भारत सरकार Government of India
विद्युत मंत्रालय Ministry of Power
उत्तर पूर्वी क्षेत्रीय विद्युत समिति
North Eastern Regional Power Committee
एन ई आर पी सी कॉम्प्लेक्स, डोंग पारमाओ, लापालाङ, शिल्लोंग-७९३००६, मेघालय
NERPC Complex, Dong Parmaw, Lapalang, Shillong - 793006, Meghalaya

Ph. No: 0364 - 2534039
Fax No: 0364 - 2534040
Website: www.nerpc.nic.in

No. NERPC/SE (O)/OCC/2020/***1793-1830*** Dated: 06th July, 2020

To,

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

Sub: Minutes of 167th OCC Meeting.

Sir/Madam,

Please find enclosed herewith the minutes of 167th OCC Meeting held at "NERPC Conference Hall", Shillong on the **19th June, 2020** for your kind information and necessary action. The minute is also available on the website of NERPC, **www.nerpc.nic.in**.

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

Encl: As above

भवदीय / Yours faithfully,

B. Lyngkhoi
Director/ SE

Copy to:

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

Director/ SE

North Eastern Regional Power Committee

MINUTES OF THE 167th OPERATION COORDINATION SUB-COMMITTEE MEETING OF NERPC

Date : 19/06/2020 (Friday)

Time : 10:30 hrs

Venue : "NERPC Conference Hall", Shillong.

The List of Participants in the 167th OCC Meeting is attached at **Annexure – I**

Shri A.K. Thakur, Member Secretary, NERPC welcomed the participants to the 167th OCC meeting. He regretfully informed the forum that due to the COVID pandemic the meeting could not be held after March, 2020 and is being held now over Video-Conferencing. 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 166th MEETING OF OPERATION COORDINATION SUB-COMMITTEE OF NERPC.

The minutes of 166th meeting of Operation Sub-committee held on 6th March, 2020 at Shillong were circulated vide letter No. NERPC/SE (O)/OCC/2019/2674-2711 dated 04th April, 2020.

The Sub-committee confirmed the minutes of 166th OCCM of NERPC as no comments/observations received from the constituents.

ITEMS FOR DISCUSSION

B.1. ACTION TAKEN:

1. IMPLEMENTATION OF PROJECTS FUNDED FROM PSDF:

The status as informed in 167th OCC:

State	R&U scheme	ADMS	Capacitor Installation	SAMAST**	Line Differential Protection
Ar. Pradesh	Package-I Materials supplied. P-II (for PLCC & communication) LOA issued.	Requisition for second tranche of 60% to be submitted.	-	TESG approval awaited	-

	Work delayed due to COVID situation. Station-wise status to be updated				
Nagaland	All completed except for PLCC package. Delayed due to COVID situation Station-wise status to be updated.	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 to be submitted ASAP.	Requisition for second tranche of 60% to be submitted.	To reply to TESG queries.	TESG approval awaited.	Lines identified for installation of DPR viz. 132kV Aizawl - Luangmual and 132kV Kawmzawl - Khawiva.
Manipur	Package-II: completed Package-I: WIP Delayed due to COVID situation Station-wise status to be updated.	Requisition for second tranche of 60% already submitted.	PSDF approved. NIT to be floated.	TESG approval awaited.	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 to be sent ASAP. Station wise status to be updated.	TPA to be signed immediately. First requisition to be sent ASAP.	Study results to be submitted alongwith DPR	TESG approval awaited.	Lines not yet identified. To be taken up in Sub-group.

Assam	LOA issued. WIP, delayed due to COVID situation Station-wise status to be submitted.	TPA signed. Requisition for 30% to be submitted ASAP.	-	Under finalization stage for LOA.	Lines identified. Under DPR preparation stage.
Meghalaya	MePTCL Completed in all respects** MePGCL – 10% claim to be submitted ASAP. Station-wise status to be updated.	Final 10% requisition under process.	-	Under finalization stage for LOA.	WIP. Delayed due to COVID situation

Deliberation of the sub-Committee:

**Director(O&P), NERPC on behalf of the forum congratulated MePTCL for being the only power utility in Eastern and North Eastern Region till date, to have completed R&U works in all respects.

Regarding ADMS, he stated that due to delay in signing of TPA by Assam & Tripura, the project could not be completed on time. He suggested that time extension may be given to the executing agency till October, 2020. The Forum agreed.

Further, he stated that since the PDMS project has already been commissioned, he requested to all utilities that any change in setting trails in PDMS should be updated. He also requested NERLDC to give FTC only after all settings have been uploaded in PDMS. Forum agreed,

Member Secretary, NERPC informed that NIT of SAMAST Meter, AMR portion for Assam, Meghalaya was floated on 14.02.2020 and technical bid was opened on 16.06.2020. The bidder(s) have been called for technical demonstration over VC on 23.06.2020. He requested all the state utilities, NERLDC, NERTS to make it convenient to attend the same over VC especially Assam and Meghalaya.

The Sub-Committee noted as above.

Action: All state utilities/NERPC.

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

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

NER PERFORMANCE DURING MAY, 2020

States	Energy Met (MU)		w.r.t. Apr,20 % inc (+) /dec (-)	Energy Reqr. (MU)		w.r.t. Apr,20 % inc (+) /dec (-)	% surplus (+) /shortfall (-) of energy In May,20
	May-20	Apr-20		May-20	Apr-20		
Ar. Pradesh	53.95	45.65	18.18	54.16	46.96	15.33	-0.39
Assam	682.32	545.94	24.98	732.58	604.32	21.22	-6.86
Manipur	70	65.87	6.27	70.27	67.17	4.62	-0.38
Meghalaya	143.93	113.52	26.79	147.14	117.56	25.16	-2.18
Mizoram	50.73	46	10.28	50.97	47.09	8.24	-0.47
Nagaland	63.22	59.67	5.95	63.45	60.54	4.81	-0.36
Tripura	210.03	171.46	22.50	210.72	173.05	21.77	-0.33
Region	**1274.18**	**1048.11**	**21.57**	**1329.29**	**1116.69**	**19.04**	**-4.15**

States	Demand Met (MW)		w.r.t. Apr,20 % inc (+) /dec (-)	Demand in (MW)		w.r.t. Apr'20 % inc (+) /dec (-)	% surplus (+) /shortfall (-) of demand In Apr,20
	May-20	Apr-20		May-20	Apr-20		
Ar. Pradesh	108	74	45.95	108	76	42.11	0.00
Assam	1663	1419	17.20	1720	1419	21.21	-3.31
Manipur	189	188	0.53	208	215	-3.26	-9.13
Meghalaya	322	261	23.37	322	261	23.37	0.00
Mizoram	106	102	3.92	106	102	3.92	0.00
Nagaland	133	130	2.31	136	142	-4.23	-2.21
Tripura	284	259	9.65	284	259	9.65	0.00
Region	**2676**	**2433**	**9.99**	**2755**	**2475**	**11.31**	**-2.87**

REGIONAL GENERATION & INTER-REGIONAL EXCHANGE IN MU

Month---->	May-20	Apr-20
Total Generation in NER (Gross)	1378.302	1195.39
Total Central Sector Generation (Gross)	1086.797	966.028
Total State Sector Generation (Gross)	232.562	265.169
Inter-Regional Energy Exchange		
(a) NER-ER	117.27	440.04
(b) ER-NER	**125.05**	**0.00**
(c)NER-NR	**204.02**	**0.00**
(d)NR-NER	131.13	344.07
© Net Import	-65.11	-95.97

AVERAGE FREQUENCY (Hz)

Month---->	May-20	Apr-20
	% of Time	% of Time
Below 49.9 Hz	4.23	5.09
Between 49.9 to 50.05 Hz	76.68	75.14
Above 50.05 Hz	19.10	19.77
Average	50.01	50.00
Maximum	50.30	50.27
Minimum	49.61	49.69

Deliberation of the sub-Committee:

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

The Sub-Committee noted as above.

C. ITEMS- STATUS REVIEW

C.1 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 166th OCC meeting 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.

Deliberation of the sub-Committee:

Sr.DGM(AM), NERTS informed that spare CBs are available at Dimapur S/S and ready to be diverted. However due to the present COVID situation, Govt. of Nagaland has imposed restrictions on movement, hence the work has been delayed.

The Sub-Committee noted as above.

Action: NERTS

C.2 Low voltage in Manipur Power System in case of tripping/outage of 400 kV Silchar – Imphal D/C:

Decision as per discussions in the previous meeting:

NERLDC to 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.

Deliberation of the sub-Committee:

Sr. DGM(AM), NERTS informed that initiation for tripping of the Bus Reactor has been given in case of tripping of both circuits of Silchar-Imphal Line on 12.06.20. The forum decided to ***drop the agenda item***.

The Sub-Committee noted as above.

C.3 Auto-reclosure issues at Azara:

In 166th OCCM 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.

Deliberation of the sub-Committee:

AEGCL informed that at 400kV Azara GSS for 400kV Silchar line, priority scheme of CB is present. I.e. in case of SPAR, first Main CB recloses then signal is sent to Tie CB to recloses after dead time setting of 60s. The signal is sent via hard-wiring so no delay in transmission of the same.

Also, it was informed that when carrier channel(s) are shorted at Azara the signal is received at Silchar, however mismatch is present.

It was decided that shutdown would be requisitioned by AEGCL/NERTS to test and ascertain signal mismatch at Azara/Silchar.

The Sub-Committee noted as above.

Action: NERTS, 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			**1.114**	
Kopili	-	-	**0**	Will be "0" until further intimation.
Doyang			**0.138**	
Loktak			**0.5**	

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:

The sub-Committee discussed and approved the transmission line outages proposed by Constituents for July, 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 January,2020 - March,2020:

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

The Sub-Committee noted as above.

D.4 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 visit the site tentatively in the second week of March, 20 to assess & explore possibility of any temporary restoration.

Deliberation of the sub-Committee:

Sr.DGM(AM), NERTS gave a brief presentation(attached at **Annexure-D.4**) on the restoration of Kopili switchyard and transmission system. The salient points are as follows:

- Existing Transmission System:
  1. 160MVA 220/132kV ICT-II:- Restoration cost INR 47.66 lakhs
  2. 220kV CBs - MoM box, MB and complete CBs to be replaced. However existing foundation to be used. Restoration cost INR 77.02 lakhs
  3. 220kV Isolators/ Earth Switch - Complete set to be replaced. Restoration cost INR 32.92 lakhs.
  4. 220kV CT, CVT, LA - 2 nos CVTs to be replaced, 3nos LAs to be replaced, 12 nos 3 core CTs to be replaced with 5 core CTs. Restoration cost INR 50.89 lakhs.

5. C&R, PLCC panels - To be replaced in entirety. However Kiosk protection panels are healthy and are to be diverted. Those are to be replaced with SAS. Restoration cost INR 52.92 lakh.
6. Telecom, RTU, PMU & panel- To be replaced in entirety. Restoration cost INR 180.58 lakh.
7. Auxiliary Power Supply - LTAC panels, 220V DC system under NERSS-III would be utilized. However 415V AC supply needs to be provided. 48V DC system to be procured. Total restoration cost INR 38.92 lakhs.
8. Fire Fighting System - Hydrant pipe line to be relaid. Portable fire extinguishers and fire alarm system to be installed. Restoration cost INR 13.10 lakh.
9. Power & Control Cable - Totally new cables to be installed. Restoration cost INR 40.73 lakhs.
10. Panel room/Kiosk - Existing kiosk dislodged and panel room completely destroyed. New Panel room to be constructed. Restoration cost INR 19.95 lakhs.
11. Earth mat/Cable Trench/hardware/Lighting - Completely to be replaced. Restoration cost INR 76.79 lakhs.
12. Switchyard Retaining Wall- Washed off section of wall to be reconstructed. Restoration cost INR 43.05 lakhs.

- Ongoing NERSS-III project: After salvaging usable items and insurance amount, additional cost amounts to INR 5.54 Cr.

Expenditure summary

SN	Particulars	Estimated Expenditure (in INR Lakh)
1	Transformer (160MVA 220/132kV ICT-II)	47.66
2	Circuit Breakers (245kV)	77.02
3	Isolators/ Earth Switch (245kV)	32.92
4	CT, CVT, LA (220kV)	50.89
5	Control & Protection	52.92
6	Telecom/ RTU/ PMU	180.58
7	Auxiliary Power Supply	38.92

8	Fire Fighting System	13.10
9	Power & Control Cable	40.73
10	Panel Room/Kiosk	19.95
11	Earth mat/Cable Trench/Hardware/ Lighting	76.79
12	Switchyard Retaining Wall	43.05
13	Additional Expenditure for Ongoing Project	554.35
	Total Estimated Expenditure	**1228.88**

Sr.GM (Group-in-charge, Misa), NERTS apprised the forum that for revival of Kopili Transmission System following elements are to be restored:

- Restoration of 220kV Misa-I, Misa – II, Misa - III & Bus Coupler Bays of NEEPCO on AIS.
- Restoration of 160MVA 220/132kV ICT - II of POWERGRID
- Commissioning of 160MVA 220/132kV ICT - I of POWERGRID under ongoing NERSS – III scheme.
- Commissioning of entire 132kV GIS Scheme under ongoing NERSS – III scheme.

DGM, NEEPCO requested that 132kV Bus & 5MVA Station transformer is to be installed on priority matching with the above work. Further, he proposed that BOQ of the restoration work should be finalized with joint discussion NEEPCO & NERTS Engineers, so, that compatibility of Power Station and Switchyard SCADA would be there.

After detailed deliberation, it was decided that individual bay wise/element wise ownership determination, kiosk location, cable routing etc., at site level is to be done jointly be NEEPCO & NERTS and a consolidated report should be submitted to the task force committee. Subsequently based on that estimate is to be prepared. The Task Force Committee shall decide the mechanism of handing over of NEEPCO switchyard except Units bays and 132KV/33KV bays of 5 MVA transformer to NERTS and treat the entire elements as transmission assents. The damaged assets of NEEPCO/ renovation works against the same will be executed by NERTS. After handing over of NEEPCO' switchyard assets portion to NERTS and assets under NERSS-III shall be restored by NERTS under PoC mechanism. It was also decided that NERTS may explore the amount to be recovered from Insurance agency. The forum requested NERTS to present the detailed estimate in the next OCC meeting.

MePTCL requested that considering the unavailability of Misa-Kopili-Khandong-Khliehriat link a study may be conducted specifically for winter period. The forum agreed and decided that the issue will be taken up by the Task Force Committee constituted for restoration of the above link.

The Sub-Committee noted as above.

Action: NERTS, NEEPCO, NERLDC, SLDC Meghalaya.

D.5 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 Apr'20 is as follows:

Day	Ar. Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
Median (Jan'20)	19	14	27	35	21	16	22

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

The Sub-Committee noted as above.

Action: all SLDCs.

D.6 RGMO analysis for events dated 17th May, 2020 and 28th May 2020

RGMO performance by generating units on bar during the events on 17/05/2020 and 28/05/2020 is presented in RGMO analysis report attached in Annexure 1.1 and 1.2.

On 17/05/2020 response from all the generating units on bar was negligible. On 28/05/2020 response from RHEP, Pare, Doyang and BgTPP were either zero or negative. Although Palatana GTGs gave more than desired response, STGs gave negligible response. DAS data has been received from all units for event dated 17/05/2020. But DAS data was not received from RHEP, Doyang and Loktak for event dated 28/05/2020.

Deliberation of the sub-Committee:

NERLDC informed the forum that primary response from generators are normally expected to remain for around 5 minutes till secondary and tertiary response come into effect for restoration of the frequency. As generally it is observed that the units are not able to sustain their response for complete period of 5 minutes, in the RGMO analysis NERLDC calculates the actual vs desired response considering availability of primary response from generators for minimum period of 1 minute.

Regarding the RGMO analysis for events dated 17th May 2020 and 28th May 2020, NERLDC informed the following:

- On 17th May, 2020 response from all the units were negligible.
- For Palatana GTG-I, GTG-2 gave positive response but could not sustain the same for 1 minutes. In STG-I & II oscillation was observed during response and not it did not sustain.
- BgTPP Unit#I negative response, BgTPP Unit#III response not sustained.
- Pare HEP response not sustained.
- On 28th May,2020 response from RHEP, Pare, Loktak, DHEP & BgTPP were either zero/negative.
- Palatana GTG#I & II response sustained for around 2 minutes. In STG-I & II oscillation was observed during response and not it did not sustain.
- Pare Unit 2 did not provide any response whereas RHEP Unit I, II & III gave a positive response but could not sustain.

DGM, NEEPCO clarified that response depends upon the effective head till the turbine and not dependent upon generation capacity or actual generation at the instant.
NERLDC requested NEEPCO to furnish details for understanding the correlation between governor response in hydro units and water level (head).

DGM, NTPC BGTPP agreed to check the issue of Negative response in all their units.

NERLDC requested all the other utilities to clarify the undesired response from their respective units. NERLDC also requested all utilities to furnish DAS data as and when requested by NERLDC for RGMO analysis.

The Sub-Committee noted as above.

Action: NTPC, OTPC.

D.7 <u>Continuous Deviation violation by Tripura</u>

Tripura has been observed to be continuously either overdraw or under draw by considerable amounts on many occasions even after issuance of Deviation violation messages and frequency violation messages from NERLDC and NLDC. Total 15 number of violations messages have been issued to Tripura in May 2020 (Annexure-3)

<u>Deliberation of the sub-Committee:</u>

The forum advised Tripura to resist from excessive deviation violation and take necessary actions to reduce the deviation specially when instructed to do so by NERLDC in real time in view of system requirements.

Tripura highlighted issues faced in control of deviation due to sudden changes in weather conditions. NERLDC requested Tripura to utilize RTM to manage their schedules such that deviations may be reduced.

The Sub-Committee noted as above.

Action: TSECL.

D.8 Non-reduction of State Generation during planned shutdown of 400 kV Silchar- Byrnihat or 400 kV Silchar -Azara by Tripura

During shutdown of 400 kV Silchar- Byrnihat or 400 kV Silchar -Azara the generation reduction required in southern NER grid to ensure N-1 security, is around 300 MW. Out of which around 200 MW is backed down by Palatana, around 30 MW is backed down by AGTCCPP and rest around 70 MW backing down is expected from State generations of Tripura. On most of the occasions the support is not obtained from Tripura state generations. Tripura is requested to back down generations to ensure reliable and secure operation of NER Grid.

Deliberation of the sub-Committee:

The forum advised Tripura to back down generation for planned shutdowns. Tripura expressed their difficulties in management of deviations during reduction in Intra-State generations. NERLDC assured that ISGS generating stations of Palatana and AGTCCPP shall be backed down to their Technical Minimum first and then remaining backing down requirement shall be requested from Tripura internal generations.

The Sub-Committee noted as above.

Action: TSECL.

D.9 Testing for oscillation (LFO) with reduced generation of AGTCCPP

To test the performance of the DAVRs of AGTCCPP, NEEPCO, it is proposed to test the machines at reduced generation level. The generation may be increased in other units while testing a unit so that actual is not affected.

Deliberation of the sub-Committee:

NEEPCO agreed to the testing.

The Sub-Committee noted as above.

Action: NERLDC/NEEPCO.

D.10 Immediate implementation of SPS-2&4 related to Bangladesh

It was agreed during the special meeting held on 20.02.20 that for SPS 2 and SPS 4 related to Bangladesh, the tripping can be done at Indian side. The issue was also discussed during the outage coordination meeting held on 22.05.20 via VC.

It was expected that these two schemes out of the four schemes can be implemented on immediate basis. This would also facilitate in availing the shutdowns of 400 kV Silchar – Palatana I or II without reduction in generation of Palatana by keeping SPS-2 (India) in operation.

Deliberation of the sub-Committee:

Sr.DGM(AM), NERTS informed that cabling for SPS-2 & 4 has been completed at Surjamaninagar and Palatana. The final connection and testing shall be done during Shutdown proposed by Bangladesh on 22.06.2020/23.06.2020.

The Sub-Committee noted as above.

Action: NERTS.

D.11 Overloading of 132 kV EPIP 2- Umtru D/C when closing 132 kV Umtru – Kahilipara D/C and 132 kV Umtru – Sarusajai D/C

NERLDC control room has expressed its concern to SLDC Meghalaya regarding keeping 132 kV Umtru – Kahilipara D/C and 132 kV Umtru – Sarusajai D/C in closed condition. It has been found that there has been some apprehension regarding closing of the said lines for the fear of overloading of 132 kV EPIP 2 – Umtru D/C. As per the data extracted from SCADA for the month of April'20, it has been found that the maximum loading is about 55 MW for 132 kV EPIP 2- Umtru II and about 44 MW in 132 kV EPIP 2- Umtru I, which is well below the thermal capability of 132 kV Lines viz. about 84 MVA (79 MW considering power factor of 0.95 pu). It is envisaged that Assam Meghalaya Tie lines can be kept closed at all times to increase the reliability of the grid.

Deliberation of the sub-Committee:

EE, SLDC, Meghalaya opined that connecting 132kV Umtru-Kahilipara D/C and/or 132kV Umtru-Sarusajai D/C leads to overloading of 132kV EPIP-2 - Umtru D/C. So the lines may be kept open to avoid overloading of 132kV EPIP-2 - Umtru D/C. After detailed deliberation the forum decided that thermal limit is to be considered for deciding overloading of the said lines. For these actual conductor configuration and age of the line may be taken into consideration.

The Sub-Committee noted as above.

Action: NERLDC/MePTCL.

D.12 Real Time Market (RTM) has been implemented on Pan India basis w.e.f 00:00 Hrs of 1st June 2020.

RTM was introduced by Hon'ble CERC on 12th Dec. 2019 along with amendments in IEGC, Open Access and Power Market regulations. On 20th March 2020, CERC notified the revised date of implementation of RTM as 1st June 2020. Training on RTM was conducted for all NER constituents on 13th Feb.2020 in NERPC forum along with 165th OCCM and on 27th May 2020 through VC & WebEx by NERLDC. POSOCO has updated the Web based Energy Scheduling (WBES) software to facilitate implementation of RTM. The new WBES was made live at NERLDC w.e.f. 00:00 Hrs of 30th May 2020 and RTM was successfully implemented on Pan India basis w.e.f 00:00 Hrs of 1st June 2020.

Participation of NER constituents in RTM till 9th June 2020 (in MU)(+Buy; - Sell)

Assam	Manipur	Meghalaya	Nagaland	OTPC
0.71	1.16	-0.415	0.2	-0.715

Deliberation of the sub-Committee:

The steps taken by NERLDC for implementation of RTM including modification of WBES and imparting training to Discoms, SLDCs and ISGSs was highlighted. RTM performance of NER constituents and details of change of schedule profile by Nagaland, before and after their participation in RTM, was presented by NERLDC.

Director(O&P), NERPC stated that the problem of delayed gate closure due to RTM is common for all generation utilities/DISCOMs. He requested all the utilities to send any other desired modifications in RTM modus operandi to NERPC so that compiled list may be sent to CERC.

The Sub-Committee noted as above.

D.13 Over-generation by OTPC Palatana generating station and schedule more than DC due to over bidding in RTM

OTPC Palatana is observed to be generating more than their DC on many occasions. This has been observed for 08/06/2020 and 09/06/2020. An email was sent from NERLDC control room to OTPC regarding the same. Also, the RTM sale by OTPC has been observed to be more than their available URS causing schedule of OTPC to be more than DC. OTPC is requested to:

1. Declare their DC faithfully. The higher DC would enable beneficiary states to obtain more power schedule from the plant
2. Put their sell bid only upto the URS quantum available after right to recall ends so that they are not scheduled more than DC.

Deliberation of the sub-Committee:

Manager, OTPC informed the following:

a. **Over generation by Palatana during most time of the day**- OTPC mentioned that the same is caused due to variation of Gas availability in real time by ONGC from their Day-Ahead commitment of Gas availability. The issue has been discussed by OTPC with ONGC and the same shall not be repeated in future.

b. **Bidding in RTM by Palatana more than available URS quantum**- OTPC mentioned that the same was caused due to coordination issues between OTPC and Trader. OTPC has now changed their trader and the overbidding shall not take place in future.

The Sub-Committee noted as above.

Action: all utilities.

D.14 Testing of primary frequency response

The Hon'ble Central Electricity Regulatory Commission (CERC), vide notification dated 12th April 2017, had notified Indian Electricity Grid Code (Fifth Amendment) Regulation, 2017. As per the notification, following proviso has been added at the end of the Regulation 5.2(g) of Part 5 of the Principal Indian Electricity Grid Code (IEGC) Regulation:

"Provided that periodic checkups by third party should be conducted at regular interval once in two years through independent agencies selected by RLDCs and SLDCs as the case may be. The cost of such tests shall be recovered by the RLDC or SLDCs from the generators. If deemed necessary by RLDCs/SLDCs, the test may be conducted more than once in two years."

In compliance to the IEGC regulation, regarding periodic testing of primary frequency response of generating units, bidding process was completed in coordination with all the generating stations. The independent agencies and price per unit to carry out testing has been finalized. The selected testing agencies and identified generating units are given below:

S.No.	Testing Agency	Capability to carry out testing in two years	Allocated generators informed by POSOCO via communication Dated
1	M/s Siemens Ltd.	40	22nd Apr 2020
2	M/s Solvina India Pvt. Ltd.	200	13th May 2020

The details of generating units under purview of NERLDC for Primary Frequency Response is given as under:

Generating Machines under RLDC for testing Primary Frequency Response								
Sn	**Name of Utility**	**Station**	**Generating Unit**	**Capacity (MW)**	**Fuel Type**	**Allocation to which party?**	**Order Placed (Yes/No)**	**Details**
1	NTPC	Bongaigaon TPP	1	250	Coal	Solvina		
2	NTPC	Bongaigaon TPP	2	250	Coal	Solvina		
3	NTPC	Bongaigaon TPP	3	250	Coal	Solvina		
4	NEEPCO	Monarchak	GT	65.42	Gas	Solvina		
5	NEEPCO	Monarchak	ST	35.58	Gas	Solvina		
6	NEEPCO	Kopili St II	1	25	Hydro	Solvina		
7	NEEPCO	Khandong	2	25	Hydro	Solvina		
8	NEEPCO	Ranganadi	1	135	Hydro	Solvina		
9	NEEPCO	Ranganadi	2	135	Hydro	Solvina		
10	NEEPCO	Ranganadi	3	135	Hydro	Solvina		
11	NEEPCO	Tuirial	1	30	Hydro	Solvina		
12	NEEPCO	Tuirial	2	30	Hydro	Solvina		
13	NEEPCO	Pare	1	55	Hydro	Solvina		
14	NEEPCO	Pare	2	55	Hydro	Solvina		
15	NHPC	Loktak	1	35	Hydro	Solvina		
16	NHPC	Loktak	2	35	Hydro	Solvina		
17	NHPC	Loktak	3	35	Hydro	Solvina		
18	OTPCL	Palatana	GT-II	232.39	Gas	Solvina		
19	OTPCL	Palatana	ST-II	130.91	Gas	Solvina		
20	NEEPCO	Doyang	1	25	Hydel	Siemens		
21	NEEPCO	Doyang	2	25	Hydel	Siemens		
22	OTPCL	Palatana	GT-I	232.39	Gas	Siemens		
23	OTPCL	Palatana	ST-I	130.91	Gas	Siemens		

Deliberation of the sub-Committee:

DGM, NEEPCO requested to remove Monarchak STG from above list, because as per extant guidelines primary response is not required for gas units having capacity less than 50MW.

NERLDC requested NEEPCO to refer Regulation 5.2(f)(i)(c)of Part 5 of the IEGC Regulations 2010 and amendments thereof, wherein it is mentioned that "Open Cycle Gas Turbine/Combined Cycle generating stations having gas turbines of capacity more than 50 MW each" should have their governors in operations at all times.

A combined cycle generating station shall have governor in operation at all times based on the criteria that its GTG should be having installed capacity of at-least 50 MW. Thus, although the STG of Monarchak is having installed capacity of 35.58 MW, the

GTG of Monarchak is having installed capacity of 65.42 MW which is more than 50 MW. So, the combined cycle generating station of Monarchak (both GTG and STG) shall always have their governors in operation and primary response testing also will be necessary for both GTG and STG of Monarchak.

NERLDC further requested ISGS stations to place the order as per list mentioned above.

The Sub-Committee noted as above.

Action: All concerned Utilities.

D.15 SEMs to be Procured

In 165th OCC Meeting, NERTS informed that M/L&T has submitted their bid, which has been opened and is under evaluation. Effort is made to finalize 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.

Deliberation of the sub-Committee:

NERTS informed that work order has been placed to M/s L&T. The party informed that production is in advanced stage of completion. With testing and inspection, the same shall be ready for dispatch by 30.06.20. Delivery of meters is expected by first week of July'20.

The Sub-Committee noted as above.

Action: NERTS.

D.16 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.

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 (PG)	REPORT NOT RECEIVED
	ASSAM	
15	GOHPUR	REPORT NOT RECEIVED
16	RANGIA	REPORT NOT RECEIVED
17	**NAGALAND(S)**	MONTHLY
18	**MIZORAM(S)**	REPORT NOT RECEIVED
	TRIPURA	
19	SM NAGAR	REPORT NOT RECEIVED
20	79 TILLA	REPORT NOT RECEIVED
	ARUNACHAL PRADESH	
21	CHIMPU	REPORT NOT RECEIVED
22	LEKHI	REPORT NOT RECEIVED
	GENERATION	
23	AGBPP	REPORT NOT RECEIVED
24	DOYANG	REPORT NOT RECEIVED
25	PALATANA	REPORT NOT RECEIVED

Locations not sending weekly SEM data

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

Deliberation of the sub-Committee:

NERTS informed that the time drift reports shall be furnished by 19.06.20. NERLDC requested Nagaland to send the time drift report on weekly basis.

The Sub-Committee noted as above.

Action: NERTS.

D.17 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 08/06/2020 and up to Week-08 (18/05/20 to 24/05/20) is as below –

REGIONAL ENTITY	O/S PAYABLE TO POOL	O/S PAYABLE >13 WEEKS
Assam	5.05 Crores	Nil
Manipur	5.65 Crores	5.47 Crores
Meghalaya	4.54 Crores	2.70 Crores

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

Deliberation of the sub-Committee:

The status as informed in the 167th OCCM:

REGIONAL ENTITY	Status
Assam	-
Manipur	Disbursement by second week of July'20
Meghalaya	-
Tripura	Mismatch to be reconciled in DSM pool payment

The Sub-Committee noted as above.

Action: all utilities as above.

D.18 DSM, RRAS quarterly reconciliation:

Manipur, Mizoram, Tripura and NEEPCO are yet to sign DSM Reconciliation (Published upto Q-4, FY 2019-20). It is requested all the above to sign the Quarterly Reconciliation statements.

Except Nagaland, others are yet to sign Reactive Reconciliation Statements.

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: Arunachal Pradesh, Assam, Meghalaya, Nagaland, BNC, NHPC, OTPC and NTPC –DSM Reconciled.

Nagaland-Reactive Reconciled

Deliberation of the sub-Committee:

Tripura intimated that NERLDC reconciliation statement is not matching as per their record. NERLDC requested to send their mismatch details so that same could be checked & reconciled.

The Sub-Committee noted as above.

D.19 Replacement of meters:

With reference to the video conference meeting on Shutdown Approval held on 22-05-2020, BgTPP and Nagaland has raised High Time Drift of SEM issue for the following meters:

a. NP-9643-A i.e BgTPP LV side of ICT I has time drift >20 min
b. NP-8478-A i.e Dimapur end of 132 kV Dimapur_PG –Dimapur –II
c. NP-8479-A i.e Kohima end of Kohima – Dimapur

NERTS has committed for replacement of same on immediate basis.

NERLDC informed that 2 nos. of meters have been installed on the HV side of ICT I and one of them may be replaced with the defective meter (NP-9643-A).

Deliberation of the sub-Committee:

NERTS informed that Engineers from Dimapur and Bongaigaon deputed to respective stations for replacement work as on 18.06.20. Replacement of the SEM Sl No. NP-8479-A at Kohima has been replaced.

The Sub-Committee noted as above.

Action: NERTS.

D.20 RESTORATION OF TRANSMISSION SYSTEM OF KOPILI HEP BY POWERGRID – ADDITIONAL COST IMPLICATION FOR COMPLETION OF ONGOING PROJECT UNDER NERSS-III:

Conversion of 145kV Substation from Single Bus Bar System to Double Bus Bar System through GIS and replacement of 3×20MVA, 220/132kV (Failed) Transformer (ICT-1) with 160MVA, 220/132kV Transformer was going on at KopiliHEP under North Eastern Region System Strengthening Scheme-III.

Due to failure of penstock at KopiliHEP on 07.10.2019, huge damage caused to the equipment installed under this project, which was on the verge of commissioning.

Subsequently, it was decided in-principle that POWERGRID will restore the entire transmission part of Kopili HEP for which projection of Rs. 6.80 Crores for AIS part was given by POWERGRID during 165th OCC Meeting. Now, the assessment of GIS part is also completed and the additional implication for GIS part after recovery from Insurance is worked out to be Rs. 5.53 Crores. Thus, total tentative financial implication for restoration of Transmission System of Kopili HEP is Rs. 12.33 Crores.

POWERGRID proposes to recover the investment through PoC Mechanism.

Deliberation of the sub-Committee:

Pls refer to deliberation in agenda item D.4.

The Sub-Committee noted as above.

Action: NERTS/NEEPCO.

D.21 STATUS OF PROGRESS / ACTIN PLAN OF AEGCL FOR EXECUTION OF NERSS – VI SCHEME

As per the approval of 6th Standing Committee the scope of NERSS – VI is as below:

POWERGRID

- **a.** 420kV,1x125 MVAR bus reactor (2nd) at Imphal (PG)
- **b.** Up-gradation of New Mariani substation to 400/220kV with 2x500MVA transformer along with associated bays
- **c.** Disconnection of Mariani (AEGCL) – Misa 400kV line (presently operated at 220kV) from Mariani (AEGCL) and termination of the same at New Mariani (POWERGRID) and operation of the resultant Mariani (POWERGRID) – Misa line (ckt-1) at 400kV
- **d.** Operation of existing Misa – New Mariani (POWERGRID) 400kV (presently operated at 220kV) line (ckt-2) at rated voltage level of 440kV
- **e.** 2 no. 400kV line bays at New Mariani for termination of Misa - New Mariani 400kV D/c line [formed after (iii) and (iv)]
- **f.** 2 no. 400 kV line bays (GIS) at Misa for termination of New Mariani – Misa 400kV D/c line [formed after (iii) and (iv)]
- **g.** 420kV, 2x125MVAR bus reactors at New Mariani
- **h.** 2 no. 220kV line bays at New Mariani for termination of New Mariani – Mariani (AEGCL) 220kV D/c twin moose line (line under AEGCL scope)
- **i.** 2 no. 400kV line bays at Imphal (PG) S/s for termination of Imphal – New Kohima 400kV D/c line (line under TBCB)
- **j.** 2 no. 400 kV line bays at New Mariani S/S for termination of New Kohima New Mariani 400 kV D/C line (line under TBCB)

Note:

1. 2 no. 420kV, 50MVAR fixed line reactors installed at Misa end of the Misa – New Mariani line are required to be charged at rated voltage level of 400kV in view of 400kV operation of the Misa – New Mariani D/c line.
2. With 400kV operation of Misa – New Mariani D/c line, 2 no. 220kV line bays vacated at Misa shall be utilised by AEGCL for Misa – Sankardebnagar 220kV D/c line (line under AEGCL scope)
3. With 400kV operation of Misa – New Mariani (ckt-2) at 400kV, the 220kV bay vacated at New Mariani shall be utilised by AEGCL for termination of one of the

220kV Samaguri - Mariani (AEGCL) 2xS/C lines from Mariani (AEGCL) to New Mariani (POWERGRID) thus forming SamaguriNew Mariani (POWERGRID) and Samaguri-Mariani (AEGCL) 220kV S/C lines

Further, members agreed to the early commissioning of scope of works mentioned at sl. no. (ii) to (vii) by POWERGRID.

The diagram of the above arrangement is given below:

Now, under the scope of NERSS- VI, AEGCL has to carry out the following:

1. Construction of 220kV D/C twin moose line from New Mariani to Mariani (AEGCL) for two (2) no. 220kV connectivity between New Mariani (PG) and Mariani (AEGCL). At New Mariani (PG) two (2) nos. of new 220kV bays for the purpose is in advanced stage of construction.
2. Termination of one of the 2 x 220kV S/C Samaguri - Mariani (AEGCL) lines from Mariani (AEGCL) to New Mariani (POWERGRID) as shown in diagram above to form Samaguri - New Mariani (POWERGRID) and Samaguri - Mariani (AEGCL) connectivity at 220kV level. However, for the purpose, AEGCL to utilize 220kV bay vacated at New Mariani (PG) upon upgradation of operation of Misa – New Mariani from 220kV to 400kV level.

Deliberation of the sub-Committee:

AEGCL informed that the matter has been taken up with CEA.

The Sub-Committee noted as above.

Action: AEGCL/NERTS

ADDITIONAL AGENDA ITEM FROM MSPCL/P&ED MIZORAM:

D.22 Petition in CERC filed by NERLDC:

GM, SLDC, MSPCL stated the following i.r.o. Petition dated. 01.06.2020 filed by NERLDC:-

1. That it is not fair to name GM, SLDC as respondent in the petition. Rather issue may be addressed to management.
2. Repeated trippings already discussed in various forum like PCC, OCC and also in Sub-group meetings. So the matter should not be raised in CERC petition.
3. Protection related issues should be informed first to the management of MSPCL.
4. Once R&U scheme is completed in totality then the matter can be reviewed or referred to in petition.

Sr.EE, SLDC, P&ED Mizoram also supported the view of Manipur regarding Petition filed by NERLDC. He stated that it was unfortunate that SLDC has received petition regarding failures in protection system. Since P&ED Mizoram is a Govt. Department there is no clear demarcation. Further, he also informed that financial independence is not granted to SLDC. So, Engineer-in-Chief, P&ED Mizoram is the concerned representative.

Director (O&P), NERPC stated that SLDCs are Grid Operators in the respective states. So it is unjustified to hold them accountable for the entire working of the Power Department/ power utility in the respective state.

Thereafter, in view of the ongoing R&U scheme, regular discussion of repeated trippings and protection issues on various forums viz., OCC, PCC etc., and the current Covid19 pandemic situation, the forum in unison denounced the petitions filed by NERLDC and requested NERLDC to withdraw the petitions.

NERLDC informed the forum that although the issues of Protection and Telemetry in NER has been repeatedly discussed in various fora since past many years, substantial improvement in this regard has not been achieved so far. Through the petitions, NERLDC has appraised this situation to Hon'ble CERC, as mandated in IEGC, so that necessary guidelines are issued by the hon'ble commission in order that the individual states as well as NER as a whole may achieve sustainable development and secure & reliable NER grid.

The Sub-Committee noted as above.

Action: NERLDC

ADDITIONAL AGENDA FROM AEGCL:

D.23 Frequent tripping of 132kV Khandong-Umrangso-Haflong:

DGM, SLDC, AEGCL informed that due to frequent trippings of 132kV Khandong-Umrangso-haflong, CALCOM Cement plant located at Umrangso is affected.

Sr. DGM(AM), NERTS informed that most of the trippings are lightning related trippings and TLA will be installed in the line shortly. However, it was noted that in the AEGCL section vegetation overgrowth is present. It was also decided that NERTS & AEGCL would jointly check the line for infringement. NEEPCO informed that the time setting in E/F relay at Khandong has been reviewed and presently kept at 0.05.

The Sub-Committee noted as above.

Action: NERTS/AEGCL

ADDITIONAL AGENDA FROM NERTS:

D.24 Implementation of AR for lines connecting generating stations:

POWERGRID proposes to implement auto reclosure at PG end, for the lines connecting generating stations to avoid outages for transient faults.

The forum approved the same.

The Sub-Committee noted as above.

Action: NERTS.

D.25 Status of important projects implemented by POWERGRID:

CGM(AM), NERTS informed that various projects are being implemented in NER. He intimated the status as follows:

-> Diversion of 132 kV Dimapur-Imphal Line:

Foundation: 34/35 completed
Erection: 33/35 completed
Stringing: 11.4/14.6 Km completed.

->2x132 kV line bays at Biswanath Chariali for termination of 132 kV Itanagar – Biswanath Chariali line under NERSS II B project:

a. TBCB schedule : Mar'20
b. Expected completion : July'20

-> 2x400 kV GIS bays at both Misa S/s and Silchar S/s for termination of 400 kV Misa-Silchar line under NERSS IIB project:

a. TBCB schedule : Nov'20
b. Expected completion : Nov'20

->2x400 kV line bays at Mariani S/s for 400 kV New Kohima – New Mariani T/L and installation of 2x500 MVA 400/220 kV ICTs at Mariani S/s under NERSS VI project:

a. TBCB schedule : July'20
b. Expected completion : Oct'20

->2x400 kV line bays for 400 kV New Kohima – Imphal T/L including 1x125 MVAR Bus Reactor at Imphal S/s under NERSS VI:

a. TBCB schedule : July'20
b. Expected completion : July'20

-> Additional lines at Silchar & P.K. Bari ends for termination of 400 KV Silchar-P.K. Bari line (initially operated at 132 kV) at 400 kV Silchar (POWERGRID) and 400 kV P.K. Bari (ISTS) S/s under NERSS V project:

a. TBCB schedule : July'20
b. Expected completion : Oct'20

-> Additional lines at Palatana & Surajmaninagar ends for termination of 400 KV Palatana _ Surajmaninagar line (initially operated at 132 kV) at 400 kV Palatana S/Y and 400 kV Surajmaninagar (ISTS) S/s under NERSS V project:

a. TBCB schedule : July'20
b. Expected completion : Sept'20

->400 kV (Quad) Jigmelling – Alipurduar line:

Expected completion : March 2021

The Sub-Committee noted as above.

ADDITIONAL AGENDA FROM NERPC:

D.26 Agenda items referred to TCC/RPC by NERLDC:

Member Secretary, NERPC informed the forum that ED, NERLDC had written to NERPC with copy to Chairman, TCC & Member(GO&D),CEA (vide letter dated 18.05.2020 referring agenda items to TCC/NERPC. A reply to this letter vide letter dated. 29.05.2020 was sent to NERLDC stating that due to COVID situation it is inconvenient to hold TCC/RPC meetings at present. He however, stated that since meetings on grid incidences, operational issues etc., are being held regularly over VC, the gravity of the agenda items may be discussed in OCC meeting. Hence, during the 167th OCC meeting, Member Secretary desired to take up those items for discussion after completion of regular agenda items. However, ED, NERLDC was not present that time and the senior most officer of NERLDC present at that time mentioned that he was surprised to learn that those agenda items would be discussed in OCC meeting. The casual attitude on part of NERLDC is uncalled for and the forum viewed the matter seriously.

After sometime ED, NERLDC returned in the meeting and mentioned that as the meeting was continuing beyond 15:00 hrs without any break, he had to take a short break for taking lunch considering his health condition. On his arrival, ED NERLDC requested the forum to discuss the agenda items sent by NERLDC for discussion in TCC/NERPC.

Member Secretary mentioned that if senior level officers are leaving the meeting for some time due to unavoidable/urgent reasons, the forum should be well informed. However, the forum as well as the NERLDC officers was not aware that ED, NERLDC has gone for lunch. Further, in the absence of senior officer, the next senior most officer should have taken up the agenda items, but the senior most officer was surprised to learn that that those agenda items would be discussed. It indicates the lack of sincerity on the part of NERLDC. Member Secretary stated that due to unpreparedness on part of NERLDC, it will have no benefit to discuss those agenda in this meeting and advised NERLDC to put up those items in next OCC Meeting.

ED NERLDC highlighted that around 22 agenda items sent by NERLDC for discussion in 167th OCC Meeting via letter dated 12/06/2020 were excluded in the Agenda circulated by NERPC on 15/06/2020 without informing the reason for the exclusion.

Director, NERPC mentioned that some of the agenda items were pertaining to Protection, Telemetry & Commercial issues and requested NERLDC to put up those items in appropriate sub group meetings. He further intimated that it was also well informed before finalization of the 167th OCC Agenda meeting.

The Sub-Committee noted as above.

Date & Venue of next OCC meeting:

It is proposed to hold the 168th OCC meeting of NERPC on second week of July 2020. However, exact date and venue will be intimated in due course.

*****

Annexure-I

List of Participants in the 167th OCC Meeting held on19.06.2020

SN	Name & Designation	Organization	Contact No.
	No Representative	Ar. Pradesh	-
1	Sh. Bimal Ch. Borah, DGM (SLDC)	Assam	09435336126
2	Sh. R. Goswami, AGM (SLDC)	Assam	09435119248
3	Smti. B. Kashyap, AM	Assam	09854015601
4	Sh I. Tahbildar, DM, APDCL	Assam	-
5	Sh. Abhishek, AM, MRT	Assam,	-
6	Sh. L. Dinesh Kumar, GM (SLDC), MSPCL	Manipur	-
7	Smti. Khoisnam Steela, DGM (SLDC), MSPCL	Manipur	08730831103
8	Sh. Roshan Oinam, Manager	Manipur	-
9	Sh. S. Chandradhaja, OSD	Manipur	-
10	Sh. B.Saibon, SE	Meghalaya	
11	Sh. T. Gidon, EE (SLDC)	Meghalaya	-
12	Sh. D.J. Lyngdoh, EE	Meghalaya	
13	Sh. B. Nikhla, EE, MePTCL	Meghalaya	-
14	Sh. K. Kynjing, AE, MePTCL	Meghalaya	-
15	Sh. Benjamin L. Tlumtea, Sr. EE (SLDC)	Mizoram	09466151424
16	Sh. L. Sailo, JE	Mizoram	
17	Sh. Rokobeito Iralu, SDO	Nagaland	09436837020
18	Sh. Tia Kava, JE	Nagaland	-
19	Sh. Nitovi Wotsa, EE	Nagaland	-
20	Sh. Anil Debbarma, DGM (SLDC)	Tripura	09612589250
21	Sh. Debabrata Paul, Sr. Manager	Tripura	-
22	Sh. Mrinal Paul, Manager	Tripura	-
23	Sh. Joypal Roy, DGM	NEEPCO	-
24	Sh. V. Suresh, ED	NERLDC	09449599156
25	Sh. S.C. De, GM	NERLDC	09436335369
26	Sh. Sourav Mandal, Dy. Mgr (SO-I)	NERLDC	09402102354

27	Sh. Kritika Debnath, Engineer	NERLDC	09436930830
28	Sh. Palash Jyoti Borah, Dy. Manager	NERLDC	08761093397
29	Sh. U. Kataki, CGM	PGCIL	09435505418
30	Sh. H. Talukdar, Sr.DGM (AM)	PGCIL	09436335237
31	Sh. Narendra Kumar Gupta, Sr. Manager (O)	OTPC	09774233426
32	Sh. Vivek Karthikeyan, Manager	STERLITE	08966903034
33	Sh. D. Chaliha	KALPATARU	-
34	Sh. A.K. Thakur, Member secretary	NERPC	-
35	Sh. B. Lyngkhoi, Director	NERPC	09436163419
36	Sh. S. Mukherjee, Dy. Director	NERPC	08794277306
37	Sh. Rajib Das, AE	NERPC	-

उ.पू.क्षे ग्रिड प्रदर्शन

NER GRID PERFORMANCE

For the month May, 2020

North Eastern Regional Load Despatch Centre

POSOCO, Shillong

Highlights of the Month

Frequency Profile

Voltage Related Issues

Transmission Element Issues

Operational Issues

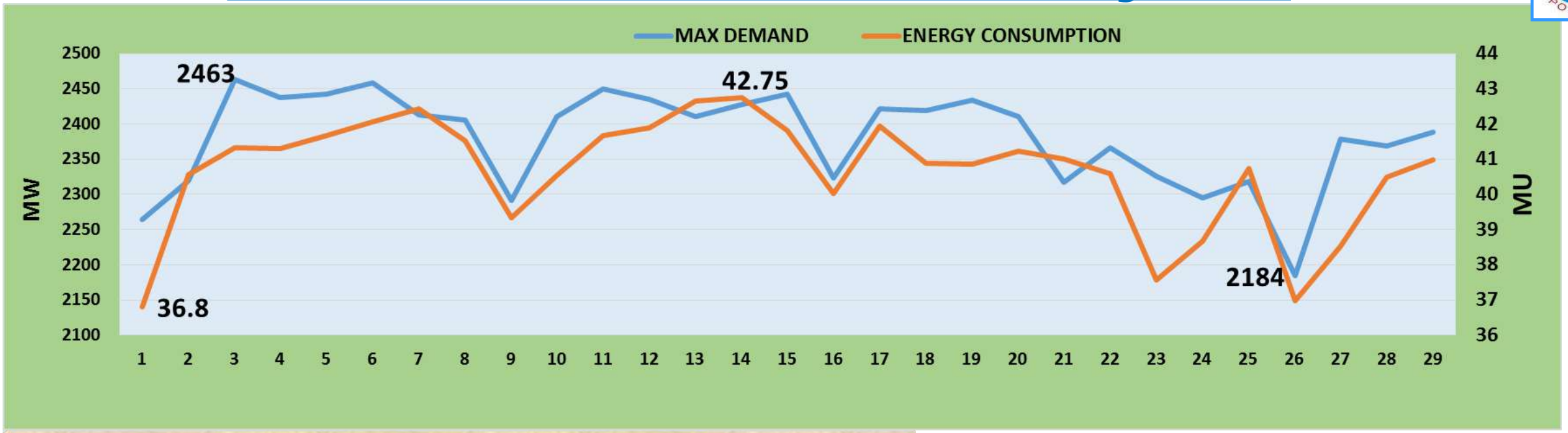
Network Issues

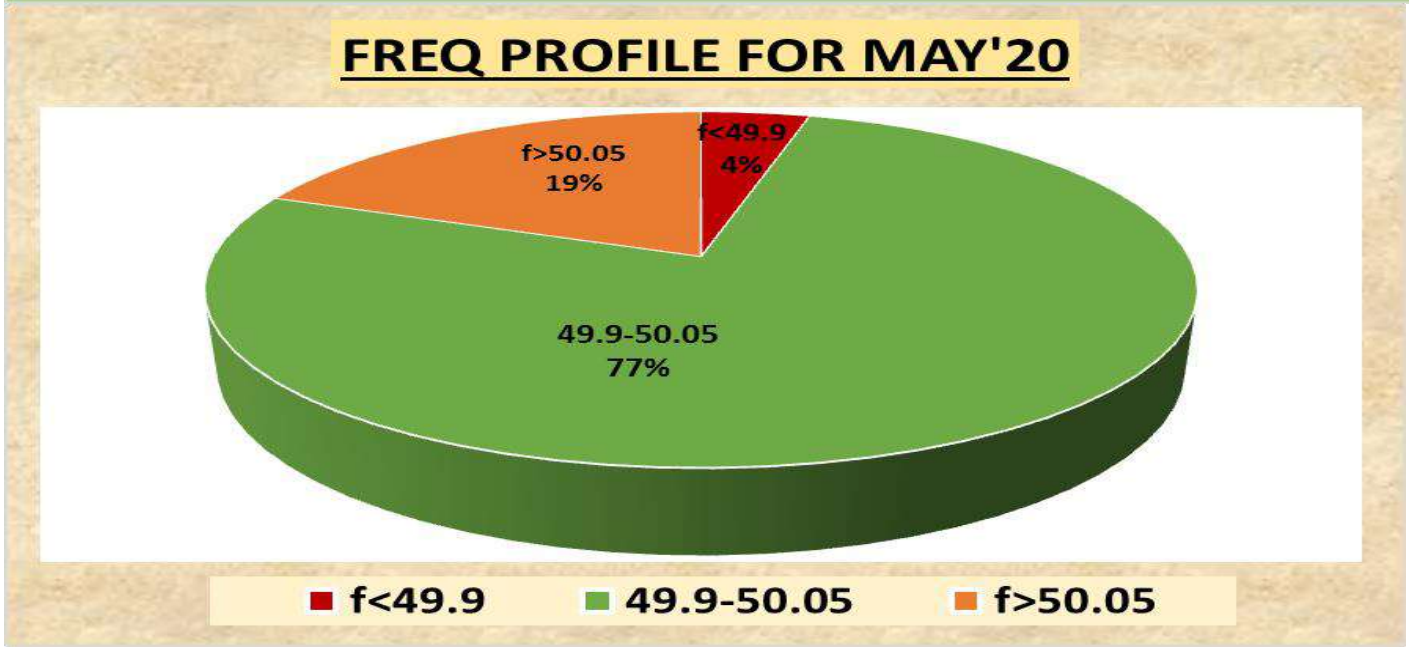
Protection Issues

Hydro Reservoir Levels

Communication Issues

Maximum MW and MU in NER: May 2020





No. of GD	15
No. of GI	9

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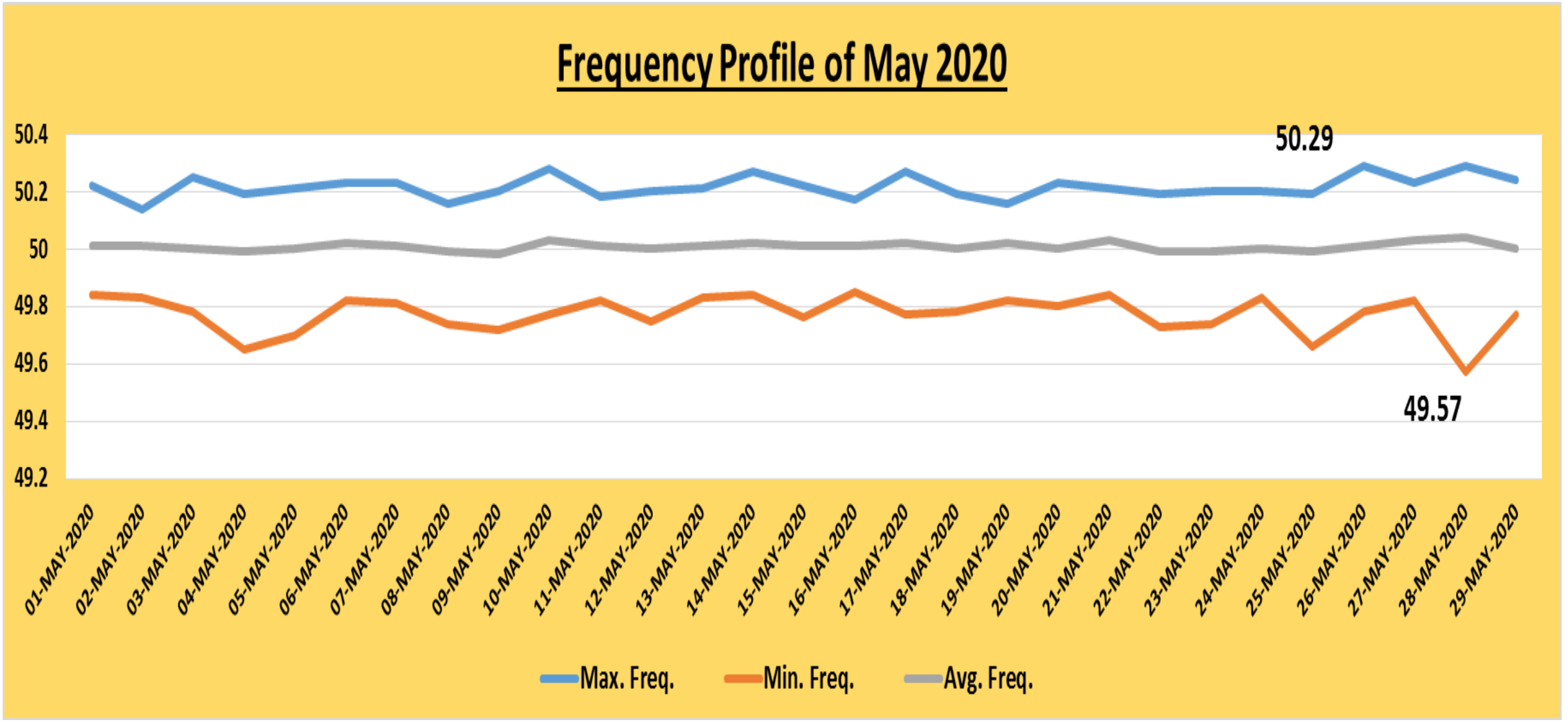
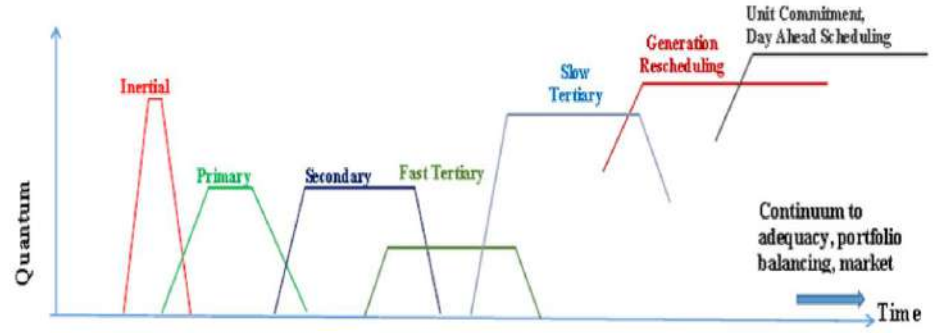
Frequency Profile



D.6. RGMO Analysis for events dated 17th May, 2020 and 28th May, 2020

- RGMO analysis report attached in **Annexure 1.1 and Annexure 1.2.**
- On 17/05/2020, response from all generating units on bar was negligible .
- On 28/05/2020, response from RHEP, Pare, Doyang and BGTPP were either zero or negative.
- Hydro Units generating at 110 % of their capacity due to spillage is not expected to give response
- Palatana GTGs gave more than desired response on 28/05/2020, but STGs gave negligible response.
- DAS data has been received from all units for event dated 17/05/2020. But DAS data was not received from RHEP, Doyang and Loktak for event dated 28/05/2020.



Response → Attribute	Inertial	Primary	Secondary	Fast Tertiary	Slow Tertiary	Generation Rescheduling/Market	Unit Commitment
Time	First few secs	Few sec - 5 min	30 s – 15 min	5 - 30 min	> 15 – 60 min	> 60 min	Hours/ day-ahead
Quantum	~ 10000 MW/Hz	~ 4000 MW	~ 4000 MW	~ 1000 MW	~ 8000-9000 MW	Load Generation Balance	Load Generation Balance
Local / LDC	Local	Local	NLDC / RLDC	NLDC	NLDC / SLDC	RLDC / SLDC	RLDC / SLDC
Manual / Automatic	Automatic	Automatic	Automatic	Manual	Manual	Manual	Manual
Centralized / Decentralized	Decentralized	Decentralized	Centralized	Centralized	Centralized/ Decentralized	Decentralized	Decentralized
Code / Order	IEGC / CEA Standard (?)	IEGC / CEA Standard	Roadmap on Reserves	Ancillary Regulations	Ancillary Regulations	IEGC	IEGC
Paid / Mandated	Mandated	Mandated	Paid	Paid	Paid	Paid	Paid
Regulated / Market	Regulated	Regulated	Regulated	Regulated	Regulated / Market	Regulated / Market	Regulated / Market
Implementation	Existing	Partly Existing	Pilot	Yet to start	Existing	Existing	Existing

D.14. Testing of Primary Frequency Response of Generators as per IEGC clause 5.2(g)

- The following proviso has been added at the end of the regulation 5.2(g) of Part 5 of the Principal Indian Electricity Grid Code (IEGC) Regulation: **"Provided that periodic checkups by third party should be conducted at regular interval once in two years through independent agencies selected by RLDCs and SLDCs as the case may be. The cost of such tests shall be recovered by the RLDC or SLDCs from the generators. If deemed necessary by RLDCs/SLDCs, the test may be conducted more than once in two years."**
- The selected testing agencies are given below:

Sl.No.	Testing Agency	Capability to carry out testing in two years	Allocated generators informed by POSOCO via communication Dated
1	M/s Siemens Ltd.	40	22nd Apr 2020
2	M/s Solvina India Pvt. Ltd.	200	13th May 2020

- The details of the generating units under purview of NERLDC for Primary Frequency Response is given as under:

Generating Machines under RLDC for testing Primary Frequency Response								
Sl No	Name of Utility	Station	Generating Unit	Capacity (MW)	Fuel Type	Allocation to which party?	Order Placed (Yes/No)	Details
1	NTPC	Bongaigaon TPP	1	250	Coal	Solvina		
2	NTPC	Bongaigaon TPP	2	250	Coal	Solvina		
3	NTPC	Bongaigaon TPP	3	250	Coal	Solvina		
4	NEEPCO	Monarchak	GT	65.42	Gas	Solvina		
5	NEEPCO	Monarchak	ST	35.58	Gas	Solvina		
6	NEEPCO	Kopili St II	1	25	Hydro	Solvina		
7	NEEPCO	Khandong	2	25	Hydro	Solvina		
8	NEEPCO	Ranganadi	1	135	Hydro	Solvina		
9	NEEPCO	Ranganadi	2	135	Hydro	Solvina		
10	NEEPCO	Ranganadi	3	135	Hydro	Solvina		
11	NEEPCO	Tuirial	1	30	Hydro	Solvina		
12	NEEPCO	Tuirial	2	30	Hydro	Solvina		
13	NEEPCO	Pare	1	55	Hydro	Solvina		
14	NEEPCO	Pare	2	55	Hydro	Solvina		
15	NHPC	Loktak	1	35	Hydro	Solvina		
16	NHPC	Loktak	2	35	Hydro	Solvina		
17	NHPC	Loktak	3	35	Hydro	Solvina		
18	OTPCL	Palatana	GT-II	232.39	Gas	Solvina		
19	OTPCL	Palatana	ST-II	130.91	Gas	Solvina		
20	NEEPCO	Doyang	1	25	Hydel	Siemens		
21	NEEPCO	Doyang	2	25	Hydel	Siemens		
22	OTPCL	Palatana	GT-I	232.39	Gas	Siemens		
23	OTPCL	Palatana	ST-I	130.91	Gas	Siemens		

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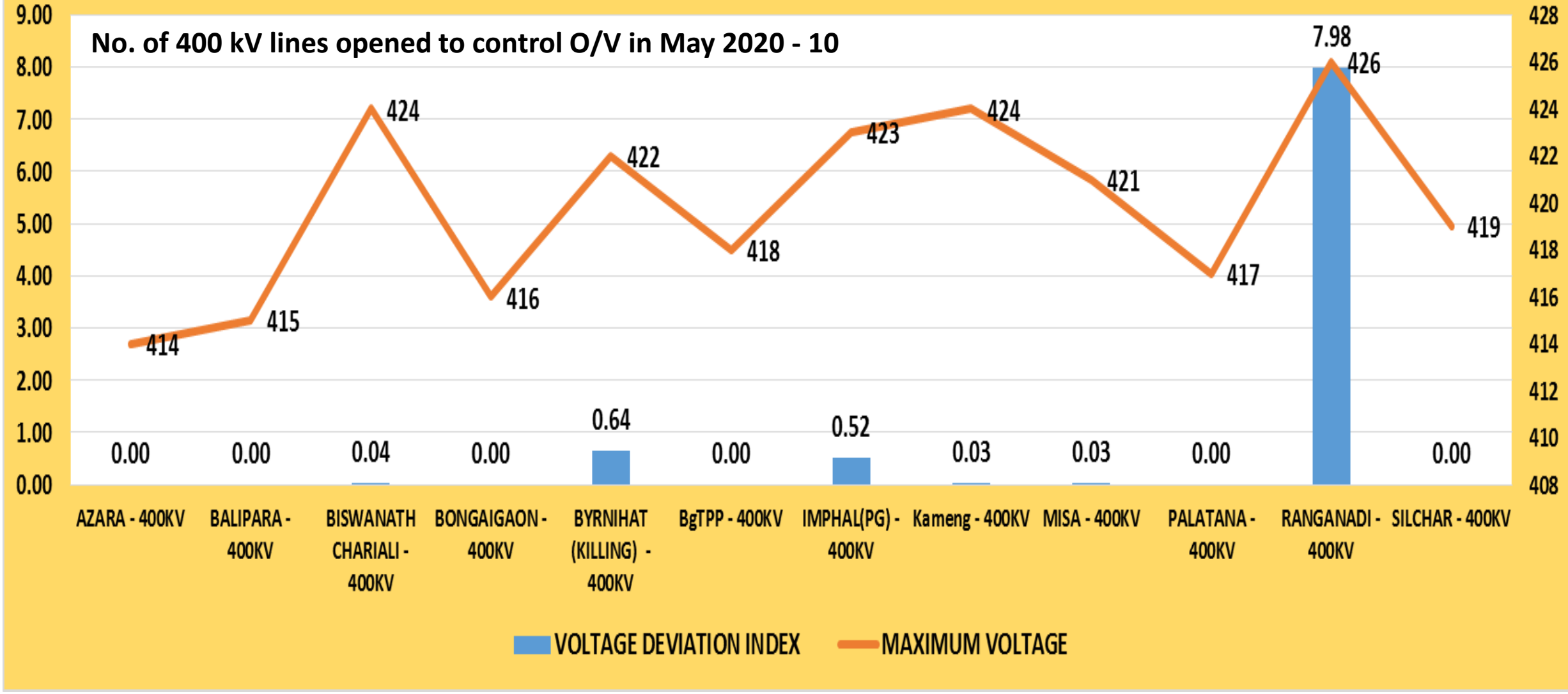
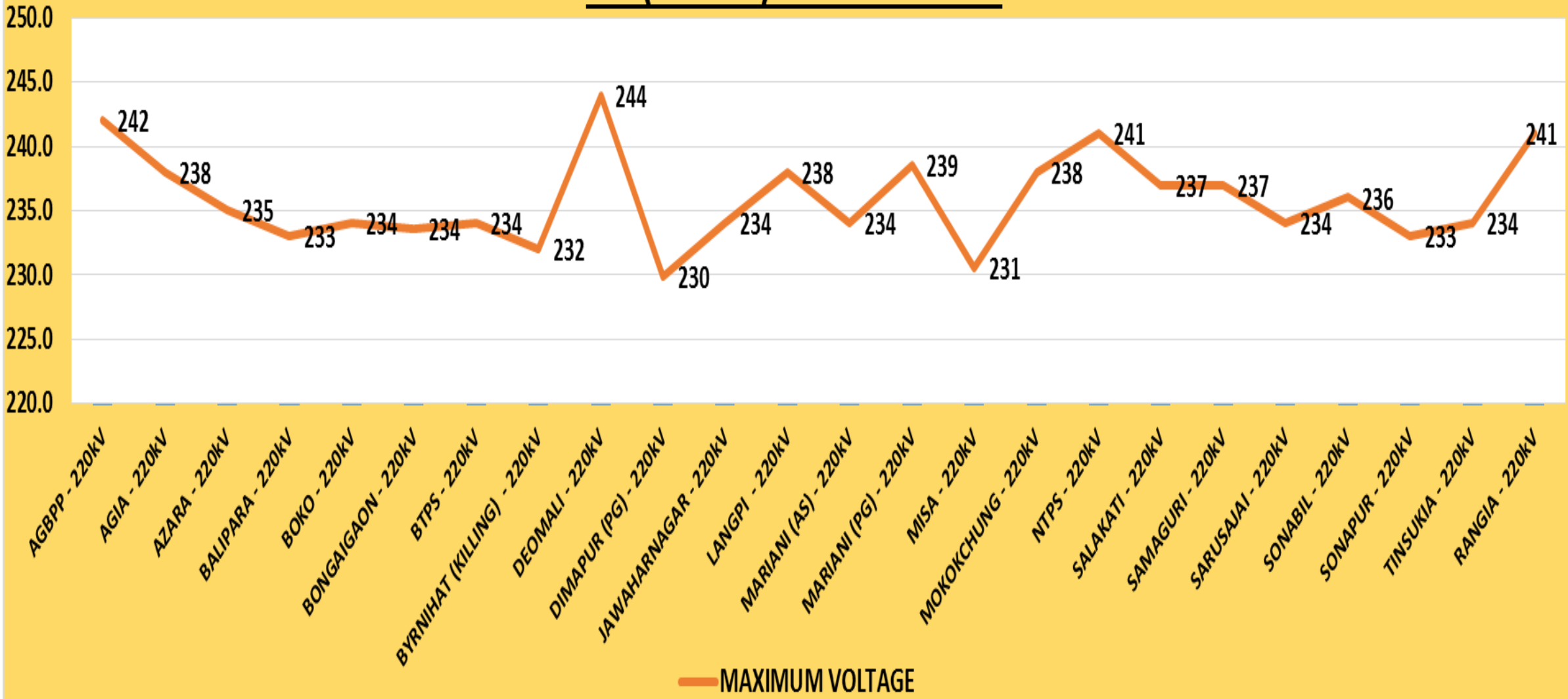
VDI (400 KV) FOR May 2020



VDI(200 KV) FOR MAY 2020



Voltage Issues

C.2. 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.**
- **The logic has already been sent to NERTS on 16.03.2020 and reminder on 09.06.2020.**
- **Status Review**

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Transmission Elements Issues

D.4. Restoration of Misa-Kopili-Khandong link

- Special task force formed consisting of members from NERPC, NERLDC & NERTS to furnish action plan for quick restoration by taking appropriate means including diversion of materials from other locations- **Status review**

C.1. 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
- NERTS to intimate the status

Operational Issues

D.5. 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 Apr'20 are as follows:

Day	Arunachal Pradesh	Assam	Manipur	Meghalaya	Mizoram	Nagaland	Tripura
Median	19	14	27	35	21	16	22

D.8. Non-reduction of State generation during planned shutdown of 400 kV Silchar-Byrnihat or 400 kV Silchar-Azara by Tripura

- During shutdown of 400 kV Silchar- Byrnihat or 400 kV Silchar –Azara, the generation reduction required from Tripura is around 70 MW.
- Tripura is requested to back down generations to ensure reliable and secure operation of NER Grid.

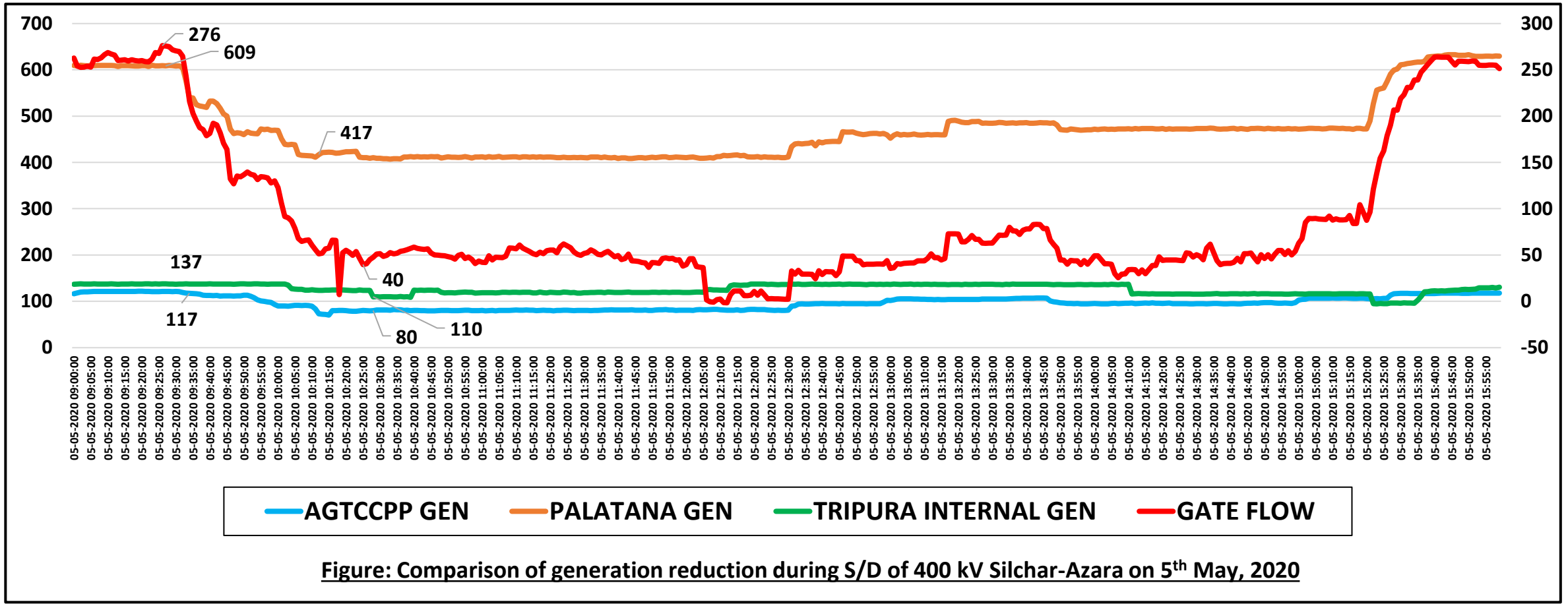
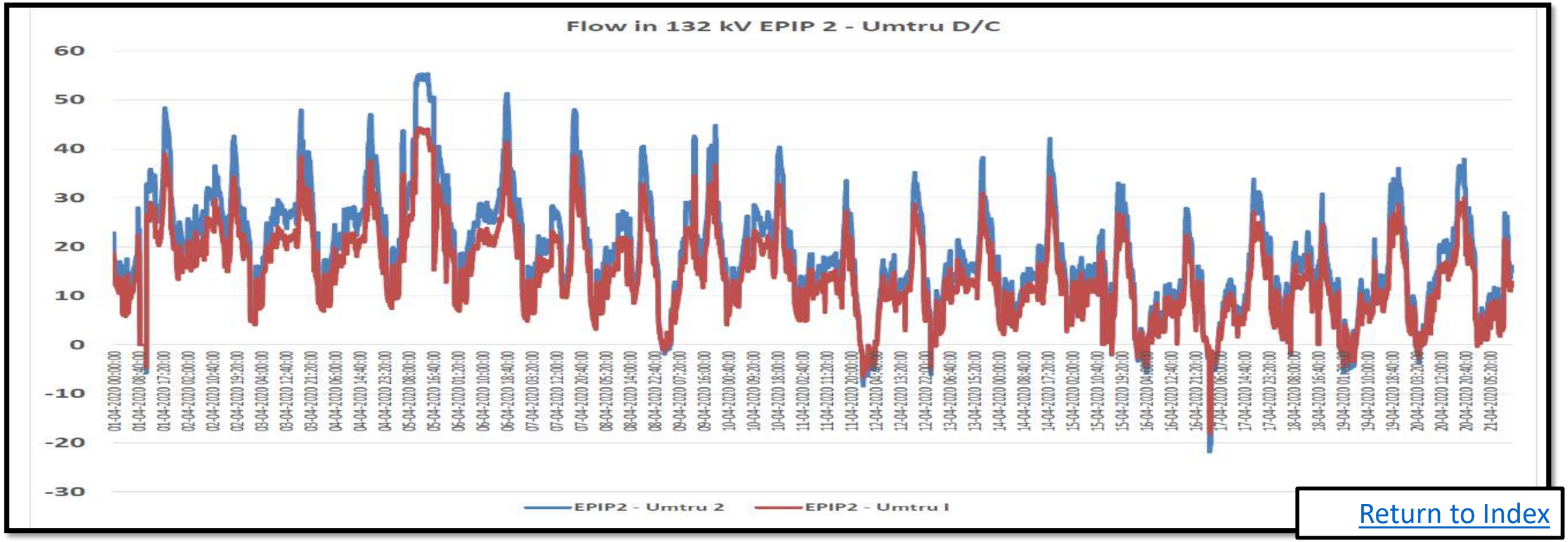


Figure: Comparison of generation reduction during S/D of 400 kV Silchar-Azara on 5th May, 2020

D.11. Overloading of 132 kV EPIP 2-Umtru D/C when closing 132 kV Umtru-Kahelipara D/C and 132 kV Umtru-Sarusajai D/C

- Maximum loading of 132 kV EPIP 2-Umtru I is around 55 MW & about 44 MW in 132 kV EPIP 2-Umtru II which is well below the thermal capability of 132 kV lines about 84 MVA(79 MW considering p.f. of 0.95 pu)
- Meghalaya may keep these lines closed at all times to ensure connectivity of Southern and Northern NER Grid



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Network Issues

Grid Disturbance during May 2020

Events / Incidents	May'19	Apr'20	May'20
No of GDs	20	15	15
No of GI	19	8	9

Tripping of the following lines has led to GD in the region:	
1. 132kV Pare-Lekhi S/C	caused GD 3 times
2. 132kV Dimapur-Kohima line	caused GD 2 times
3. 132 kV Along-Pasighat, 132 kV Ziro-Daporijo & 132 kV Daporijo-Along line	caused GD 3 times

Tripping of critical elements of NER Grid:

Transmission Line	No. of Trippings
1. 400 kV Silchar-Azara	1
2. 400 kV Silchar-Byrnihat	2

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 Review**

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Protection Issues

C.3. Auto-recloser issues at Azara:

- In 166th OCCM, it was informed that PLCC link is in working condition.
- Issues related to Single phase auto recloser of 400 kV Silchar - Azara line to be attended.
- Installation of TLSA in 400 kV Silchar- Azara & 400 kV Silchar-Byrnihat – Agreed in 160th & 166th OCCM Status Review- NETC
- **Status Review**

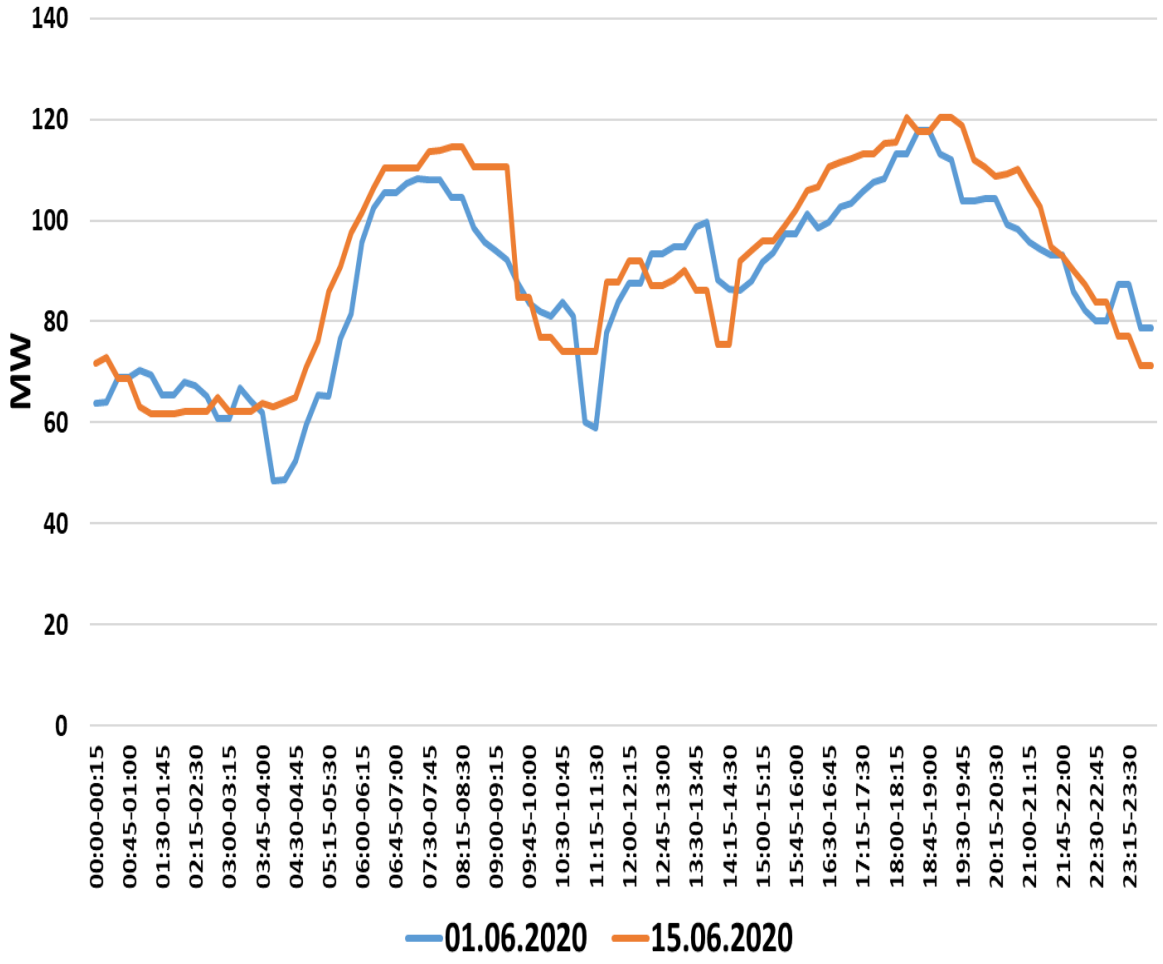
Other Items

D.12. Real Time Market (RTM) has been implemented on Pan India basis w.e.f 00:00 Hrs of 1st June 2020

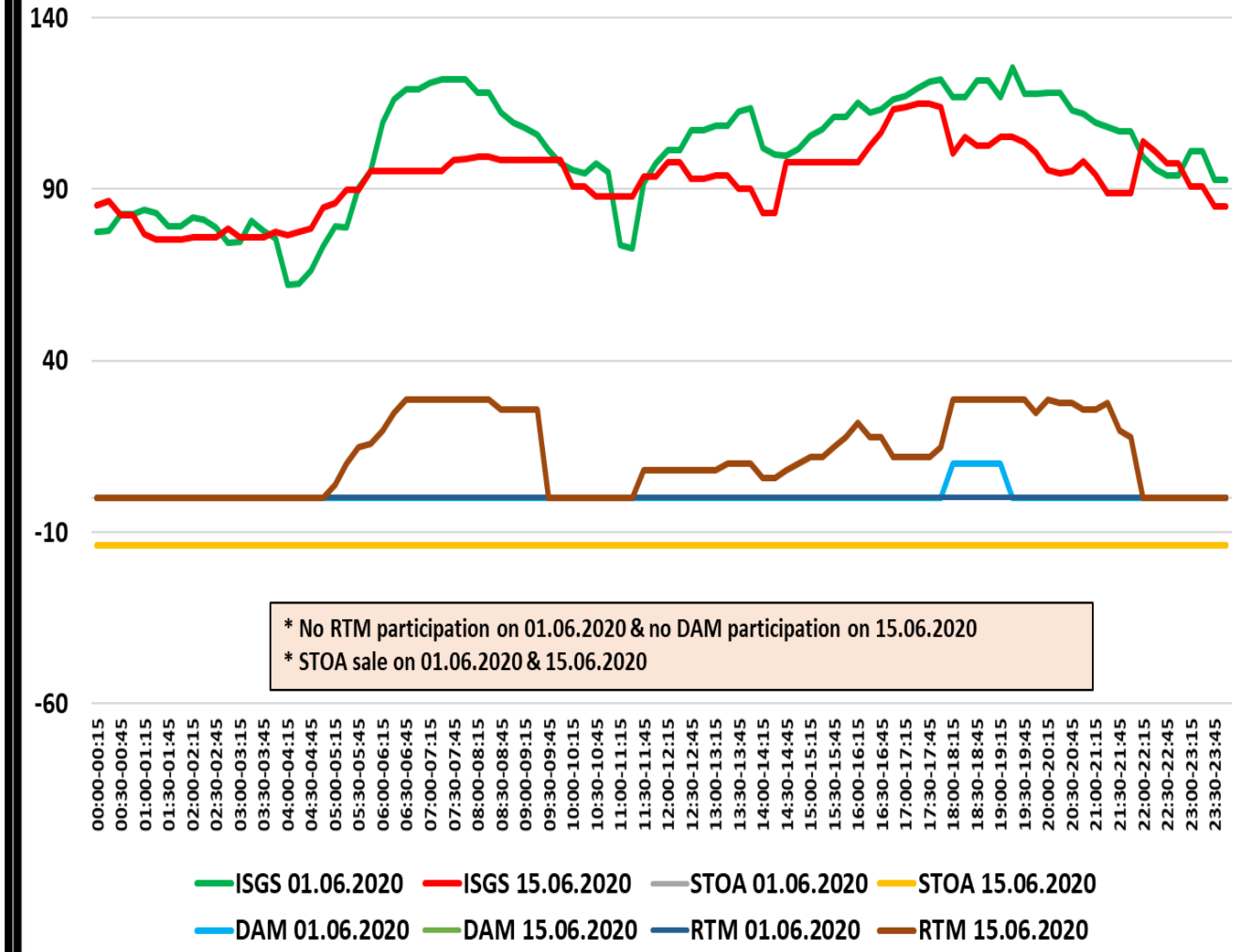
- Real Time Market was introduced by Hon'ble CERC on 12th Dec, 2019 and was successfully implemented on Pan India basis from 1st June, 2020
- Training on RTM was conducted for all NER constituents on 13th Feb.2020 in NERPC forum along with 165th OCCM and on 27th May 2020 through VC & WebEx by NERLDC
- POSOCO has updated the Web based Energy Scheduling (WBES) software to facilitate implementation of RTM. The new WBES was made live at NERLDC w.e.f. 00:00 Hrs of 30th May 2020
- Participation of NER Constituents in RTM till 9th June, 2020 (in MU) (+Buy; -Sell)

Assam	Manipur	Meghalaya	Nagaland	OTPC
0.71	1.16	-0.415	0.2	-0.715

Comparison of Net Schedule of Nagaland on 01.06.2020 & 15.06.2020



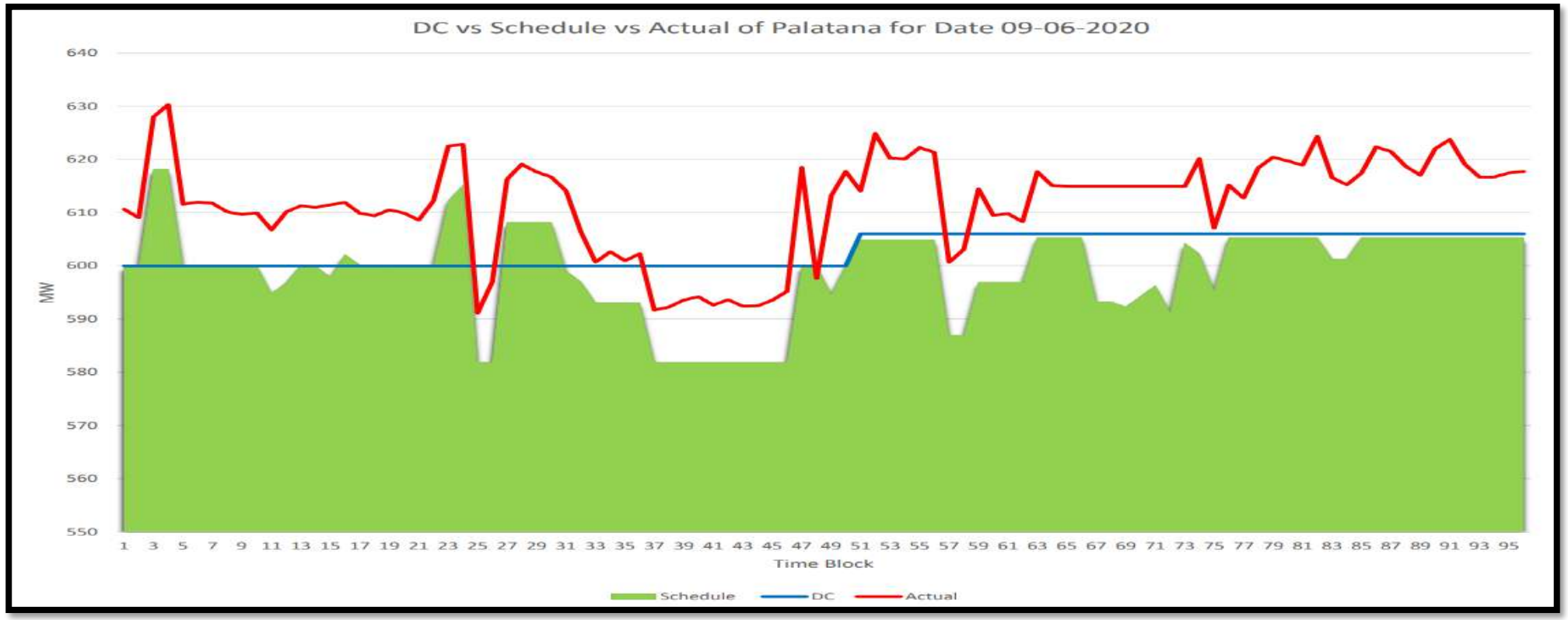
Breakup of Schedule of Nagaland for 01.06.2020 & 15.06.2020



Other Items

D.13. Over-generation by OTPC Palatana generating station schedule more than DC due to over bidding in RTM

- On 8th & 9th June'20, OTPC Palatana was generating more than their DC.
- Also, due to RTM sale more than their available URS, OTPC was scheduled more than DC.
- An email regarding same was sent to OTPC



Other Items

D.7. Continuous Deviation Violation by Tripura

- Continuous Over-drawal or under-drawal by Tripura by considerable amounts on many occasions even after issuance of Deviation violation messages & frequency violation messages from NERLDC & NLDC.
- Total 15 violation messages have been issued to Tripura in May 2020. **(Annexure 3)**

D.9. Testing of oscillation (LFO) with reduced generation of AGTCCPP

- To test the performance of the DVARs of AGTCCPP, NEEPCO, it is proposed to test the machines at reduced generation level. The generation may be increased in other units while testing a unit so that actual is not affected.

Other Items

D.10. Immediate implementation of SPS 2 & 4 related to Bangladesh

- During the special meeting held on 20.02.2020 for SPS 2 and SPS 4 related to Bangladesh, it was decided that the tripping can be done at Indian side. The issue was also discussed during the outage coordination meeting held on 22.05.2020 via VC.
- Two schemes out of the four schemes can be implemented on immediate basis to facilitate the shutdowns of 400 kV Silchar – Palatana I or II without reduction in generation of Palatana by keeping SPS-2 (India) in operation.

Other Items

Advisory regarding reliable and secure system operation during Solar eclipse on 21/06/2020

- India is going to experience Solar eclipse on 21/06/2020 from 0956 hrs to 1429 hrs
- Expected maximum reduction in solar generation 11943 MW on India basis (at 1150 hrs)
- Major points of Guidelines issued by NLDC:
  - ✓ Resources to be identified and kept on bar
  - ✓ Planned outages of IR transmission elements to be rescheduled
  - ✓ ISGS units on RSD to be kept on bar since 18:00 hrs of 20/06/2020
  - ✓ ISGS and State Hydro generations to meet demand ramp
  - ✓ Gas based units may be brought on bar by 0700 hrs of 21/06/2020
  - ✓ All regional entities to avoid real time deviations
  - ✓ Adequate RRAS will be despatched by NLDC
  - ✓ All defence mechanisms like SPS, UFR, etc to be kept in service.
  - ✓ RGMO/FGMO shall be kept in operation
  - ✓ All system parameters shall be closely monitored
  - ✓ Round the clock availability of SCADA data at each control room shall be ensured positively by respective SCADA teams

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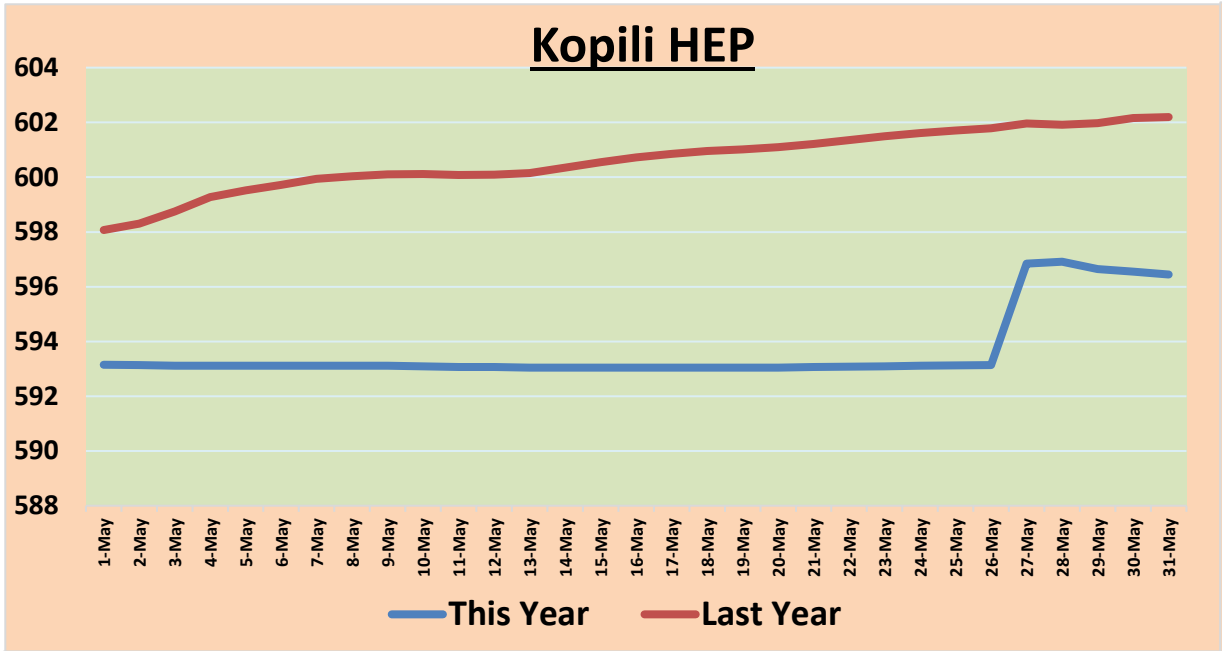
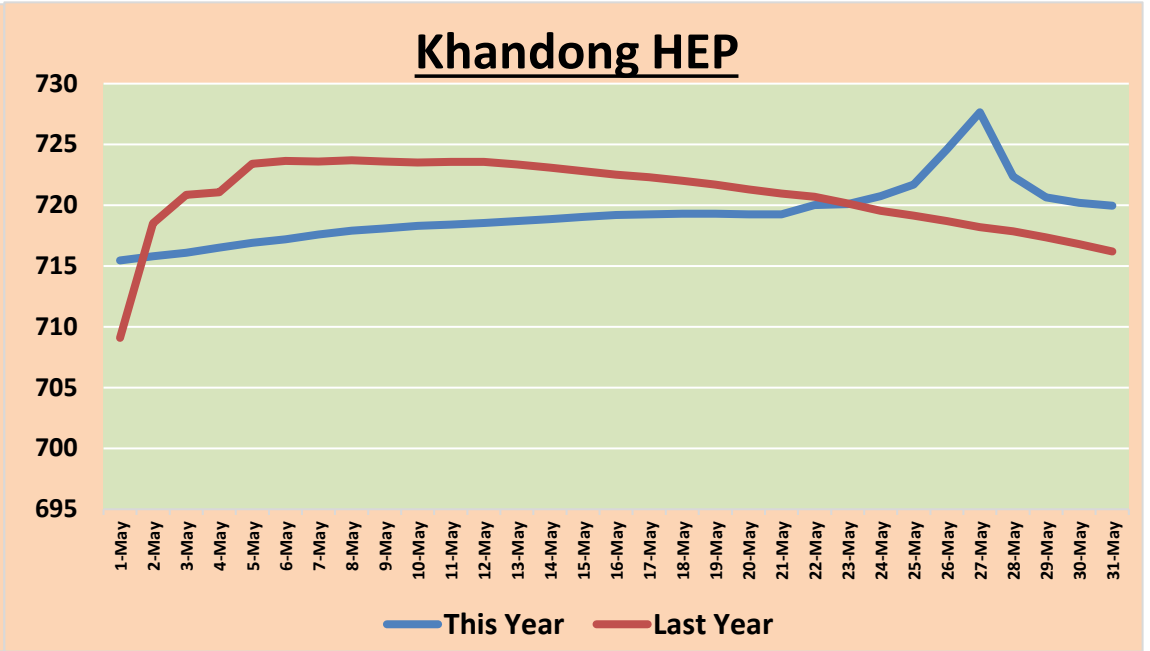
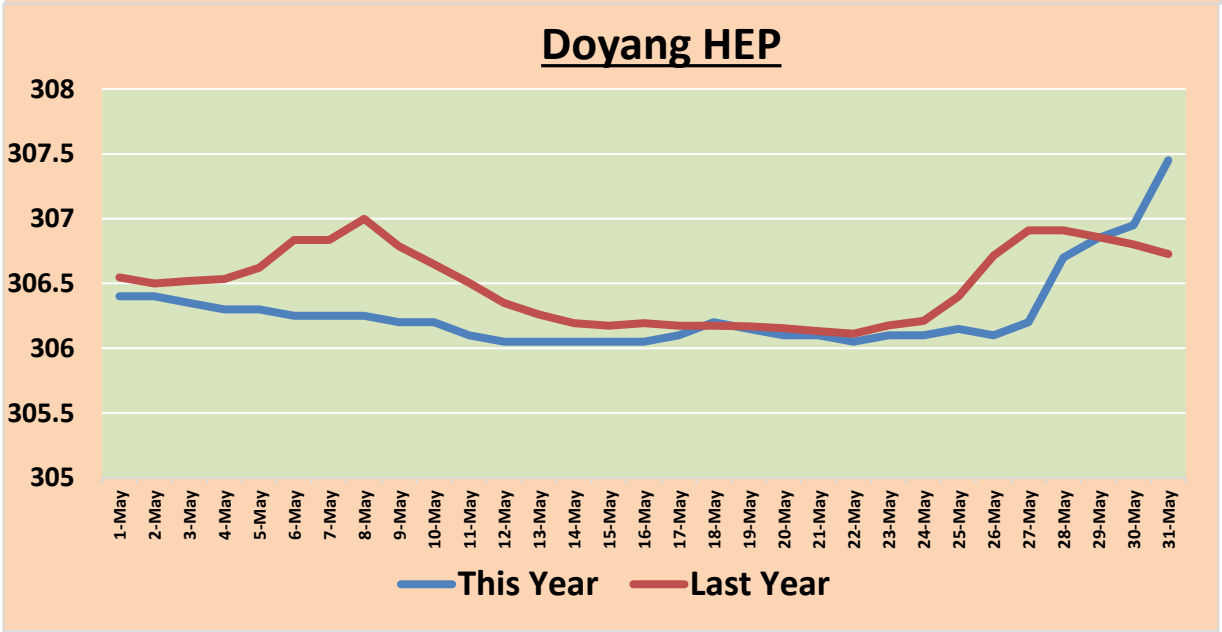
Number of Days as per Current Hydro Generation

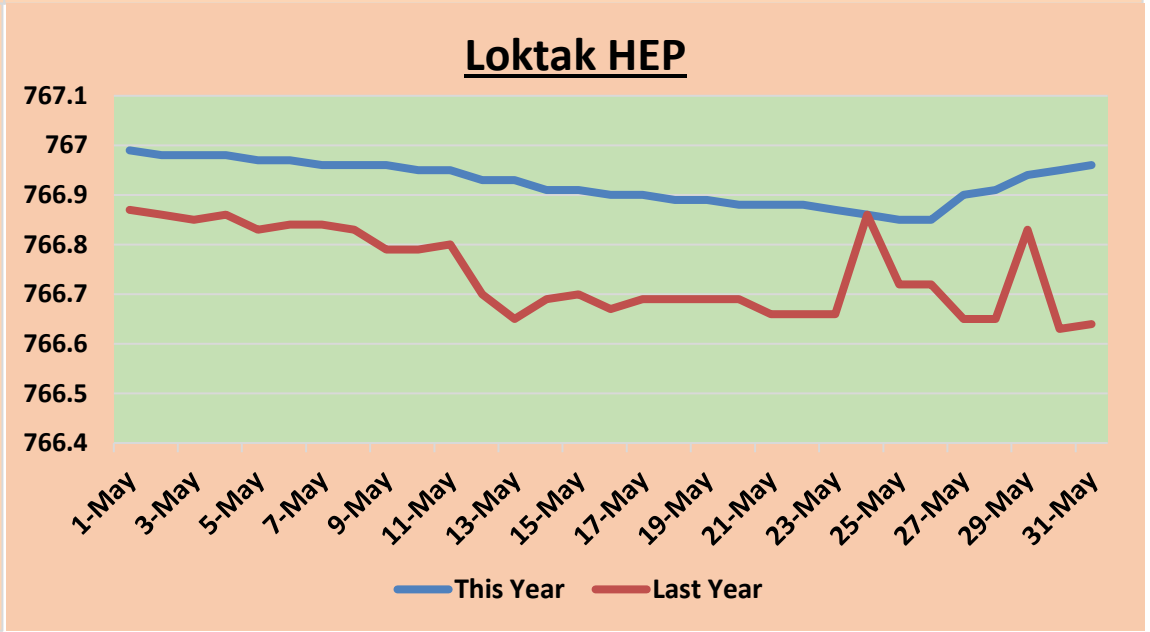
Plants	Reservoir Level in meters (as on 17/06/2020)	MU Content	Present DC (MU)	No of days as per current Generation
Khandong + Kopili STG II	719.65	25	0	-
Kopili	-	-	-	-
Doyang	307.4	2	0.7820	3
Loktak	767.34	49	1.629	30

RESERVOIR LEVEL – MAY 2020

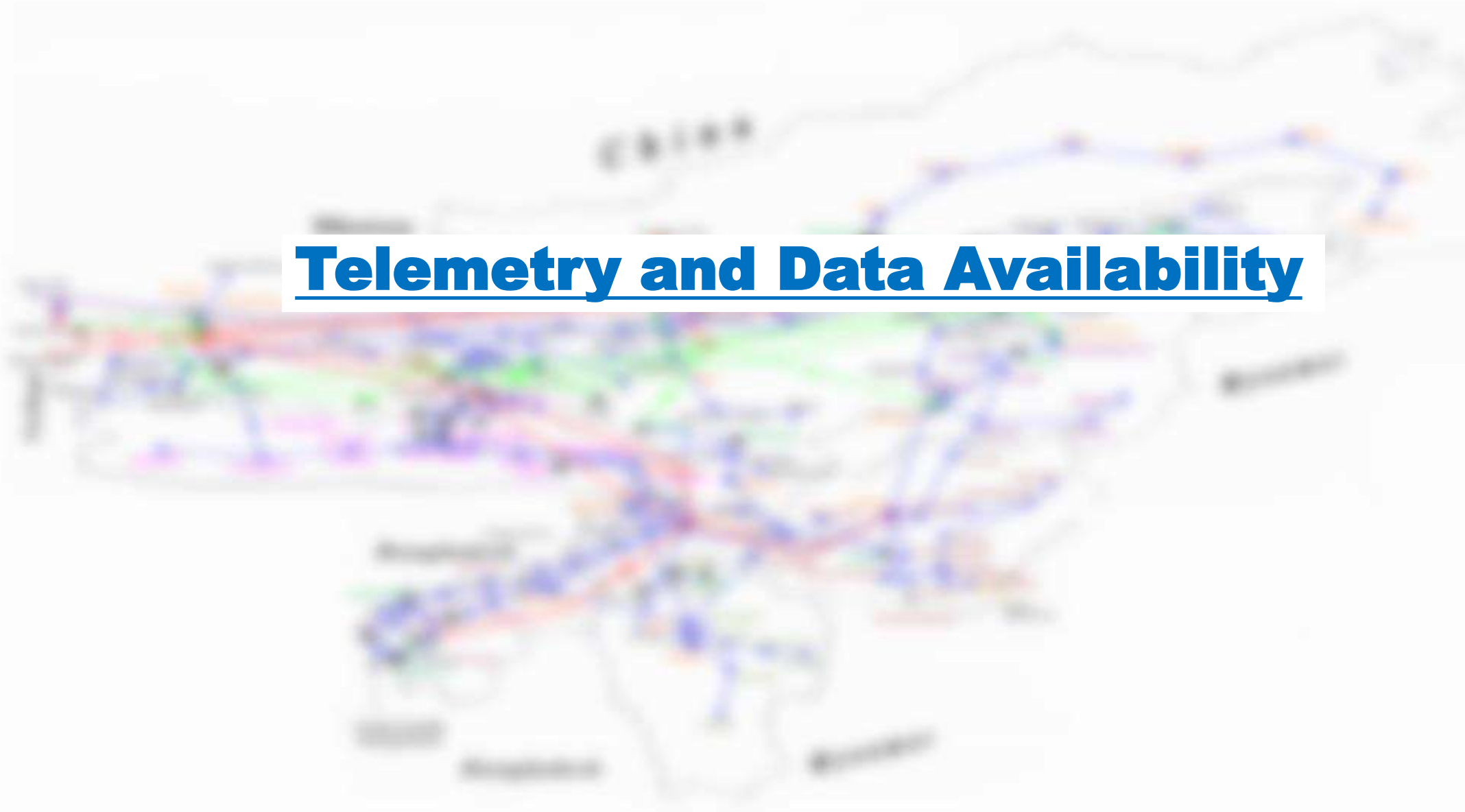




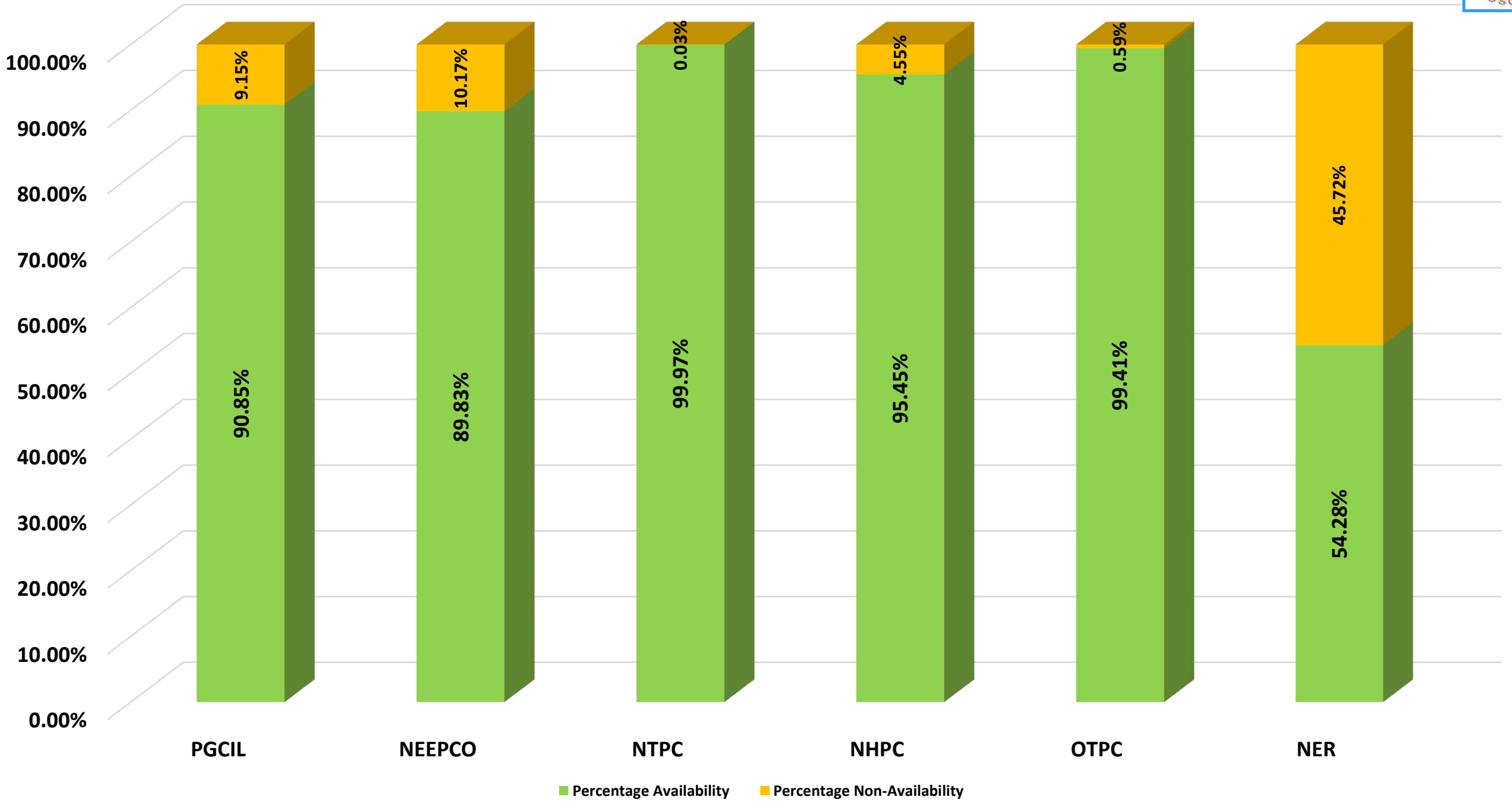




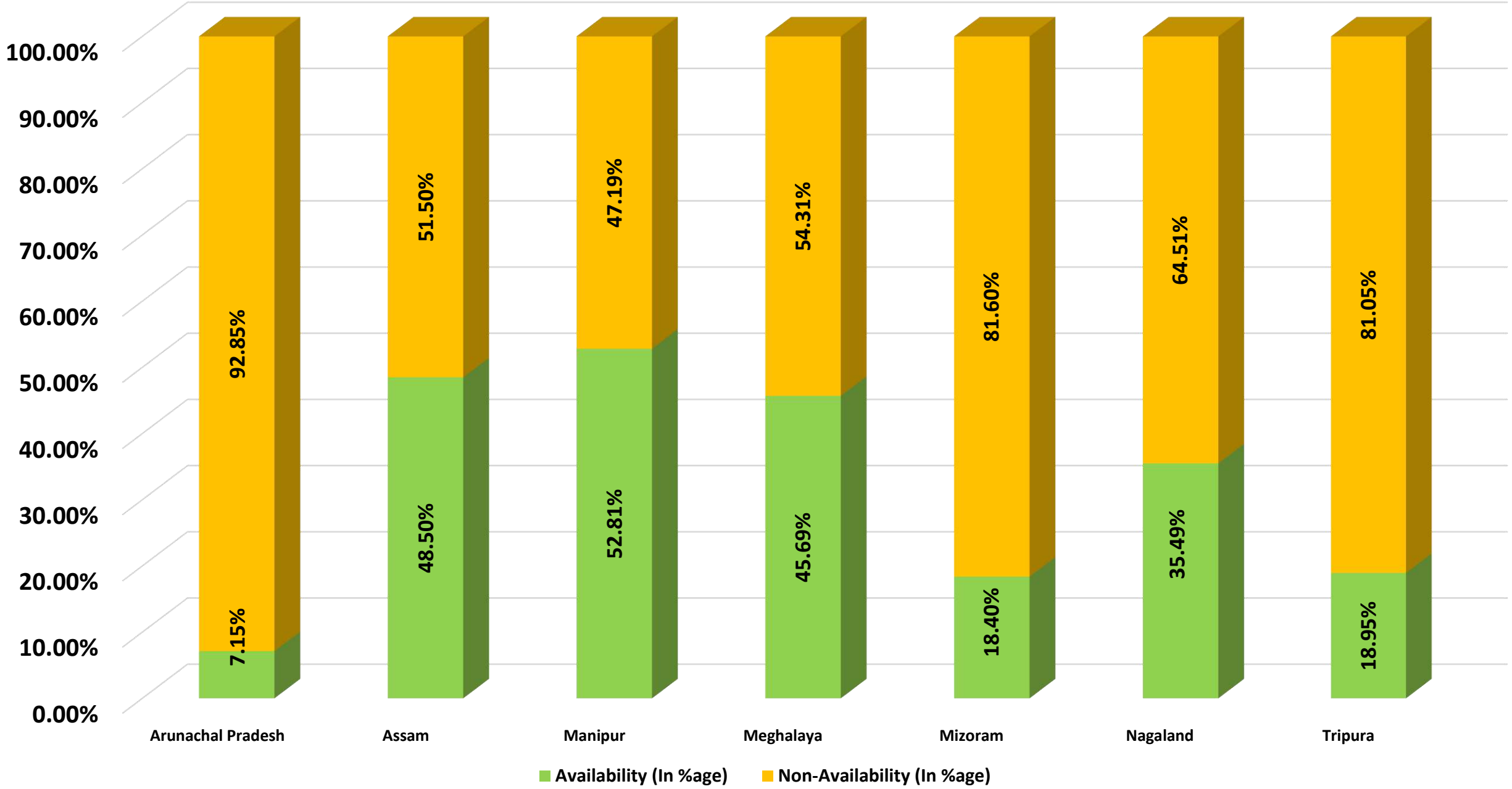
Telemetry and Data Availability



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



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



METERING STATUS REVIEW

D.15 SEMs to be Procured

- In 166th OCC Meeting, NERTS informed that M/L&T has submitted their bid that 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.
- **Status Review**

D.16 SEM time drift:

- Time drift in SEMs may result in computational errors in Regional Energy Accounts & Weekly loss.
- Alll constituents to take corrective actions for time correction whenever meter time drift > 1 minute

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 (PG)	REPORT NOT RECEIVED
	ASSAM	
15	GOHPUR	REPORT NOT RECEIVED
16	RANGIA	REPORT NOT RECEIVED
17	NAGALAND(S)	MONTHLY
18	MIZORAM(S)	REPORT NOT RECEIVED
	TRIPURA	
19	SM NAGAR	REPORT NOT RECEIVED
20	79 TILLA	REPORT NOT RECEIVED
	ARUNACHAL PRADESH	
21	CHIMPU	REPORT NOT RECEIVED
22	LEKHI	REPORT NOT RECEIVED
	GENERATION	
23	AGBPP	REPORT NOT RECEIVED
24	DOYANG	REPORT NOT RECEIVED
25	PALATANA	REPORT NOT RECEIVED

Locations not sending weekly SEM data

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

D.17. High DSM Outstanding

The status of DSM outstanding as on 08/06/2020 and up to Week-08 (18/05/20 to 24/05/20) is as below –

REGIONAL ENTITY	O/S PAYABLE TO POOL	O/S PAYABLE >13 WEEKS
Assam	5.05 Crores	Nil
Manipur	5.65 Crores	5.47 Crores
Meghalaya	4.54 Crores	2.70 Crores

D.18. DSM, RRAS, FRAS & Reactive Quarterly Reconciliation

Manipur, Mizoram, Tripura and NEEPCO yet to sign DSM Reconciliation (published upto Q-4, FY 2019-20).

Except Nagaland, others are yet to sign Reactive Reconciliation Statements.

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: AP, Assam, Meghalaya, Nagaland, BNC, NHPC, OTPC & NTPC – DSM Reconciled

Nagaland – Reactive Reconciled

D.19 Replacement of Meters

BgTPP and Nagaland has raised High Time Drift of SEM issue for the following meters:

- **a. NP-9643-A i.e BgTPP LV side of ICT I has time drift >20 min**
- **b. NP-8478-A i.e Dimapur end of 132 kV Dimapur_PG –Dimapur –II**
- **c. NP-8479-A i.e Kohima end of Kohima – Dimapur**

NERLDC informed that 2 nos. of meters have been installed on the HV side of ICT I and one of them may be replaced with the defective meter (NP-9643-A).

Meter Replacement- Status review

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)

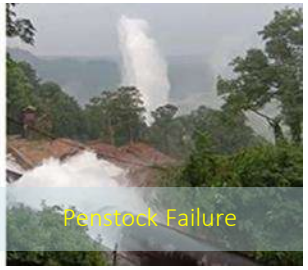
- In 165th OCCM, NERTS informed that all the said meters would be replaced by 31st Mar'2020
- NERTS is requested to provide new target date for the said Meter replacements

Thank You

Restoration of Transmission System associated with Kopili HEP

A presentation by POWERGRID, NERTS

Introduction


Penstock Failure


Water through Substation


Switchyard Inundated


Equipment buried in sand


Damage to Substation


Project affected

Penstock of Kopili HEP failed resulting on 7th October, 2019

Loss of Generation and Transmission associated with Kopili HEP

Restoration of Generation to take time

Transmission to be restored by POWERGRID

Ongoing Transmission Project (NERSS-III) to be completed

Transformer (160MVA 220/132kV ICT-II)

Leakage from oil pocket flanges

ODS, NIFS, Hydrant System damaged

Gasket replacement, Oil top-up & circulation required

ODS, FFS to be installed

Restoration Cost INR 47.66 lakh

Circuit Breakers (220kV)

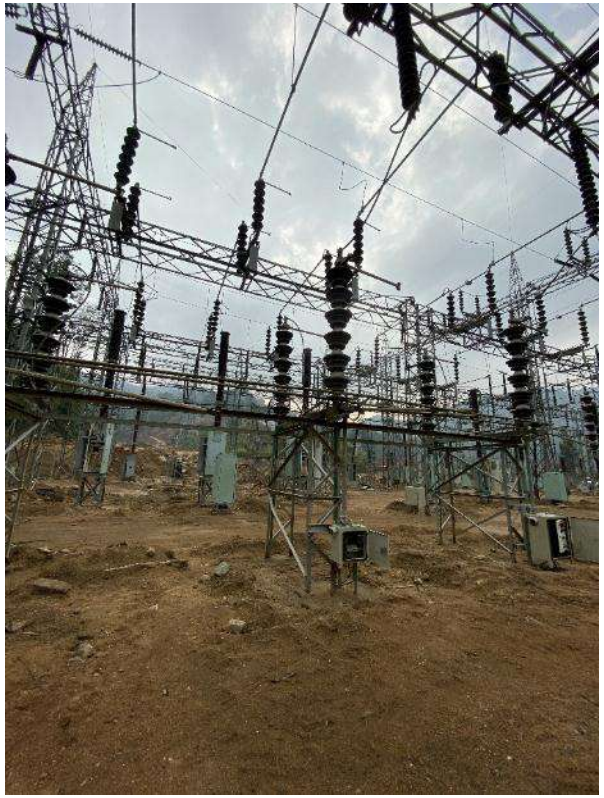
MOM Box & MB damaged

Complete CB to be replaced (5 nos.)

Existing foundations may be used

Restoration Cost INR 77.02 lakh

Isolators/ Earth Switch (220kV)

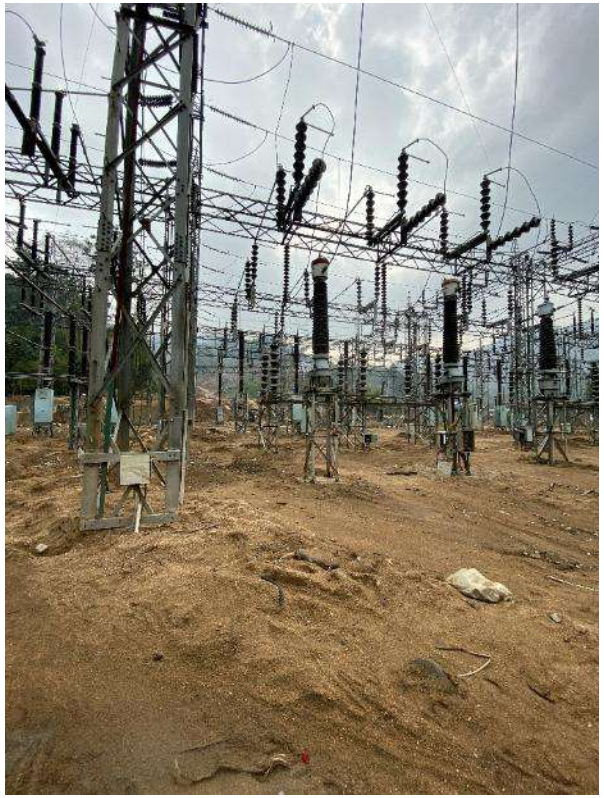


Isolator/ Earth switch damaged and to be replaced for all three bays.

MoM Box to be replac Old ised for other three bays.

Restoration Cost INR 32.92 lakh

CT, CVT, LA (220kV)



3 Core CTs (12nos.) to be replaced with 5 core

Old CVTs (2nos.) to be replaced

Damaged Las (3nos.) to be replaced.

Restoration Cost INR 50.89 lakh

Control & Protection

C&R, PLCC Panels in CR Building completely damaged, Kiosk Protn panels healthy

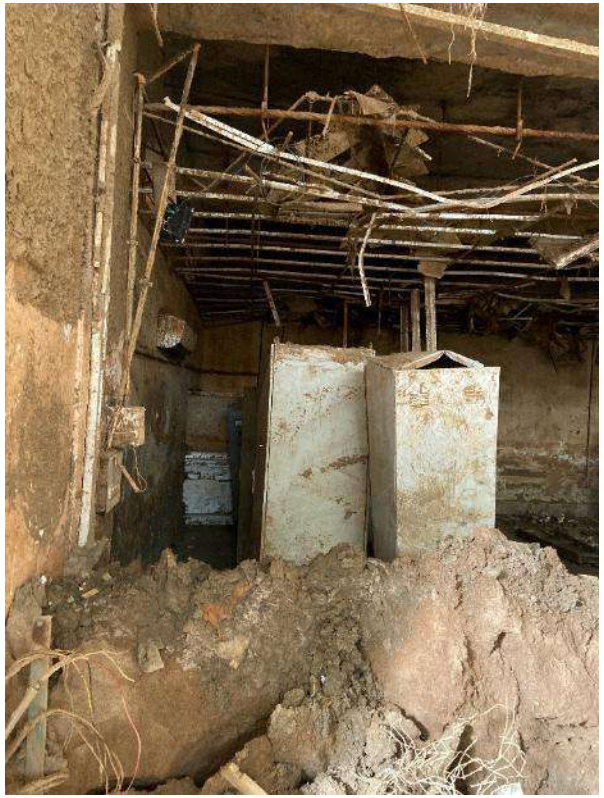
Protn panels to be diverted;

SAS to be implimented

PLCC equipment (3sets) to be procured after utilizing panels at remote ends.

Restoration Cost INR 52.92 lakh

Telecom/ RTU/ PMU



Telecom/RTU/ PMU Panels completely damaged

To be replaced

Panels to be accommodated in new Panel Room

Restoration Cost INR 180.58 lakh

Auxiliary Power Supply

NEEPCO to provide LT Power Supply at 415V, AC level

LTAC Panels installed under ongoing project to be utilized

220V DC System installed under ongoing project to be utilized

48V DC System to be procured

Restoration Cost INR 38.92 lakh

Fire Fighting System

Hydrant pipe line damaged

To be re-laid

Water Source not available at present – NEEPCO to provide

Portable Fire extinguishers & Fire Alarm system to be installed

Restoration Cost INR 13.10 lakh

Power & Control Cable

Buried under sand/debris

Damaged during site clearance

New cables to be laid

Restoration Cost INR 40.73 lakh

Panel Room/Kiosk

Existing kiosk dislodged - to be abandoned

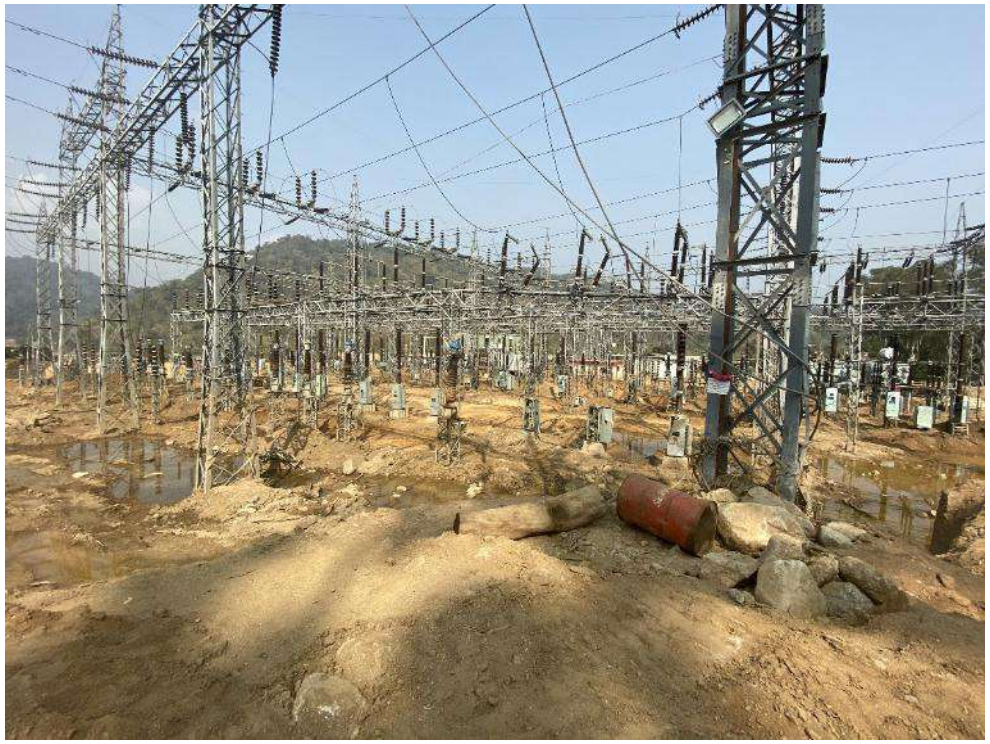
Existing Control Room completely damaged

New Panel Room to be constructed in switchyard

Panels to be accommodated in new Panel Room

Restoration Cost INR 19.95 lakh

Earth mat/ Cable Trench/ Hardware/ Lighting



Earth mat, Cable Trench damaged – to be re-laid/reconstructed

BMK, Switchyard Lighting, clamps/ connectors etc. to be replaced.

Switchyard Gavel removed – NEEPCO to re-spread

Restoration Cost INR 76.79 lakh

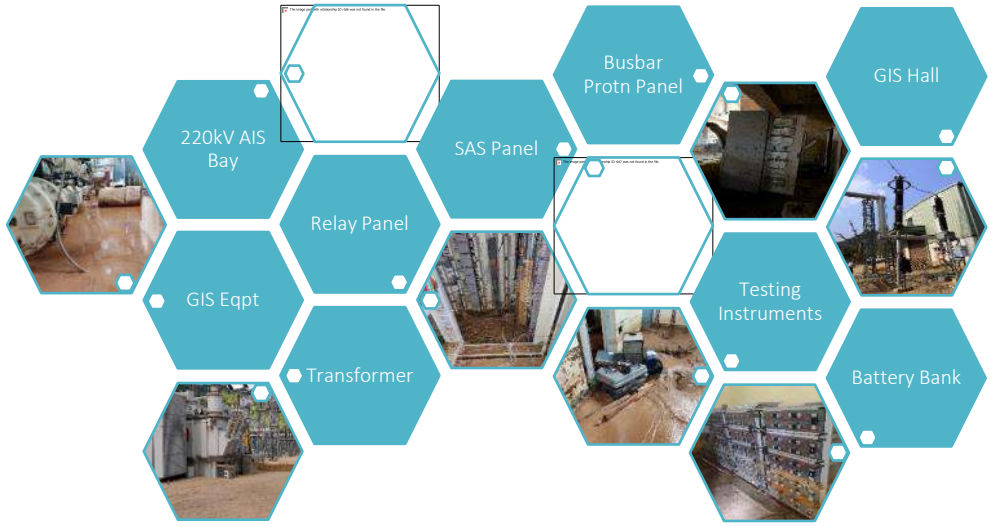
Switchyard Retaining Wall

Part of Retaining Wall washed off

To be reconstructed

Restoration Cost INR 43.05 lakh

Additional Expenditure for Ongoing Project



Contract Value :	INR 32.83Cr
Usable Value :	INR 14.67Cr
Insurance Claimable :	INR 18.16Cr
Deductible :	INR 0.77Cr
Additional Cost :	**INR 5.54Cr**

Restoration Road Map

Restore 220kV Line & Bus Coupler Bays (Misa-I, II & III)

- Replace/ repair damaged Equipment
- Install new Protection System

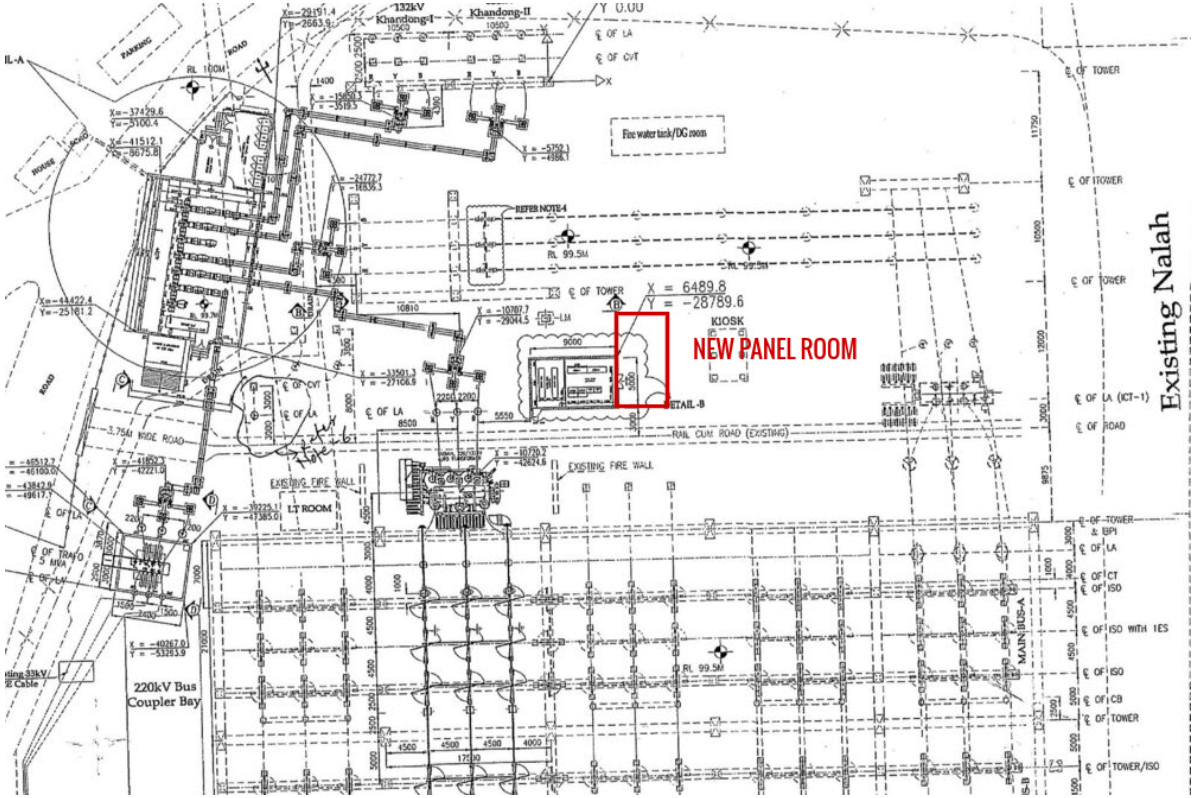
Restore 160MVA, 220/132kV Transformer (ICT-II)

- Overhaul Transformer – Gasket replacement & Oil Top-up
- Restore NIFPS & ODS

Restore 132kV Line (Khandong-II)

- Through GIS – if ready
- Through AIS – if GIS is not ready

Switchyard Layout



Summary of Expenditure

Sl. No.	Particulars	Estimated Expenditure (in INR Lakh)
1	Transformer (160MVA 220/132kV ICT-II)	47.66
2	Circuit Breakers (245kV)	77.02
3	Isolators/ Earth Switch (245kV)	32.92
4	CT, CVT, LA (220kV)	50.89
5	Control & Protection	52.92
6	Telecom/ RTU/ PMU	180.58
7	Auxiliary Power Supply	38.92
8	Fire Fighting System	13.10
9	Power & Control Cable	40.73
10	Panel Room/Kiosk	19.95
11	Earth mat/Cable Trench/Hardware/ Lighting	76.79
12	Switchyard Retaining Wall	43.05
13	Additional Expenditure for Ongoing Project	554.35
	Total Estimated Expenditure	**1228.88**

Thank you