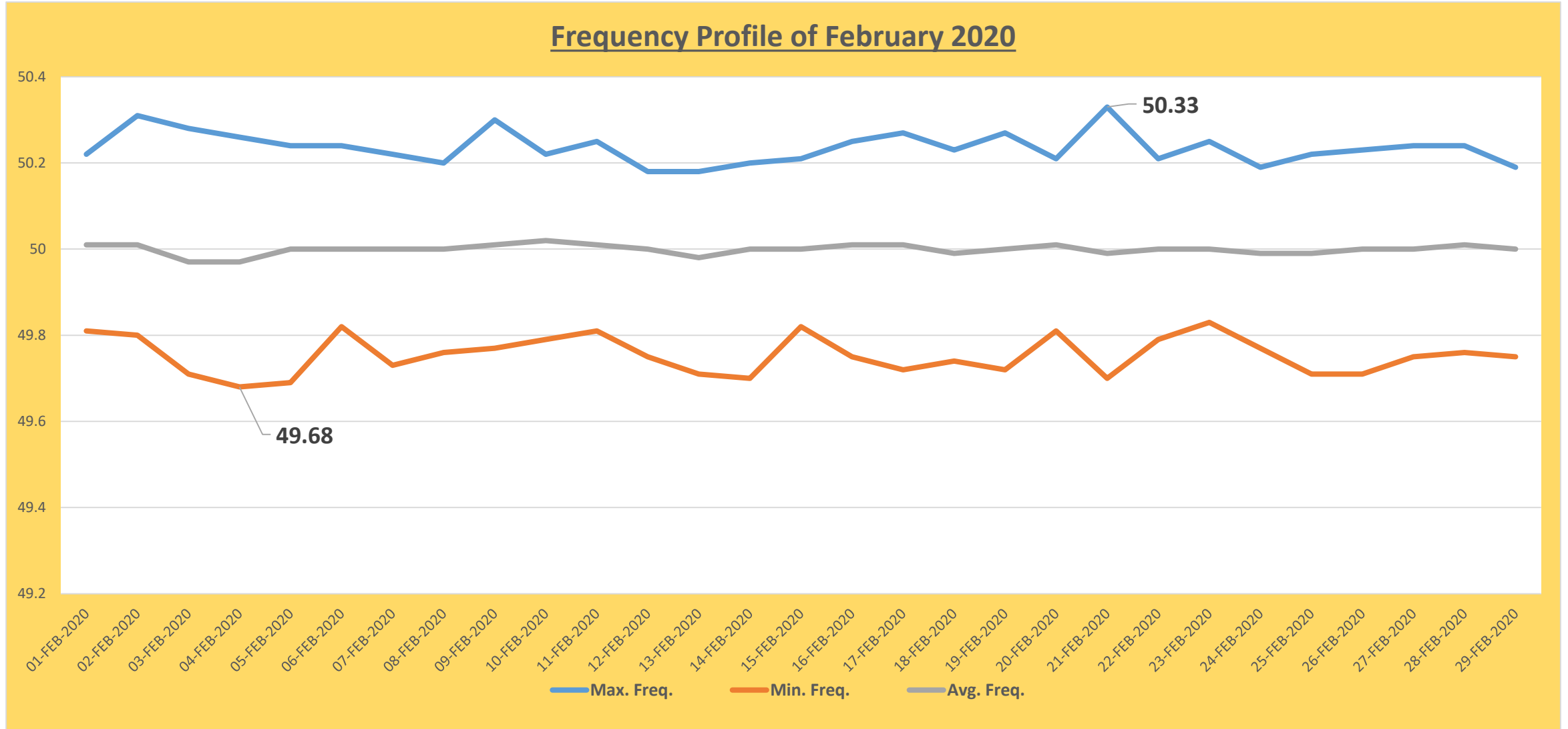


■ f < 49.9
 ■ 49.9-50.05
 ■ f > 50.05

No. of GD	3
No. of GI	8

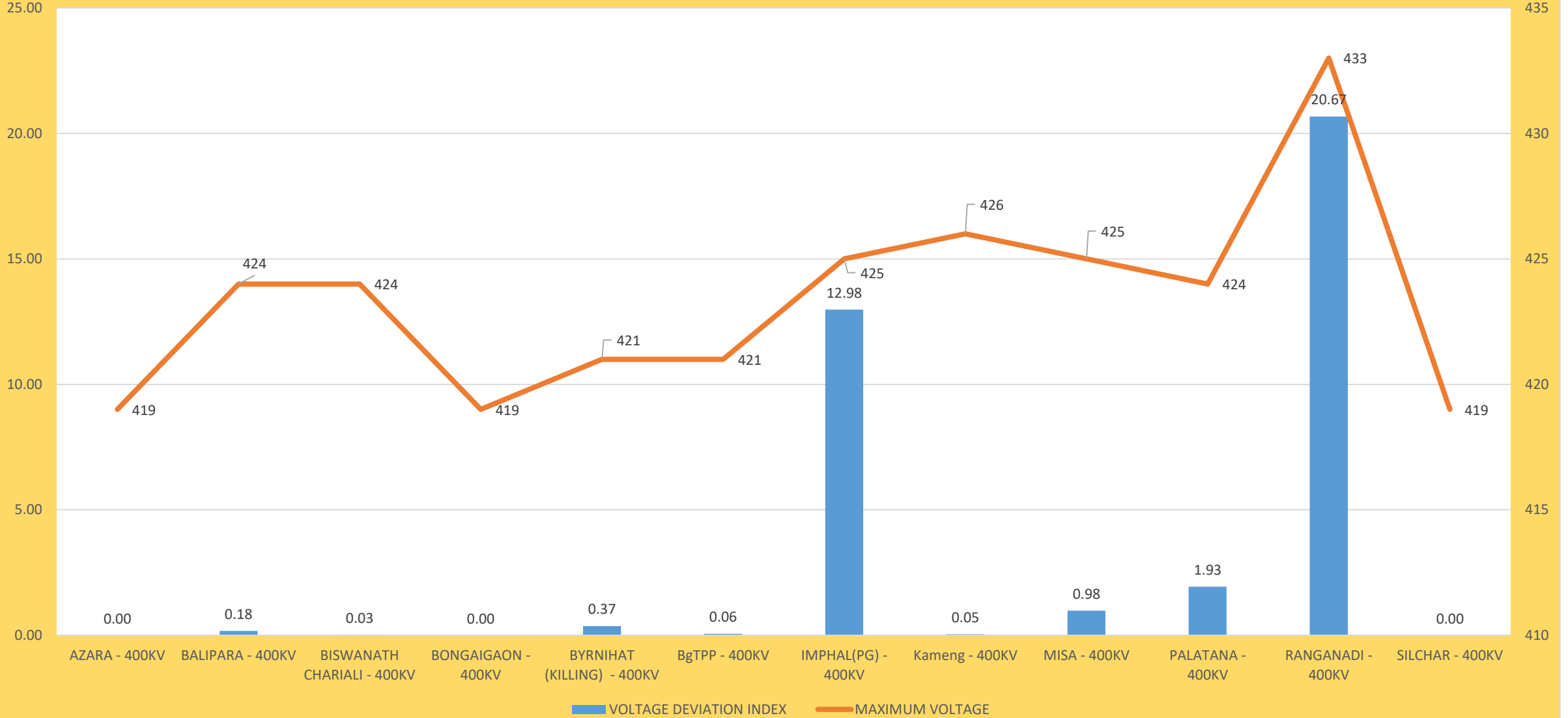
[Return to Index](#)

Frequency Profile

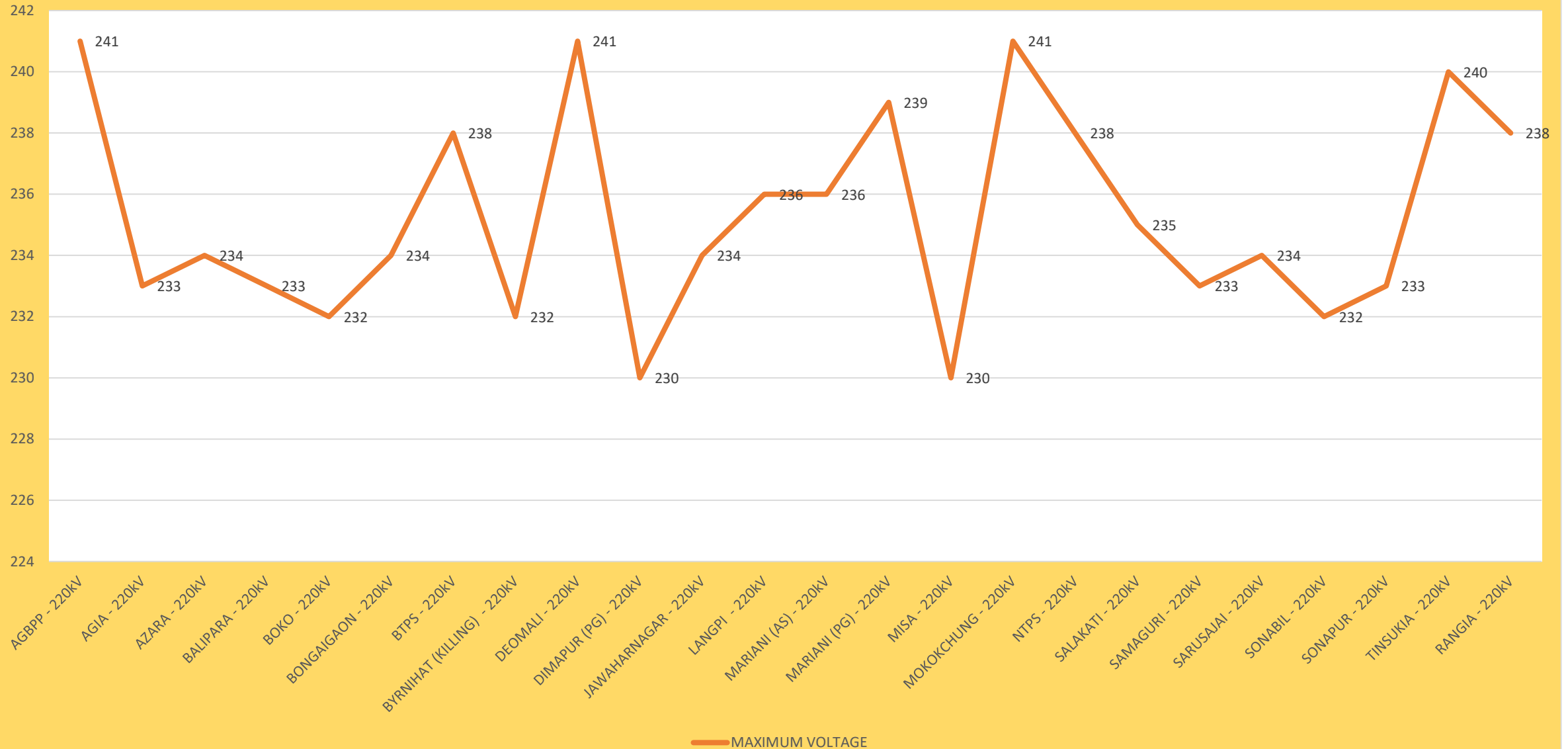


[Return to Index](#)

VDI (400 KV) FOR FEBRUARY 2020



VDI(200 KV) FOR FEBRUARY 2020



B.1.2. Long Outage of Reactors

- 63 MVAR Bus Reactor at Byrnihat : Out since: Dec'2014. Status as per 164th OCCM – **PSDF Sanction order received**
- 63 MVAR L/R at Palatana for 400kV Palatana-Silchar Ckt-I: Out since: April,2019. Status as per 164th OCCM – **Target for restoration : 31.03.2020**
- 50 MVAR L/R at Misa of 220 kV Misa – New Mariani – expected restoration date 31-03-2020 - Status

C.8 & C.13. Installation of DVR & PSS at AGTCCPP, PSS tuning testing for Tuirial

- AGTCCPP- PSS kept OFF in all DVR panels- NERTS agreed to co-ordinate with CTU in 163rd OCCM, for data required by NEEPCO for PSS tuning. - Status update
- Tuirial - OEM to visit for PSS tuning-**Target : 15th Mar'2020**: NEEPCO may update

Voltage Issues



D.9. Reactive power capability/injection of generating stations

- Palatana - For UAT tap changing will be done during shutdown (Online Tap change is not available for UAT). UAT tap to be changed from 3 to 4.– **Status review**
- Testing at Loktak- Proposed date: 16th Mar'20
- Kameng – Reactive capability testing along with Trial run - date may be specified by NEEPCO

Optimization of GT Tap position of Kameng Unit

- To improve the voltage profile of 400 kV nodes of NER and to avoid opening of line(s) to control voltage, it is proposed to review the GT tap position of Kameng unit.
- Present Tap Position: 2 (13.8/420 kV)
- Proposed Tap Position: 4 (13.8/399.5 kV)

D.13. Low voltage in Manipur Power System in case of tripping/outage of 400 kV Silchar – Imphal D/C:

- **Automatic disconnection of 420 kV Bus Reactor at Imphal in case of tripping/outage of both circuit of 400 kV Silchar – Imphal D/C at Imphal.- To avoid low voltage in Manipur System**

Transmission Elements Issues



B.1.2. Long Outage of Important Grid Elements

- 132kV Dimapur – Imphal line: Status and timeline for restoration may be updated by NERTS.
- 132 kV Srikona-Panchgram - Status may be updated by Assam
- 220kV Sonabil-Samaguri-I: Target for restoration: July 2020 , Status may be updated by Assam

C.9. Bus configuration issues for various sub-stations.

- 400 kV Bus A at RHEP: Tendering Target as per 165th OCCM: May'2020. Detailed plan to be submitted by NEEPCO.
- Pavoi – Target date for restoration as per 164th OCCM : 31st Mar'2020 - Status may be updated by Assam

Transmission Elements Issues



C.6. Non availability/non functioning of Synchronization facility

- AEGCL- Demonstration of remote synchronization using BCU during Mock Black-start testing at AGBPP
- Arunachal- Procurement of Sync. Trolley at Chimpu and Lekhi – Target date as per 165th OCCM : Mar'2020
- Mizoram- Procurement of Sync. Trolley at Kolasib –Status may be updated by Mizoram

D.6. Restoration of Misa-Kopili-Khandong link

- Special task force formed for the purpose was to visit site and furnish action plan for quick restoration by taking appropriate means including diversion of materials from other locations- Status review

C.16 Autorecloser in 132 kV Rangia-Motonga & 132 kV Salakati-Gelephu

- Single phase autorecloser facility at Salakati-Action plan by NERTS
- Single phase autorecloser facility at Rangia-Action plan by NERTS

Transmission Elements Issues



Restoration of 220 kV Mariani – Mokokchung 1 line as per original configuration- Target

- Target date for restoration Feb,2020
- Since the B/R at Mokokchung has been acting like L/R, the outage details for TAC for the same along with outage of 220 kV Mariani – Mokokchung 1 line, must be furnished by NERTS.

FSC of 400 kV Balipara – Bongaigaon IV

- NERTS informed that the same has been studied and is due to harmonics generated by HVDC. Furnishing SCADA status point, real time outage details of the FSC and also availing code for normalization of FSC on tripping – Action Plan may be furnished by NERTS

Operational Issues

B.1.2 Long outage of Important Grid Elements

- OTPC Palatana GTG – 1 and STG-1 – Under outage since 07.10.2019: Target date for restoration as per 165th OCCM: 31/03/2020 – Status Update

C.7. Tentative schedule of Black Start Mock Test. RHEP & AGBPP

- AGBPP – Date to be finalised
- RHEP – Date to be finalised

Operational Issues



B.1.4.4. RE generation details

- All states are requested to furnish details of RE generation : Data not received

Generation forecast on D-2 basis for computation of TTC/ATC

- All ISGS to furnish their forecasted generation by 10 hrs on D-2 basis.
- Being received only from: LRPP, LTPS, Doyang, RHEP, AGBPP, AGTCCPP, OTPC, Tripura state generations

D.10. AGC implementation in NER

- FO communication path is available for all stations except Loktak HEP. However, route redundancy/ alternate path is not available for any of the stations.
- In 165th OCCM, NHPC informed that necessary equipment for AGC would be ordered by Mar'20. With delivery/installation by July'20.- Status Update
- Implementation of AGC in Kopili – After restoration
- Implementation of AGC in Khandong, Kopili Stg-II and Doyang – along with R&M with LE

Operational Issues



D.12. Accurate Load forecasting by SLDCs as per IEGC c1.5.3 for better system operation:

- RMSE for actual data in comparison to that forecasted data by the states for the month of Jan'20 are as follows:

Day	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
Median (Jan'20)	13	6	7	24	22	9	11

D.11 Proposal for Installation of PMUs in the strategic locations of Power Systems

- Installation of PMUs in the strategic locations of State Power Systems as per [annexure](#)
- Usage of DAS data in lieu of PMU in Generating stations: The purpose of PMU cannot be served by DAS as phasor data is not available. Also, real time data transmission and visualization will be difficult.
- Therefore , the PMUs in all locations mentioned in the attached list is required including the generating stations.

Network Issues

Grid Disturbance during February 2019

Events / Incidents	Feb'19	Jan'20	Feb'20
No of GDs	8	12	3
No of GI	7	2	8

Tripping of the following lines has led to GD in the region:

1. 132kV Balipara – Tenga S/C	caused GD 1 times
2. 132kV Monarchak-Rokhia line	caused GD 1 times
3. 132 kV Lumshnong - Panchgram line	caused GD 1 times

Tripping of critical elements of NER Grid: NIL

- 400kV Silchar – Azara & 400 kV Silchar-Byrnihat successfully Autoreclosed at 16:23 Hrs of 05/03/2020.
- As per Minutes of 160th OCC Meeting – 400 kV TLA to be installed – Status may please be updated

Network Issues

C.17. Status of CT Upgradation & Diversion of CT from Aizawl to Kolasib:

- 132 kV Doyang-Dimapur D/C- Target: Apr,2020
- 132 kV Lekhi-Chimpu – Target: Mar,2020
- P&ED Mizoram to divert and install CT (300/1) from Aizawl to Kolasib – Status

D.5. Continuous shutdown of 220 kV Dimapur Bus B , Coupler & 4 x 33 MAV 22/132kV ICT-1 along with associated bays

- Study Results circulated via email 19-02-2020 - [attached](#)

D.14 Restoration of 132 kV Jiribam (MSPCL) – Rengpang line

- 132 kV Jiribam (MSPCL) – Rengpang line is under long outage (since 20th Nov'19 as per NERLDC records).
- Healthiness of 132 kV Loktak – Rengpang – Jiribam (MSPCL) – Jiribam (PG) link is vital for the reliable operation of Manipur Power System.
- MSPCL is requested to intimate the tentative schedule for the restoration

Network Issues

D.15. Submission of RIO clearance for 400 kV Silchar – Imphal D/C:

- Provisional RIO clearance valid upto 2 Months
- NERTS to submit final RIO clearance

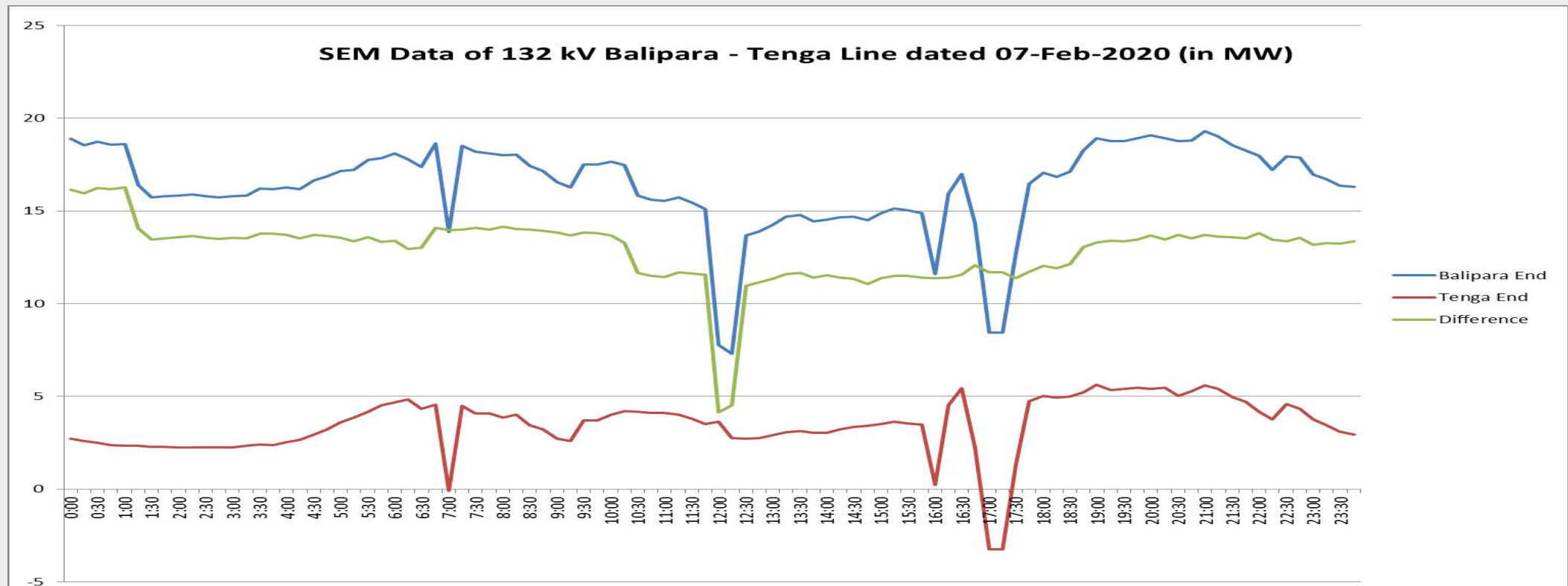
D.16. Charging of Khupi-Kimi (Kameng) line at 132 kV voltage level

- In the 54th PCCM, it was decided:
 - 132kV line charged at 33kV presently shall be converted to 132kV.
 - 132kV Seppa bay at Khupi to be used for 132kV Khupi-Kimi (Kameng).
 - Insulator, line inspection to be carried out by DoP, Arunachal Pradesh.
- NEEPCO & DoP AP are requested to intimate the tentative schedule for the works involved.

Network Issues

D.17. Conversion of all T-connection in 132 kV Balipara – Tenga – Khupi link to LILO

- In the 54th PCCM, forum requested DoP Arunachal Pradesh to submit a plan for the conversion of all T connections to LILO before next OCCM.
- The forum advised NERLDC to tally SEM figures. As per SEM data, mismatch of ~12 MW was observed between Balipara & Tenga. Plot for 1 day is given below:



Network Issues

D.17. HTLS reconductoring of 132 kV Umiam I– Umiam III D/C and 132 kV Badarpur – Panchgram line

- N-1 contingency is not satisfied for 132 kV Umiam I– Umiam III D/C during low generation and high demand in Southern Part of NER and Capital & Khliehriat Area of Meghalaya Power System
- During outage of 132 kV Umiam I– Umiam III D/C, overloading of 132 kV Badarpur – Panchgram line is observed. (Study Results are attached in [Annexure](#))
- It is therefore proposed to reconductor the lines 132 kV Umiam I– Umiam III D/C and 132 kV Badarpur – Panchgram with HTLS conductor to increase the load ability of these lines.

Agenda from AEGCL: D.7 Shorting of 132kv Pavoi-Sonabil & Sonabil-Gohpur at 186th location

- NERLDC Study results [attached](#)
- RIO clearance and all other requirements as per first time changing of element to be complied by Assam

Protection Issues

C.18. Auto-recloser issues at Azara:

- Due to communication channel problem at Azara with both Channel-1&2 blocked in PLCC panel
- Issues related to Single phase auto recloser of 400 kV Silchar - Azara line to be attended – NERTS & AEGCL

Submission of Disturbance recorder (DR)

- The locations from where DR is yet to be submitted are as below:
- Arunachal: Khupi, Aalo, Daporizo, Pasighat, Lekhi, Deomali, **Tenga**.
- Manipur: Jiribam, **Tipaimukh**, Rengpang, **Chandel**, Kongba, **Kakching**, **Churachandpur**, **New Moreh**, **Elangkangpokpi**, **Yaingangpokpi**, **Ningthoukhong**.
- Mizoram: **Luangmual**, Zuangtui, Kolasib, **Saitual**, **Khawzawl**, Champai.
- Nagaland: **Dimapur (NG)**, **Kohima**, **Meluri**, **Mokukchung (NG)**, Sanis, **Wokha**, **Kiphire**.
- Numerical relays are available in highlighted locations. Further details [attached](#)
- States may please intimate the issue and rectification plan/timeline

Protection Issues

Protection Conclave is being organized by NERLDC on 16th and 17th March, 2020

- In view of the prevailing law and order situation in Shillong, it has been decided to postpone Power System Protection Conclave which was scheduled on 16-17th March 2020 at NERLDC, Shillong to avoid any inconvenience to the Faculties and participants.
- It has been planned to reschedule the Conclave tentatively during April'20.
- The revised date of Protection Conclave will be intimated in advance for planning the travel.

Tripping of all units of AGBPP on 25th Dec.'2019

- GBC motor contactor tripped after voltage jerk.
- GBC motor Contactor rectification-Status Review

SPS to ensure reliable power supply to South Comilla and Tripura

- In the 8th OCC meeting of India –Bangladesh Interconnection held on 23.01.20, it was agreed to implement 4 nos. of SPSs to ensure reliable power supply to South Comilla and Tripura by Mar'20. NERTS & OTPC are requested to intimate the latest status.

Preparations for RTM Implementation

- RTM shall be implemented w.e.f 01/04/2020
- Mock exercise to be coordinated by POSOCO with the assistance of Power exchanges, buyers, sellers and other concerned stakeholders- Tentatively to start w.e.f 16/03/2020

LTA quantum of 5 MW to Assam from Nabinagar – I TPP (4*250 MW) of Bharatiya Rail Bijlee Company Ltd (BRBCL)

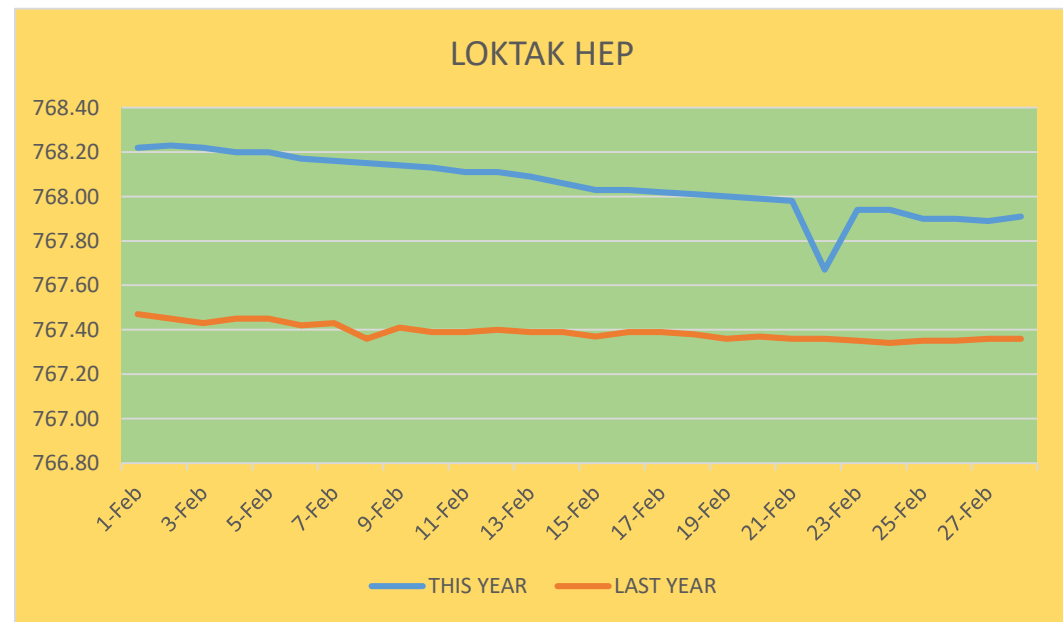
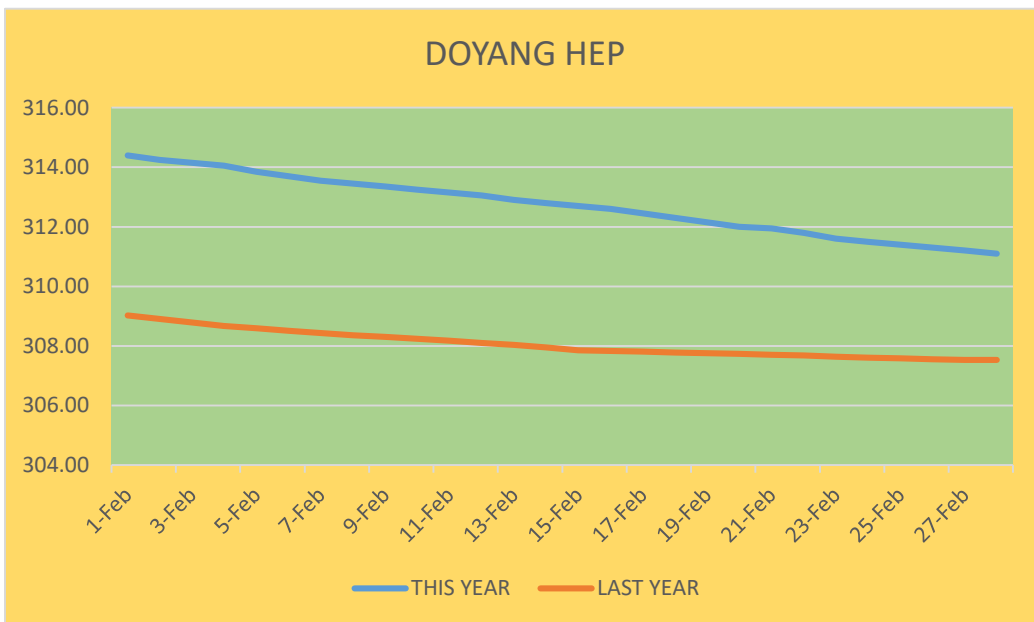
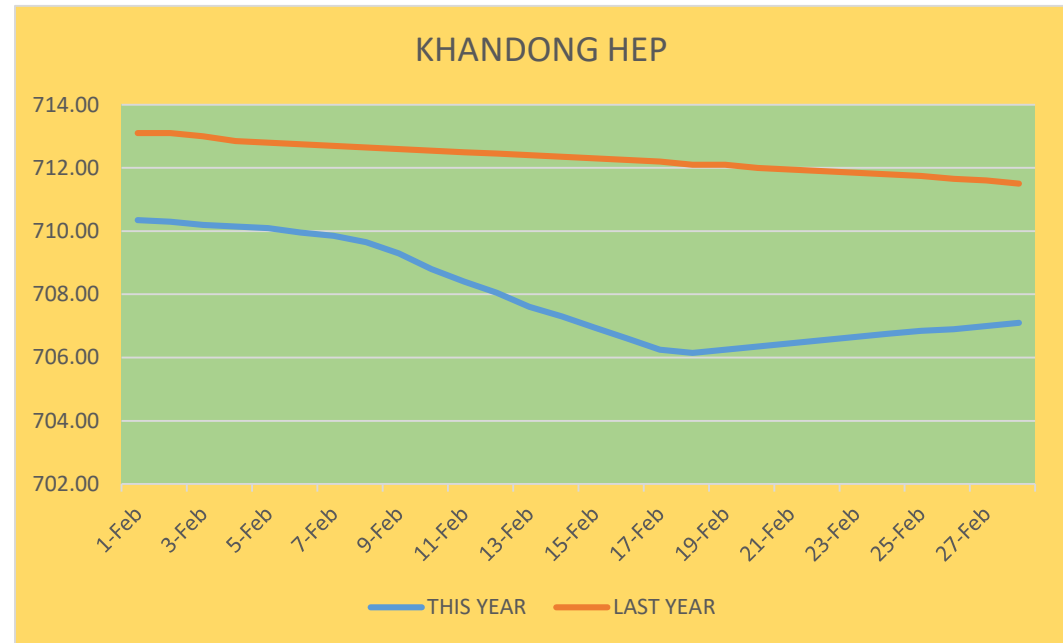
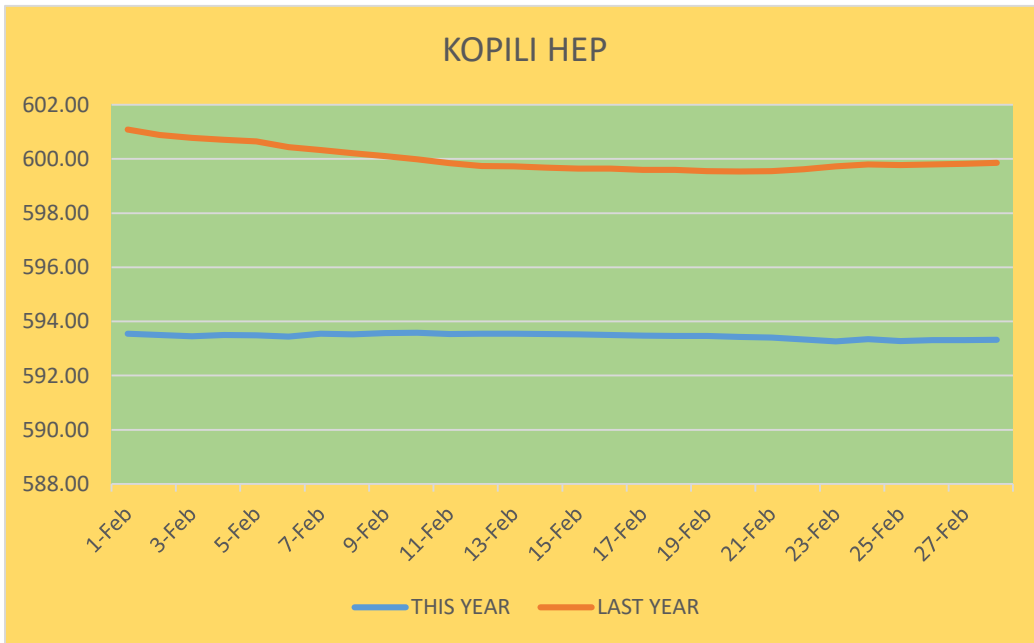
- In the 19th Connectivity and LTA Meeting of Eastern Region on 28/02/2020, The agenda of allocation of 5 MW LTA to Assam from Nabinagar – I TPP (4*250 MW) of Bharatiya Rail Bijlee Company Ltd (BRBCL) was discussed.
- Assam may kindly furnish the drawl points of the railway load and the availability of redundant supplies and black start facilities of these traction loads.

Number of Days as per Current Hydro Generation



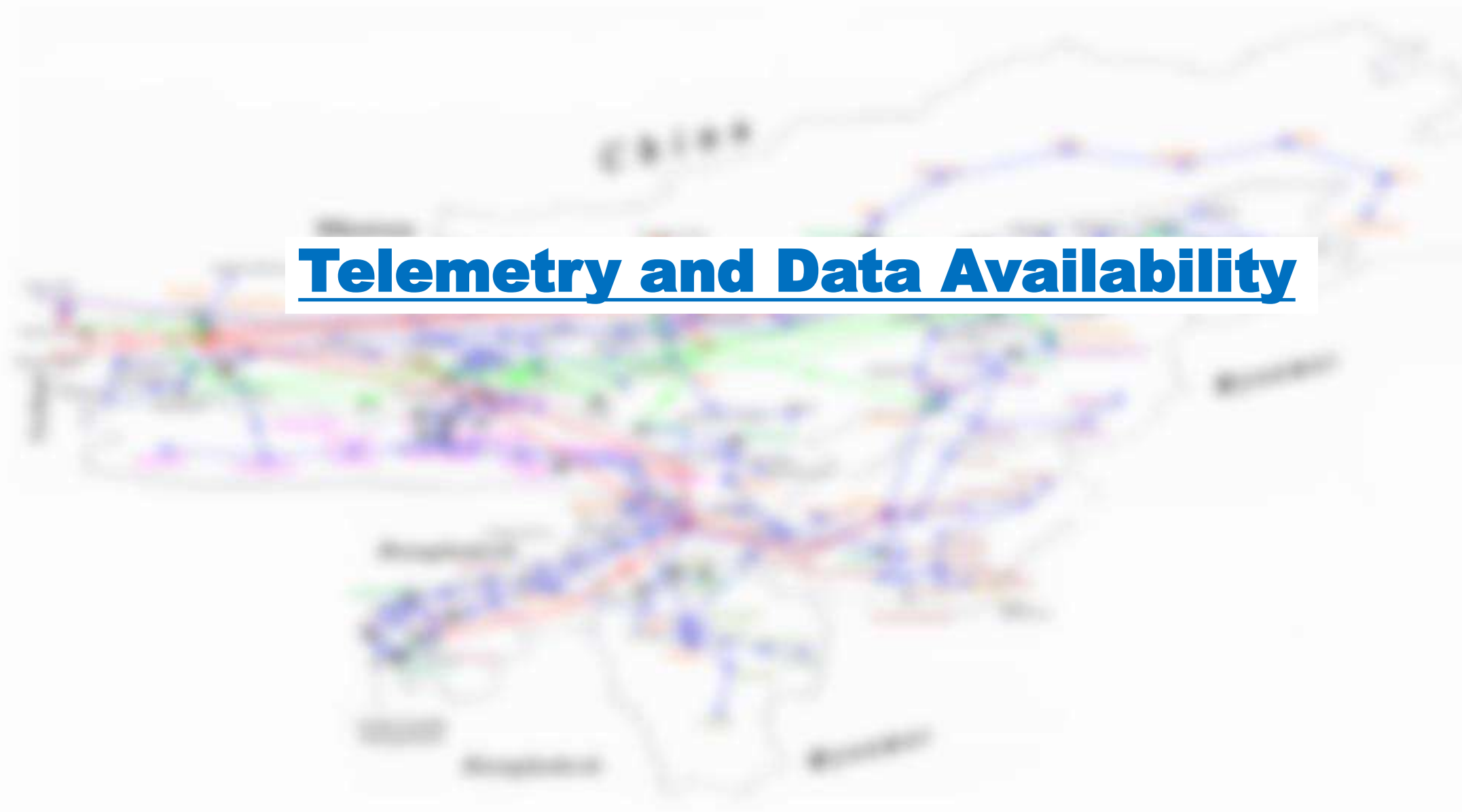
Plants	Reservoir Level in meters (as on 03/03/2020)	MU Content	Present DC (MU)	No of days as per current Generation
Khandong + Kopili STG II	707.45	3	0	-
Kopili	-	-	-	-
Doyang	310.55	6	0.1759	34
Loktak	767.48	59	0.7	84

Reservoir Level- February 2020



[Return to Index](#)

Telemetry and Data Availability



Communication Issues



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

- Killing Data & Voice over VSAT presently reporting to SLDC Meghalaya & NERLDC – Free Demo available upto 09/03/2020

C.7 Phase shift errors in PMU

- PMUs at Samaguri not reporting. – Assam may update
- Misa 220 kV Bus 2 & 220 kV Misa- Killing Line II - NERTS may update
- Phase shift error – Dimapur (PG), Tinsukia (AS), Mariani (AS)
- Matrix sent for Tinsukia and Mariani and for Dimapur wires to be changed on field and results will be observed in real time

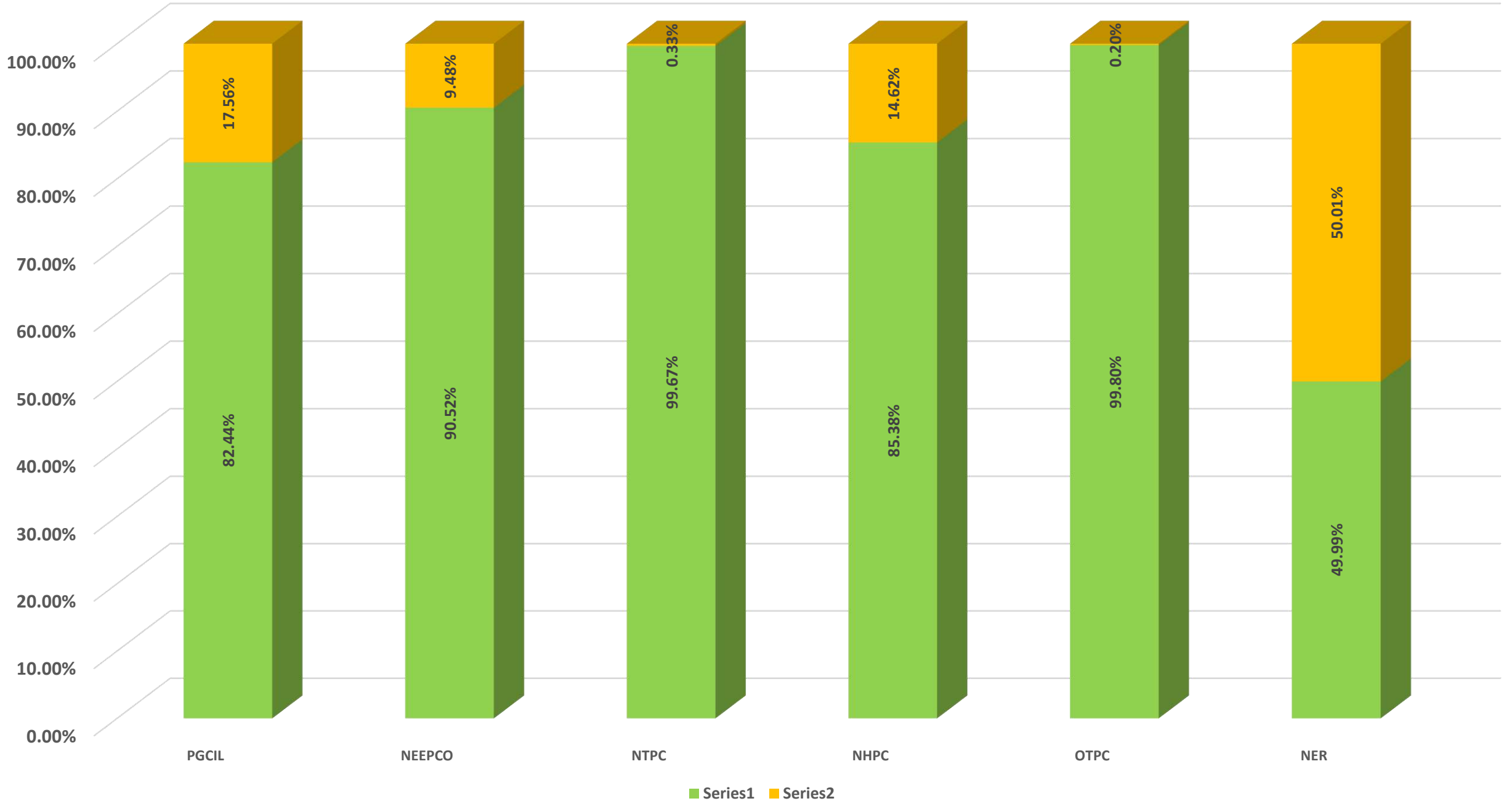
C.14 PLCC Link issues

- VSAT in Ar. Pradesh – AP may please update the status
- PLCC links status of 132kV Bairabi – Kolasib– Mizoram may please update

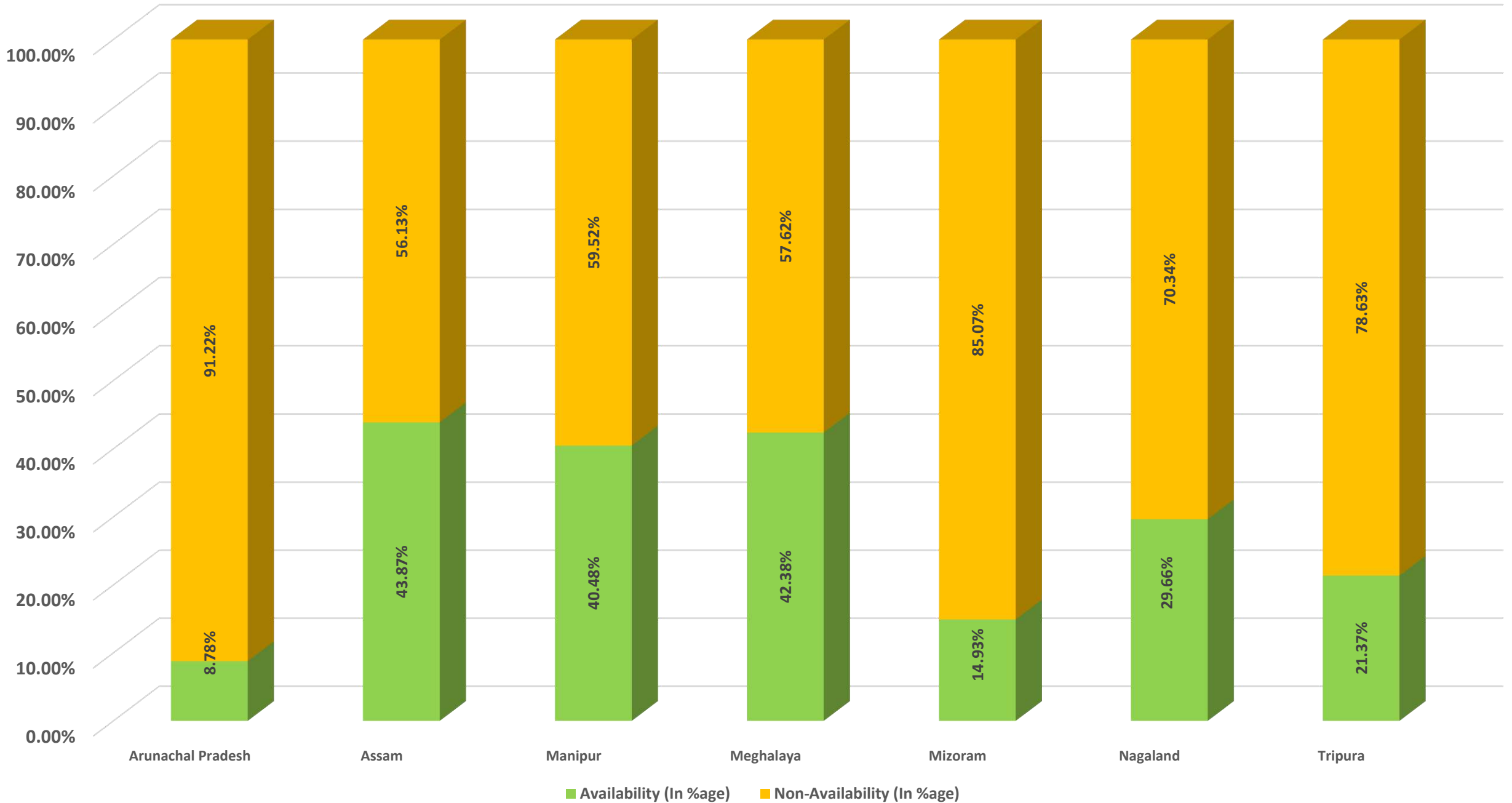
Utilization of Powertel fiber network in NER for Power System Purpose

- Extracts from minutes of 14th WRPC Meeting held on 19/08/2010:
- *“3.2.ii. TCC recommended for OPGW with 24 fibers. Out of this, maximum 12 Nos. can be used for Telecom business. Out of 12 Nos. fibers, presently as indicated by PGCIL, 6 Nos. are required to meet communication/SCADA etc. requirement of WR grid and balance 6 Nos. spare fiber, if need be, may be used by other agency, with the approval of WRPC.”*
- Extracts from Minutes of the 31st SRPC Meeting held on 25.02.2017:
- **“63.2. PGCIL had informed that in most of the FO, there were no spare fibres available. Six fibres (out of 24) are available for grid management purposes.”**
- **Action plan for utilizing – link may be discussed.**

Telemetry Statistics for Central Sector of NER (Average availability of data for the Month of February'20)



Telemetry Statistics for NER States (Average availability of data for the Month of February'20)



METERING STATUS REVIEW

D.19 Correction of Meter error

(i) Erratic reading:

- I. Ningthokhoung (NP-9521-A) end of Imphal
- II. Kohima (NP-9703-A) end of Karong
- III. Imphal(S) (NP-9546-A) end of Imphal(PG)-II
- IV. Dullavchera (NP-9438-A) end of Dharmanagar:

As discussed in 165th OCCM, Both end meter data sent to NERTS along with Net Bus check data of Imphal(PG).

NERTS may update the status.

(ii) Sign Change:

- I. Rengpang end of Loktak
- II. Mokokchung end of Doyang

As per last OCCM, Dimapur(S)-corrected & Mokokchung to be done by end of Feb'20.

- III. PK'Bari end (NP-9709-A) of 132 kV Silchar-1

D.20 SEMs to be Procured

In 165th OCC Meeting, NERTS intimated that M/s L& T has sought some extra time (up to 26.02.20) to submit their bid.

Order may be placed to L&T and supply expected by end of Feb'2020

D.21 High SEM time drift:

Constituents not submitted Drift report as given in **Annexure B** are requested to send time drift report regularly to minimize computational errors in Regional Energy Accounts & Weekly Loss.

It has been observed that time drift could not be done by some old DCD (Eg. Sarusajai), but same could be done through the Laptop.

Some are facing problem with laptop s/w and some are even not using the laptop due to non availability of required data downloading cable

Annexure (Time Drift Report)

SL.NO	PGCIL
1	BNC (PG)
2	BADARPUR (PG)
3	SILCHAR (PG)
4	MARIANI (PG)
5	HAFLONG (PG)
6	MOKOKCHUNG (PG)
7	RANGIA (PG)
8	AIZWAL (pg)
9	SALAKATI(PG)
10	BONGAGIGAON(pg)
11	DIMAPUR(pg)
12	KHLEIRIAT (Pg)
13	BALIPARA

SL.NO	ASSAM
14	DULLAVCHERRA
15	GOHPUR
16	RANGIA
17	NAGALAND(S)
18	MIZORAM(S)
	TRIPURA
19	SM NAGAR
20	79 TILLA
	ARUNACHAL PRADESH
21	CHIMPU
22	LEKHI
	GENERATION
23	AGBPP
24	DOYANG
25	PALATANA

Locations not sending weekly SEM data

Sl. No.	LOCATION	STATUS
1	UDAIPUR	DATA NOT SENT
2	SONABIL	DATA NOT SENT
3	TINSUKIA	DATA NOT SENT
4	UMRANGSHOO	DATA NOT SENT

D.22 Meter Replacement:

Following meters is to be replaced on urgent basis:

- I. Meter no. NP-8492-A i.e Sarusajai end Umtru II feeder (defective for long time)
- II. Meter no. NP-9456-A i.e Azara end of Bongaigaon feeder (high time drift)
- III. Meter no. NP-9457-A i.e Azara end of Silchar feeder (high time drift)
- IV. Meter no. NP-9546-A i.e Imphal end Imphal (PG) –II fdr (high time drift)
- IV. Meter no. NP-9438-A i.e Dullavchera – Dharmanagar fdr (high time drift)

(Timeline of replacement was Feb,2020)

D.23 Collection of SEM data before availing Shutdown:

In 165th OCCM matter noted as:

If any feeder is currently under shutdown voltage of any phase active PT secondary supply may be extended from the nearest feeder pannel to energise the meter and data may be collected thereafter.

But another problem faced:

In case of S/S shutdown, extension of PT supply is not possible .

Such problem was faced during 132 kV Dharmanagar main bus continuous shutdown w.e.f 02.02.20.

Necessary action may be done for collection of SEM data is such cases.

High DSM Outstanding

The status of DSM outstanding as on 28/02/2020 and up to Week-46 (10/02/20 to 16/02/20) is as below –

REGIONAL ENTITY	O/S PAYABLE TO POOL	O/S PAYABLE >13 WEEKS
Ar. Pradesh	20.38 Crores	16.65 Crores
Assam	4.73 Crores	Nil
Manipur	8.83 Crores	7.94 Crores
Meghalaya	4.96 Crores	Nil

DSM, RRAS, FRAS & Reactive Quarterly Reconciliation:

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

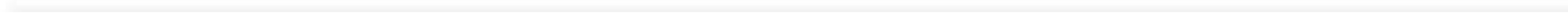
Same are also available in NERLDC website on the following links

- DSM: <https://www.nerldc.in/dsm-reconciliation/>
- RRAS: <https://www.nerldc.in/rras-reconciliation/>
- FRAS: <https://www.nerldc.in/fras-reconciliation/>
- Reactive: <https://www.nerldc.in/reactive-reconciliation/>

Status: BNC, Nagaland, NHPC, OTPC and NEEPCO-Reconciled

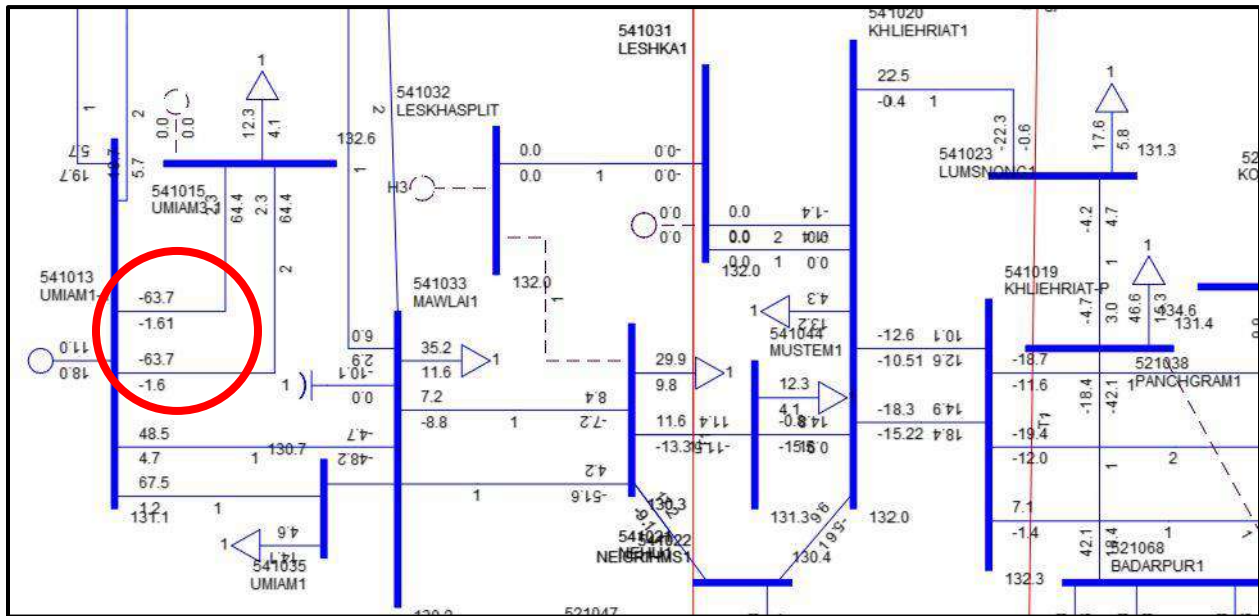


Thank You

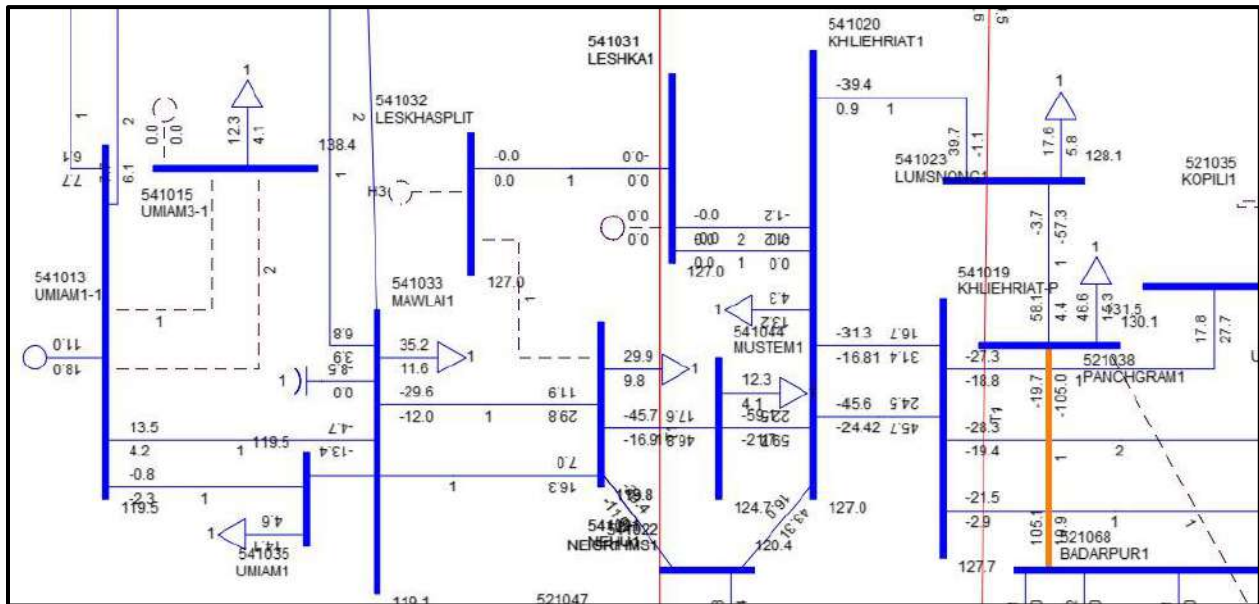


Study Results

Case 1: N- 1 contingency not satisfied 132 kV Umiam I– Umiam III D/C



Case 2: overloading of 132 kV Badarpur – Panchgram line during outage of 132 kV Umiam I– Umiam III D/C



Note: Total Demand met of South Assam, Tripura (with Bangladesh), Manipur, Mizoram, Meghalaya (Khliehriat Area) considered in the base case= 915 MW

Annexure B

TIME DRIFT REPORT STATUS

SL.NO	PGCIL	STATUS
1	BNC (PG)	REPORT NOT RECEIVED
2	BADARPUR (PG)	REPORT NOT RECEIVED
3	SILCHAR (PG)	REPORT NOT RECEIVED
4	MARIANI (PG)	REPORT NOT RECEIVED
5	HAFLONG (PG)	REPORT NOT RECEIVED
6	MOKOKCHUNG (PG)	REPORT NOT RECEIVED
7	RANGIA (PG)	REPORT NOT RECEIVED
8	AIZWAL (pg)	REPORT NOT RECEIVED
9	SALAKATI(PG)	REPORT NOT RECEIVED
10	BONGAGIGAON(pg)	REPORT NOT RECEIVED
11	DIMAPUR(pg)	REPORT NOT RECEIVED
12	KHLEIRIAT (Pg)	REPORT NOT RECEIVED
13	BALIPARA	REPORT NOT RECEIVED
	ASSAM	
14	DULLAVCHERRA	REPORT NOT RECEIVED
15	GOHPUR	REPORT NOT RECEIVED
16	RANGIA	REPORT NOT RECEIVED
17	MIZORAM(S)	REPORT NOT RECEIVED
	TRIPURA	
18	SM NAGAR	REPORT NOT RECEIVED
19	79 TILLA	REPORT NOT RECEIVED
	ARUNACHAL PRADESH	
20	CHIMPU	REPORT NOT RECEIVED
21	LEKHI	REPORT NOT RECEIVED
	GENERATION	
22	AGBPP	REPORT NOT RECEIVED
23	DOYANG	REPORT NOT RECEIVED
24	PALATANA	REPORT NOT RECEIVED

Locations not sending weekly SEM data

Sl. No.	LOCATION NOT REPORTING	STATUS
1	UDAIPUR	DATA NOT SENT
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