



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

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No.: No. NERPC/SE (O)/PCC/2025/144-185

April 1, 2025

To

As per list attached

Sub: 77वीं संरक्षण समन्वय उप-समिति (पीसीसी) बैठक का कार्यवृत्त/ Minutes of 77th Protection Coordination Sub-Committee (PCC) Meeting

महोदय/महोदया,

कृपया 24 मार्च 2025 को एनईआरएलडीसी कॉन्फ्रेंस हॉल, गुवाहाटी में आयोजित 77वीं 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 77th PCC Meeting held at NERLDC Conference Hall, Guwahati on 24th March 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,

(अनिल कवरानी/ Anil Kawrani)

निदेशक / 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.



(अनिल कवरानी/ Anil Kawrani)

निदेशक / Director



सत्यमेव जयते

77वीं पीसीसीएम की

मिनट्स

Minutes of 77th PCCM

भारत सरकार, विद्युत मंत्रालय

उत्तर पूर्वी क्षेत्रीय विद्युत समिति

शिलांग

Govt. of India

Ministry of Power

North Eastern Regional Power Committee

Shillong

North Eastern Regional Power Committee

Minutes of

77th Protection Coordination Sub-Committee Meeting

Date: 24/03/2025 (Monday)

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 76th PROTECTION SUB-COMMITTEE MEETING OF NERPC.

Minutes of the 76th PCC Meeting held on 27th February, 2025 (Thursday) at NERPC Conference Hall, Shillong was circulated vide letter No.: NERPC/SE (O)/PCC/2025/4491-4532 dated 13th March 2025.

No comments were received from the constituents

Sub-committee confirmed the minutes of the 76th PCCM

B. ITEMS FOR DISCUSSION

B.1 Protection Audit in NER:**Background:**

Forum in previous PCCM 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 as per provision of IEGC.

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 2025-26. A google spreadsheet has been circulated to the constituents by NERLDC to provide the schedule of protection audit as well as date of last audit. The forum requested the constituents to update the spreadsheet.

In **76th 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. Rest to be done Internal audit of Along and Pasighat S/S will be planned shortly	Report of Chimpu to be submitted by March'25	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 April'25	NA

2.	Assam	Done for 61 SS for FY 2024-2025. For FY 2025-2026, audits to be done during July-Oct'25	submitted	Forum advised to start identifying external agencies to carry out the third-party audit for next phase of audit (2023-2027). Forum suggested to plan the audits in phase-wise manner.	Submitted for phase 2017-2022
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 Ningthoukong ss may be done by NERPC team in April'25.	NA
4.	Meghalaya	Internal audit of 132kV Substations completed except for two substations namely., IIM & Mustem Will be completed shortly	Reports shared	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 March'25
5.	Mizoram	Done for all SS	Report shared	List of external agencies awaited.	NA

				<p>Searching for parties to conduct audit.</p> <p>Audit of Kolasib, Aizawl, Melriat (PG), Zuangtui and Luangmual may be done in May'25 by NERPC</p>	
6.	Nagaland	Done for all SS	Report shared	<p>Audit of 5 SS to be done in March'25 by NERPC.</p> <p>For rest, to be planned later.</p>	NA
7.	Tripura	13 done, rest by April'25. For 66kV SS - audit by Mar'25.	<p>Shared for 13 SS. But, NERPC informed that the report is incomplete as all the formats have not been provided.</p> <p>TSECL to provide complete formats</p>	<p>Requested NERPC to conduct audit of critical substations namely Agartala, SMnagar, PK Bari, Dharmanagar and Udaipur. MS NERPC stated that the audit may be planned for May'25</p>	NA
8.	Powergrid (NERTS)	21 done, one pending, to be completed within FY 2024-25	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. Matter is under process.</p>	
9.	NTL	Utilities to update status			

10	KMTL				
11	MUML	for N.Lakhimpur- Pare line bays and N.Lakhimpur- Nirjuli bays at Lakhimpur, audit done last week	To be shared by next week		
12	NEEPCO	Pare, Ranganadi Kopili and Turial done. Kathalguri (AGBPP) also done. RC Nagar to be done in Feb'25 Kameng to be done in March'25	Shared for Pare and Turial and AGBPP.	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. Finalization of agency is under process.	
13.	OTPC (Palatana)	Done	Shared	Done	shared
14.	NTPC (BgTPP)	Done	shared	Done (by CPRI)	Report shared. But no data for generation protection. Generation protection report will be provided shortly

15.	NHPC (Loktak)	By Mar'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 Nov'24, rest under planning	To be shared	External audits of all generating stations were done in 2021. For next cycle of audit, planning being done.	
19	Dikshi HEP (IPP)	*	*	*	*

**DoP Ar. Pradesh to intimate Dikshi HEP to provide status to NERPC*

Further deliberations of 76th PCCM

1. AEGCL raised concern that hiring an external agency for conducting third party audit will increase huge commercial impact on the already financial challenged state power utilities of NER. He opined that an expert group may be formed with additional members from state utilities and CPSUs and they can conduct the maximum external protection audits of the generating stations and substations in NER.

Member Secretary informed that already list of experts from NER has been formed. This group has already started doing external audits on identified critical substations in NER. However, considering large numbers of stations to be audited in a Year, list of experts from State/Utilities can be increased and sub group can be strengthened, so as most of the stations can be considered for audit purpose and Assam can assist in preparing a list of experts from State/PSUs and present it in the next PCC meeting for further action

2. MS NERPC also asked all the utilities to enlist the shortcoming/deficiencies observed in the internal and external audits and send compliance reports to NERPC on regular basis. Further he advised the utilities that they may seek PSDF funding also for filling up the gasps in protection system as per the extant PSDF guidelines.

Deliberation of the sub-committee*Utilities updated as follow -*

Sr No	Utility/ Constituents	Internal Audit		External audit	
		Latest Status	report	Latest Status	report
1.	Ar. Pradesh	No representative of A.P.	Report of Chimpu to be submitted by March'25	representative of A.P. MS NERPC stated that that audit of Pashighat and Along substations may be conducted on 11-12 th April'25. Powergrid requested NERPC to conduct the nearby substations of Powergrid also.	NA
2.	Assam	Done for 61 SS for FY 2024-2025. For FY 2025-2026, audits to be done during July-Oct'25	submitted	Forum advised to start identifying external agencies to carry out the third-party audit for next phase of audit (2023-2027). Forum suggested to plan the audits in phase-wise manner.	Submitted for phase 2017-2022. External audit of only Karimganj S/s is left
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 Ningthoukong ss may be done by	NA

				NERPC team in last week of April'25.	
4.	Meghalaya	Internal audit of 132kV Substations completed except for two substations namely., IIM & Mustem Will be completed shortly	Reports shared	Audit of 6 SS (Killing, EPIP I, EPIP II, NEHU, Mawlai an Mawphlang) done. 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 May'25.	Report shared
5.	Mizoram	Done for all SS	Report shared	List of external agencies awaited. Searching for parties to conduct audit. Audit of Kolasib, Aizawl, Melriat (PG), Zuangtui and Luangmual may be done in May'25 by NERPC	NA
6.	Nagaland	Done for all SS	Report shared	Audit of 5 SS to be done in April or May'25 by NERPC. For rest, to be planned later.	NA
7.	Tripura	13 done, rest by April'25. For 66kV SS - audit by Mar'25.	Shared for 13 SS. But, NERPC informed that the report is incomplete as all the formats have not been provided.	Requested NERPC to conduct4 audit of critical substations namely Agartala, SMnagar, PK Bari, Dharmanagar and Udaipur. MS NERPC stated that the audit	NA

			TSECL to provide complete formats by April'25	may be planned for May'25	
8.	Powergrid (NERTS)	21 done, one pending, to be completed within FY 2024-25	Shared	External audit done for Misa & Salakati s/s by NERPC. For 2 substations, audit is being planned to be done by government agencies like CBIP and CPRI. Matter is under process.	
9.	NTL	No representative. A letter will be issued by NERPC to these Tx. licensee to comply on the matter			
10	KMTL				
11	MUML	No representative			
12	NEEPCO	Pare, Ranganadi Kopili and Turial done. Kathalguri (AGBPP) also done. RC Nagar and Kameng done. Monarch being done	Shared for Pare and Turial and AGBPP. Shared for Kameng. RC Nagar report will be shared shortly	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. Finalization of agency is under process.	Internal and external audit of AGTCCPP have been done and reports submitted. External audit of Kameng was done on March'25. External audit report of

					Monarchak will be submitted shortly.
13.	OTPC (Palatana)	Done	Shared	Done	shared
14.	NTPC (BgTPP)	Done	shared	Done (by CPRI)	Complete Report shared.
15.	NHPC (Loktak)	By Mar'25	Internal audit will be done by April'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 Nov'24, Stg III and stg IV to be done by April'25	Submitted for st I and stg II. Internal audit of Umiam Stg 3 and 4 by April'25.	External audits of all generating stations were done in 2021. For next cycle of audit, planning being done.	
19	Dikshi HEP (IPP)	*	*	*	*

* DoP Ar.Pradesh to update

Regarding formation of the protection expert group in NER for conducting the external audits, Assam updated that nominations will be sent this week. Member Secretary requested all the state utilities and CPSUs to send their nominations to NERPC within one week so that the audit committee may be formed within ten days.

With respect to internal protection audits, NERPC requested the utilities to prepare a list of shortcomings observed and corresponding action plans and submit to NERPC and NERLDC along with the protection audit reports. Also, he advised

NERLDC to prepare compliance reports, utility wise, and present regularly in the PCC meetings.

B.2 Analysis and Discussion on Grid Disturbances which occurred in NER grid in February'25 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 February 2024 based on the draft report prepared by NERLDC.

Deliberation of the sub-committee

NERLDC apprised that 6 GDs and one near miss incidents have occurred in NER in February'25 and the same have been put up for discussion in further agenda items.

B.3 Status of submission of FIR, DR & EL outputs for the Grid Events for the month of February'2025:

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 01-02- 2025 to 28-02-2025 as on **17-03-2025** is given below:

Owner Name	Total No of FIR/DR/EL/TR to be submitted(SEND +REND)	FIR			DR			EL		
		Total Furnished in 24hrs %	Total Furnished after 24hrs %	Total furnished %	Total Furnished in 24hrs %	Total Furnished after 24hrs %	Total furnished %	Total Furnished in 24hrs %	Total Furnished after 24hrs %	Total furnished %
AEGCL	22	0.00%	100.00%	100.00%	100.00%	0.00%	100.00%	95.45%	4.55%	100.00%
DoP, Arunachal Pradesh	14	28.57%	50.00%	78.57%	40.47%	42.86%	83.33%	56.05%	28.57%	84.62%
DoP, Nagaland	4	75.00%	0.00%	75.00%	75.00%	25.00%	100.00%	75.00%	25.00%	100.00%
MePTCL	3	33.33%	66.67%	100.00%	33.33%	66.67%	100.00%	100.00%	0.00%	100.00%
MSPCL	1	0.00%	100.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%
NBTL	2	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%
NEEPCO	23	56.52%	34.78%	91.30%	30.43%	60.87%	91.30%	52.17%	39.13%	91.30%
NHPC	2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NTL	1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NTPC	1	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	0.00%	100.00%	100.00%
OTPC	2	100.00%	0.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%	100.00%
POWERGRID	21	33.33%	66.67%	100.00%	52.38%	47.62%	100.00%	57.14%	42.86%	100.00%

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.nerldc.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 nerldcso3@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.

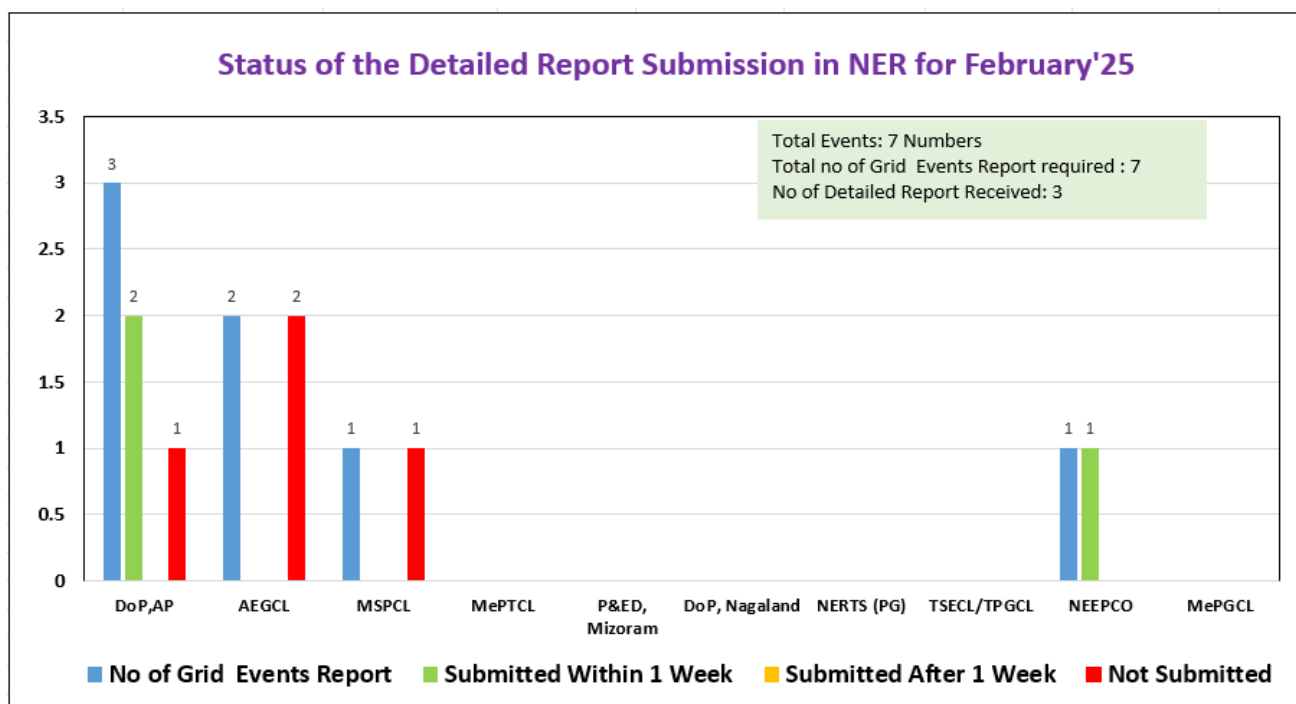
Also, all utilities are requested to nominate a nodal officer responsible for the submission of FIR, DR & EL in Tripping Monitoring Portal (<https://tripping.nerldc.in/Default.aspx>)

Deliberation of the sub-committee

Forum appreciated that most of the utilities have submitted all the DR/EL and urged all the utilities to continue the practice and ensure compliance with 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 **February, 2025** as on **17-03-2025** is shown below:



DoP AP, AEGCL and MSPCL have not submitted the detailed report of grid disturbance

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 exhorted all the utilities to timely submit the flash report and detailed reports following any grid events in compliance of IEGC 2023.

B.5 Non-operation of auto recloser in Important Grid Elements for transient faults in February 2025:

Utilities updated as follow -

Sl. No	Element Name	Tripping Date and Time	RELAY_A	RELAY_B	Auto-Recloser not Operated	Remarks from Utility
1	132 kV NTPS - Tinsukia Line	15-02-2025 12:11:00	DP, ZI, R-E, A/R Not Operated	DP, ZI, R-E, A/R Operated Successfully	NTPS (Assam)	Pole discrepancy relay malfunctioned
2	132 kV Dimapur - Doyang 2 Line	18-02-2025 03:26:00	DP, ZII, Y-B-E, FD: 92 Kms, carrier received, A/R Operated Successfully	DP, ZI, Y-B-E, A/R Not Operated	Doyang (NEEPCO)	CB replacement issue. Only Pneumatic spare available. New Spare CB procurement is underway and will be received by May'25
3	132 kV Dimapur - Doyang 1 Line	18-02-2025 03:26:00	DP, ZI, Y-B-E, A/R Operated Successfully	DP, ZI, Y-B-E, FD: 4.0 Kms, A/R Not Operated	Doyang (NEEPCO)	CB replacement issue. Only Pneumatic spare available. New Spare CB procurement is underway and will be received by May'25

4	132 kV Ranganadi -Itanagar line	22-02- 2025 08:26:00	DP, ZI, Y-B, FD: 6.132kms, A/R Not Operated	DP, ZI, Y- B, FD: 22.57 km, A/R Operated Successfull y	Ranganad i (NEEPCO)	Single phase AR has been enabled at Ranganadi end while the fault was phase to phase. Forum directed Ar. Pradesh to enable SPAR at the place of 3PH AR at Itanagar end for the line.
5	132 kV Aizawl - Kumarghat Line	28-02- 2025 15:14:00	DP, ZI, R-E, FD: 4.3kms, A/R Not Operated	DP, ZII, R- E, FD: 100.4 kms, carrier received, A/R Operated Unsucessf ully	Aizawl (POWERG RID)	PGCIL updated that AR operated at Aizawl end but tripped in reclaim time due to persistent fault

Sub-committee noted as above

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 17.03.2025, **MUML, NBTL, NETC, NTL, MePTCL, DoP Nagaland, OTPC and DoP Arunachal Pradesh** has submitted protection performance indices for the month of February'25.

SN	Name of Transmission Licencee	D= (Nc/ Nc+Nf)	S= (Nc/ Nc+Nu)	R= (Nc/ Nc+Ni)	Remarks
1	NETC	-	-	-	No tripping during Feb'25
2	OTPC	1	1	1	
3	MUML	-	-	-	No tripping during Feb'25
4	NBTL	1	1	1	
5	MePTCL	1	1	1	
6	DoP Arunachal Pradesh	0.833	0.833	0.714	Tripping of 132 kV Along-Basar Line at 11:15 Hrs of 05.02.2025 and 00:38 Hrs pf 15.02.2025. Fault cleared from Basar in Zone-1. At Along Zone-1 trip command did not open CB and LBB operation also did not open Pasighat line CB resulting in tripping of line at Pasighat in Zone-2.
7	DoP Nagaland	1	1	1	

Protection Performance Indices not received from transmission utilities such as **POWERGRID, AEGCL, MSPCL**. Also, not received from Generating companies such as **NTPC, NHPC and NEEPCO (AGBPP, AGTCCPP, Kameng, Ranganadi, Doyang, Kopili)**.

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 apprised that MSPCL and NEEPCO have not submitted the indices. NEEPCO informed that the indices for Kopili and PLHPS (Ranganadi) have been

submitted, NERLDC stated that the indices have not been received due to some technical issues. For other stations, NEEPCO assured to submit the indices shortly. MSPCL also assured to submit the indices shortly.

B.7 Time Drift issue of submitted Disturbance recorder during Feb 2025:

As per Regulation No. 17(1) of IEGC 2023- All users shall keep the recording instruments (disturbance recorder and event logger) in proper working condition.

As per Regulation No. 17(3) of IEGC 2023, The time synchronization of the disturbance recorders shall be corroborated with the PMU data or SCADA event loggers by the respective RLDC. Disturbance recorders which are non- compliant shall be listed out for discussion at RPC.

List of elements with time drift issue in the submitted DRs for February 2025 are as follows:

sl. No.	Element Name	Tripping Date and Time	Time Drift Issue in DR submitted from	Time Drift duration	Remarks (Status as per 77 th PCCM)
1	132 kV Along - Pasighat Line	05-02-2025 11:15	Pasighat (DoP AP)	1 min	AP Absent
2	220 kV Balipara - Sonabil 1 Line	07-02-2025 11:46	Sonabil (Assam)	4 mins	Clock procurement underway. Will be available by May'25
3	132 kV Margherita - Tinsukia Line	13-02-2025 02:18	Margherita & Tinsukia (Assam)	1 Hr	Will be rectified by next PCC
4	132 kV Badarpur - Kolasib Line	13-02-2025 20:53	Kolasib (POWERGRID)	3 mins	GPS not available as of now. Will

					be procured.
5	132 kV Along-Basar Line	15-02-2025 00:38	Basar (DoP AP)	1 min	AP Absent
6	132 kV Along - Pasighat Line	15-02-2025 00:38	Pasighat (DoP AP)	1 min	AP Absent

Utilities should ensure that the submitted DR and EL files have correct time synchronization for proper analysis purposes. Healthiness of GPS may be checked and time to be adjusted as per grid code.

Deliberation of the sub-committee

The forum requested all utilities to identify GPS issue in their respective S/S and forward the list of issues identified and action taken to NERPC and NERLDC

B.8 Multiple tripping of 220 kV Kopili - Misa 1 Line:

220 kV Kopili - Misa 1 Line tripped twice at 18:07 Hrs and 23:18 Hrs on 11-03-2025 on DT received at Misa end. As per PMU, there is no fault in the system. Thus, tripping on DT received seems like a spurious DT operation.

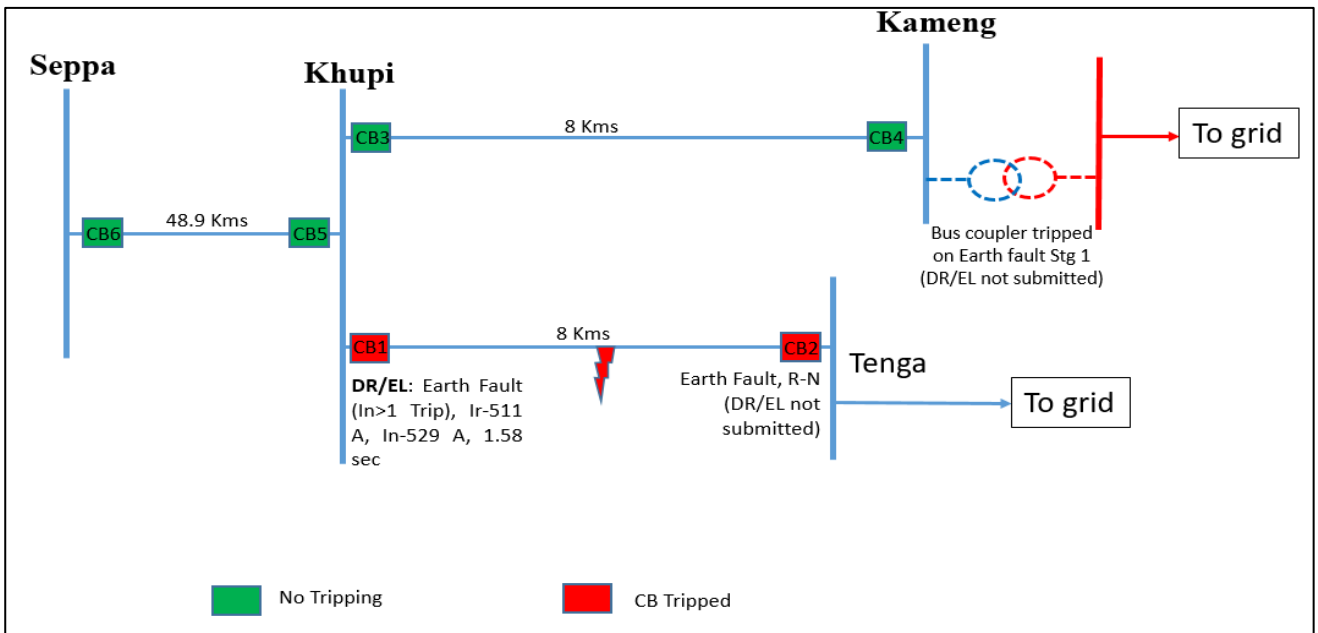
NEEPCO may update the root cause as well as the remedial measures.

Deliberation of the sub-committee

NEEPCO stated that apparently there was no fault in the system and spurious signal was sent to Misa end. PowerGrid suggested that there might be fault in the cable used for DT. Forum advised NEEPCO to check for any faults in the cable and update in next PCC meeting.

B.9 Grid Disturbance in Khuppi and Seppa areas of Arunachal Pradesh Power System on 13-02-2025

Khuppi and Seppa areas of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Kameng - Khupi & 132 kV Tenga - Khupi lines. At 15:25 Hrs of 13-02-2025, 132 kV Kameng - Khupi & 132 kV Tenga - Khupi lines tripped resulting in grid disturbance in Khuppi and Seppa areas of Arunachal Pradesh. Load loss of 1.2 MW occurred.



As per DR analysis, highly resistive R-E fault (Ir-0.5 kA, In-0.5 kA) in 132 kV Tenga - Khupi Line initiated at 15:25:21.062 Hrs which was cleared within 1.58 sec from Khupi end on operation of E/F protection (delayed isolation occurred due to slow rise in fault current because of the high resistive vegetation fault).

Also, 132 kV Bus Coupler at Kameng tripped on E/F Stage-1 (as per FIR) which seems to be unwanted.

As informed by DoP Arunachal Pradesh, a tree fell onto the R-phase conductor of the 132 kV Tenga-Khuppi Line, resulting in a conductor snap loc. 189-190. The snapped R-phase conductor of the 132 kV Tenga-Khuppi line was replaced and line restored on 16th February 2025.

Following observations:

- Tripping of 132 kV Bus Coupler at Kameng on Earth fault Stg-1 before fault could be cleared from Khupi end of 132 kV Tenga - Khupi Line is inferred misoperation. Root cause of unwanted tripping of 132 kV Bus Coupler at Kameng needs to be intimated by NEEPCO.
- The back-up protection settings at Kameng, Khupi and Tenga needs to be reviewed and coordinated as per NER protection philosophy.
- Non-submission of DR/EL for 132 kV Tenga-Khupi line at Tenga end and 132 kV Kameng Bus Coupler which is a violation of Clause 37.2.c of IEGC-23.

DoP AP and NEEPCO may update the actions taken on the above-mentioned issues.

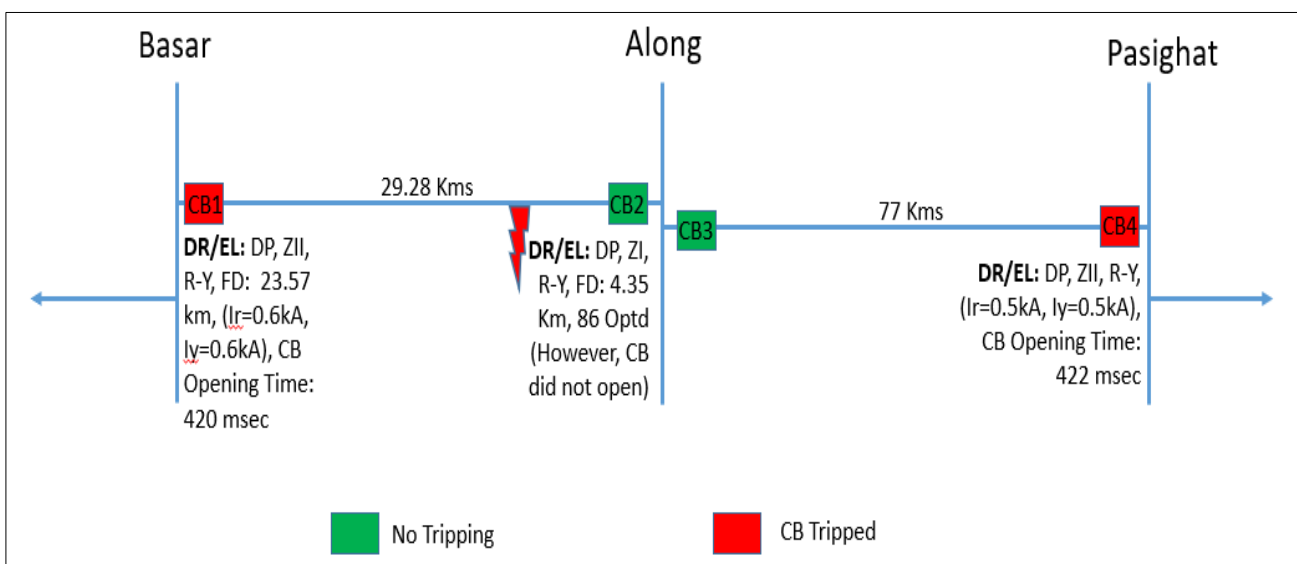
Deliberation of the sub-committee

Regarding tripping of Bus-coupler at Kameng, NEEPCO informed that DR could not be captured due to malfunctioning of relay. He stated that the relay will be replaced soon in next opportunity. Forum opined that there might be issues with the settings of Bus-coupler at Kameng and asked NEEPCO to check settings with NERPC and NERLDC for necessary vetting.

B.10 Grid Disturbance in Along area of Arunachal Pradesh on 15-02-2025:

Along area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Along-Basar & 132 kV Along-Pasighat lines.

At 00:38 Hrs of 15-02-2025, 132 kV Along-Pasighat and 132kV Along-Basar lines tripped resulting in grid disturbance in Along area of Arunachal Pradesh. Load loss of 4 MW occurred.



As per DR analysis, high resistive R-Y fault ($I_r=697\text{ A}$, $I_y=683\text{ A}$) in 132 kV Along-Basar line initiated at 00:39:00.712 Hrs which was cleared within 420 msec from Basar end on operation of DP, ZII, R-Y, FD: 23.57 km. ZI started from Along end and trip command issued. However, CB at Along fails to open. Non-isolation of fault from Along, resulted in clearing of fault from remote end by tripping of 132 kV Pasighat-Along on DP, ZII, R-Y, within 422 msec.

Observations:

- Non-opening of CB at Along for 132 kV Along-Basar line despite issuance of ZI trip command. DoP AP to immediately resolve the Pneumatic type Circuit Breaker issue of Basar feeder at Along Substation, which is reported to be in

poor working condition. In the 76th PCCM, DoP AP informed that they are facing fund issue for procurement of CB. Also, there are no spare CB available. Forum urged DoP AP to keep mandatory spares in substations as per CEA guidelines.

- DoP AP to implement multiphase along with 1-Ph A/R for continuity of power supply in case of transient multiphase fault.
- After 302 msec of initiation of fault, LBB operated at Along end for Basar line. However, 132 kV Along-Pasighat line did not open. LBB time delay setting and its wiring circuit to all feeders at Along to be reviewed
- SOE not recorded for tripping of 132 kV Along-Basar line. The same needs attention from DoP Arunachal Pradesh/SLDC Arunachal Pradesh
- Time drift of 1 min observed at both Pasighat end for 132 kV Along-Pasighat line and at Basar end for 132 kV Along-Basar line which need to be sync with GPS.

It is to be mentioned that similar kind of disturbance observed on 08th Dec'24, 23rd January'25 and 05th Feb'25 and it was already highlighted in the 75th & 76th PCC meeting. In the 76th PCCM, DoP Arunachal Pradesh updated that CBs at Along to be replaced and proposal have been put up to higher authorities. DoP AP informed that they are facing fund issue for procurement of CB. Also, there are no spare CB available. The forum strongly advised DoP Arunachal Pradesh to replace the CBs on urgent basis as multiple blackouts have occurred due to the CB issue.

Despite the recommendations provided in the 76th PCC minutes and NERLDC Protection Team vide ref mail 24/01/25 and letter Ref No NERLDC/SO/24-25/14/7384, dated 07/02/25, no corrective actions have been implemented, leading to repeated disturbances caused by the same known issue.

DoP Arunachal may provide an update on the actions taken in response to the aforementioned observations.

Deliberation of the sub-committee

No representative of DoP Ar. Pradesh. Zone III settings at Pasighat modified from 120% to 100% as informed by POWERGRID.

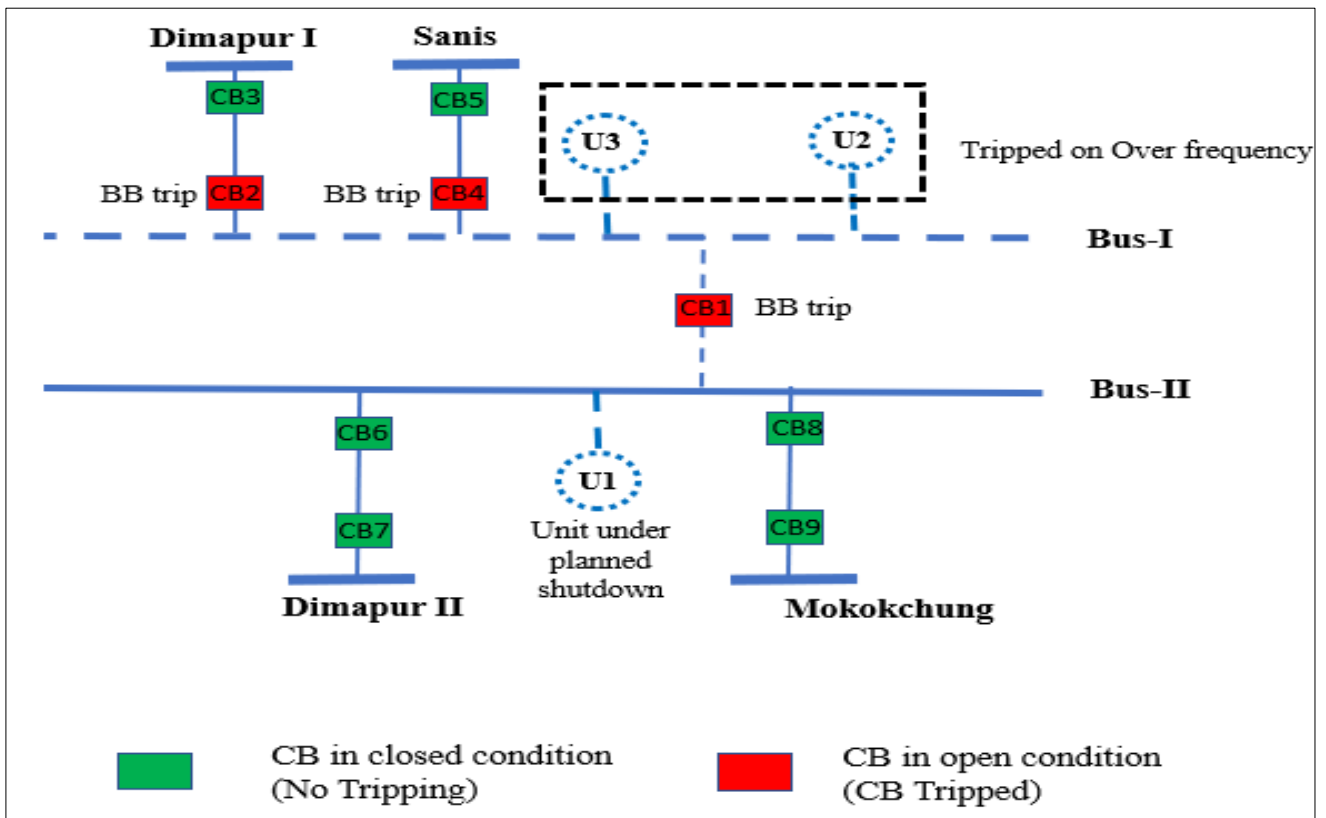
PowerGrid suggested that till the CBs are procured, any CB from tie bays of other substation may be used in the main bay of Basar line at Along S/S. Forum endorsed the view of PowerGrid and requested DoP Ar. Pradesh for action accordingly.

Near Miss Event in Doyang S/S of NEEPCO on 16-02-2025:

Doyang S/S of NEEPCO was connected with rest of NER Grid through 132 kV Dimapur-Doyang D/C lines, 132 kV Doyang-Sanis line and 132 kV Doyang-Mokokchung Line.

Prior to the event, 132 kV Doyang-Dimapur I line, 132 kV Doyang-Sanis line, Doyang Unit-2 & 3 were connected to Bus-I and 132 kV Doyang-Dimapur II line and 132 kV Doyang-Mokokchung line were connected Doyang Bus-II. Doyang Unit-I was under planned shutdown.

At 19:59 Hrs of 16-02-2025, during desynchronization of Doyang Unit-2, 132 kV Bus-I at Doyang tripped on operation of bus bar protection resulting in tripping of all elements connected to Doyang Bus-I.



As per DR analysis of 132 kV Doyang-Dimapur I line, R-B ($I_r=1.04\text{kA}$, $I_b=0.9\text{kA}$) fault initiated at 19:59:32.761 Hrs. Fault was cleared within 52 msec from Doyang end on operation of Bus bar Trip. Also, Z5(rev) started at 19:59:32.786 Hrs.

As informed by NEEPCO, during desynchronization of Doyang Unit-II, due to Gen CB trip coil faulty / burned, CB unable to open due to Excitation trip.

Observation:

- DR/EL submitted for Doyang Unit-2 and Doyang Unit-3 does not open due to which proper analysis could not be done. NEEPCO is requested to submit correct DR/EL files.

NEEPCO is requested to update the root cause and remedial measures taken.

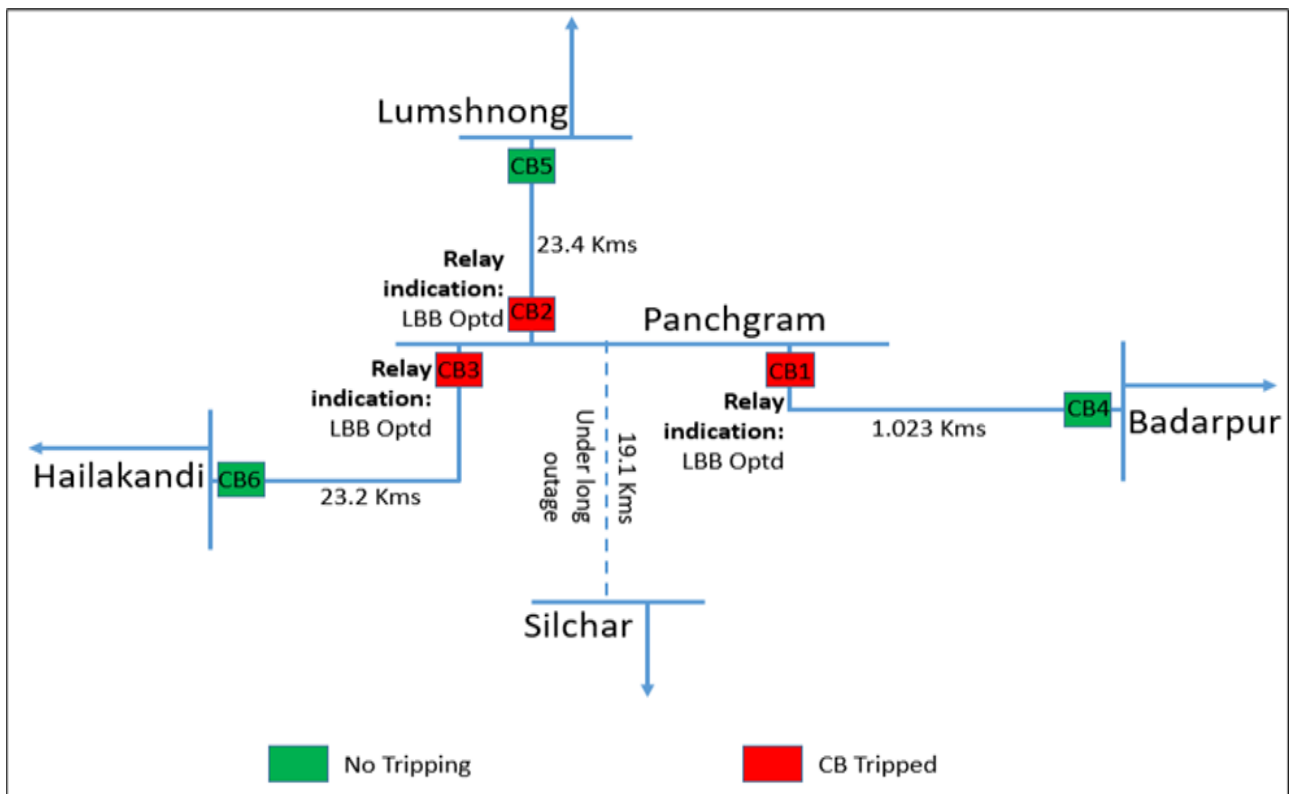
Deliberation of the sub-committee

NEEPCO informed that CB trip coil of Unit II got burned and the same might have caused fault in the system and BB operation. NERLDC stated that complete analysis of the Units could not be done due to nonavailability of DR.

Forum requested NEEPCO to provide all the DR to NERLDC and referred the matter to PSAG for further analysis.

B.11 Repeated Grid disturbance in Panchgram area of Assam Power System on 20-02-2025 and 22-02-2025:

Panchgram area of Assam Power System was connected with rest of NER Grid through 132 kV Panchgram-Hailakandi, 132 kV Panchgram-Badarpur & 132 kV Lumshnong-Panchgram lines. 132 kV Panchgram-Srikona line was under long outage since 14.01.2019. At 12:30 Hrs of 20-02-2025 and at 14:26 Hrs of 22-02-2025, 132 kV Panchgram-Hailakandi, 132 kV Panchgram-Badarpur & 132 kV Lumshnong-Panchgram lines tripped resulting in GD in Panchgram area of Assam Power System. Load loss of 18 MW and 20 MW occurred respectively.



As per PMU data analysis, there was no fault observed in current or voltage magnitudes, suggesting that the tripping of all lines emanating from the 132 kV Panchgram substation on LBB appears to be maloperation.

As informed by AEGCL, LBB maloperation in new 132 kV Line panel.

Protection issues observed:

- LBB maloperation at Panchgram end without any fault in the system. Repeated Grid Disturbance due to LBB maloperation is the cause of concern. Therefore, AEGCL is requested to take immediate pre-cautionary actions to avoid re-occurrence of such event.

AEGCL may update the remedial actions taken to prevent re-occurrence.

Deliberation of the sub-committee

AEGCL updated that LBB operated at Panchgram as LBB contact was damaged in the 132kV Railway traction bay. Further he updated that the connections have been shifted a spare contact.

Forum opined that any traction line at 132kV has to be mapped in the SCADA and protection approval has to be taken from NERPC as per the NERPC Protection Protocol.

B.12 Submission of Transmission System Availability Factor (TAFPn) by Transmission Licensee:

As per Clause 1 of Appendix-IV of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024, transmission system availability factor for nth calendar month (“TAFPn”) shall be calculated by the respective transmission licensee, verified by the concerned RLDC and certified by the Member-Secretary, RPC of the region concerned, separately for each AC and HVDC transmission system and grouped according to sharing of transmission charges.

Accordingly, a revised format for Transmission Availability Verification calculation is attached as **Annexure B.13**, incorporating the formulae for calculation of availability of each category of transmission elements as per Appendix-V of CERC (Terms and Conditions of Tariff) Regulations, 2024.

Deliberation of the sub-committee

Matter referred to 224th OCC meeting for deliberation

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
1	SPS Signal		DIGITAL STATUS: Enable/Disable,	

			Operated/No (Condition/Logic Wise)	Operated	
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Display of SPS SCADA Mapping

17-Mar-2025 10:49:47 SPS STATUS & OPERATION			
STATION	SPS	SPS ON/OFF	SPS OPTD.
BGTPP_NTPC	BGTPP U-3	ON	NRML
PALATANA_OTPC	SPS-2 Bangladesh	OFF	NRML
	SPS-4 Bangladesh	OFF	NRML
	SPS -2 HSR	ON	NRML
	SPS -3 HSR	ON	NRML
	ZIRO SPS	ON	NRML
SARUSAJAI_AS	SARUSAJAI SPS	F OFF	F NRML
IMPHAL_PG	IMPHAL SPS	ON	NRML
SM NAGAR (ST)	SM NAGAR B/R -1 SPS	OFF	NRML
SM NAGAR (ST)	SM NAGAR B/R -2 SPS	OFF	NRML
PK BARI (ST)	PK BARI B/R -1 SPS	OFF	NRML
PK BARI (ST)	PK BARI B/R -2 SPS	OFF	NRML
TINSUKIA (AS)	TINSUKIA SPS	ON	NRML

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 76 th PCCM
1	<u>Tripping of 400kV Palatana-Silchar D/C-</u> when both modules of Palatana are in service causes tripping of HV side breaker of 2x125 MVA, 400/132 kV ICT at Palatana	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	Done. Modified logic to be mapped after implementation

		ON during shut down of 400 kV Palatana-Surajmaninagar(ISTS) line-1	
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	<u>Related to the safe evacuation of power from BgTPP(NTPC) generation</u> - BGTPP generation reduction to 600 MW	-	Done
4	<u>Related to Generation evacuation from Monarchak(NEEPCO) Power Plant</u> - Tripping of STG at Monarchak under outage of any one circuit of 132 kV Monarchak – Rokhia line & 132 kV Monarchak- Udaipur	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 kV Bongaigaon-Balipara 1 & 2 Line at Rangia.	Done
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	<p><u>Related to the tripping of Bus Reactors at 400 kV P K Bari (ISTS)</u> -</p> <p>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</p>	-	Done
8	<p><u>Related to the tripping of Bus Reactors at 400 kV Imphal (PG)</u> -</p> <p>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)</p>	-	Done
9	<p><u>Related to Outage of any one of the 400/132kV 2x360MVA ICTs at Panyor Lower Hydro Power Station</u> -</p> <p>Disconnection of One Unit of Panyor (135 MW) and One Unit of Pare (55 MW)</p>	<p>After restoration of 132 kV Panyor -Itanagar & 132 kV Panyor -Pare line (expected by 31st Mar'24)</p>	<p>SPS logic only has O/C and is not connected to DCS. It is directly connected to Relay in which only SPS Operated status can be mapped. SPS ON and SPS OFF can't be mapped for such cases.</p>

10	<u>SPS related to outage of 220 kV Azara-Sarusajai DC -</u> <u>On tripping of 220 kV Azara-Sarusajai D/C:</u> 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> <u>On tripping of 220 kV Misa-Samaguri DC:</u> 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 April'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 April'25
15	SPS related to reliable power supply to Arunachal Pradesh from Assam through the Roing-Chapakhowa DC line: Triggering criteria-1: Tripping of either 132KV Tinsukia-Ledo or 132KV Tinsukia-Rupai line with current	i) Commissioning of 220kV Kathalguri-Namsai D/C ii) Reconductoring of 132kV Tinsukia-Ledo and 132kV Tinsukia - Rupai Lines	Done

	exceeding 300A in 132kV Tinsukia - Ledo or 132KV 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 second week for April'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 second week for April'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 March'25
19	SPS at Tezu substation to prevent under voltage issue prior to connection of Niglok load at Pasighat area of Arunachal Power System		Similar to point 9. SPS ON and OFF status can't be mapped. Done
20	SPS at Namsai substation to prevent under voltage issue prior to connection of Niglok load at		Similar to point 9. SPS ON and OFF status

	Pasighat area of Arunachal Power System		can't be mapped. Done
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
23	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	
Sl. No.	SPS under implementation	Long term measures	
1	SPS related to overloading of 2x160 MVA 220/132 kV ICTs at BTPS	Feb'25	
2	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	

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 76th PCCM, NERPC stated that the quarterly report for July-Sept quarter and Oct-Dec quarters have been prepared and will be sent to CERC shortly.

Forum requested the concerned states to provide the monthly reports timely to NERPC and NERLDC

Deliberation of the sub-committee

NERLDC informed that all the concerned states have submitted the progress report till Feb'25 except for Manipur which has not submitted the report for Feb'25. MSPCL assured that the report will be sent shortly.

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 77th 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 (77th PCCM)
1	132 kV Agartala - Surajmaningar 2 Line	17-11-2023 15:10	DP,ZI,Y-B,FD:5.81 km, AR successful	DP,ZI,R-Y,FD:11.98 KM	Surajmaningar	The Relay Testing kit has been received, but control cable has not been arranged at SM Nagar. Work to be completed by April'25

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 May'25
3	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) l)	Aizawl(PG CIL)	Carrier signal issue at Tipaimukh end. MSPCL to check the time delay settings for sending carrier at Tipaimukh. MSPCL updated that issue could not be resolved due to law & Order issue in the state
4	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 updated that matter has been raised to NERPSIP, awaiting the response of NERPSIP.
5	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. FTC related

						issue, to be discussed in 224 th OCCM.
6	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	Bokajan (AEGCL)	Issues with pneumatic breakers at Bokajan end. New CBs in transit, to reach the site by end of April'25
8	132 kV Daporijo - Ziro Line	13-01-2025 15:00:00	DP, ZI, B-E, AR Not Operated	DP, ZI, B-E, FD: 67.724K ms, A/R Operated Successfully	Daporijo (DoP AP)	No representative of Ar. Pradesh

Sub-committee noted as above

C.3 Bus bar protection at Surajmaninagar (TSECL):

As per the monthly progress report submitted by Tripura (Petition No535/MP/2020) for the month of December, 2024, the progress regarding implementation of Bus bar Protection at SM Nagar (TSECL) is updated as: Will be implemented after getting fund from PSDF. TSECL may update the latest status of the same and mention the tentative date of completion as the issue is long pending.

As per 76th PCC minutes

TSECL updated that the DPR was submitted to PSDF seven months ago, but update has not been received from PSDF yet. MS NERPC advised to resubmit the DPR to PSDF with revised cost estimate. Forum also noted that Bus-Bar protection is not in service at 132kV Agartala SS. Further it was noted that due to non-availability of Busbar protection at 132 kV 79 Tilla (Agartala SS), Z4 timing of all 132 kV feeders

may be revised to 200 msec considering the criticality of the substation which is catering to the capital city load.

Tripura to update the latest status.

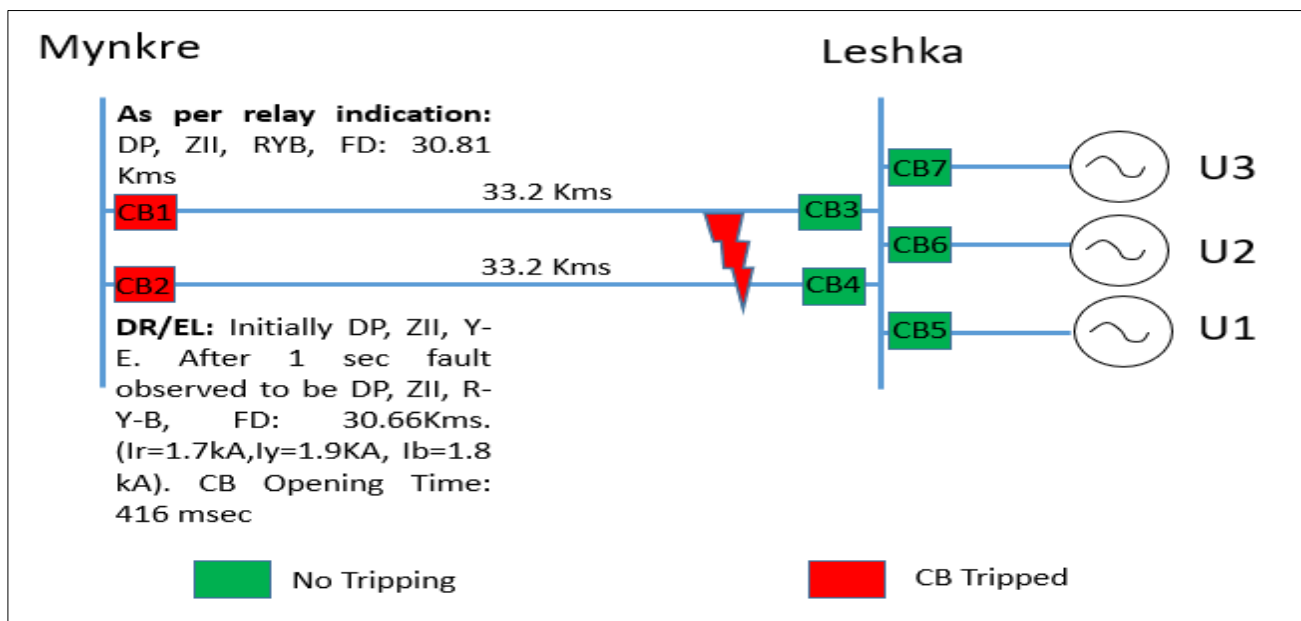
Deliberation of the sub-committee

Tripura updated that the proposal has been sent to the state government for funding. Tripura apprised that in the DPR, CTs are also proposed to be replaced with higher ratings. NERTS informed that to commission Bus Bar protection there is no requirement of CT replacement. Forum requested Tripura to reconsider on the matter.

Regarding revision of Z4 timing at Agartala ss, PowerGrid updated that revision has been done their feeders, Tripura updated that the work will be done within one week.

C.4 Grid disturbance in Leshka HEP of Meghalaya Power System on 20-01-2025:

Leshka HEP of Meghalaya Power System was connected with rest of NER Grid via 132kV Mynkre-Myntdu Leshka D/C lines. At 09:16 Hrs of 20-01-2025, 132kV Mynkre-Myntdu Leshka D/C lines tripped, resulting in grid disturbance due to loss of evacuation path of Leshka HEP area of Meghalaya Power System. At the same time Umiam stg1 Unit 1, Umiam stg1 Unit 2 and Umiam stg1 Unit 4 also tripped which seems to be nuisance tripping. Generation loss of 62 MW observed.



As per detailed report submitted by MePGCL, the 132kV link line from the 11kV/132kV Transformer Bay to the Switchyard passes through forest. Fault may have occurred in this line which is protected by O/C E/F relay.

Protection/Operational issues observed:

- Root cause of the tripping and the exact location of the fault may be shared by MePTCL and MePGCL
- Mynkre end DR channels for 132KV-Myntdu Leshka-Mynkre 1 Line are not standardised due to which proper analysis could not be done. The DR duration to be enhanced to 3 sec with Pre fault time of 500 msec and post fault of 2.5 sec. Also, voltage channel to be configured in analogue channel of DR in line with DR Parameter Standardisation report of FOLD Working Group-3. Action- MePTCL
- A huge time drift of 4 mins observed from Mynkre ends DR for 132KV-Myntdu Leshka-Mynkre D/C Lines. GPS need to be checked and time to be aligned to get correct sequence for analysis. Action-MePTCL.
- SOE not recorded for tripping of all elements from Mynkre and Leshka HEP. The same needs attention by team MeTCL and MePGCL.
- Reason for tripping of 3 units from Umium stage-1 along with actions taken may be updated by MePGCL

- MePGCL may submit the Switchyard layout of Leshka for understanding of equipment location

Deliberation of the 76th PCCM

MePGCL informed that the fault occurred (vegetation fault) in the link line (from generator to the switchyard). He further informed that only B/U OC and EF protection is provided for this link.

Forum exhorted Meghalaya to implement the Line differential protection for the link. MePGCL informed that LDP procurement is in process.

MePGCL informed that correct DR for 132 kV Mynkre-Leskha I line will be submitted shortly.

Regarding tripping of Umiam Stg-I Unit-1,2&4, MePGCL informed that units tripped on operation of OC & EF relay. Tripping of Umiam Stg-I Unit-1,2&4 for fault in 132 kV link line at Leshka is unwanted which needs to be thoroughly investigated.

Forum referred the matter to PSAG for further analysis.

Deliberation of the sub-committee

NERPC updated that the PSAG meeting will be held next week on the matter.

Regarding Differential protection on the link line, MePGCL informed that the DPR has been sent to PSDF on the matter

C.5 Monitoring of internal and external audit by Users

IEGC 2023, Regulation 15 mandates all Users to conduct an internal audit annually and a third-party protection audit for substations at 132kV and above every five years or as recommended by NERPC.

It is essential to maintain a list that monitors the proposed dates for internal and external audits versus their actual completion dates. To facilitate this, **NERLDC has created a Google spreadsheet that includes details of protection audits, the AR status of lines, and SPS mapping on SCADA. All utilities are kindly requested to update the latest status to facilitate easy tracking and ensure onward IEGC compliance.**

In 76th and 77th PCCM, Forum exhorted, in line with discussions in agenda B.1, all the utilities to update the google sheet and comply with the IEGC regulations. Forum urged all utilities to submit action plan and compliance report on audit findings to NERLDC & NERPC for further deliberation in PCCM.

Utilities may update

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.

In 75th PCCM, 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.

In 76th PCCM, NERLDC informed that Tripura is yet to provide the required details in the google spreadsheet. Forum exhorted Tripura to provide the details at the earliest so that review of settings can be done timely.

Deliberation of the sub-committee

NERLDC informed that Tripura is yet to provide the required details in the google spreadsheet. Forum exhorted Tripura to provide the details at the earliest so that review of settings can be done by next PCC meeting.

Tripura informed that the settings of substations of TPTL have been sent to NERPC and NERLDC on 25.02.2025. Forum noted the same and asked Tripura to provide data as required in google sheet also.

C.7 Status on resolution of protection issues as discussed in 76th PCCM

Utilities updated as follow -

SN	Protection issues to be resolved as decided in 76th PCCM	Concerned Utility	Previous status	Latest status
1.	LDP on Rokhia-N.Rokhia link	TSECL	March'25	RoW issue hampering the work. Matter escalated to higher level. MS stated that the matter will be taken up MD TSECL in a separate meeting
2.	Replacement of relay panels (electromechanical to numerical) at AGTCCPP	NEEPCO	one panel has been replaced and the other will be replaced in next shutdown	WIP. To be completed by 28.03.2025

3.	BB protection stability test at Doyang	NEEPCO	that matter is being taken up with the OEM (M/s ABB) and the test will tentatively be conducted in April'25	Price offer awaited from ABB
4.	Modification of SPS Scheme related to the outage of 132 kV Leshka –Khliehriat D/C after LILO at 132 kV Mynkre S/S	MePTCL	the revised scheme has been shared with Mynkre S/S and will be implemented by March'25.	Matter has been taken up with NERPSIP. Also, Protection coupler is not present there, in talk with ABB
5.	Implementation of SPS related to overloading of 2x160 MVA 220/132 kV ICTs at BTPS	AEGCL	SPS will be implemented in 2 nd week of March'25	Done, but the logic for failure of carrier has not been done yet. To be completed within one week.

Sub-committee noted as above

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 76th PCCM -

Sl. No.	Utility Name	Status update (76 th PCCM)
1	DoP Arunachal Pradesh	By Feb'25
2	DEPL	
3	AEGCL	Standardized 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).

NERLDC has prepared a google sheet with substation wise and feeder wise details of each state. All utilities are requested to update the status of DR parameter standardization in the google spreadsheet.

In 76th PCCM, NERLDC informed that only Meghalaya and MUML have updated the status in the google spreadsheet. Forum exhorted other utilities to update at the earliest.

Deliberation of the sub-committee

Forum advised NERLDC to take update through e-mail.

C.9 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.

As per 74th PCC minutes, Forum requested all the utilities to update the relay settings of 66 kV *and above elements in the PDMS portal at the earliest.*

As per 75th PCC minutes, 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.*

NERLDC has prepared a google spreadsheet containing substations of each state. All utilities are requested to review and update relay settings in the google spreadsheet.

In 76th PCCM, Forum exhorted the utilities to update the relay settings in PDMS database as well as the google spreadsheet.

Deliberation of the sub-committee

All utilities except Powergrid are yet to start the updating of relay settings in PDMS. Forum directed all the utilities to complete the exercise at the earliest as any relay settings coordination exercise through PSCT tool requires updating of network and relay settings in the PDSM database. Further, the forum requested NERLDC to prepare a google spreadsheet utility and substations wise and take update regularly.

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 77th PCCM

Sl no	State	Important Transmission lines where AR has to be enabled at the earliest	Status (74 th /73 rd /72 nd PCCM)	Status as per 77 th 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 77th PCCM –

Name of utility	Last updated status (74th/73rd/72nd PCCM)	Status as per 77th PCCM
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	<p>Lines identified 132kV Khamzawl - Khawiva.</p> <p>Mizoram stated that DPR in final stage. Price offer has been received from one vendor and awaited form other vendors. The DPR would be prepared by end of Sept.'24.</p>	DPR prepared and will be sent to PSDF shortly.
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

Annexure-I**List of Participants in the 77th PCC Meeting held on 24.03.2025**

SN	Name & Designation	Organization	Contact No.
	-	Ar. Pradesh	-
1	Sh. Rahul Goswami, AGM, AEGCL	Assam	07399167669
2	Sh. Abhishek Kalita, Dy.Mgr, AEGCL	Assam	08486213068
3	Sh.Pfoksehrie Loli, Sr.Mgr, MSPCL	Manipur	07085402730
4	Sh. S.Shangriwung, Mgr,MSPCL	Manipur	08732016945
5	Sh.Lalsangliana, SE	Mizoram	06009605796
6	Sh. C.Chawnggzikpuia, SDO	Mizoram	08974770712
7	Sh. Alvin Shullai,AEE, MePGCL	Meghalaya	09436334458
8	Sh. Kitbok Kynjing, AEE, MePTCL	Meghalaya	09485170070
9	Sh. Shuwatho Kajiry, JE (E)	Nagaland	07005584689
10	Sh. Alex E.Ngullie, JE, SLDC	Nagaland	08837080321
11	Sh. Ratan Dhar, Manager,TPTL	Tripura	09436582838
12	Sh. Amaresh Mallick, ED	NERLDC	09436302720
13	Sh. Subhash Kumar, Mgr	NERLDC	09485185844
14	Ms. Isha Das, Engineer	NERLDC	09365332774
15	Sh. Manash Jyoti Baishya, Ch.Manager	PGCIL	09435555740
16	Sh. M.Talukdar, GM	NEEPCO	09435339690
17	Sh. Manas Pratim Sharma, Sr.Mgr	NEEPCO	08729901871
18	Sh. Sanjib Pal, Section Head-PME	OTPC	09436583737
19	Sh. Dayanand Prasad Yadav, Sr.Mgr (E)	NHPC	09800003465
20	Sh. Sajeev Mohandas, AGM	NTPC	09496006403
21	Sh. K.B.Jagtap, Member Secretary	NERPC	-
22	Sh. Anil Kawrani, Director	NERPC	08799737377
23	Sh. Maya Kumari, Dy Director	NERPC	09024334279
24	Sh. Vikash Shankar, Asst.Director	NERPC	09455331756