



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

SPEED POST/FAX

Ph : 0364-2534039

Fax: 0364-2534040

email: nerpc@ymail.com

website: www.nerpc.gov.in

No.: No. NERPC/SE (O)/PCC/2024/3978-4019

January 28, 2025

To

As per list attached

Sub: 75वीं संरक्षण समन्वय उप-समिति (पीसीसी) बैठक का कार्यवृत्त/ Minutes of 75th Protection Coordination Sub-Committee (PCC) Meeting

महोदय/महोदया,

कृपया 16 जनवरी 2025 को NERLDC कॉन्फ्रेंस हॉल, गुवाहाटी में आयोजित 75वीं पीसीसी बैठक के कार्यवृत्त को आपकी जानकारी और आवश्यक कार्रवाई के लिए प्राप्त करें। कार्यवृत्त NERPC की वेबसाइट: www.nerpc.gov.in पर भी उपलब्ध है।

कृपया कोई भी टिप्पणी जल्द से जल्द NERPC सचिवालय को सूचित करें।

Sir/Madam,

Please find enclosed herewith the minutes of the 75th PCC Meeting held at NERLDC Conference Hall, Guwahati on 16th January 2025 for your kind information and necessary action. The minutes is also available on the website of NERPC: www.nerpc.gov.in.

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

भवदीय / Yours faithfully,

(ए. दे/ A. De)

उप निदेशक / Dy. Director

Encl: As above

Distribution List:

1. Managing Director, AEGCL, Bijuli Bhawan, Guwahati – 781 001
2. Managing Director, APGCL, Bijuli Bhawan, Guwahati – 781 001
3. Managing Director, APDCL, Bijuli Bhawan, Guwahati – 781 001
4. Managing Director, MSPCL, Electricity Complex, Keishampat, Imphal – 795 001
5. Managing Director, MSPDCL, Secure Office Bldg. Complex, South Block, Imphal – 795 001
6. Director (Transmission), MePTCL, Lumjingshai, Short Round Road, Shillong – 793 001
7. Director (Generation), MePGCL, Lumjingshai, Short Round Road, Shillong – 793 001
8. Director (Distribution), MePDCL, Lumjingshai, Short Round Road, Shillong – 793 001
9. Director (Tech.), TSECL, Banamalipur, Agartala -799 001.
10. Director (Generation), TPGCL, Banamalipur, Agartala -799 001.
11. GM (Transmission), TPTL, Banamalipur, Agartala -799 001.
12. Chief Engineer (WE 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. Chief Engineer (Commercial) -cum- CEI, DoP, Govt. of Arunachal Pradesh, Itanagar- 791111
15. Engineer-in-Chief, P&E Department, Govt. of Mizoram, Aizawl – 796 001
16. Engineer-in-Chief, Department of Power, Govt. of Nagaland, Kohima – 797 001
17. ED (O&M), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
18. ED (O&M), NHPC, NHPC Office Complex, Sector-33, Faridabad, Haryana-121003
19. Group GM, NTPC, Bongaigoan Thermal Power Project, P.O. Salakati, Kokrajhar- 783369
20. Vice President (Plant), OTPC, Badarghat Complex, Agartala, Tripura - 799014
21. ED, PGCIL/NERTS, Dongtiah-Lower Nongrah, Lapalang, Shillong -793 006
22. AGM (BD), NVVN, Core 5, 3rd floor, Scope Complex, 7 Institutional Area, Lodhi Rd., N. Delhi-3
23. Vice President, PTCIL, 2nd Floor, NBCC Tower, 15, Bhikaji Cama Place, New Delhi – 110066
24. Dy. COO, CTUIL, “Saudamini”, 1st Floor, Plot No. 2, Sector-29, Gurugram, Haryana – 122001
25. Chief Engineer, GM Division, Central Electricity Authority, New Delhi – 110066
26. Chief Engineer, NPC Division, Central Electricity Authority, New Delhi – 110066
27. Head & VP, (R&C), ENICL, IndiGrid, Windsor Building, Kalina, Santacruz (East), Mumbai- 98
28. ED, NERLDC, Dongtiah, Lower Nongrah, Lapalang, Shillong -793 006
29. CGM, AEGCL, Bijuli Bhawan, Guwahati – 781001
30. CGM, APGCL, Bijuli Bhawan, Guwahati – 781001
31. CGM, DISCOM, Bijuli Bhawan, Guwahati – 781001
32. Head of SLDC, Dept. of Power, Govt. of Arunachal Pradesh, Itanagar – 791111
33. CGM, (LDC), SLDC Complex, AEGCL, Kahilipara, Guwahati-781 019
34. Head of SLDC, MSPCL, Imphal – 795001
35. Head of SLDC, MePTCL, Lumjingshai, Short Round Road, Shillong – 793 001
36. Head of SLDC, P&E Deptt. Govt. of Mizoram, Aizawl – 796 001
37. Head of SLDC, Dept. of Power, Govt. of Nagaland, Dimapur – 797103
38. Head of SLDC, TSECL, Agartala – 799001
39. Chief Engineer (Elect), Loktak HEP, Vidyut Vihar, Kom Keirap, Manipur- 795124
40. DGM (O&M), OTPC, Badarghat Complex, Agartala, Tripura – 799014
41. AGM Regulatory & Commercial, NER II TL, 10th Floor, Berger Tower, Noida sector 16B-201301
42. Director, NETC, 2C, 3rdFloor, D21Corporate Park, DMRC Building Sector 21, Dwarka, Delhi-77.



(ए. दे/ A. De)

उप निदेशक / Dy. Director



सत्यमेव जयते

Minutes
of
75th PCCM



Govt. of India
Ministry of Power
North Eastern Regional Power Committee
Shillong

North Eastern Regional Power Committee

Minutes of

75th Protection Coordination Sub-Committee Meeting

Date: 16/01/2025 (Thursday)

Time: 11:00 hrs.

Venue: NERLDC conference Hall, Guwahati

The list of participants is attached as annexure I

A. CONFIRMATION OF MINUTES

1. CONFIRMATION OF MINUTES OF THE 74th PROTECTION SUB-COMMITTEE MEETING OF NERPC.

Minutes of the 74th PCC Meeting held on 16th December, 2024 (Monday) at NERLDC Conference Hall, Guwahati was circulated vide letter No.: NERPC/SE (O)/PCC/2024/3521-3562 dated 24th December, 2024.

Following comments were received from constituents

Agenda (74 th PCCM) and utility	Originally recorded in the minutes	To be modified/comments of the utility
B.5 (point no. 2) Non-operation of auto recloser in 220kV Behiating -Tinsukia line 1 for transient faults in November 2024 - NERPSIP	“NERPSIP to look into the matter as the line is maintained by them as of now”	The line has been handed over to AEGCL, so AEGCL to look into the matter.

The sub-committee discussed the comments and confirm the minutes of 74th PCCM including the comments.

B. ITEMS FOR DISCUSSION

B.1 Protection Audit of NER:

As per the protection code of IEGC 2023 following roles and responsibilities, related to the subject mentioned, of constituents have been defined–

Description		Constituent	Responsibility	Timeline
Audit	Internal Audit	All users (132kV and above)	Shall conduct internal audit of protection system	Annually
			Audit report to be shared with RPC	Within 30 days of Audit
			Action plan for rectification of deficiencies to be shared with RPC	Within 30 days of Audit
	Third party Audit	All users (132kV and above)	Shall conduct audit for each SS	Once in five years
			Shall conduct audit on advice of RPC	Within three months of advice of RPC
			Audit report* to be submitted to RPC and NERLDC/SLDC	Within a month of submission of third-party audit report
			Action plan for rectification of deficiencies	Same as above
		RPC	Compliance to audit reports to be followed up regularly	Not specified
		RPC	After analysis of any event, shall identify substations where audit is required to be carried out	Conditional responsibility

	Annual audit plan	All users	Annual audit plan to be submitted to RPC by 31st October	Annual
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Background: In 60th PCCM the following points were discussed-

Member Secretary NERPC informed that third party protection audit has to be generally conducted by the utilities on their own. However, the 3rd party audit will be carried out by team constituted by NERPC at selected substations based on the criticality, analysis and requirement. In this regard, NERPC has already circulated an audit calendar and audit formats for reference of the constituents.

The nodal officers of respective State/Power Utilities have to fill the audit formats and submit to the NERPC secretariat within 1 week. The forum decided that compliance to audit reports will be followed up regularly in PCC meeting of NERPC.

Information regarding substations that have already been audited will be provided by States to NERPC & NERLDC. *Forum agreed that all users (132 kV and above) have to conduct Internal Audit annually and submit audit report to RPC with action plan for rectification of deficiencies within 30 days of Audit.*

Regarding audit plan of utilities, the forum requested the utilities to furnish the list of substations and audit (internal as well as third party) schedule for FY 2024-25. NERLDC stated that a google spreadsheet has been circulated to the constituents to provide the schedule of protection audit as well as date of last audit. The forum requested the constituents to update the spreadsheet.

In 74th PCCM, following points were discussed -

Utilities updated as follow-

Sr No	Utility/ Constituents	Internal Audit		External audit	
		Status	report	Status	report

1.	Ar. Pradesh	Chimpu – done. Lekhi and Pashighat by March'25	Report of Chimpu to be submitted soon.	Financial approval for the audit pending. Schedule to be decided afterwards. Requested NERPC to conduct the audit meanwhile.	NA
2.	Assam	Done for 61 SS	Not yet submitted	NERPC conducted audit of 6 SS in Jan to June'24. Other SS done in 2021-22. Only Karimganj left.	submitted
3.	Manipur	Done for all SS	Submitted	8 SS to be done, Schedule to be decided, subject to law and Order situation. Audit of Imphal SS may be done by NERPC team.	NA
4.	Meghalaya	Internal audit of 132kV Nangalbibra, 132kV Rongkhon, 132kV Mendipathar, 132kV Ampati and 132kV Umiam SS has been completed between July'24 to October '24.	Report to be shared shortly	Audit of 6 SS (Killing, EPIP I, EPIP II, NEHU, Mawlai an Mawphlang) conducted by NERPC on 26 th and 27 th August'24	Report to be shared by end of December'24

		For rest SS, will try to complete by Dec'24.			
5.	Mizoram	Done for all SS	Report shared	Audit of Luangmual, Zuangtui and Kolasib planned in August'24. List of external agencies awaited. Searching for parties to conduct audit.	NA
6.	Nagaland	Done for four SS	Report shared	Audit of 5 ss to be done in Mid of November'24. For rest, to be planned later.	NA
7.	Tripura	11 done, rest by December '24. For 66kV SS - audit by Decmber'24.	To be shared by Jan'25	Jan-Feb'25	NA
8.	Powergrid (NERTS)	POWERGRID has completed & submitted internal protection reports for 18 nos. of substations.	Shared	External audit completed for Misa & Salakati s/s.	
9.	NTL	Utilities to update status			
10	KMTL				
11	MUML	Planned in Dec'24 for	To be shared		

		N.Lakhimpur- Pare line bays and N.Lakhimpur- Nirjuli bays at Lakhimpur			
12	NEEPCO	Pare, Ranganadi and Turial done. RC Nagar and Kathalguri to be planned	Shared for Pare and Turial	To be planned. Waiting for the list of agencies from NPC	
13.	OTPC (Palatana)	Done		Done	shared
14.	NTPC (BgTPP)	Done	shared	Done (by CPRI)	Report to be shared in three weeks
15.	NHPC (Loktak)	By Jan'25		To be done after R&M of the plant	
16.	APGCL	Utilities to update status			
17.	TPGCL				
18.	MEPGCL	Audit of Umiam stg I and Stg II was done in 2021, rest under planning	To be shared		

Further discussion-

1. DoP Arunachal Pradesh updated that financial approval for the external audit is pending with higher authorities. Meanwhile DoP AP, requested NERPC to conduct the 3rd Party audit for few substations. Forum opined that NERPC may conduct the audit of critical substations of Ar. Pradesh and the schedule will be decided by NERPC in due course.

2. Forum opined that the audit of Imphal SS (PGCIL) and Yurembam (MA) may be conducted by NERPC at a suitable date by considering the Law-and-order situation. These substations are also critical for Manipur grid.
3. Meghalaya stated that there is urgent requirement of protection audit of Lumshnong substation and requested NERPC to conduct the audit as soon as possible. Forum opined that the audit may be done in Jan'25.
4. It was decided that Audit of the 5 S/S of Nagaland can be conducted in Jan'25 by NERPC and audit of Kolasib (Mizoram), Aizwal (PG), Melriat (PG) and other nearby important substations also to be conducted in Jan'25.

Deliberation of the sub-committee

Utilities updated as follow-

Sr No	Utility/ Constituents	Internal Audit		External audit	
		Status	report	Status	report
1.	Ar. Pradesh	Chimpu – done. Rest to be done	Report of Chimpu to be submitted by December'24	Financial approval for the audit pending. Schedule to be decided afterwards. Requested NERPC to conduct the audit meanwhile. MS NERPC stated that NERPC will conduct audit of only critical substations. Further it was decided that audit of Pashighat and Along substations may be conducted in Feb'25	NA
2.	Assam	Done for 61 SS	submitted	NERPC conducted audit of 6 SS in Jan to June'24.	submitted

				Other SS done in 2021-22. Only Karimganj left. Forum advised to start identifying external agencies to carry out the third party audit for next phase of audit.	
3.	Manipur	Done for all SS	Submitted	8 SS to be done, Schedule to be decided, subject to law and Order situation. Audit of Yurembam ss and Ningthoungkong ss may be done by NERPC team soon.	NA
4.	Meghalaya	Internal audit of 132kV Nangalbibra, 132kV Rongkhon, 132kV Mendipathar, 132kV Ampati and 132kV Umiam SS has been completed between July'24 to October '24. For rest 14 SS, will try to complete by Mar'25.	Report to be shared shortly	Audit of 6 SS (Killing, EPIP I, EPIP II, NEHU, Mawlai an Mawphlang) conducted by NERPC on 26 th and 27 th August'24. For other substations, seek offer from CBIP, yet to receive offer. 3rd party audit of Lumshnong may be done by NERPC by first week of Feb'25.	Report to be shared by end of January'24
5.	Mizoram	Done for all SS	Report shared	Audit of Luangmual, Zuangtui and	NA

				<p>Kolasib planned in August'24. List of external agencies awaited. Searching for parties to conduct audit.</p> <p>Audit of Kolasib, Aizawl, Melriat (PG) and Luangmual to be done in Feb'25 by NERPC</p>	
6.	Nagaland	Done for four SS	Report shared	<p>Audit of 5 ss to be done in Jan/Feb'25 by NERPC.</p> <p>For rest, to be planned later.</p>	NA
7.	Tripura	<p>11 done, rest by Feb'25.</p> <p>For 66kV SS - audit by Feb'25.</p>	To be shared shortly	<p>Requested NERPC to conduct audit of critical substations. MS NERPC stated that the audit may be planned for March'25</p>	NA
8.	Powergrid (NERTS)	<p>POWERGRID has completed & submitted internal protection reports for 20 nos. of substations. 2 more substations being done in Jan'25</p>	Shared	<p>External audit done for Misa & Salakati s/s by NERPC.</p> <p>For 2 substations, audit is being planned to be done by government agencies like CBIP and CPRI.</p>	

9.	NTL	Utilities to update status			
10	KMTL				
11	MUML	Planned in Dec'24 for N.Lakhimpur-Pare line bays and N.Lakhimpur-Nirjuli bays at Lakhimpur	To be shared		
12	NEEPCO	Pare, Ranganadi Kopili and Turial done. Kathalguri (AGBPP) also done. RC Nagar and Kathalguri to be planned	Shared for Pare and Turial and AGBPP. NERPC highlighted the AGBPP format is incomplete and asked NEEPCO to complete the format.	To be planned. Waiting for the list of agencies from NPC. Forum advised that till the list is finalized NEEPCO may consider reputed auditing agencies (including CBIP and CPRI)for conducting the external audits .	
13.	OTPC (Palatana)	Done		Done	shared
14.	NTPC (BgTPP)	Done	shared	Done (by CPRI)	Report to be shared in three weeks
15.	NHPC (Loktak)	By Jan'25		To be done after R&M of the plant	
16.	APGCL	Utilities to update status			
17.	TPGCL				
18.	MEPGCL	Audit of Umiam stg I and Stg II	To be shared	External audits of all generating stations	

		was done Nov'24, rest under planning		were done in 2021. For next cycle of audit, planning being done.	
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Sub-committee noted as above

B.2 Analysis and Discussion on Grid Disturbances which occurred in NER grid in December'24 in compliance with IEGC 2023:

TABLE 8 : REPORT SUBMISSION TIMELINE

Sr. No.	Grid Event^ (Classification)	Flash report submission deadline (users/ SLDC)	Disturbance record and station event log submission deadline (users/ SLDC)	Detailed report and data submission deadline (users/ SLDC)	Draft report submission deadline (RLDC/ NLDC)	Discussion in protection committee meeting and final report submission deadline (RPC)
1	GI-1/GI-2	8 hours	24 hours	+7 days	+7 days	+60 days
2	Near miss event	8 hours	24 hours	+7 days	+7 days	+60 days
3	GD-1	8 hours	24 hours	+7 days	+7 days	+60 days
4	GD-2/GD-3	8 hours	24 hours	+7 days	+21 days	+60 days
5	GD-4/GD-5	8 hours	24 hours	+7 days	+30 days	+60 days

[^]The classification of Grid Disturbance (GD)/Grid Incident (GI) shall be as per the CEA Grid Standards.

The forum may deliberate upon the GD/GI/near miss events that occurred in December 2024 based on the draft report prepared by NERLDC.

Deliberation of the sub-committee

NERLDC informed that only 4 GDs occurred in the month of December'24 and the same have been put up in further agendas for detailed discussion.

NERLDC Agenda

B.3 Status of submission of FIR, DR & EL outputs for the Grid Events for the month of December'2024:

In line with regulation 12 (1) of CEA Grid Standards Regulations and IEGC-23 provision under clause 37.2 (c), FIR and DR & EL Outputs for each grid events are required to be submitted by concerned utilities to NERLDC for detailed investigation and analysis.

Status of uploading of FIR, DR & EL outputs in Tripping Monitoring Portal for events from 01-12-2024 to 31-12-2024 as on **06-01-2025** is given below:

Name of Utility	No. of trippings	Total FIR to be submitted	Total DR to be submitted	Total EL to be submitted	Total FIR, DR & EL submitted			Total FIR, DR & EL not submitted			% Submission of		
					FIR	DR	EL	FIR	DR	EL	FIR	DR	EL
DoP, Arunachal Pradesh	4	6	5	5	6	5	5	0	0	0	100	100	100
DEPL	0	0	0	0	0	0	0	0	0	0	No event		
AEGCL	10	16	12	12	14	7	7	2	0	0	88	100	100
APGCL	2	2	2	2	0	0	0	2	2	2	0	0	0
MSPCL	1	1	1	1	1	0	0	0	1	1	100	0	0
MePTCL	1	2	2	2	2	2	2	0	0	0	100	100	100
MePGCL	0	0	0	0	0	0	0	0	0	0	No event		
P&ED, Mizoram	0	0	0	0	0	0	0	0	0	0	No event		
DoP, Nagaland	2	4	4	4	4	0	0	0	4	4	100	0	0
TSECL	5	8	8	8	8	8	8	0	0	0	100	100	100
TPGCL	1	1	1	1	0	0	0	1	1	1	0	0	0
POWERGRID	8	18	16	17	18	16	17	0	0	0	100	100	100
NEEPCO (Line/ICT)	3	4	4	4	4	3	3	0	1	1	100	75	75
NEEPCO (Unit)	8	8	5	8	7	4	7	1	1	1	88	80	88
NHPC	0	0	0	0	0	0	0	0	0	0	No event		
NTPC (Unit)	1	1	0	0	1	0	0	0	0	0	0	NA	NA
OTPC	0	0	0	0	0	0	0	0	0	0	No event		
NTL	0	0	0	0	0	0	0	0	0	0	No event		
MUML	0	0	0	0	0	0	0	0	0	0	No event		
KMTL	0	0	0	0	0	0	0	0	0	0	No event		

Concerned Utilities are requested to upload Disturbance Recorder (DR), Event Logger (EL) outputs for grid events along with a First Information Report (FIR) in Tripping Monitoring Portal (<https://tripping.nerlndc.in/Default.aspx>) for analysis purpose. In light of the cybersecurity measures implemented by Grid India to safeguard sensitive information, NERLDC has created the email address nerlndcso3@gmail.com. This new account has been specifically set up to facilitate

the secure exchange of DR and EL files that have previously faced blockage when sent to nerldcprotection@grid-india.in.

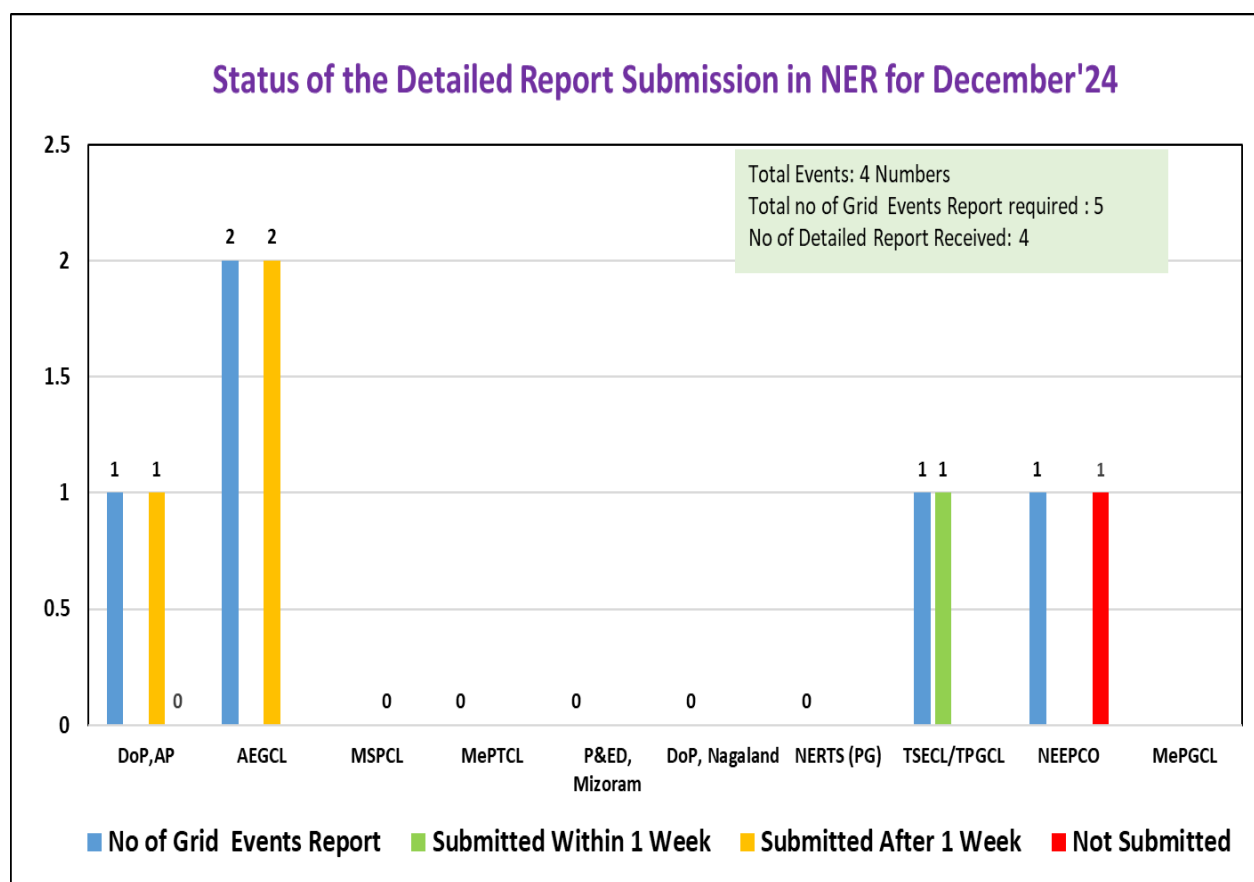
Also, all utilities are requested to nominate a nodal officer responsible for the submission of FIR, DR & EL in Tripping Monitoring Portal (<https://tripping.nerldc.in/Default.aspx>)

Deliberation of the sub-committee

Forum noted that all the utilities, except for MSPCL, APGCL, DoP Nagaland and NEEPCO, have timely submitted the FIR/DR/EL. Further the forum urged these utilities to provide the data timely in compliance with the IEGC 2023.

B.4 Submission of Flash Report and Detailed Report by User/SLDC as per IEGC-2023:

As per IEGC-2023, all User/SLDCs are requested to prepare and share **Flash Report** and **Detailed Report** with **NERLDC** and **NERPC** following any Grid Events as per the timeline mentioned in the cl 37.2(f). Status of submission of the same for the month of **December, 2024** as on **06-01-2025** is shown below:



NEEPCO has not submitted the detailed report of grid disturbances.

All the utilities are requested to promptly share all the necessary information such as FIR, DR, EL and Reports (Flash Report & Detailed Report) as per the specified timeline mention in the Grid Code-2023.

Deliberation of the sub-committee

Forum strongly urged all the utilities to provide the reports timely in compliance with IEGC 2023.

B.5 Non-operation of auto recloser in Important Grid Elements for transient faults in December 2024:

Sl. No.	Element Name	Tripping Date and Time	RELAY_A	RELAY_B	Auto-Reclose or not Operated	Remarks from Utility
1	132 kV Bokajan-Sarupathar Line	28-12-2024 12:52	DP, ZI, Y-B, FD: 1.7 Km	DP, ZI, Y-B	Both ends	AEGCL updated that 3 phase AR will be enabled in next shutdown

Deliberation of the sub-committee

Utilities updated as provided in above table.

B.6 Submission of Protection Performance Indices by Transmission Utilities:

As per Regulation No. 15(6), Protection Code - Users shall submit the following protection performance indices of previous month to their respective RPC and RLDC on monthly basis for 220 kV and above (132 kV and above in NER) system by 12th of every month for previous month indices, which shall be reviewed by the RPC.

As on 06.01.2025, **NETC, AEGCL, OTPC, NTL, NEEPCO (Monarchak and Kopili) and DoP Arunachal Pradesh** has submitted protection performance indices for the month of December'24.

SN	Name of Transmission Licencee	D= (Nc/ Nc+Nf)	S= (Nc/ Nc+Nu)	R= (Nc/ Nc+Ni)	Remarks
1	NETC	-	-	-	No bays owned by NETC
2	OTPC	-	-	-	No tripping during Dec'24
3	NTL	-	-	-	No tripping during Dec'24
4	AEGCL	1	0.786	0.786	<ul style="list-style-type: none"> Unwanted tripping of 220 kV Tinsukia-AGBPP II line on 23-12-2024. (No indication from Tinsukia end) Unwanted tripping of 220/132 kV ICT-II at Mariani on 25-12-2024 on spurious buccholz trip.
5	NEEPCO (Monarchak & Kopili)	1	1	1	
6	DoP Arunachal Pradesh	0.8	1	0.8	Tripping of 132 kV Along-Basar line from Basar end on ZI. Along end CB failed to open despite issuance of trip command. The LBB initiation command was also triggered at Along, however the Pasighat line breaker did not open.

Protection Performance Indices not received from transmission utilities such as **POWERGRID, MSPCL, MePTCL, DoP Nagaland and TSECL**. Also, not received from Generating companies such as **APGCL, TPGCL, NTPC and NEEPCO (AGTCCPP)**.

Therefore, all Users are requested to furnish and ensure performance indices (Dependability-D, Security-S, Reliability-R) with regards to the tripping of elements to NERPC & NERLDC positively by **12th** of every month for previous month indices in compliance with IEGC.

Deliberation of the sub-committee

NERLDC informed that all the utilities have submitted the reports timely for December'24. Forum observed that the S and R values of Assam seems to be unsatisfactory due to the two unwanted tripping at Tinsukia and Mariani ends.

Regarding tripping of 220kV Tinsukia – AGBPP II line, AEGCL replied that the tripping occurred due to DC EF issue at Tinsukia substation. He further informed that checking is underway and the issue will be rectified shortly.

Regarding unwanted tripping of 220/132kV ICT-II at Mariani, AEGCL stated that the tripping occurred due to moisture ingress in the Bucholz relay. He further informed that the issue has been rectified. Forum recommended that best practices adopted by Powergrid may be adopted to avoid moisture ingress in the in the Bucholz relay to avoid such traippings.

B.7 Tripping of 132 kV Dimapur-Doyang I line on 09-Nov-24:

At 08:34 Hrs of 09-11-2024, 132 kV Dimapur-Doyang I tripped.

As per submitted DR, there was no fault in the system. At 08:34:42.728 Hrs, Bus Bar protection operated at Doyang end and CB open at 08:34:42.758 Hrs. There was no tripping from Dimapur (PG) end.

NEEPCO is requested to furnish the reason of Bus bar protection operation at Doyang end and its remedial measures.

Deliberation of the sub-committee

NEEPCO informed that there is some issue with the BB protection at Doyang. He further stated that there is urgent requirement of external protection audit at the substation in order to identify all the protection issues, including the issue with the BB protection, and suggest remedial measures.

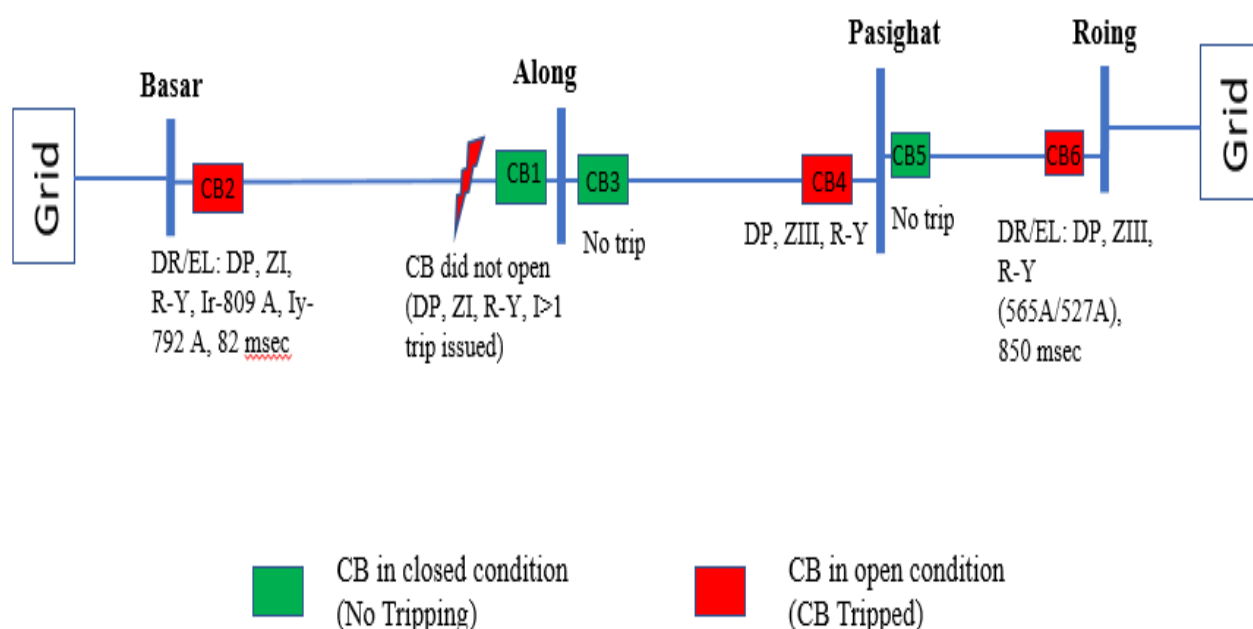
Forum advised NEEPCO to conduct the BB stability test at the earliest. Forum also suggested that NEEPCO may take support of NTPC in this regard.

Forum also noted that checking of BB protection stability test reports can made a part of FTC procedure for charging of elements.

B.8 Grid Disturbance in Along and Pasighat areas of Arunachal Pradesh on 08-12-2024:

Along and Pasighat areas of Arunachal Pradesh Power System were connected with rest of NER Grid through 132 kV Along-Basar & 132 kV Roing-Pasighat lines.

At 03:46 Hrs of 08-12-2024, 132 kV Along-Basar line, 132 kV Along-Pasighat Line and 132 kV Roing-Pasighat line tripped resulting in grid disturbance in Along and Pasighat areas of Arunachal Pradesh. Load loss of 2 MW occurred.



As per DR analysis, R-Y fault (Ir-809 A, Iy-792 A) in 132 kV Along-Basar line initiated at 03:46:30.091 Hrs which was cleared within 82 msec from Basar end on operation of DP, ZI. ZI started from Along end and trip command issued. Also, I>1 trip command issued after 793 msec. However, CB at Along did not open resulting in clearing of fault by tripping of 132 kV Roing-Pasighat line on operation of DP, ZIII from Roing end within 850 msec.

Following observations:

- Non-opening of CB at Along for 132 kV Along-Basar line despite issuance of ZI trip command. Reason of the same needs to be investigated by DoP Arunachal Pradesh.
- I>1 trip command issued after 793 msec at Along end for 132 kV Along-Basar line. O/C setting at Along for 132 kV Along-Basar line needs to be coordinated with ZII setting as per NERPC protection philosophy.
- At 03:46:11.476 Hrs, after 300 msec of initiation of fault, LBB initiation command was triggered at Along end. However, Pasighat line breaker did not open. LBB time delay setting needs to be reviewed.
- SOE not recorded for tripping of any of the elements. The same needs to be checked by DoP AP/SLDC AP/POWERGRID for ensuring IEGC compliance.
- Time drift of 10 min observed at Pasighat end for 132 kV Roing-Pasighat line which need to be sync with GPS.

DoP Arunachal Pradesh is requested to:

- Share the root cause and remedial measures taken.
- Furnish the reason of non-opening of CB at Along for 132 kV Along-Basar line.
- Check/review the O/C setting at Along for 132 kV Along-Basar line.
- Furnish reason for failure of LBB at Along to isolate the fault by disconnecting 132 kV Along-Pasighat line. Also, LBB time delay setting at Along needs to be reviewed and set as per protection philosophy.
- Rectify the DR time drift at Pasighat end for 132 kV Roing-Pasighat line.

Deliberation of the sub-committee

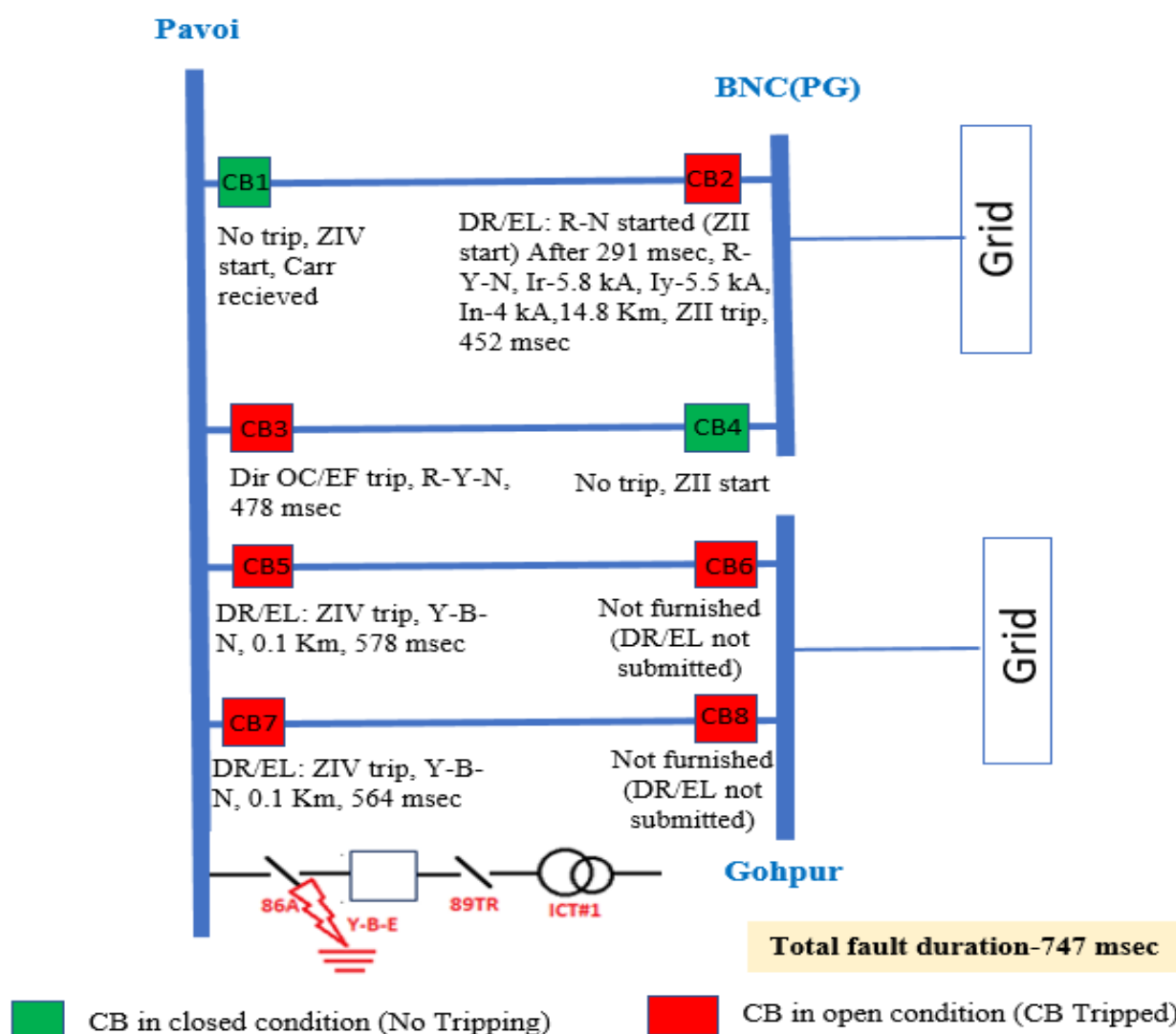
1. DoP Ar. Pradesh apprised that trip command as well as LBB was triggered at Along end, but CB did not operate as it is old and pneumatic. Also, CB3 did not operate on LBB as wiring has not been done yet with LBB.
2. Forum advised DoP Ar. Pradesh to replace the pneumatic CBs with sprig charged ones at the earliest.
3. Forum requested AR.Pradesh to coordinate the O/C timing at Along end for Basar line with Zone 2
4. Forum asked NERTS to modify the ZIII reach at Roing end for Pashighat line as follow: 100% of (Principal line + next longest line at remote end).

5. Forum also requested Ar. Pradesh to rectify the time drift issue at Passighat for Roing line at the earliest. Further the forum also recommended that GPS have to be installed at all 132kV and above substations.

B.9 Grid disturbance in Pavo area of Assam on 16-12-2024:

Pavoi (BNC) area of Assam Power System was connected with rest of NER Grid through 132 kV BNC-Pavoi 1 & 2 & 132 kV Gohpur-Pavoi 1 & 2 lines.

At 15:43 Hrs of 16-12-2024, 132 kV BNC-Pavoi 1 & 2 & 132 kV Gohpur-Pavoi 1 & 2 lines tripped resulting in blackout of Pavoi S/S. Load loss of 11 MW occurred.



Root cause: The 132/33kV Transformer-1 at Pavoi was under shutdown during the event. A flashover at Bus Isolator of Transformer-1 (Y-B-E fault) was witnessed during isolator Open/Close operation. The fault was cleared by tripping of all 132kV Lines (Fault feeding sources) at local and remote ends.

Following observations:

- Solid R-N fault (Ir-2.9 kA, In-2.9 kA) initiated at 15:42:34.450 Hrs and ZII/ZIII start. After around 291 msec, R-N fault converted into R-Y-N fault (Ir-5.8 kA, Iy-5.5 kA, In-4 kA) which was cleared within 452 msec on operation of DP, ZII from BNC end. Total fault duration-747 msec.
- For 132 kV BNC-Pavoi I line at Pavoi end, ZIV start and Carrier received signal was high. However, there was no tripping observed from Pavoi end.
- For 132 kV BNC-Pavoi II line at BNC end, ZII pickup and “Aided 1 Send” high. However, at Pavoi end, Carrier was received and no tripping observed. CB3 opened on Directional OC/EF trip.
- Tripping of 132 kV BNC-Pavoi II line from Pavoi end on directional OC/EF within 478 msec for reverse fault is inferred unwanted. AEGCL needs to review the backup protection setting and check directionality of the B/U relay.
- DR/EL not submitted CB6 & CB8.
- Time drift of 9 min observed in Pavoi end DR for 132 kV BNC-Pavoi II line.

AEGCL is requested to provide update on the above-mentioned issues.

Deliberation of the sub-committee

1. AEGCL informed that isolator flashover occurred at Pavoi in HV side of ICT I due to some mechanical issues with the isolator. Forum advised AEGCL to replace the isolator.
2. Regarding tripping of CB3 on Dir O/C E/F, NERTS informed that there was phase sequence issue and the same has been rectified now.

B.10 Mock testing of System Protection Scheme (SPS):

As per Clause 16.2 of IEGC 2023, mock testing of SPS for reviewing SPS parameters & functions should be conducted at least once in a year.

In order to compliance the above clause, it has been planned to conduct mock testing of SPS:

- I. Related to the tripping of Bus Reactors at 400 kV Imphal (PG)
- II. Related to Outage of 400 kV Palatana – Surajmani Nagar line (charged at 132 kV)
- III. Related to Outage of both 400/132 kV, 2x125 MVA ICTs at Palatana

POWERGRID and OTPC is requested to provide the tentative dates for mock testing of SPS in the month of January'25.

Deliberation of the sub-committee

Powergrid informed that mock testing of SPS I and II will be done shortly. OTPC informed that the testing of SPS III will be done next month.

B.11 Modification related to the reporting of GD-1 due to outage of 132 kV radial system with negligible load or generation loss (in case of NER): (Agenda of NPC meeting)

In case of North Eastern region, 132 kV power system consist of many radial feeders. Further the load loss due to tripping of such feeders are almost negligible as compared to the regional antecedent generation or load which resulted into the reporting of higher numbers of Grid Events per month as compared to other regions. During April'24 to September'24, 46% of the Grid Events reported with Load/Generation loss upto 10 MW and 32% of the Grid Events reported which was radially fed area through single feeder only (Loss upto 10 MW)

As per minutes of 15th NPC meeting, outage of 132 kV system in the NER should not be excluded from the GD-1 category; which is necessary for improvement of performance of NER system. Grid incidents should be closely monitored and reporting should also be done for further reduction and improvement. Further, the Committee advised to identify the root cause of the Grid failure and take measures to minimize their occurrence.

Deliberation of the sub-committee

Forum noted the observations of NPC and impressed upon the power utilities the need of proper maintenance practices.

B.12 System Protection Scheme (SPS) Document of North Eastern Region:

A draft document on System Protection Schemes of North Eastern Region is prepared by NERLDC which comprises of details of all the SPS available in NER. The Summary of System Protection Schemes (SPS) both inter/Intra regional including cross border SPS which are in service, and no of schemes Approved and no of schemes under discussion stage are detailed below: -

Sl. No	Region	No. of Schemes in service	No. of Schemes approved (yet to be operationalized)	No of schemes under discussion
1	SPS in NER under operation	20	2	0
2	SPS related to Bangladesh	2	1	-
	TOTAL	22	3	0

Draft SPS document will be shared by NERLDC on **10th of January, 2025.**

*All the utilities are requested to review the document and furnish comments if any to NERLDC by **17th of January, 2025.***

Deliberation of the sub-committee

NERLDC apprised that the draft SPS report has been shared and requested the utilities to provide comments within one week.

B.13 Mapping of SPS in the SCADA Display for real time monitoring of all SPS:

NLDC has submitted the Guidelines on “Interfacing Requirements” after stakeholder consultation for approval of the Commission as mentioned in the Regulation 7.4, read with Regulation 14.2 of the Communication System for inter-State transmission of electricity) Regulations, 2017. On dated 19-Jan-2024, CERC approved the guideline on “Interfacing Requirements” prepared by NLDC in consultation with the stakeholder. As per the Guideline, real time telemetered is SPS Signal need to be monitored. The digital status shall be as per IEC standard. Digital Status for circuit breaker must be double point while isolator status can be either single point or double point as per end device. All users shall comply with interface requirements as specified and shall share interface details with respective Control Centre.

Sl. No.	Description	Analog Points	Digital Points	Protection Signal
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1	SPS Signal		DIGITAL Enable/Disable, Operated/No (Condition/Logic Wise)	STATUS: Operated	
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Display of SPS SCADA Mapping

06-Jan-2025 18:15:54 SPS STATUS & OPERATION			
STATION	SPS	SPS ON/OFF	SPS OPTD.
BGTPP_NTPC	BGTPP U-3	<input type="checkbox"/>	<input type="checkbox"/>
PALATANA_OTPC	SPS-2 Bangladesh	<input type="checkbox"/>	<input type="checkbox"/>
	SPS-4 Bangladesh	<input type="checkbox"/>	<input type="checkbox"/>
	SPS -2 HSR	<input type="checkbox"/>	<input type="checkbox"/>
	SPS -3 HSR	<input type="checkbox"/>	<input type="checkbox"/>
ZIRO_PG	ZIRO SPS	<input type="checkbox"/>	<input type="checkbox"/>
SARUSAJAI_AS	SARUSAJAI SPS	<input type="checkbox"/>	<input type="checkbox"/>
IMPHAL_PG	IMPHAL SPS	<input type="checkbox"/>	<input type="checkbox"/>
SM NAGAR (ST)	SM NAGAR B/R -1 SPS	<input type="checkbox"/>	<input type="checkbox"/>
SM NAGAR (ST)	SM NAGAR B/R -2 SPS	<input type="checkbox"/>	<input type="checkbox"/>
PK BARI (ST)	PK BARI B/R -1 SPS	<input type="checkbox"/>	<input type="checkbox"/>
PK BARI (ST)	PK BARI B/R -2 SPS	<input type="checkbox"/>	<input type="checkbox"/>
TINSUKIA (AS)	TINSUKIA SPS	<input type="checkbox"/>	<input type="checkbox"/>

At present, there are 22 numbers of SPS under operation and 3 numbers of SPS under implementation as listed tabulated below:

Sl. No.	SPS under operation	Long term measures	SPS mapping status in SCADA (YES/No) as per
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			75th PCCM
1	<p><u>Tripping of 400kV Palatana-Silchar D/C-</u></p> <p>when both modules of Palatana are in service causes tripping of HV side breaker of 2x125 MVA, 400/132 kV ICT at Palatana</p>	After commissioning of 400 kV Palatana - Surajmaninagar line-1, there is no requirement of this SPS and hence, it is to be kept OFF. However, the SPS at Palatana is to be kept ON during shut down of 400 kV Palatana-Surajmaninagar(ISTS) line-1	Done
2	SPS related to overloading of 220kV BTPS- Salakati D/C- Tripping of 220kV Agia – Boko and 220kV Agia – Mirza	After upgradation of 220 kV BTPS-Salakati D/C lines, this SPS is kept OFF	Done
3	<p><u>Related to the safe evacuation of power from BgTPP(NTPC) generation</u></p> <p>- BGTPP generation reduction to 600 MW</p>	-	Done
4	<p><u>Related to Generation evacuation from Monarchak(NEEPCO) Power Plant</u></p> <p>- Tripping of STG at Monarchak under outage of any one circuit of 132 kV Monarchak – Rokhia line & 132 kV Monarchak-Udaipur</p>	Commissioning of 132 kV Monarchak-Surajmaninagar line	Mapping done till SLDC. To be extended till NERLDC by the SLDC
5	Outage of 220 kV BTPS (Salakati) – Rangia I & II - load shedding	Commissioning of 400 kV Rangia SS and LILO of 400	Done

		kV Bongaigaon-Balipara 1 & 2 Line at Rangia.	
6	<u>Related to the tripping of Bus Reactors at 400 kV S M Nagar (ISTS)</u> - Tripping of both circuits of 400 kV SM Nagar-PK Bari D/C will trip 2 x 125 MVAR Bus Reactors at SM Nagar (ISTS) to prevent under voltage situation	-	done
7	<u>Related to the tripping of Bus Reactors at 400 kV P K Bari (ISTS)</u> - Tripping of both circuits of 400kV PK Bari (ISTS) – Silchar(PG) D/C will trip 2 x 125 MVAR Bus Reactors at P K Bari(ISTS) to prevent under voltage situation	-	done
8	<u>Related to the tripping of Bus Reactors at 400 kV Imphal (PG)</u> - Tripping of 400 kV New Kohima – Imphal D/C during outage of 400 kV Silchar – Imphal D/C will lead to the tripping of 125 MVAR and 80 MVAR Bus Reactor at Imphal(PG)	-	Done
9	<u>Related to Outage of any one of the 400/132kV 2x360MVA ICTs at Panyor Lower Hydro Power Station</u> - Disconnection of One Unit of Panyor (135 MW) and One Unit of Pare (55 MW)	After restoration of 132 kV Panyor -Itanagar & 132 kV Panyor -Pare line (expected by 31st Mar'24)	To be checked

10	<u>SPS related to outage of 220 kV Azara-Sarusajai DC</u> - On tripping of 220 kV Azara-Sarusajai D/C: 140-150 MW load disconnection is to be done at Sarusajai and Kahilipara areas	Commissioning of 400 kV Sonapur Substation. LILO of 400 kV Bongaigaon-Byrnihat Line at Sonapur.	Done
11	<u>SPS related to outage of 220 Misa-Samaguri DC:</u> On tripping of 220 kV Misa-Samaguri DC: Load reduction of 50-60 MW at Samaguri area	Commissioning of 400 kV Sonapur Substation. LILO of 400 kV Bongaigaon-Byrnihat Line at Sonapur.	RTU issue. By March'25
12	<u>SPS related to the outage of 132 kV Panyor HEP-Ziro Line</u> - Tripping of 132 kV Panyor-Ziro will cause disconnection of 33kV Load at Ziro	Commissioning of 132 kV Khupi - Along Link/220 kV AGBPS-Namsai D/C	Done
13	Related to outage of any one circuit of 132 kV Dimapur(PG)-Dimapur(NA) D/C	Reconductoring of 132 kV Dimapur(PG)-Dimapur(NA) D/C	Done
14	Related to outage of any one circuit of 220 kV Balipara-Sonabil D/C	Reconductoring of 220 kV Balipara-Sonabil D/C lines with higher ampacity and Utilisation of 2 X 160 MVA ICTs at Balipara	RTU issue. By March'25
15	SPS related to reliable power supply to Arunachal Pradesh from Assam through the Roing-Chapakhawa DC line: Triggering criteria-1: Tripping of either 132KV Tinsukia-Ledo or 132KV Tinsukia-Rupai line with current exceeding 300A in 132kV Tinsukia - Ledo or 132KV	i) Commissioning of 220kV Kathalguri-Namsai D/C ii) Reconductoring of 132kV Tinsukia-Ledo and 132kV Tinsukia - Rupai Lines	Done

	Tinsukia - Rupai line, Triggering criteria-2: Overloading of 132 kV Tinsukia-Rupai line when current in the line crosses 300 Amps. , 8-10 MW of load at 132kV Rupai GSS will be shed.		
16	Related to the outage of any one circuit of the 132 KV Khliehriat (PG)- Khliehriat D/C line	Reconductoring of 132 KV Khliehriat (PG)-Khliehriat D/C line	By Jan'25
17	Related to outage of any one circuit of 132 kV Leshka – Khliehriat D/C	Reconductoring of 132 kV Khliehriat – Leshka D/C	By Jan'25
18	Related to 132kV SM Nagar(ISTS) - SM Nagar line to prevent Overloading	i) Commissioning of 132kV Monarchak - SM Nagar D/C ii) HTLS Reconductoring of 132kV SM Nagar(ISTS) - SM Nagar, 132kV SM Nagar(ISTS) - Budhjungnanagar, 132kV PK Bari(ISTS) - Ambasa and 132kV PK Bari(ISTS) - PK Bari	By Jan'25
19	SPS at Tezu substation to prevent under voltage issue prior to connection of Niglok load at Pasighat area of Arunachal Power System		PGCIL by March'25
20	SPS at Namsai substation to prevent under voltage issue prior to connection of Niglok load at Pasighat area of Arunachal Power System		PGCIL by March'25

21	<u>Related to Outage of 400 kV Palatana – Surajmani Nagar line (charged at 132 kV)</u> - Tripping of 400 kV SM Nagar – Comilla D/C (charged at 132 kV) during outage of 400 kV Palatana – SM Nagar(TSECL) line (charged at 132 kV)	Upgradation of 132 kV Surajmaninagar(TSECL) to 400 kV	Done
22	<u>Related to Outage of both 400/132 kV, 2x125 MVA ICTs at Palatana</u> - Entire load disconnection of South Comilla by way of tripping of 132kV SM Nagar-South Comilla D/C	Upgradation of 132 kV Surajmaninagar(TSECL) to 400 kV	Done
Sl. No.	SPS under implementation	Long term measures	
1	SPS at Pasighat substation for preventing Overloading of 132 kV Tinsukia-Rupai/Tinsukia-Ledo Lines in the event of a tripping on the 132 kV Paynor-Ziro Line	Commissioning of 220kV Kathalguri – Namsai D/C lines	
2	SPS related to overloading of 2x160 MVA 220/132 kV ICTs at BTPS	Feb'25	
3	Related to Outage of one circuit of 400 kV Surajmani Nagar (TSECL)-South Comilla line (Charged at 132 kV)	Upgradation of Comilla SS to 400 kV level	

Deliberation of the sub-committee

Utilities updated as provided in the table above.

B.14 Modification of SPS Scheme related to the outage of 132 kV Leshka – Khliehriat D/C after LILO at 132 kV Mynkre S/S:

With the recent LILO (Line In Line Out) of the 132 kV Leshka – Khliehriat D/C at the 132 kV Mynkre Substation, which is now connected to the 132 kV Goldstone generating station, the existing SPS scheme at Leshka requires modification to accommodate changes in the evacuation of power from both Leshka HEP and Goldstone generating station.

Proposed modification: The modified SPS scheme should ensure the safe evacuation of both Leshka HEP and Goldstone Generation under the condition that any one circuit of the 132 kV Leshka – Mynkre D/C or 132 kV Khliehriat – Mynkre D/C trips or goes under outage.

With the integration of 132 kV Mynkre Substation and the connection of 132 kV Goldstone Generation to the Leshka – Khliehriat D/C, the evacuation of power via a single circuit becomes insufficient.

If one of the circuits trips, both Leshka and Goldstone generation cannot be fully evacuated, necessitating a reduction in generation from both sources to prevent overloading the remaining line.

Trigger condition: If any one circuit of the 132 kV Leshka – Mynkre D/C or 132 kV Khliehriat – Mynkre D/C trips or goes under outage.

Action taken: One unit of Leshka HEP and one unit of Goldstone Generation will trip in the event of a circuit trip.

MePTCL is requested to implement the necessary modifications at the earliest.

Deliberation of the sub-committee

Forum noted that the SPS has to be revised and MePTCL to prepare the scheme.

C. FOLLOW-UP AGENDA ITEMS

C.1 Submission of monthly and quarterly progress report by respondents of NERLDC's Petition:

As per the Direction of Hon'ble commission related to the Petition No 198/MP/2020, 259/MP/2020, 535/MP/2020, 539/MP/2020 and 540/MP/2020, respective respondents have to submit the **monthly/quarterly progress report** of the action plan prepared by the respective respondents in consultation with the Petitioner (i.e. NERLDC) to NERPC.

Order dated	Petition No	Respondent
08-Nov-2023	198/MP/2020	DoP, Arunachal Pradesh
	259/MP/2020	DoP, Nagaland
	539/MP/2020	MSPCL
27-Oct-2023	535/MP/2020	TPTL/TSECL
	540/MP/2020	P&ED, Mizoram

In 63rd PCCM, MS, NERPC stated that Hon'ble CERC (in above mentioned Petition) has directed the following:

NERPC shall monitor the work of the implementation of the Protection system by the Department of Power, Arunachal Pradesh; Department of Power, Nagaland, MSPCL, TPTL/TSECL, P&ED, Mizoram and shall submit a quarterly progress report to the Commission till the establishment of the Protection system at the substations identified by the NERLDC.

NERPC shall validate relay settings and conduct the Protection Audit of the associated transmission system at the substation and transmission lines, as and when required. Any issue faced during the implementation of Protection system or observed during the protection audit shall be discussed in the Protection Sub-Committee meeting at the RPC forum and sorted out. Concerned Power department /State shall identify one person from their top management as a nodal officer, who shall submit a monthly progress report on the implementation of the protection

system to the NERPC and NERLDC, till the establishment of the Protection system at the substations identified by the NERLDC.

In this regard, Member Secretary stated that the monthly progress reports will be monitored at PCC forum. He requested the States to send monthly progress report and action plan accordingly.

In 70th PCCM, NERLDC informed that only Nagaland, Manipur and Mizoram are submitting the monthly progress report, while Arunachal Pradesh and Tripura have not yet shared any monthly report. The forum strongly urged Ar. Pradesh and Tripura to provide the reports within two working days.

NERLDC informed in 73rd PCCM that no state has provided the progress report for the month of Oct'24. He added that Tripura has not submitted any monthly progress report so far. The forum strongly asked the states to submit the monthly report and ensure compliance with CERC order.

Tripura assured to start providing the reports shortly.

In 74th PCCM, the forum strongly urged to the concerned States to send the monthly progress report timely so as NERPC would submit the progress report.

Deliberation of the sub-committee

NERLDC informed that the progress report for Dec'24 have been received from Manipur and Tripura only. Forum requested rest of the states to timely submit the reports. NERPC Secretariat to send the consolidated report to Honble CERC on priority.

C.2 Status on remedial measures actions on non-operation of auto recloser in Important Grid Elements for transient faults occurred in last few months:

Utilities updated in 75th PCCM as provided in the table below:

Sl No	Element Name	Tripping date and time	Relay End1	Relay End2	A/R not Operated	Remarks from Utility (75th PCCM)
1	132 kV Agartala - Surajmaningar 2 Line	17-11-2023 15:10	DP,ZI,Y-B,FD:5.81 km, AR	DP,ZI,R-Y,FD:11.98 KM	Surajmaningar	The Relay Testing kit has been received, but control

			successful			cable is not available. Work under progress. AR (without carrier) to be enabled by Feb'25
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2	132 kV Dimapur - Doyang 2	29-03- 2024 13:10	DP, Z1, R- Y, FD: 72.6km	DP, Z1, R- Y	Doyang	CB procurement underway. By March'25
3	220 kV AGBPP - Mariani (PG) Line	01-05- 2024 03:12	Z1, B-N, 24.97 Kms	DP, ZI, B- E, FD: 131.4 KM, Operated Successfully	AGBPP	completed
4	132 kV Badarpur - Karimganj Line	05-05- 2024 13:48	DP, ZII, Y- E, FD:27.25K M, Carrier Aided tripping & AR Operated Successfully	DP, ZI, Y- E, FD: 0.2km	Karimganj	Completed
5	220 kV Amguri-NTPS Line	27-09- 2024 11:50	DP, ZI, B-N	DP, ZII, B- N	Both ends	Completed

6	132 kV Aizawl - Tipaimukh Line	02-11-2024 10:22	DP, ZII,Y-E, FD: 32.4 KM, Carrier received after CB opening , No Carrier aided tripping	LLG fault. IL1 1.06kA IL2 0.88 kA FD: 63.3 km (A/R Successful)	Aizawl(PG CIL)	PGCIL informed that carrier from Tipaimukh was received only after tripping of CB, so no Carrier aided tripping occurred, so no AR. MSPCL to check the time delay settings for sending carrier at Tipaimukh. MSPCL will update in next meeting
7	220 kV Behiating - Tinsukia 1 Line	02-11-2024 10:32	DP, ZI, B-E, 1.1 kA	DP, ZI, B-E	Both ends	AEGCL to look into the matter. Work to be completed within one month
8	132 kV Hailakandi - Panchgram Line	02-11-2024 11:39	DP, ZI, R-Y-E, FD: 18.68 Kms, A/R Successful	DP, ZI, R-Y-B-E, 2.6 Km	Panchgram(AEGCL)	rectified
9	132 kV Panchgram - Lumshnong Line	04-11-2024 12:50	DP, ZI, Y-E, FD: 12.5km, 3.2kA	DP, ZI, Y-E, FD: 39.9 km	Both Ends	AR in disabled mode at both ends. To be enabled after

						CT replacement at Lumshnonng end by MePTCL by last week of Jan'25
10	132 kV Jiribam - Pailapool Line	05-11- 2024 23:03	DP, ZI, R- Y, FD: 9.07 km, A/R Successful	DP, ZI, R- Y, FD: 4.5 km	Pailapool (AEGCL)	Pailapool end AR block high due to no CB status Issue resolved now
11	132 kV Bokajan - Dimapur Line	10-11- 2024 13:08	DP, ZI, Y- E, FD: 20.3 kms	DP, ZI, Y- E, FD: 8.4 KM, AR Successful 1	Bokajan (AEGCL)	Issues with pneumatic breakers at Bokajan end. Orders have been placed for new breakers. Expecetd to be completed by end of Feb'25

Utilities may further update

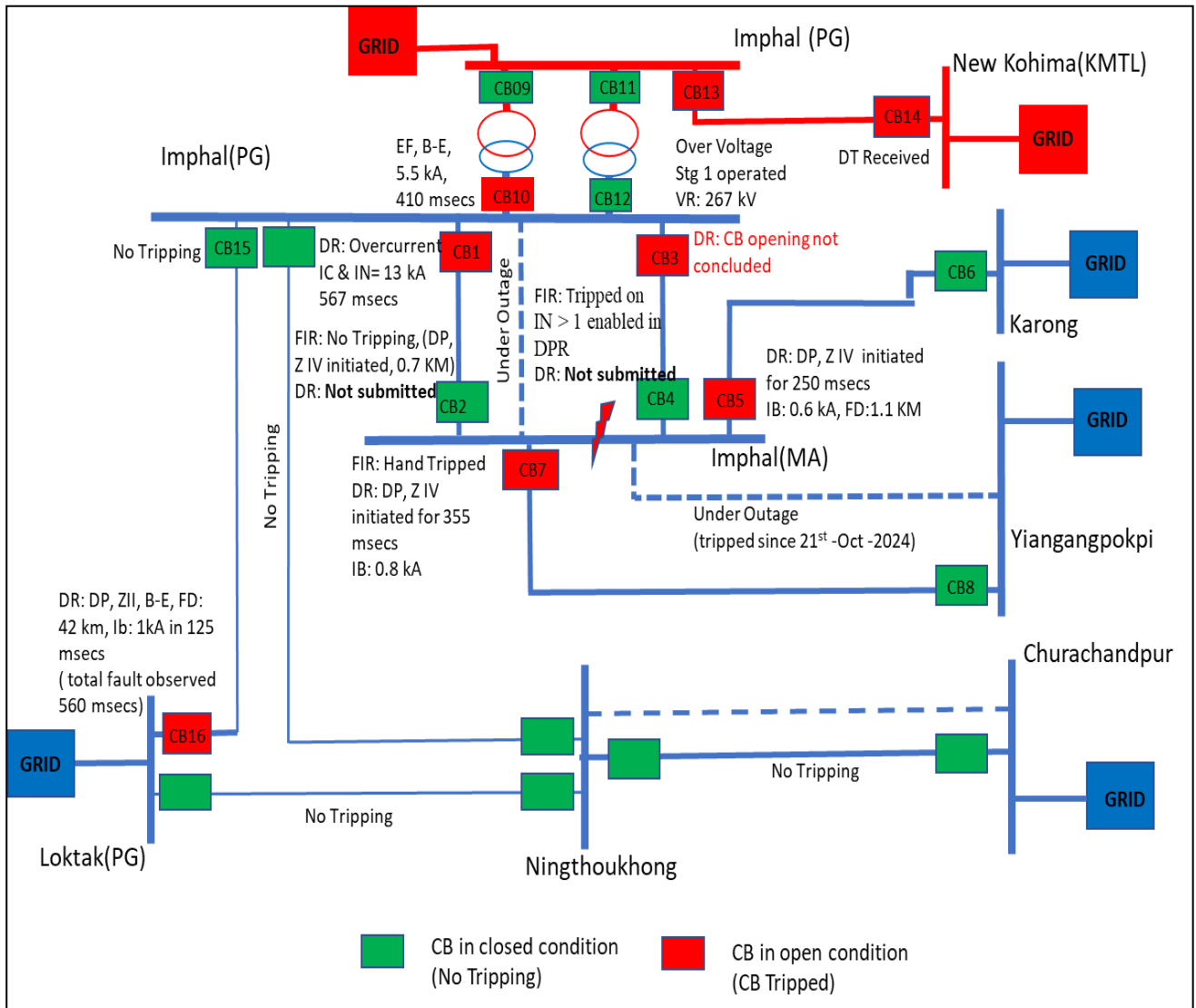
C.3 Grid Disturbance in the Imphal (Yurembam) substation of Manipur power system on 28th October 2024:

Imphal (Yurembam) area i.e. the capital area of Manipur is connected with rest of the NER grid mainly through 3 numbers of 132 kV Imphal(PG)- Imphal(Yurembam) Lines. Also, Imphal (Yurembam) is connected with Yiangangpokpi SS through 2 numbers of 132 kV Imphal (Yurembam) - Yaingangpokpi 1&2 Lines and connected with Karong SS through 1 number of 132 kV Imphal (MSPCL) - Karong Line.

Before the event, 132 kV Imphal (PG)- Imphal(Yurembam) 2 Line and 132 kV Imphal (Yurembam) - Yaingangpokpi 2 Lines was under planned shutdown.

At 13:30 Hrs of 28th October 2024, due to heavy fault in Imphal (Yurembam) SS, all the connected lines i.e. 132 kV Imphal (PG)- Imphal(Yurembam) 1 &3 Lines, 132 kV Imphal (Yurembam) - Yaingangpokpi 1 Lines and 132 kV Imphal (MSPCL) - Karong Line tripped resulted into the Grid Disturbance (Category 1) in the Imphal(Yurembam) substation of Manipur power system. Due to the event, load loss of 50 MW observed in the Capital area of Manipur power system.

Additionally, tripping of 400/132 kV, 315 MVA, ICT I at Imphal (PG), 132 kV Imphal (PG) - Loktak Line and 400 kV Imphal(PG) - New Kohima 1 Line observed during the time.



As per event analysis based on the DR & EL, DP, ZIV initiated at Imphal (Yurembam) for Imphal (PG) 1 line, Karong line and Yaingangpokpi 1 line indicates that fault location is in the Imphal (Yurembam) Substation. The fault persisted in the system for 560-567 msecs.

As informed by MSPCL, B-phase Bus jumper snapped at Yurembam S/S.

Major Protection issues observed are as follows:

1. 132 kV Imphal(PG)- Imphal(Yurembam) 1 Line tripped on Overcurrent at Imphal(PG) end in 567 msec. However, the same was not detected by the Main Relay. To be checked by NERTS.
2. 315 MVA ICT I at Imphal(PG) tripped at 132 kV side on Backup E/F in 410 msec on reverse fault. Directionality of the LV side backup relay need to be rectified by NERTS.
3. High Voltage of Vre: 267 kV observed in the Imphal(PG) end of the 400 kV Imphal(PG) - New Kohima 1 Line after the tripping of Tie CB of 315 MVA, ICT-1 which resulted into the tripping of the line. NERTS is requested to check & rectify the reason for HV in the R-Phase of 400 kV Imphal(PG) - New Kohima 1 Line.
4. 132 kV Imphal (PG) - Loktak Line detected the fault in ZIII for 420 msec & then ZII initiated and tripped the CB in next 125 msec. However, ZII time delay need to be reviewed by NHPC.
5. Tripping of 132 kV Imphal (Yurembam) - Yaingangpokpi 1 Line, 132 kV Imphal (MSPCL) - Karong Line and 132 kV Imphal(PG)- Imphal(Yurembam) 3 Lines could not be concluded due to non-availability of the DR & EL of Yaingangpokpi, Karong and Imphal (Yurembam) end. MSPCL is requested to share the DR & EL files.
6. DR time synch Issue observed in the submitted DR for CB3 and CB7. MSPCL is requested to rectify the same for proper analysis purpose.

MSPCL is requested to share the actual reason for the GD at Imphal (Yurembam) and its corrective measures taken.

Also, **NERTS & NHPC** is requested to provide update on the above-mentioned issues.

Deliberation of 73rd PCCM

1. Manipur stated, regarding the root cause of the fault, that fault initiated due to B-phase Bus jumper snapping at Yurembam SS, however further investigation are underway to ascertain the correct root cause of the fault.
2. NERTS informed that for 132 kV Imphal(PG)-Imphal(Yurembam) III line, Bay at Imphal(PG) owned by MSPCL and relay did not sense any fault during the event.

3. 132 kV Imphal(PG)- Imphal(Yurembam) 1 Line tripped on Overcurrent at Imphal(PG) end in 567 msecs. NERTS informed that distance relay sensed the fault in ZIII.
4. NERTS informed there was some wiring issue in 315 MVA ICT-I at Imphal which has been rectified.
5. NERTS informed O/V at Imphal(PG) was caused in 400 kV Imphal-New Kohima I line during switching of PT selection relays during trip of ICT-1 in which contact of PT selection relay was found burnt & continuously shorted. The same has been replaced.
6. NERLDC emphasized the importance of having a Standard Operating Procedure for any switching operation to prevent any human error.
7. The forum opined that the incident involves multiple failure of protection system at connecting substations and lines and therefore referred the matter to PSAG for further analysis and finalization of remedial actions.

In 74th PCCM, NERPC updated that the PSAG meeting would be held shortly to deliberate the matter for further analysis and finalization of remedial actions.

Deliberation of the sub-committee

NERPC apprised that the PSAG meeting was held on 02.01.2025 to discuss the matter and the major finding/recommendations are provided below. –

1. 132 kV Imphal(PG)-Imphal(Yurembam) I line tripped on Overcurrent protection from Imphal(PG) end. POWERGRID informed that ZIII pickup in distance relay. MSPCL informed ZIV operated at Imphal(Yurembam) end.
2. Tripping of 132 kV Imphal(PG)-Imphal(Yurembam) III line could not be concluded from the submitted DR. CB-4 did not trip as informed by MSPCL.
3. POWERGRID informed that for 132 kV Imphal(PG)-Imphal(Yurembam) II & III lines, CRP panels have been replaced at Imphal PG end and installation of Line Differential relay on both the ends has been completed by PG. The ownership of LDR relay at Imphal (Yurembam) end for 132 kV Imphal(PG)-Imphal(Yurembam) I, II & III lines shall be of POWERGRID.
4. Regarding unwanted tripping of 315 MVA ICT-I at Imphal (PG), POWERGRID informed there was some wiring issue which has been rectified.
5. POWERGRID informed Over voltage at Imphal(PG) end for 400 kV Imphal(PG)-New Kohima I Line was caused during switching of PT selection relays during trip of

400/132 kV ICT-1 at Imphal(PG) in which contact of PT selection relay was found burnt & continuously shorted. The same has been replaced.

6. NERLDC highlighted the absence of bus bar protection at the 132 kV Imphal(Yurembam) S/S and, considering the criticality of Imphal Capital area, recommended to revise the Z-IV time delay to 200 msec to prevent the risk of large - scale blackout. Also, installation and commissioning of Bus bar protection were suggested to enhance system reliability.

7. NERLDC recommended ensuring the continuous healthiness of the GPS system as per IEGC to maintain synchronization with all IEDs 24/7. MSPCL was advised to address this issue promptly to ensure compliance with IEGC regulations. The sequence of events not recorded for the tripping of the 132 kV Imphal(PG)-Imphal(Yurembam) III line. MSPCL is requested to investigate and address this issue immediately.

Forum noted the above points and requested MSPCL to comply with recommendations within 7-10 days and submit the report to NERPC and NERLDC.

C.4 Hands on training on PDMS and PSCT software for carrying out system study:

In order to review the protection settings of NER grid, it is necessary to carry out detailed system study of NER grid using PDMS and PSCT software.

In view of this, an offline hands-on training of the software is required for NERLDC protection team from M/s PRDC.

M/s PRDC is requested to arrange a hands-on training session on PSCT and PDMS software for carrying out necessary studies in the month of November'24.

In 72nd PCCM, the forum requested M/s PRDC to conduct a physical training program on the matter. M/s PRDC stated that the training will be conducted in last week of November. The forum opined that the training may be conducted in NERLDC, Guwahati. NERLDC agreed.

In 73rd PCCM, M/s PRDC updated that the training could not be conducted in Nov'24 owing to server and power supply related issues. He further stated that the training will be conducted in Jan'25.

In 74th PCCM, NERPC updated that the training would be conducted in Jan'25 by M/s PRDC.

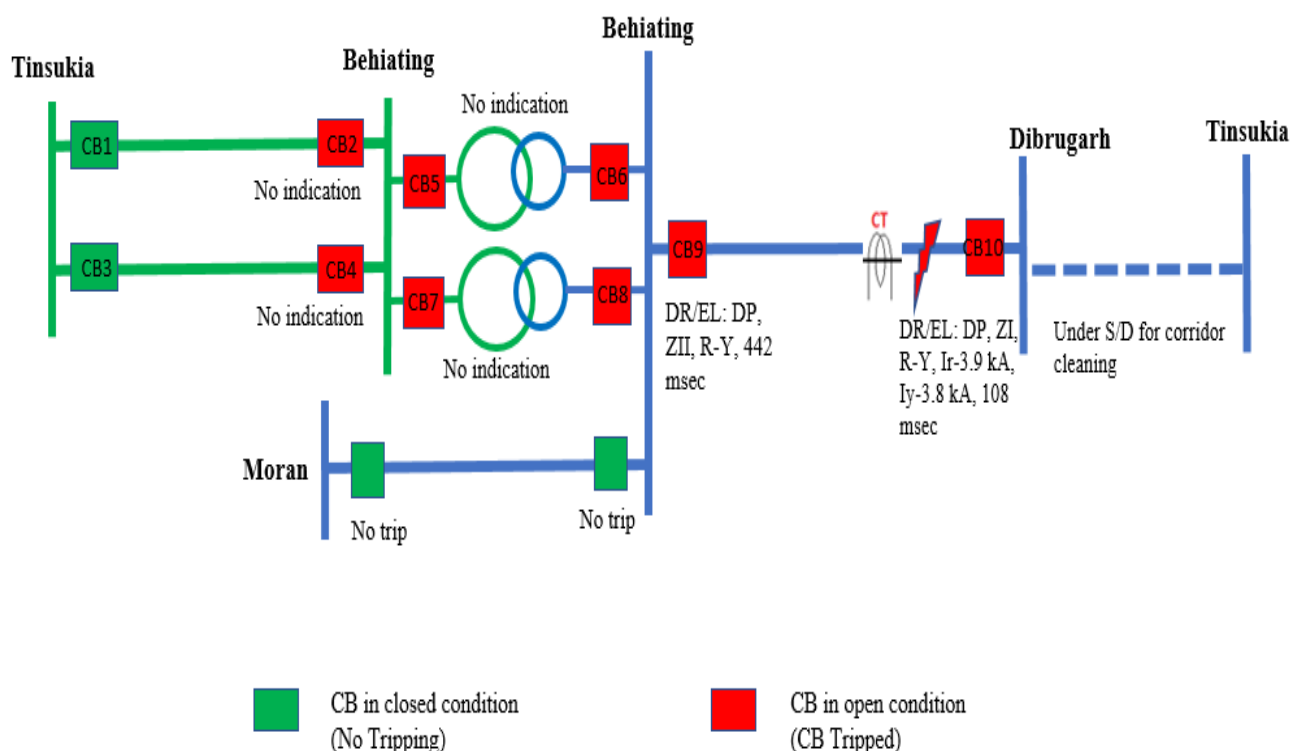
M/s PRDC may update**Deliberation of the sub-committee**

M/s PRDC updated that training may be conducted in Feb'25 on a date suitable to the forum. Forum decided that PRDC may conduct the training on 11th and 12th Feb'25 in Guwahati and requested the utilities to send the nominations to PRDC timely.

C.5 Grid Disturbance in Dibrugarh area in Assam on 29-10-2024:

Dibrugarh area of Assam Power System was connected with rest of NER Power system through 132kV Behiating- Dibrugarh line. Prior to the event, 132 kV Tinsukia-Dibrugarh was under S/D for corridor cleaning.

At 09:05 Hrs of 28-10-2024, 132 kV Behiating- Dibrugarh, 220 kV Behiating-Tinsukia D/C lines & 2x100 MVA 220/132 kV ICTs at Behiating tripped leading to blackout in Dibrugarh area of Assam.



As per DR analysis, solid R-Y phase fault (Ir-3.9 kA, Iy-3.8 kA) in 132 kV Dibrugarh-Behiating line initiated at 09:05:53.331 Hrs and cleared within 108 msec on operation of DP, ZI from Dibrugarh end and within 442 msec from Behiating end on operation of DP, ZII.

As informed by AEGCL, fault is between CT and Line Isolator (RØ-YØ) of 132 kV Dibrugarh – Behiating Line.

Following observations:

1. 220 kV Behiating-Tinsukia I & II lines tripped from Behiating end within 265 msec of inception of fault. It is unclear which protection system operated at Behiating.
2. 220/132 kV Behiating ICT-I&II tripped. As per EL, O/C started at 09:05:53.386 Hrs. HV side CB open at 09:05:53.600 Hrs.
3. Tripping of upstream 220 kV Behiating-Tinsukia D/C lines & 220/132 kV Behiating ICT-I&II for fault in 132 kV Dibrugarh-Behiating line seems to be unwanted.

AEGCL is requested to update the findings and review the protection setting of 220 kV Behiating-Tinsukia D/C lines & 220/132 kV ICT-I&II at Behiating to prevent further re-occurrence of such events.

Deliberation of 73rd PCCM -

1. AEGCL informed that fault is between CT and Line Isolator (RØ-YØ) of 132 kV Dibrugarh – Behiating Line.
2. NERLDC highlighted the absence of Carrier inter-trip scheme in 132 kV Dibrugarh-Behiating line. The same needs to be reviewed by AEGCL.
3. Forum asked AEGCL to review the protection setting at Behiating S/S thoroughly.

In 74th PCCM, AEGCL apprised that the protection system at Behiating was maintained by NERPSIP. Forum advised AEGCL to review the settings of Behiating in coordination with NERPSIP, NERPC and NERLDC.

Regarding the absence of carrier aided tripping scheme, AEGCL assured to look into the matter shortly and would update in next PCC meeting.

AEGCL may update

Deliberation of the sub-committee

AEGCL updated that Master trip signal of ICT1 (CB5) was erroneously high even before the fault and when the fault occurred, LBB operated which tripped CB2, CB4, CB5 and CB7. Further CB6 and CB8 tripped on intertrip on Back-trip(LBB) feature.

Forum noted that this occurred due to shortcomings in maintenance practices of AEGCL and strongly urged AEGCL to diligently undertake maintenance and avoid such maloperations in future.

C.6 Implementation of Uniform Protection protocol vis-à-vis review of protection settings

The Uniform Protection Protocol has been approved by 15th NPC on 14.11.24. As the protocol, review of protection setting of following power system elements have to be done -

- Transmission Lines
- ICTs and Reactors
- Generators (Thermal, Gas, Hydro)
- FACTS device
- HVDC
- RE source-based generation.

As the review of setting of above transmission elements are exhaustive such review of settings shall be done on individual basis by all PSC members.

In 73rd PCCM, NLDC (through VC) requested the forum to start reviewing the protection settings of the power system elements in compliance with the Uniform Protection Protocol. NERPC stated that a protection sub-group has been constituted in 71st PCCM for the purpose and the first meeting of the sub-group will be held shortly.

In 74th PCCM, Forum requested NERPC sub-committee (which has been formed to review setting of Protection protocol in NER) to review the settings of Tripura State power system and submit the report in next PCC meeting.

Deliberation of the sub-committee

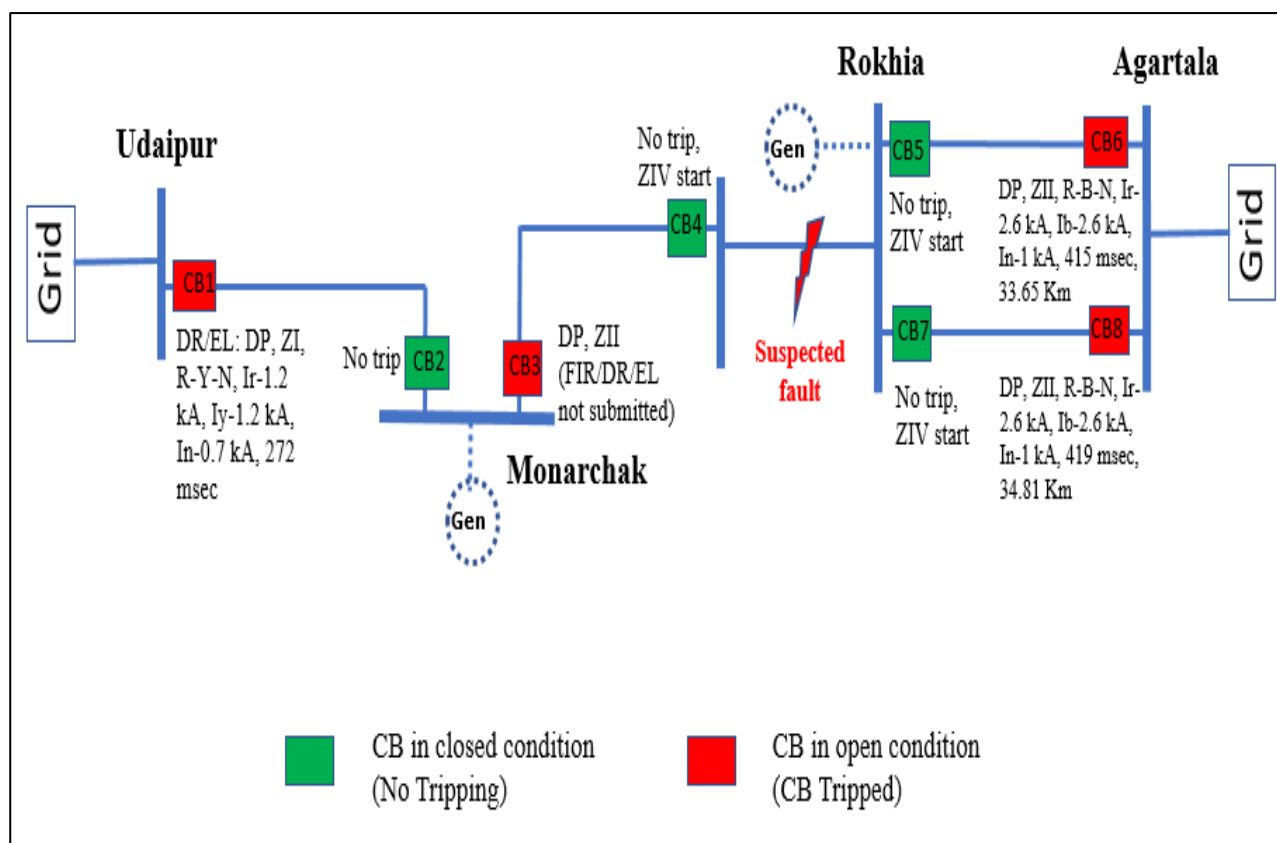
NERPC informed that NERLDC has shared a google spreadsheet requiring details on reviewing of protection settings by every utility. It was further informed that once Tripura provides the required information, the meeting of the sub-committee will be held.

Forum requested all the concerned utilities to provide the details timely.

C.7 Grid Disturbance in Monarchak and Rokhia areas of Tripura on 06-12-2024:

Monarchak and Rokhia generating station of Tripura Power System was connected with rest of NER Grid through 132 kV Monarchak – Udaipur Line, 132kV Monarchak – Rokhia line and 132kV Rokhia – Agartala D/C lines.

At 13:06 Hrs of 06.12.2024, 132 kV Monarchak – Udaipur Line, 132kV Monarchak – Rokhia line and 132 kV Rokhia – Agartala D/C lines tripped along with Rokhia unit-9. Load loss of 8 MW and generation loss of 17 MW occurred.



As per DR analysis, R-B-N fault initiated at 13:05:19.698 Hrs and cleared within 415 msec from Agartala end on operation of DP, ZII. No tripping from Rokhia end (ZIV start)

132 kV Monarchak-Rokhia line tripped on ZII from Monarchak (No FIR/DR/EL submitted). There was no tripping from Rokhia end (ZIV start)

Following observations:

- Suspected fault in 132 kV Rokhia-Rokhia link feeder which was not cleared leading to tripping of healthy lines 132 kV Monarchak-Rokhia line & 132 kV Agartala-Rokhia D/C lines on ZII from remote ends.
- At the same time, 132 kV Monarchak-Udaipur line tripped on ZI from Udaipur end which seems unwanted.

- At the same time, AGTCCPP Unit-2 & 6 tripped which seems to be misoperation.

TPTL/NEEPCO is requested to:

- Share the root cause and remedial actions taken.
- Update the status of installation of Line differential protection in 132 kV Rokhia-Rokhia Link feeder.
- Furnish the reason of tripping of 132 kV Monarchak-Udaipur line for fault in 132 kV Rokhia S/S.
- Reason of tripping of AGTCCPP Unit-2 & 6.
- Submit detailed report in compliance with IEGC-23
- Submit DR/EL within the specified timeline as per IEGC-23.

Deliberation of the 74th PCCM

1. TSECL informed that fault was near the main bus at Rokhia S/S as a CCTV cable snapped and came near the bus and flashover occurred.
2. Regarding the Line Differential Protection on the Rokhia-N.Rokhia link, Tripura updated that the commissioning is underway and would be completed shortly.
3. *NERPC stated that 132 kV generating station should have provision of Double Main Bus scheme to ensure necessary reliability. Forum urged the all the utilities to take necessary action in this regard.*
4. Regarding tripping of AGTCCPP units 2 and 6, NEEPCO informed that the tripping occurred due to relay maloperation. He further informed that the relay panels were old and replacement of the relays, by numerical ones, was being planned.
5. *Forum advised Tripura to provide analysis report on zone 1 operation at Udaipur for Monarchak line.*

Deliberation of the sub-committee

1. Regarding the Line Differential Protection on the Rokhia-N.Rokhia link, Tripura updated that CB and CT have been installed, optical fiber is yet to be installed and protection relays will be operational by Feb'25. Forum advised TSECL to commission distance protection and EF protection in the link at the earliest.

2. Regarding the replacement of relay panels at AGTCCPP, NEEPCO shutdown is planned for next month
3. TSECL to review the zone 1 settings at Udaipur end for Monarchak line.

C.8 Status Update on Parameter standardization of Disturbance Recorder (DR):

The parameter standardization of Disturbance Recorder (DR) was approved during the 59th PCCM (B.30 Standardization of Disturbance Recorder (DR) Channels). Subsequently, it has been incorporated into the Protection Protocol of the North Eastern Region by NERPC (62nd PCCM 20th December 2023). As per the Uniform Protection Protocol, DR parameters are to be standardized in line with the recommendations of the FOLD working group-3.

Status as updated by the utilities in the 75th PCCM -

Sl. No.	Utility Name	Status update (75th PCCM)
1	DoP Arunachal Pradesh	By Feb'25
2	DEPL	
3	AEGCL	Standardised as per FOLD Working Group-3 report
4	APGCL	
5	MSPCL	By Feb'25
6	MePTCL	By Feb'25
7	MePGCL	By Feb'25
8	P&ED Mizoram	By Jan'25
9	DoP Nagaland	Will update before next PCCM
10	TSECL	By Feb'25
11	TPGCL	
12	POWERGRID	Most are standardized. Internal review is ongoing and remaining will be done by Jan'25
13	NEEPCO	Almost all standardized. The rest will be done by Feb'25

14	NHPC	By Feb'25
15	NTPC	
16	OTPC	Done
17	NTL	
18	MUML	
19	KMTL	

All utilities are requested to provide an update on the status of uniform adoption of parameter standardization for Disturbance Recorder (DR).

In 74th PCCM, the forum advised NERLDC to prepare a google sheet with substation wise and feeder wise details and update in that sheet.

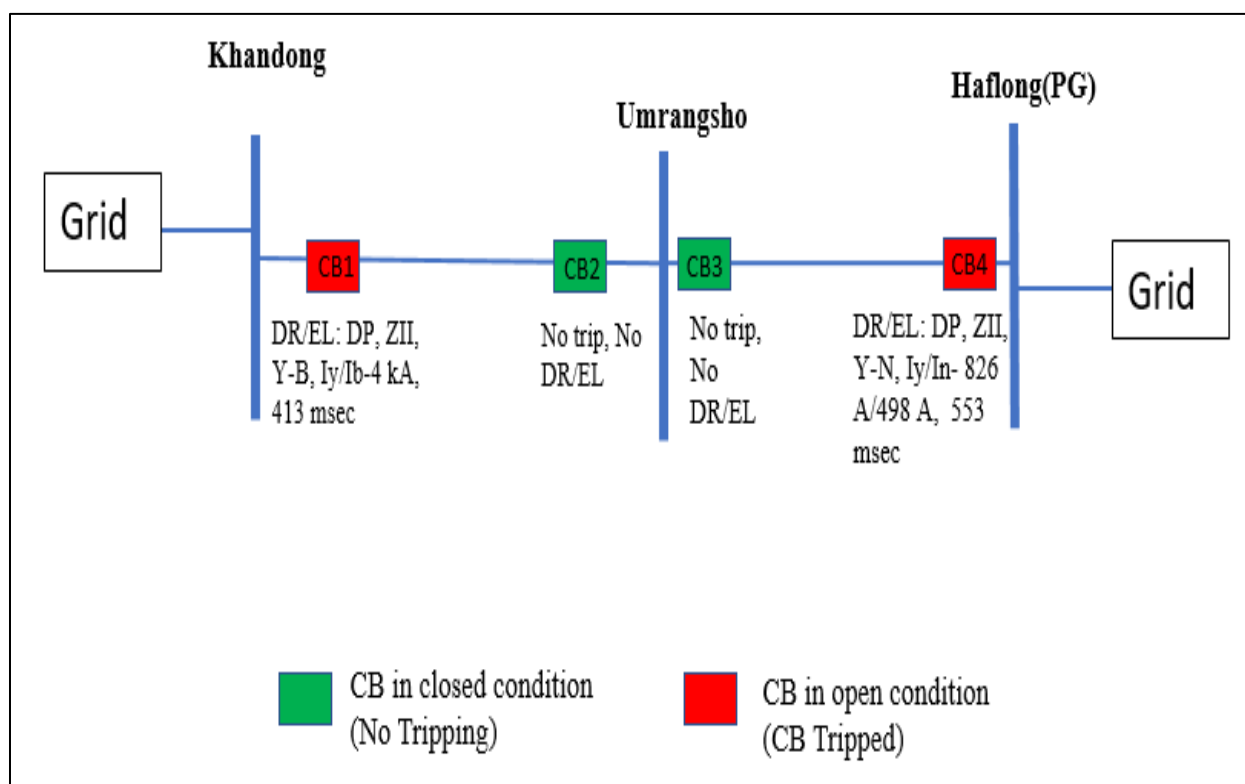
Deliberation of the sub-committee

Utilities updated as provided in the table above.

C.9 Grid disturbance in Umrangsho area of Assam on 24-11-2024:

Umrangsho area of Assam Power System was connected with connected to NER Power system via 132 kV Haflong(PG) - Umrangsho Line & 132 kV Khandong - Umrangsho Line.

At 04:55 Hrs of 24.11.2024, 132 kV Haflong(PG) - Umrangsho Line & 132 kV Khandong – Umrangsho line tripped due to which Umrangsho area of Assam Power System was isolated from NER Grid and collapsed due to no source available in this area. Load loss of 2 MW occurred.



As per DR analysis of 132 kV Khandong-Umrangsho line, Y-B fault (Iy-4 kA, Ib-4 kA) initiated at 04:55:26.146 Hrs and cleared within 413 msec on operation of DP, ZII from Khandong end. There was no tripping from Umrangsho end.

As per DR analysis of 132 kV Haflong(PG)-Umrangsho line, Y-N fault (Iy-826 A In-498 A) initiated at 04:55:24.959 Hrs and cleared within 553 msec from Haflong(PG) end on operation of DP, ZII. There was no tripping from Umrangsho end.

As informed by AEGCL, fault was in between CVT, LA and Gantry point of 132kV Umrangshu – Haflong (PG) line.

AEGCL is requested to:

- Update the reason of non-tripping of Umrangsho CB for 132 kV Haflong(PG)-Umrangsho line.
- Submit DR/EL at Umrangsho end for both the lines for proper analysis of the event.

In 74th PCCM, AEGCL informed that jumper of Haflong feeder at Umrangsho end snapped which caused the fault. He added that CB3 was non-operational and the fault could not get cleared timely. Further he informed that the CB would be checked in the upcoming shutdown of the line.

Forum advised AEGCL to provide DR/EL and root cause analysis report by next PCCM.

Deliberation of the sub-committee

1. AEGCL updated that CB2 and CB3 did not pick up the fault as there were transients in Voltage of CVT, due to fault in the line, and so did not detect drop in voltage.
2. Forum requested AEGCL to check for ZIV triggering of CB2
3. Forum also urged AEGCL to diligently carry out the maintenance practices so that issues like jumper snapping do not occur in future.

C.10 Requirement of SPS in Arunachal Pradesh Power system:

Reporting party: DoP Arunachal Pradesh & POWERGRID

Classification: SPS related to reliable power supply to Arunachal Pradesh

Operation: Load disconnection

1. Special Protection Scheme (SPS) at Tezu substation to prevent under voltage issue prior to connection of Niglok load at Pasighat area of Arunachal Power System:

The purpose of this SPS is to mitigate low voltage issues at Namsai and Tezu Substations by implementing a coordinated load-shedding scheme through automatic disconnection of 132/33 kV ICTs during specific low-voltage conditions.

Scheme:

When voltage at Tezu drops to 105 kV for 2.5 sec, a signal will be generated to trip HV side CB of ICTs at Tezu.

2. Special Protection Scheme (SPS) at Pasighat substation for preventing Overloading of 132 kV Tinsukia-Rupai/Tinsukia-Ledo Lines:

The purpose of this SPS is to mitigate overloading on the 132 kV Tinsukia-Rupai line in the event of a tripping on the 132 kV Paynor-Ziro Line through automatic disconnection of 132 kV Pasighat-Napit line under specific conditions, after the connection of the Niglok load in the Pasighat area of Arunachal Power System.

Scheme:

Trigger condition:

- i) Power flow direction change: The power flow in the 132 kV Pasighat-Along Line changes from import to export mode, with a current magnitude of 10 Amperes.
- ii) Overloading of Pasighat-Napit Line: The current on the 132 kV Pasighat-Napit Line exceeds 65 Ampere with a time delay of 3.5 seconds.

If both of the above conditions are fulfilled, a signal will be generated to trip the CB of 132 kV Pasighat-Napit line at Pasighat.

DoP Arunachal Pradesh and POWERGRID are requested to implement the SPS logics at the earliest.

Deliberation of the 74th PCCM

Regarding the SPS 1, the forum opined that there is requirement of further study of voltage profile of Tezu and Namsai area in case of various contingencies. Further the forum requested NERLDC to undertake the study before commissioning the SPS.

Regarding the SPS 2, the forum approved the SPS. DoP, Arunachal Pradesh informed that the SPS would be implemented by Jan'25.

Deliberation of the sub-committee

Regarding SPS 1, NERLDC informed that the SPS has been commissioned and functional and has operated successfully during low voltage situation (105kV at Tezu) on 10th Jan'25

Regarding the SPS2, DoP Ar. Pradesh updated that the SPS will be implemented by end of Jan'25

C.11 Relay Setting Database for 66 kV and Above Substations:

Maintaining a comprehensive relay setting database is essential for effective protection analysis and ensuring accurate coordination of the protection system. A well-maintained database benefits all stakeholders by enhancing the accuracy and reliability of these records.

All utilities are requested to share the substation-wise relay setting status on the PDMS portal of NERPC in comparison with the actual settings implemented at site.

In 74th PCCM, the forum requested all the utilities to update the relay settings of 66 kV and above elements in the PDMS portal at the earliest.

Deliberation of the sub-committee

NERTS updated that they have started the process of updating the settings in PDMS. Forum requested all the utilities to update their settings in PDMS portal as well as the Google sheet prepared by NERLDC for updating relay settings within three months, i.e. by April'25.

D. ITEMS FOR STATUS UPDATE

D.1. Status of auto-reclosure on z-1 operation for important lines:

In the discussions of the Sub-group on 12-04-2021 the following points were noted:

- a.** Auto-Reclosure is very much required for maintaining system stability, reliability and uninterrupted power supply.
- b.** Presently it will take some time for the state utilities to implement the PLCC and establish carrier communication between stations.
- c.** The operation of Auto-Reclosure on Z-I operation at the local end independent of carrier healthiness is required.

In the 57th and 56th PCC meeting the forum approved the implementation of Auto-Reclosure on Z-1 without carrier check for all lines except the lines with generating stations at both the ends and requested the utilities to implement the AR scheme at the earliest.

Status as updated in 75th PCCM

Sl no	State	Important Transmission lines where AR has to be enabled at the earliest	Status (74th/73rd/72nd PCCM)	Status as per 75th PCCM
1.	Arunachal Pradesh	132kV Balipara-Tenga, 132kV Ziro-Daporijo-Along-Pashighat link	PLCC implementation under PSDF underway. 3-Ph AR has been enabled on the lines (without carrier)	3 Ph AR has been enabled on the lines. PLCC implementation underway.
2.	Assam	All 220kV and 132kV lines	Process underway. 220kV – Completed except for Kathalguri-tinsukia line which	220 kV -all done except for Amguri-NTPS and Tinsukia-Kathalguri lines

			will be done within 2 months. Delay is due to the shutdown issue with Discoms. 132kV – completed except for Dhemaji and Majuli Substations, to be done by Oct'24.	132 kV – Completed except for 2 lines. The same will be completed shortly
3.	Manipur	132kV Imphal-Ningthoungkong	1. In 71 st PCCM Manipur updated that 132kV Imphal-Ningthoungkong line work has been completed & 4 additional line have been considered for AR implementation which work will be completed by end of Sept'24. DPR for PLCC under preparation. To be completed shortly.	
4.	Meghalaya	Annexure (D.1)	Matter was thoroughly discussed in State protection committee.	AR on Lumshnong - Panchgram line will be enabled after FTC is completed

			Report of the meeting has been submitted to NERPC. It was further updated that AR on 132kV Lumshnong-khliehriat line and Lumshnong-Panchgram lines will be enabled by next week.	
5.	Tripura	132kV Agartala-S M Nagar (TSECL), 132kV Agartala-Rokhia DC, 132kV, 132kV Agartala-Budhjungnagar	Relay testing kit has been repaired but not received yet. Target-Sept.'24	Relay testing kit received. AR to be enabled by Dec'24.

Sub-committee noted as above

D.2. Installation of line differential protection for short lines:

As per sub-regulation3 of Regulation 48 of Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022-

"For short line (less than 10 km) or cable or combination of overhead line and cable, line differential protection shall be used with built-in backup distance protection."

As per discussion in 61st PCC meeting the status for different STUs/ISTS licensees are as follows:

Status as updated in 75th PCCM -

Name of utility	Last updated status (74th/73rd/72nd PCCM)	Status as per 75th PCCM
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AEGCL	AEGCL updated that PSDF monitoring group has suspended funding for LDP for 1 year. AEGCL requested MS, NERPC to take up with NPC, CEA to provide funding for the same considering the special case of NER. MS, NERPC stated that funding for the LDP considering the special case of NER has been taken up as resolution by RPC forum	Pending with PSDF
MSPCL	DPR under preparation, to be submitted within one month.	DPR has been approved & NIT to be floated
MePTCL	LDP operation for 9 feeders. For Neighrims-NEHU line, waiting for dark fiber. For other lines, OPGW not available commissioned after OPGW link is established. (Annexure D.2) 7 Feeder operational for rest OPGW work is pending OPGW to be installed on 16 lines. LDP will be enabled after that.	Regarding OPGW installation, MePTCL updated that DPR has been prepared and it would be submitted to PSDF committee for funding by next month for inclusion in reliable communication scheme. For NEHU-NEighrims line, NERPSIP informed the forum that fiber for this line is not under the scope of NERPSIP. Therefore, forum suggested MePTCL to cover this in any other scheme.
P&ED Mizoram	Lines identified 132kV Khamzawl - Khawiva.	DPR prepared and will be sent to PSDF shortly.

	Mizoram stated that DPR in final stage. Price offer has been received from one vendor and awaited from other vendors. The DPR would be prepared by end of Sept.'24.	
DoP Nagaland	<p>LDP Doyang-Sanis line, LDR to be installed by NEEPCO.</p> <p>NEEPCO stated that LDR is available with NEEPCO, however, healthiness of the OPGW link on the line has to be checked first. DoP Nagaland updated that FOTE is present. NEEPCO updated that GE engineers will visit on 15th July.</p>	<ol style="list-style-type: none"> 1. NEEPCO updated that GE engineers had visited the site and work had been completed. 2. Report has been submitted to NERPC. 3. Agenda may be dropped
TSECL	<p>132kV 79 Tilla-Budhjungnagar. DPR to be prepared. Cost estimate submitted to TIDC to arrange for ADB funding.</p> <p>TIDC approval is still waited for fund.</p> <p>Approved for ADB funding. E-tendering underway.</p> <p>Regarding Rokhia-N.Rokhia link, he updated that the breaker has been received.</p> <p>MS, NERPC suggested to apply under PSDF</p>	DPR has been sent to PSDF committee for funding.

Sub-committee noted as above

D.3. Status against remedial actions for important grid events:Status as updated in the 75th PCCM:

Sl No	Details of the events(outage)	Remedial action suggested	Name of the utility & previous update	Status as per 75th PCCM
1.	132 kV Balipara-Tenga line in May and June	Carrier aided inter-tripping to be implemented for 132kV Balipara-Tenga-Khupi at the earliest (PLCC has to be installed on the link. Under consideration of the higher authorities)	DoP, Arunachal Pradesh. PLCC panels received.	DoP updated that PSDF funding will be short closed due to long pending payment issues and delays. He further stated that State is considering funding of the project through its own funding. PLCC work to be tentatively completed by end of this year.
2.	132 kV DoyangMokokchung line 132 kV Mokokchung - Mokokchung (DoP, Nagaland) D/C lines on 30th July	Carrier inter-trip for 132kV DHEP-Mokokchung to be implemented by DoP Nagaland (NO PLCC on the line. Matter under consideration of Higher authorities)	DoP Nagaland (DPR is under preparation for PLCC, by July'24	Offer from Hitachi is still awaited.

3.	Leshka-Khleihriat DC multiple tripping in April to September	TLSA installation along the line to be done by MePTCL	MePTCL (DPR submitted, Approval pending.)	DPR returned by PSDF.
4.	132 kV Loktak-Jiribam line, 132 kV Loktak-Imphalline, 132 kV Loktak-Ningthoukhong line, 132 kV Loktak-Rengpang line & Loktak Units 1,2 and 3 on 3rdAug	> 5MVA TRAFO (Aux. Transformer) to be repaired ->5MVA Auxiliary TRAFO panel to be repaired by NHPC	NHPC TX manufacturing underway. To be completed by Dec'24	Not received yet due to landslide issue.
5.	Grid Disturbance at Loktak HEP on 03rd Aug'22	NHPC-Loktak informed that LBB has been included under R&U scheme and the same shall be commissioned by Mar'23	NHPC (LBB to be commissioned under R&U project) Renovation would start in Nov.'24 and to be completed by Oct.'25. Forum stressed to take LBB on priority.	R & M work to start in Nov'24
6.	Outage of 220 KV Bus Bar Protection Scheme at 400/220/132 KV Killing SS	Bus-Bar protection of 220kV bus at Killing SS	MePTCL BBR defective. Order placed in Oct'23, will arrive in around 7 months, i.e. by May or June'24	Card received but found defective. New Card will be sent by the OEM shortly.
7.	Non-operation of AR for various lines at Byrnihaat end on 25 th and 26 th June'23	Rectification of PLCC issues by MePTCL Consultation with OEM underway for resolution	MePTCL Visit of OEM next week. To be completed by May'24	OEM visited, PLCC defective, will procure at earliest

8.	Tripping of 132kV Kahilipara- Sarusajai 1, 2 and 3 line, 132kV Kahilipara Main bus 1, 132kV Kahilipara transfer Bus 1 and 132kV Kahilipara-Kamalpur line on 2.08.2021	BB protection to be implemented at Kahilipara with procurement of 5 core CTs	AEGCL DPR is under preparation for PSDF. CT under procurement, to be completed by end of this year	New bays have to be integrated to ABB relay, so new cards have to be procured, commissioning may go beyond Dec'24
9.	AR issue at Gohpur end for 132kV Nirjuli-Gohpur line	Panel replacement underway	AEGCL - By April'24	Done, Agenda may be dropped
10.	Non-operation of AR at Doyang HEP	Pneumatic CBs to be replaced	NEEPCO- August 2024	March'25
11.	Generation evacuation issue at Leshka due to tripping of any line of 132kV Leshka-Khliehriat DC line	SPS to be implemented	MePGCL to implement the SPS by May'24	Done, Agenda may be dropped
12	Multiple trippings in the lines connected to Leshka station in April'24 have been observed due to delayed clearance of faults in the link line (GT to Switchyard, 550 meters)	Differential protection on the link line to be implemented. Also, AR on the link line to be implemented	MePGCL To be discussed in internal OCC meeting first. DPR under preparation, to be prepared within one month	DPR has been prepared and submitted to higher authority
13	Multiple tripping of 132 kV Panchgram-Lumshnonong line in April'24 has been observed due to delayed clearance of downstream fault in Lumshnonong	B/U protection settings coordination for the 132kV downstream industrial feeders has to be done	MePTCL To be done shortly	Done, Agenda may be dropped

14	Issue with CB at P K Bari end for Dharmangar line (agenda item C.5 of 69 th PCCM.) Powergrid has reduced timing of zone settings at Kumaraghat end for P K Bari line. The settings will be reverted as soon as the breaker issues is resolved by TSECL	Pneumatic CB at P K Bari end to be replaced with spring charging type CB	TSECL (Work in progress)	NERPSIP informed the forum that M/s Siemens was working and work would be completed within one month
15	At 12:38 Hrs of 09.07.2024, 132 kV Along - Pasighat Line, 132 kV Roing-Pasighat Line & 132 kV Along-Basar Line tripped leading to blackout of Along & Pasighat areas of Arunachal Pradesh	Pneumatic CBs at Along end for Basar line to replaced with Spring type by Oct'24. LBB relay to be rectified at Along SS	DoP Ar. Pradesh (replacement within 2 months)	Covered under PSDF scheme & parallely exploring for State funding also
16.	At 14:56 Hrs of 17-07-2024, 132 kV NEHU-NEIGRIHMS line & 132 kV Khleihriat-NEIGRIHMS line tripped leading to blackout of NEIGRIHMS area.	Neigrihms end for NEHU line Relay to be replaced shortly	MePTCL	

Sub-committee noted as above

Annexure-I**List of Participants in the 75th PCC Meeting held on 16.01.2025**

SN	Name & Designation	Organization	Contact No.
1	Sh. Moli Kamki, A.E (E)	Ar. Pradesh	09863703539
2	Sh. Abhishek Kalita, Dy.Mgr, AEGCL	Assam	08486213068
3	ShAmlan Jyoti Chakravorty, DM, AEGCL	Assam	08638905841
4	Sh. Mikhail Puyam, Mgr, MSPCL	Manipur	09615605735
5	Sh, H.Lalruatkima, SE,SLDC	Mizoram	09862925462
6	Sh. C.Daniela, EE (MRT)	Mizoram	09774692380
7	Sh. Alvin Shullai, AEE (GSPSD), MePGCL	Meghalaya	07005379616
8	Sh. A.G.Tham, AEE (MRT), MePTCL	Meghalaya	09774664034
9	Sh. Alex E.Ngullie, JE, SLDC	Nagaland	08837080321
10	Sh. Manato S. Choppy, JE	Nagaland	08667757059
11	Sh. Krishnadhan Biswas, Sr.Mgr, TPTL	Tripura	09862478930
12	Sh. Amaresh Mallick, ED	NERLDC	09436302720
13	Sh. Biswajit Sahu, CGM	NERLDC	09425409539
14	Sh. Subhash Kumar,Mgr,	NERLDC	09485185844
15	Sh. Utpal Das, AM	NERLDC	07005504075
16	Ms.Isha Das, Engineer	NERLDC	09365332774
17	Sh. Manash Jyoti Baishya, Ch.Manager	PGCIL	09435555740
18	Sh. M.Talukdar, GM (E/M)	NEEPCO	09435339690
19	Sh. Manas Pratim Sharma, Sr.Mgr	NEEPCO	08729901871
20	Sh. M.K.Sutradhar, Sr.Mgr (E)	NEEPCO	09435712779
21	Sh. Soham De, Shift-in-Charge	OTPC	09556557648
22	Sh. D.P.Yadav, Sr.Mgr, LOKTAK	NHPC	09800003465
23	Sh. Sudip Chandan, Engineer	PRDC	07679364781
24	Sh. Rabi Shankar Choubey, Engineer	PRDC	07278680271
25	Sh. K.B.Jagtap, Member Secretary	NERPC	-
26	Sh. Alikpanth De, Dy.Director	NERPC	-
27	Sh. Vikash Shankar, AD-I	NERPC	09455331756
28	Sh. Dinesh Singh, AD-I	NERPC	07042118261

Annexure D.1
Annexure C.1

Name of the line	Status as updated in 56/57th PCC meeting	Latest Status
132 kV Agia - Mendipathar	PLCC works completed. AR operation configuration to commence from March'22. Latest Status to be intimated.	
132 kV EPIP II - Byrnihat D/C		
132 kV EPIP II - Umtru D/C		
132 kV Kahilipara - Umtru D/C		
132 kV Khliehriat – Mustem		
132 kV Mustem - NEHU line		
132 kV Khliehriat (MePTCL) - Khliehriat (PG) Ckt#II		
132 kV Khliehriat- NEIGRIHMS		
132 kV NEHU – Mawlai		
132 kV Mawlai - Umiam Stage I		
132 kV Mawphlang - Nongstoin		
132 kV Mawphlang - Umiam Stg I D/C		
132 kV Mawphlang- Mawlai		
132 kV Mendipathar – Nangalbibra		
132 kV Myntdu Leshka - Khliehriat D/C		
132 kV Nangalbibra – Nongstoin		
132 kV NEHU – NEIGRIHMS		
132 kV NEHU – Umiam		
132 kV Sarusajai - Umtru D/C		
132 kV Umiam - Umiam St I	By March'22	
132 kV Umiam St I - Umiam St II		
132 kV Umiam St I - Umiam St III D/C		
132 kV Umiam St III -Umiam St IV D/C		
132 kV Umiam St III - Umtru D/C		
132 kV Umtru - Umiam St IV D/C		

MePTCL

STATUS OF LINE DIFFERENTIAL PROTECTION PROJECT UNDER PSDF					
Sl. No	Feeder Name	Installation		Commissioning	Remarks
		End A	End B		
1	EPIP-I - EPIP II Line I	Completed	Completed	Completed	
2	EPIP-I - EPIP II Line II	Completed	Completed	Completed	
3	EPIP -I - Killing Line I	Completed	Completed	Completed	
4	EPIP -I - Killing Line II	Completed	Completed	Not Completed	Fiber Network Not Available
5	EPIP -I - M/S Maithan Alloy	Completed	Completed	Not Completed	
6	EPIP -I - Shyam Century	Completed	Completed	Not Completed	
7	EPIP-II - Umtru Line I	Completed	Completed	Not Completed	
8	EPIP-II - Umtru Line II	Completed	Completed	Completed	
9	EPIP II - New Umtru	Completed	Completed	Completed	
10	EPIP II - Killing Line I	Completed	Completed	Not Completed	Fiber Network Not Available
11	EPIP II - Killing Line II	Completed	Completed	Not Completed	
12	Umtru- New Umtru	Completed	Completed	Completed	
13	LUMSHNONG- M/S MCL	Completed	Completed	Not Completed	Fiber Network Not Available
14	LumSHNONG- M/S ACL	Completed	Completed	Not Completed	
15	Lumshnong - M/S MPL	Completed	Completed	Not Completed	
16	UMIAM - Stage I	Completed	Completed	Not Completed	
17	Umiam - NEHU	Completed	Completed	Completed	
18	UMIAM STAGE-I - Umiam Stage II	Completed	Completed	Not Completed	Fiber Network Not Available
19	NEHU - NEIGHRIMS	Completed	Completed	Not Completed	Awaiting for Commissioning of fiber under NERFO
20	NEHU - MAWLAI	Completed	Completed	Completed	
21	KHLIEHRIAT (MePTCL)- KHLIEHRIAT(PG) line-II	Completed	Completed	Completed	
22	Stage-III - Stage IV Line I	Completed	Completed	Not Completed	Fiber Network Not Available
23	Stage-III - Stage IV Line II	Completed	Completed	Not Completed	