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Agenda for 83rd PCCM

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

North Eastern Regional Power Committee

Agenda for

83rd Protection Coordination Sub-Committee Meeting

Date: 18/09/2025 (Thursday)

Time: 11:00 hrs.

Venue: NERPC Conference Hall, Shillong

A. CONFIRMATION OF MINUTES

1. CONFIRMATION OF MINUTES OF THE 82nd PROTECTION SUB-COMMITTEE MEETING OF NERPC.

Minutes of the 81st PCC Meeting held on 21st August, 2025 at NERLDC Conference Hall, Guwahati was circulated vide letter No.: NERPC/SE (O)/PCC/2025/2083-2125 dated 8th September 2025.

No comments were received from the constituents

Sub-committee may confirm the minutes of the 82nd PCCM

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. 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.

Status of Internal/External audit (82nd PCCM)

Sr No	Utility/ Constituents	Internal Audit		External audit	
		Latest Status	report	Latest Status	report
1.	Ar. Pradesh	As per plan, in August'25		Planning and Tendering will be	NA

		(Total Substation: 09)		done for audit of all 9 SS. Bid document being prepared. Forum requested to provide the tentative schedule of audit	
2.	Assam	For FY 2025-2026, audits to start from Sept'25; will share the audit plan to NERPC and NERLDC (Total Substation: 75)		Bid Document under preparation.	
3.	Manipur	Audit of 8 SS done, rest to be done by end of August'25 (Total Substation: 17)	Report for 8 SS submitted to SLDC, to be submitted to NERPC and NERLDC.	8 SS to be done, Schedule to be decided, subject to law and Order situation. Audit of Yurembam ss, Ningthoukong ss and Imphal (PG) may be done by NERPC team Aug'25 end or 1 st week of September'25	NA
4.	Meghalaya	Audit of Umiam and Sohra done in July'25, rest to be done later. (Total Substation: 22)		Audit to start on 25 th August	

5.	Mizoram	Audit of Zuangtui done, others to be done as per plan (Total Substation: 13)		List of external agencies awaited. Searching for parties to conduct audit. Audit of Kolasib, Aizawl, Melriat (PG), Zuangtui and Luangmual may be done in Sept'25 by NERPC.	
6.	Nagaland	Audit of Sanis, Wokha, Chiepouzou and Kohima done in July'25 (Total 11 S/s)	Report to be shared	Audit of 5 SS to be done in Sept'25 by NERPC. For rest, to be planned later.	
7.	Tripura	Will start audit from Nov.25 (Total Substation: 18)		Requisition sent to CPRI, offer yet to be received MS NERPC stated that audit of Udaipur, Rokhia and Agartala may be conducted in Sept'25 by NERPC.	
8.	Powergrid (NERTS)	22 Substations. Schedule give to NERLDC. Audit of 6 SS done	Report shared	Planning for external agencies. Finalizing scope of work, then will seek offer. Schedule of audit will be provided shortly.	
9.	NTL	Audit of P K Bari and S M Nagar to be done in Oct'25		Feb, March'25	

10	KMTL	Audit of New Kohima SS will be done by Sep'	Report to be shared next month	Finalizing the auditing party. Will be done by Oct'25.	
11	MUML/NBTL	No representative		No representative	
12	NEEPCO (Total Substation: 10)	Internal audit plan for FY 2025-26 has been shared. To be started from Nov'25. Audit of Kopili underway.	Audit report of Kopili to be shared next month	Tendering underway for Kameng and Turial. For AGBPP, in talk with CBIP.	
13	OTPC (Palatana)	For FY 2025-26, to be done in Sept25		Done during 2024	shared
14	NTPC (BgTPP)	For FY 2025-26, to be in Nov.25		Done (by CPRI) during 2024	Complete Report shared. Action plan shared.
15	NHPC (Loktak)	To be done in Aug'25		To be done in Aug'25, order placed	
16	APGCL	No representative			
17	TPGCL				
18	MEPGCL	Schedule submitted to NERLDC. Audit of Umtru, New Umtru done in July'25. Internal audit of Umiam Stg-	Report to be shared	Budgetary offer received from CPRI and PRDC. Offer from one more party is awaited to prepare the bid document.	

		I&II being conducted			
19	Dikshi HEP (IPP)	Audit to be done in Oct'25		DoP Ar. Pradesh transmission division has written a letter to the plant, reply still awaited.	

Forum may deliberate

B.2 Analysis and Discussion on Grid Disturbances which occurred in NER grid in August'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 August 2025 based on the draft report prepared by NERLDC.

B.3 Status of submission of FIR, DR & EL outputs for the Grid Events for the month of Aug'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 of tripping of transmission elements in Tripping Monitoring Portal for events from 01-08-2025 to 31-08-2025 as on **10-09-2025** is given below:

Owner Name	Total No of FIR/DR/EL 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 after 24hrs %	Total Furnishe d in 24hrs %	Total furnished %
AEGCL TRANSMISSION	66	0.00%	60.61%	60.61%	1.52%	86.36%	87.88%	4.55%	83.33%	87.88%
DoP, Arunachal Pradesh TRANSMISSION	24	54.17%	41.67%	95.83%	66.67%	29.17%	95.83%	62.50%	33.33%	95.83%
DoP, Nagaland TRANSMISSION	25	44.00%	56.00%	100.00%	12.00%	52.00%	64.00%	40.00%	60.00%	100.00%
MePGCL TRANSMISSION	15	53.33%	46.67%	100.00%	73.33%	26.67%	100.00%	53.33%	46.67%	100.00%
MePTCL TRANSMISSION	37	94.59%	5.41%	100.00%	97.30%	2.70%	100.00%	100.00%	0.00%	100.00%
MSPCL TRANSMISSION	18	16.67%	55.56%	72.22%	27.78%	44.44%	72.22%	33.33%	38.89%	72.22%
NEEPCO GENERATION	23	26.09%	73.91%	100.00%	52.17%	43.48%	95.65%	47.83%	43.48%	91.30%
NEEPCO TRANSMISSION	42	71.43%	28.57%	100.00%	71.43%	28.57%	100.00%	57.14%	42.86%	100.00%
NHPC GENERATION	5	80.00%	20.00%	100.00%	80.00%	20.00%	100.00%	80.00%	20.00%	100.00%
NHPC TRANSMISSION	12	0.00%	100.00%	100.00%	58.33%	41.67%	100.00%	58.33%	41.67%	100.00%
NTL TRANSMISSION	8	37.50%	62.50%	100.00%	12.50%	87.50%	100.00%	25.00%	75.00%	100.00%
P&ED, Mizoram TRANSMISSION	12	16.67%	83.33%	100.00%	8.33%	91.67%	100.00%	16.67%	83.33%	100.00%
POWERGRID TRANSMISSION	36	38.89%	61.11%	100.00%	38.89%	61.11%	100.00%	36.11%	63.89%	100.00%
TSECL TRANSMISSION	12	100.00%	0.00%	100.00%	66.67%	33.33%	100.00%	75.00%	25.00%	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.nerlhc.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

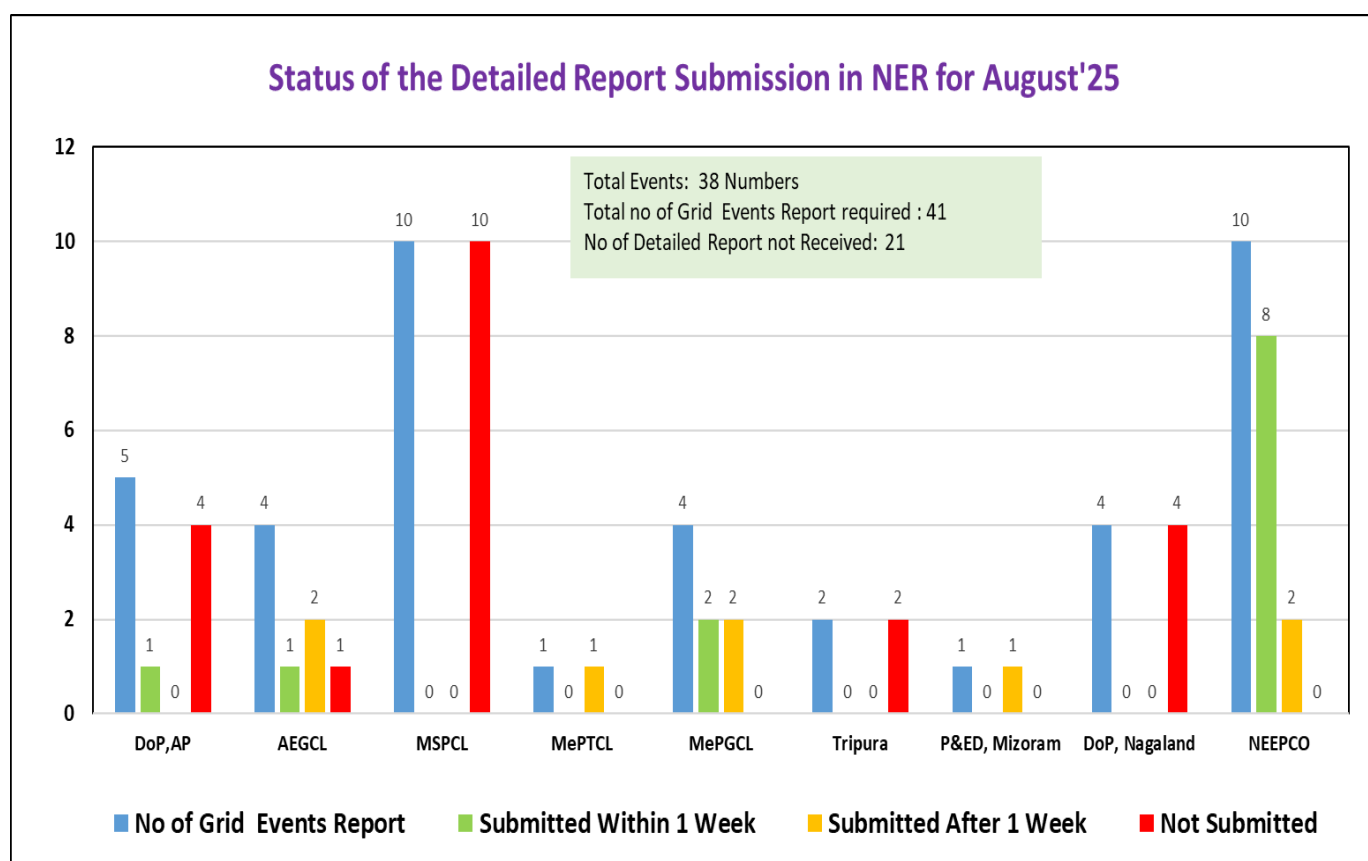
nerldcso3@gmail.com . This new account has been specifically set up to facilitate the secure exchange of DR and EL files that have previously faced blockage when sent to nerldcprotection@grid-india.in.

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>)

Members may discuss.

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 **Aug, 2025** as on **10-09-2025** is shown below:



NERLDC has received 12 number of reports within one week of time and 8 number of reports after one week.

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.

Members may discuss.

B.5 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.

Sl. No.	Name of Transmission Licensee	D= (Nc/Nc+Nf)	S= (Nc/Nc+Nu)	R= (Nc/Nc+Ni)	Remarks
1	NETC	-	-	-	Submitted (No bay owned by NETC)
2	MUML	Not Submitted			
3	NBTL	Not Submitted			
4	NTL	Not Submitted			
4	KMTL	1	1	1	No Tripping during the month
5	POWERGRID	Not Submitted			
6	AEGCL	0.984	1	0.984	The values of D and R have come less than unity due to the fault in 220kV Salakati - Agia Line II on 14.08.2025 where the B pole of the CB failed to open at Agia end. The issue has been rectified.

7	DoP Nagaland	1	1	1	DoP submitted all the trippings are under correct operation. However, during Aug'25, maloperation observed multiple times at Nagaland system.
8	TPTL	1	1	1	-
9	MePTCL	1	1	1	-
10	Arunachal Pradesh	Not Submitted			
12	MSPCL	Not Submitted			
12	Mizoram	Not Submitted			

Sl. No.	Name of Generating Company	D= (Nc/Nc+Nf)	S= (Nc/Nc+Nu)	R= (Nc/Nc+Ni)	Remarks
1	NTPC(Bgtp)	1	1	1	No tripping during Aug'25
2	OTPC(Palatana)	1	1	1	-
3	NHPC(Loktak)	Not Submitted			
4	MePGCL	1	1	1	-
5	NEEPCO				
	Kameng	1	1	1	-
	Panyor	1	1	1	-
	Pare	1	1	1	-
	Kopili	1	1	1	-
	Khandong	Not Submitted			
	Monarchak	1	1	1	-

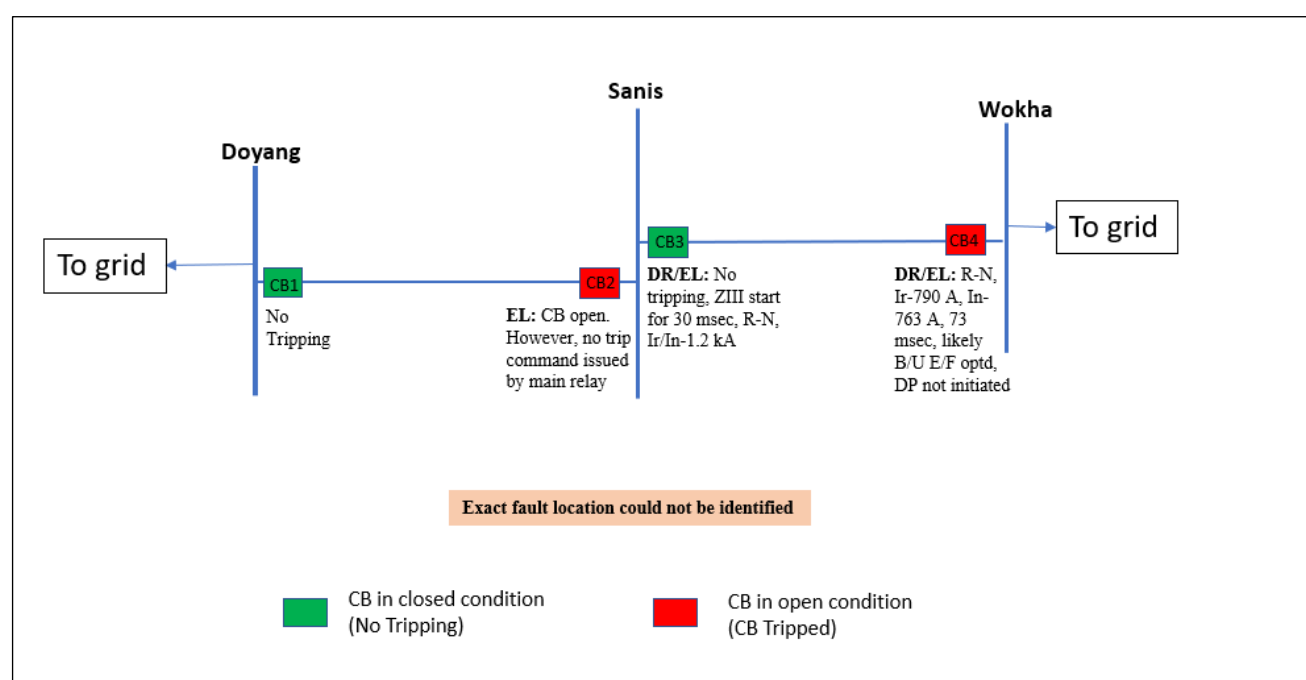
	Doyang	1	1	1	-
	AGBPP	Not Submitted			
	Tuirial	Not Submitted			

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.

B.6 Grid Event at Sains 30th Aug'25 and 3rd Sep'25:

Sanis area of Nagaland Power System is connected with rest of NER Grid through 132kV Sanis-Wokha and 132kV Doyang-Sanis lines.

At 12:20 Hrs of 30-08-2025, 132 kV Doyang-Sanis and 132 kV Sanis-Wokha lines tripped.



As per DR analysis for Wokha end (Main relay), R-N fault (Ir-790 A, In-763 A) initiated at 12:20:24.888 Hrs which was cleared 73 msecs from Wokha end likely on operation of B/U E/F protection (**DR & EL not submitted for backup relay**). Also, initiation of backup OC ($I >$) & EF ($In > 1$) protection observed in the main relay. Also,

main relay not initiated at Wokha end indicates no fault in the 132 kV Wokha – Sanis line.

From Sanis end (main relay), ZIII initiated for R-N fault (Ir-1280 A, In-1250 A) fault current disappeared within 30 msec likely after the CB opening at Sanis end of 132 kV Doyang- Sanis line. However, CB was closed as per submitted DR.

At 12:21:24.143 hrs, 132 kV Doyang-Sanis line tripped from Sanis end. As per the submitted EL (main relay) for Sanis end, no tripping command issued by the main protection. [DR&EL for backup relay not shared by DoP, Nagaland.](#)

Exact fault location could not be identified. However, the suspected fault seems beyond the Wokha substation as indicated by the ZIII initiation at Sanis end for 132 kV Sanis – Wokha Line.

The similar event also occurred at 17:48 Hrs of 03-Sep-2025.

Additionally, 132 kV Sanis-Wokha Line tripped 9 number of times during July'25 which is highlighted in the 82nd PCC Meeting.

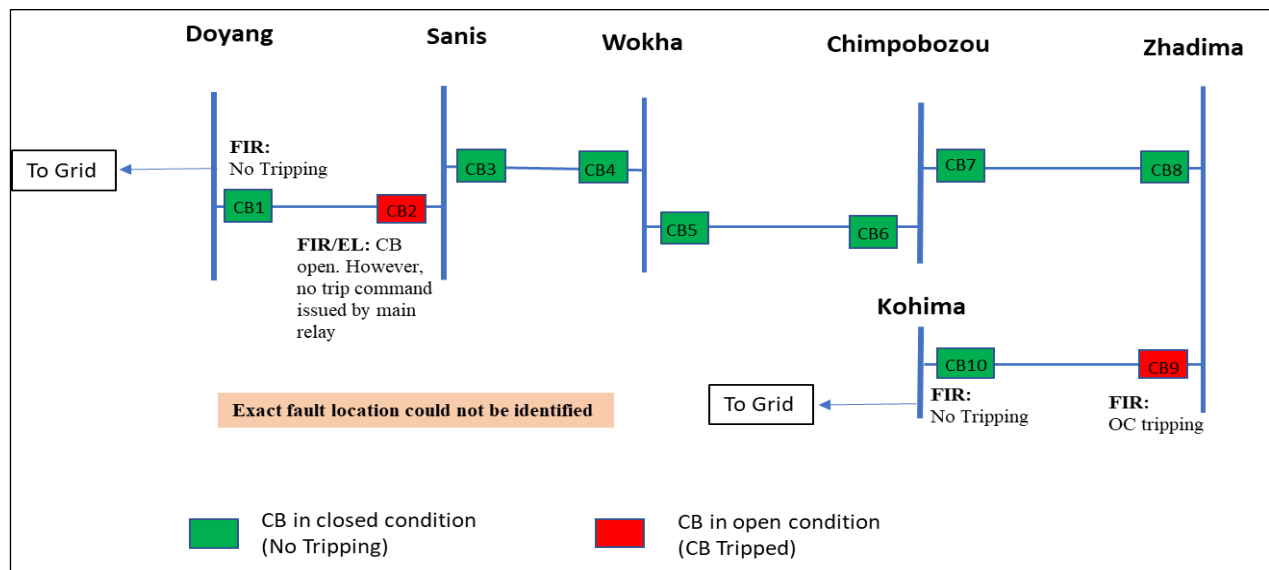
DoP, Nagaland to take the following actions:

- I. Share the exact fault location & root cause for the tripping.
- II. Share the reason for tripping of 132 kV Doyang-Sanis line from Sanis end for fault beyond the line (reverse direction) seems unwanted (newly commissioned on 20th Aug 2025).
- III. Share the reason for tripping of 132 kV Wokha-Sanis line from Wokha end for fault beyond the line (reverse direction) in 73 msec seems unwanted.
- IV. Healthiness of the backup relay need to be tested at Sanis & Wokha.
- V. DR downloading facility need to be implemented at Siemens relay at Sanis & Avana make relay at Wokha (otherwise relay replacement to be done).

B.7 Grid Event at Sains, Wokha, Chiephobozou & Zhadima area of Nagaland on 1st Sep'2025:

Zhadima, Chiephobozou, Wokha and Sanis areas of Nagaland Power System are connected with rest of NER Grid through 132kV Zhadima - Kohima line and 132kV Doyang-Sanis line.

At 09:27 Hrs of 01-09-2025, 132kV Doyang-Sanis and 132kV Kohima - Zhadima line tripped. Due to tripping of these elements, Zhadima, Chiephobozou, Wokha and Sanis areas of Nagaland Power System were isolated from NER Grid.

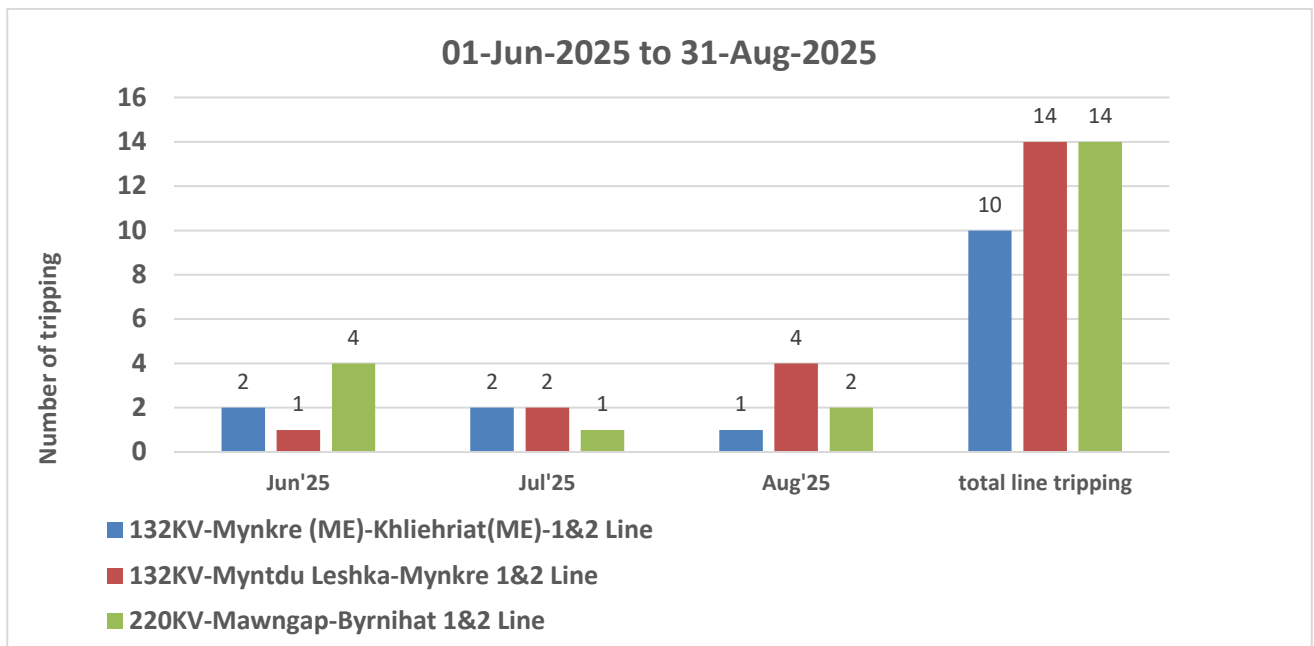


DoP, Nagaland to take the following actions:

- I. Share the exact fault location & root cause for the tripping.
- II. Share the reason for tripping of 132 kV Doyang-Sanis line from Sanis end for fault beyond the line (reverse direction) seems unwanted (newly commissioned on 20th Aug 2025).
- III. DR downloading facility need to be implemented at Siemens relay at Sanis & Avana make relay at Wokha (otherwise relay replacement to be done).

B.8 Frequent Tripping of Double-Circuit Lines in the Meghalaya Power System:

Tripping of 132KV-Mynkre (ME)-Khliehriat (ME) 1&2 Line, 132KV-Myntdu Leshka-Mynkre 1&2 Line and 220KV-Mawngap-Byrnihat 1&2 Line observed multiple times during the last 3 months as shown below:



These 3 Double circuit lines tripped total 38 times during the period 01-Jun-2025 to 31-Aug-2025 hampered reliability of the Meghalaya power system of NER. Also, all those events resulted into the Grid Disturbance at the Meghalaya power system. The majority of tripping occurred in 132KV-Mynkre (ME)- Khliehriat (ME)-1 &2 line and 132KV-Myntdu Leshka - Mynkre 1&2 Line caused due to Vegetation & lightning resulted into back flashover resulted into multi-Phase to ground fault which also impacting 128 MW Leshka generation.

Also, majority of tripping occurred in 220KV-Mawngap-Byrnihat 1&2 Line caused due to lightning resulted into back flashover resulted into multi-Phase to ground fault.

In order to improve the reliability of power supply and reduce the number of trippings in the above-mentioned transmission lines, MePTCL is kindly requested to adopt the following measures:

- **Adequate RoW width:** Ensure adequate corridor for clearance, maintenance, and safety
- **Overhead Ground Wires (Shield Wires / Earth Wires):** To be placed above phase conductors so as to intercept lightning strokes and safely divert lightning currents to ground.

- **Low Tower Footing Resistance (TFR):** Ensure that tower footing resistance is maintained below ~10 ohms for effective dissipation of lightning current into the ground.
- **Transmission Line Surge Arresters (TLSA):** To be installed on selected towers, especially in high lightning density zones or on critical line sections, to effectively clamp overvoltages and prevent flashovers.

B.9 Tripping of all the element of 220 kV Bus I at AGBPP on 26th Aug'25:

At 13:48 Hrs of 25-08-2025, while attempting to manually desynchronize Unit #3 of AGBPP for emergency shutdown, the Unit #3 Circuit Breaker failed to open. This malfunction resulted in the operation of Bus Bar Protection of 220 kV Bus-1 at AGBPP, leading to tripping all elements connected to 220 kV AGBPP Bus-1 including 220 kV AGBPP - Deomali line.

This resulted in blackout of Deomali area of Arunachal Pradesh Power system. Generation loss (AGBPP Unit-5, 7, 8 & 9) of 60 MW at AGBPP & load loss of 4 MW at Deomali observed.

As per submitted DR of 220 kV AGBPP-Mariani (PG) line at AGBPP end, at 13:48:28.785 Hrs, Bus bar protection operated. There was no fault observed in the system.

NEEPCO is requested to share the reason for trippings at AGBPP. Also, share the corrective action taken.

B.10 GD at Rangia and radially fed areas including Bhutan system on 5th Aug'25:

Fault Condition:

At 15:40 Hrs of 05-08-2025, 132 kV Rangia - Rangia(old) D/C lines tripped on overloading due to opening of 132 kV Jigmeling - Tinbiti line in Bhutan. Due to tripping of D/C line, Rangia(old), Kamalpur, Sipajhar & Tangla areas of Assam Power System and Motonga & associated radially fed areas of Bhutan power system got isolated.

Restoration details:

Rangia(old) started drawing power via Bhutan system at 15:49 Hrs. Also, Kamalpur I & II line and 132/33kV ICTs were charged.

Rangia(old) S/S connected to Rangia & Indian Grid by charging 132 kV Rangia - Rangia(old) – 1 & 2 lines at 16:20 Hrs & 16:22 Hrs respectively, subsequently power was extended to Sipajhar & Tangla areas of Assam power system at 16:47 Hrs & 16:48 Hrs respectively.

Analysis:

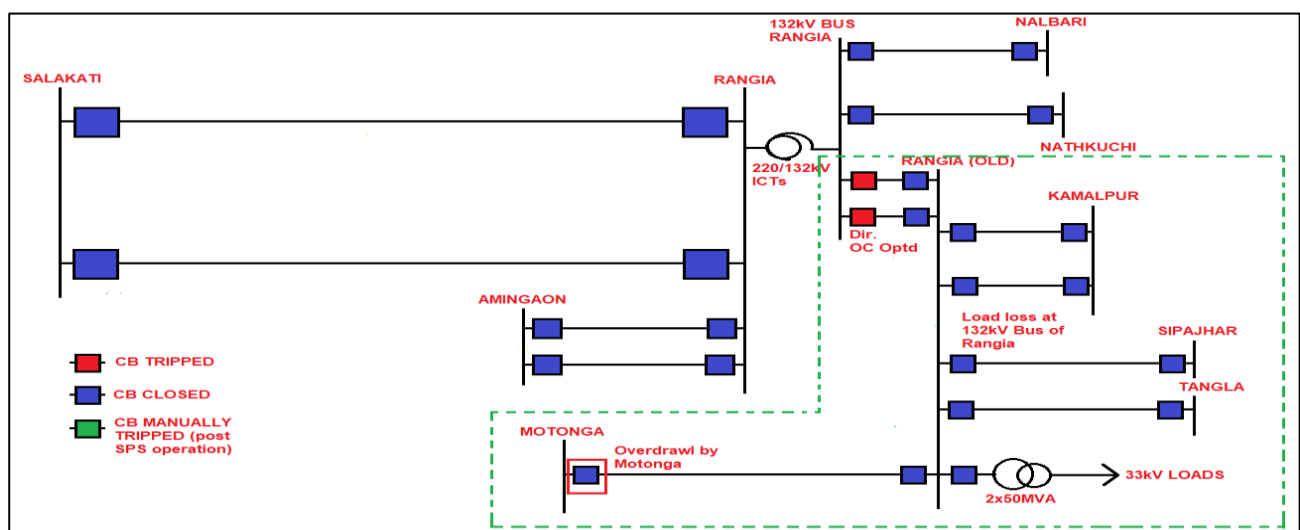
There was no fault observed in the system and the 132 kV Rangia-Rangia(old) DC line tripped on operation of Overcurrent protection due to overloading of the lines. Due to sudden rise in power drawl by 132 kV Motonga feeder due to opening of 132 kV Jigmeling - Tinbiti line in Bhutan, the load in each 132 kV Rangia-Rangia(old) short line increased to 80 MW each. CBs of the short lines at 132 kV Rangia tripped on Directional OC protection.

Line 1 tripped first, and subsequently Line 2 also tripped at Rangia end.

**Length of 132 kV Rangia – Rangia(Old) DC line: 0.3 KM*

Bhutan connectivity with Rangia:

Jigmeling -- -- -- --Tintibi — Nganglam — Deothang—Motonga — Rangia



At Rangia end of **132 kV Rangia-Rangia(old) I-line**, Directional O/C started at **15:39:05.367** Hrs with current of 380-410 A in each phase and tripped at **15:39:45.423 Hrs** (as per AEGCL).

At Rangia end of **132 kV Rangia-Rangia(old) II-line**, Directional O/C operated at **15:39:47.809** Hrs with current of 780-825 A in each phase.

Hence, AEGCL is requested to kindly review the Overcurrent (O/C) relay pickup setting, as the relay operated at a fault current of 380–410 A, whereas the pickup setting was maintained at 440 A.

Also, explore the possibility of increasing the overcurrent settings for the short lines.

B.11 Tripping of multiple elements at 220 kV Agia substation of Assam on 14-08-2025:

At 11:03 Hrs of 14th Aug'25, the tripping of multiple elements observed.

The tripping of ICT-3, 220 kV Agia–Azara Line, 220 kV Agia–BTPS II Line, and the 220 kV Bus Coupler resulted in a blackout of the 220 kV Agia **Main Bus II**.

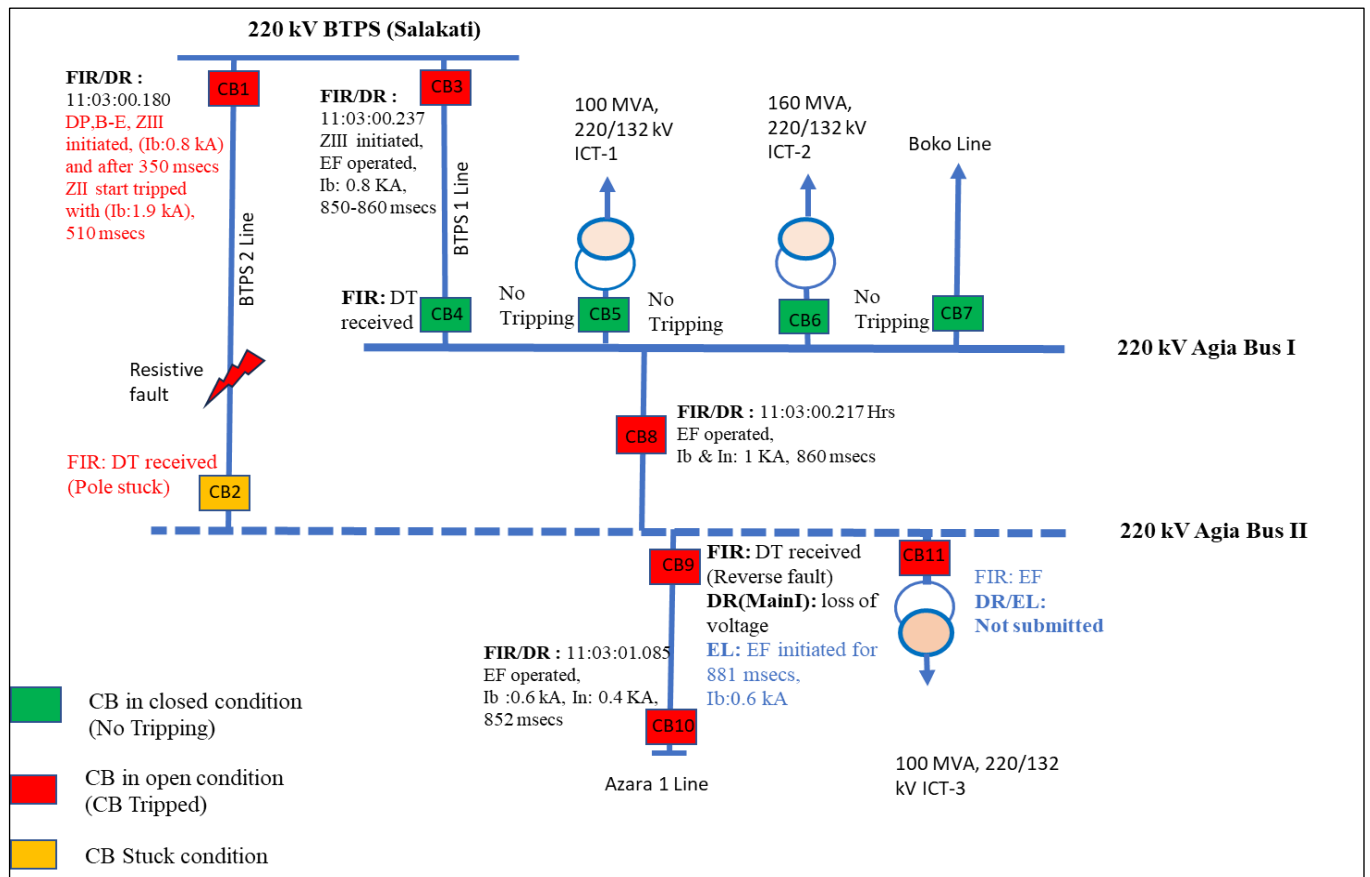
Event Analysis:

High resistive fault observed in the 220 kV Agia – BTPS II line, cleared from BTPS end by the DP, ZII protection within 510 msecs. Also send DT signal to Agia end. However, the CB got stuck at Agia for the same line.

LBB relay not initiated during the fault at Agia Bus II.

The fault was cleared from the system by tripping of 220 kV Agia – BTPS I line, Bus Coupler & 220 kV Agia–Azara Line in 850-860 msecs.

Also, the fault persisted in the system for 1670 msecs and finally cleared by tripping of ICT-3 which causes the blackout of Bus II at Agia SS.



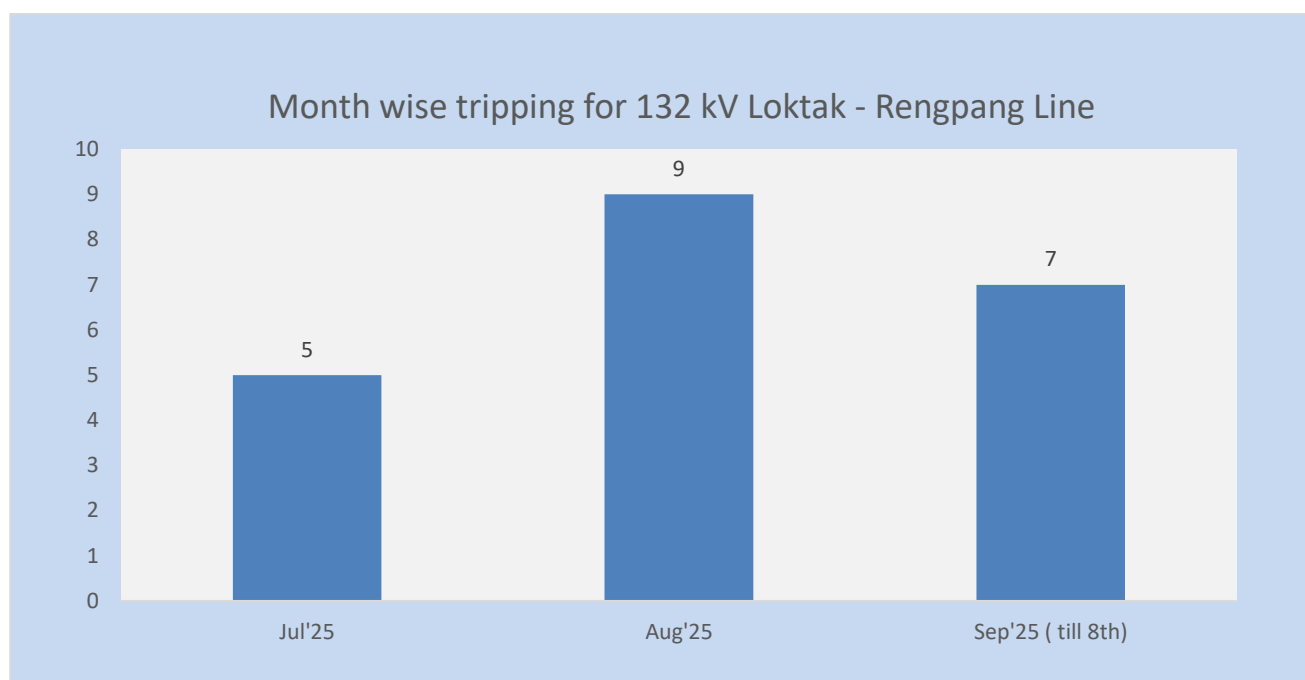
AEGCL requested to take the following action-

1. Share the reason for non-operation of LBB relay for Agia Bus II.
2. Share the reason for EF pickup at Agia end for 220 kV Agia - Azara Line & ICT-3.
3. Share the reason for DT sent (as informed verbally) from BTPS end for ZII tripping.
4. DT received & DT sent need to be incorporated in the DR for each element.

B.12 Frequent tripping of 132 kV Loktak - Rengpang line (July'25 – 8th Sep'25):

Rengpang area of Manipur power system is connected to Loktak (NHPC) through 132 kV Loktak – Rengpang line due to the long outage of 132 kV Rengpang – Jiribam (MA) line.

Tripping of 132 kV Loktak – Rengpang line observed in 31 instances starting from July'25 onwards. Also, 7 times during the 1st Sep-8th Sep'25 indicates serious maintenance issues.



As per DR & EL data, most of the tripping caused due to high resistive fault in B-phase across the line length likely due to vegetation causing the frequent Grid Disturbance at Manipur which causing stress to machines at Loktak (NHPC) power station.

Hence, MSPCL is requested to exercise periodic maintenance for reducing the tripping of the line.

B.13 Grid event at multiple areas of the Manipur on 5th Sep'25:

400kV Imphal-Thoubal New I line and 132 kV Ningthoukhong-Churachandpur 1 under long outage. Also, 132kV Imphal-Yiangangpokpi 2 is under outage since 30th Aug'25.

400kV Imphal-Thoubal New II tripped at 14:59 Hrs of 05-09-2025 (LG fault, tripped on reclaim).

At 17:58 Hrs of 05-09-2025, 132 kV Ningthoukhong-Churachandpur 2 line and 132 kV Imphal-Yiangangpokpi I line tripped simultaneously resulted into the Grid Disturbance at Churachandpur, Kakching, Elankangpokpi, Chandel, Thanlon, Thoubal Old, Thoubal new, Kongba & Yiangangpokpi substation of Manipur Power System.

Details of Backup relay settings:

- 132 kV Imphal-Yiangangpokpi I line:
Imphal (Yurembam): CTR: 400/1, OC pickup: 300 A, TMS: 0.04
- 132 kV Ningthoukhong-Churachandpur 2 line:
Ningthoukhong: CTR: 600/1, IDMT, NI, OC pickup: 150% of CTR (900 A), TMS: 0.1 (JVC electronics & JPN 098)

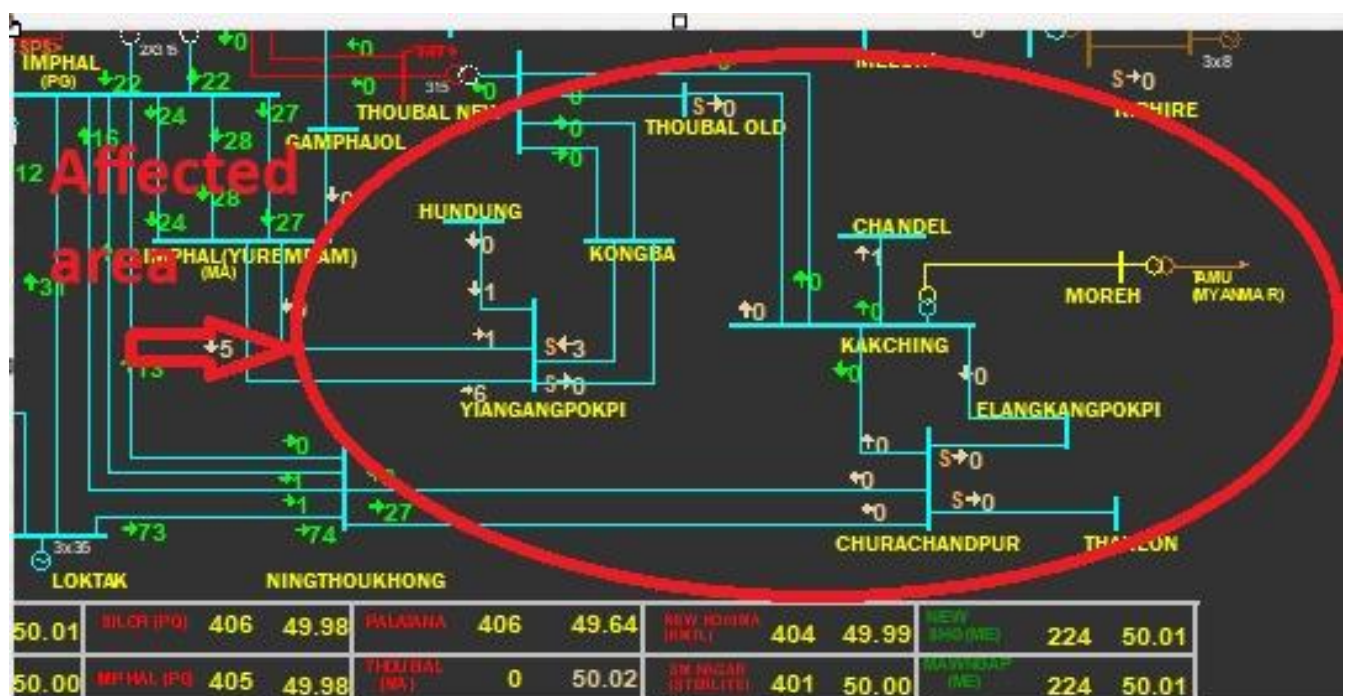
Event Analysis:

Multiple areas of Manipur were feeding through Imphal & Ningthoukhong substation with 132 kV Ningthoukhong-Churachandpur 2 line and 132 kV Imphal-Yiangangpokpi I line only.

The exact sequence of event could not be identified due to lack to numerical relay for backup protection at Ningthoukhong.

However, as per the DR snapshot for the Imphal end of 132 kV Imphal-Yiangangpokpi I line, balance current observed which indicated no fault present in the system.

Also, fault current in each phase of 220 -225 A (approx. 50 MW) suddenly increases to 445-450 A (approx. 100 MW) probably due to the tripping of 132 kV Ningthoukhong-Churachandpur 2 line.



MSPCL is requested to take following corrective action as listed below:

- I. Requirement of the testing of the static relay at Ningthoukhong to check the healthiness (as per setting relay should not have operated due such loading). Also, static relays to be replaced with numerical type as early as possible.
- II. Backup setting need to be incorporated in the main to cross verify the performance of the backup OC, EF relay (static relay) at Ningthoukhong.
- III. Overloading setting need to be revised for 132 kV Imphal – Yiangangpokpi 1 line (currently pickup current: 300 A only).
- IV. Time drift of 1 hr observed in the DR of Yurembam (Imphal). The same need to be matched.
- V. Time synchronizer need to installed at Imphal & Ningthoukhong as early as possible.

B.14 Mock Testing of System Protection Scheme (SPS):

As per Clause 16.2 of IEGC-23, for the operational SPS, RLDC or NLDC, as the case may be, in consultation with the concerned RPC(s) shall perform mock testing for reviewing SPS parameters & functions, at least once in a year. RLDC or NLDC shall share the report of such studies and mock testing including any short comings to respective RPC(s).

The list of the remaining ISTS scheme need to be tested are listed below:

Sl. No.	Name of SPS	Operation in FY 2025-26	Tentative date of performing mock testing
1	SPS related to reliable power supply to Arunachal Pradesh & Assam through the 132 kV Roing-Chapakhowa D/C line	-	SPS to be kept OFF
2	Overloading of any one of the 400/132kV, 2x360 MVA ICTs at Panyor LowerHydro Power Station	-	Nov'25

3	Related to the safe evacuation of power from BgTPP(NTPC) generation	-	Oct'25
4	Outage/tripping of 400 kV New Kohima – Imphal D/C Line	-	Tentative date to be intimated after discussion by NERTS
5	Outage/ tripping of both circuits of 400 kV SM Nagar(NTL) -PK Bari(NTL) D/C Line	-	Sep'25
6	Outage/ tripping of both circuits of 400kV PK Bari (NTL) – Silchar(PG) D/C Lines	-	Sep'25
7	Outage/tripping of both 400/132 kV, 2x125 MVA ICTs at Palatana	-	Tentative date to be intimated after discussion by NERTS
8	Outage/tripping of 400kV Palatana-Silchar D/C Line when both modules of Palatana are in service	-	After the commissioning of the 400 kV Palatana–Surajmaninagar(NTL) I Line, the SPS is deactivated. However, the SPS at Palatana must remain active during the shutdown of the 400 kV Palatana–Surajmaninagar (ISTS) Line-1

The list of the remaining state scheme need to be tested are listed below:

Sl. No.	Name of SPS	Actual Operation	Tentative date of performing mock testing
1	Overloading of 220 kV BTPS - Salakati D/C Line	-	As per deliberation during 82nd PCC: Four SPS schemes of Assam Scheduled for implementation this month (i.e. Aug'25). However, AEGCL is not agreeing to test without actual load shedding, as this may require disconnection of multiple hard wirings. The Forum agreed with the proposal and requested AEGCL to prepare SOP for mock testing.
2	Outage/tripping of 220 kV Azara-Sarusajai D/C Line	-	
3	SPS related to tripping of 220 kV Misa- Samaguri DC Line	-	
4	SPS at BTPS(Assam) substation related to overloading of any of the 2x160 MVA ICTs at BTPS(Assam)	-	
5	SPS related to Outage/tripping of any one circuit of the 132 kV Khliehriat (PG)- Khliehriat D/C line	-	Oct'25
6	SPS related to Outage/tripping of any one circuit of 132 kV Leshka – Mynkre- Khliehriat D/C Line	-	Oct'25

All the respective utilities are requested to provide the tentative dates for mock testing of SPS to be conducted in FY 2025-26.

Agenda from NEEPCO

B.15 Frequent tripping of Tuirial Kolasib 132 KV Feeder

This has reference to frequent tripping of Tuirial Kolasib 132 KV Feeder in last few days (Detailed attached).

In this regard the following are brought to your kind attention:

(i) 132 KV outgoing feeder from Tuirial Power Station has logged 34 no tripping in this year (wef 01-04-2025 till 12 noon 27-08-2025).

Total outage duration is 139 Hrs 29 minutes. The .xcel sheet is attached for your ready reference.

(ii) These 34 tripping are excluding the shut-downs taken by the State Power Department for maintenance of this line.

(iii) It is observed that the frequency of tripping has considerably increased in last two months with Twenty-Six (26) instances of tripping occurring since July 2025 till 12 noon 27-08-2025.

(iv) As the station loading since July has remained approx. 58-60 MW on continuous basis due to sufficient reservoir level, each line trip had led to overspeed tripping of both the units due to sudden load throw and thus imparting huge mechanical stress on the machines. This is not only affecting the health of the machines but also causing generation and revenue loss to the corporation.

On analysis of the tripping of this line since April this year, following are observed:

(1) The main protection (distance relay) of Tuirial-Kolasib Line feeder at Kolasib end has never picked up.

(2) There have been at least five (05) instances of broken jumper leading to sudden tripping & load throw.

(3) On some occasions, it is seen that only Tuirial end breaker is tripping while Kolasib charges other faulty feeders from their sub-station. It is apprehended that Bawktlang end circuit breaker of the concerned line is probably not clearing the fault current and ultimately the fault is being cleared at Tuirial end breaker. of Tuirial - Kolasib Line. This has happened on multiple occassion on 26.08.2025 when Kolasib Substation tried to charge Bairabi Line from their end.

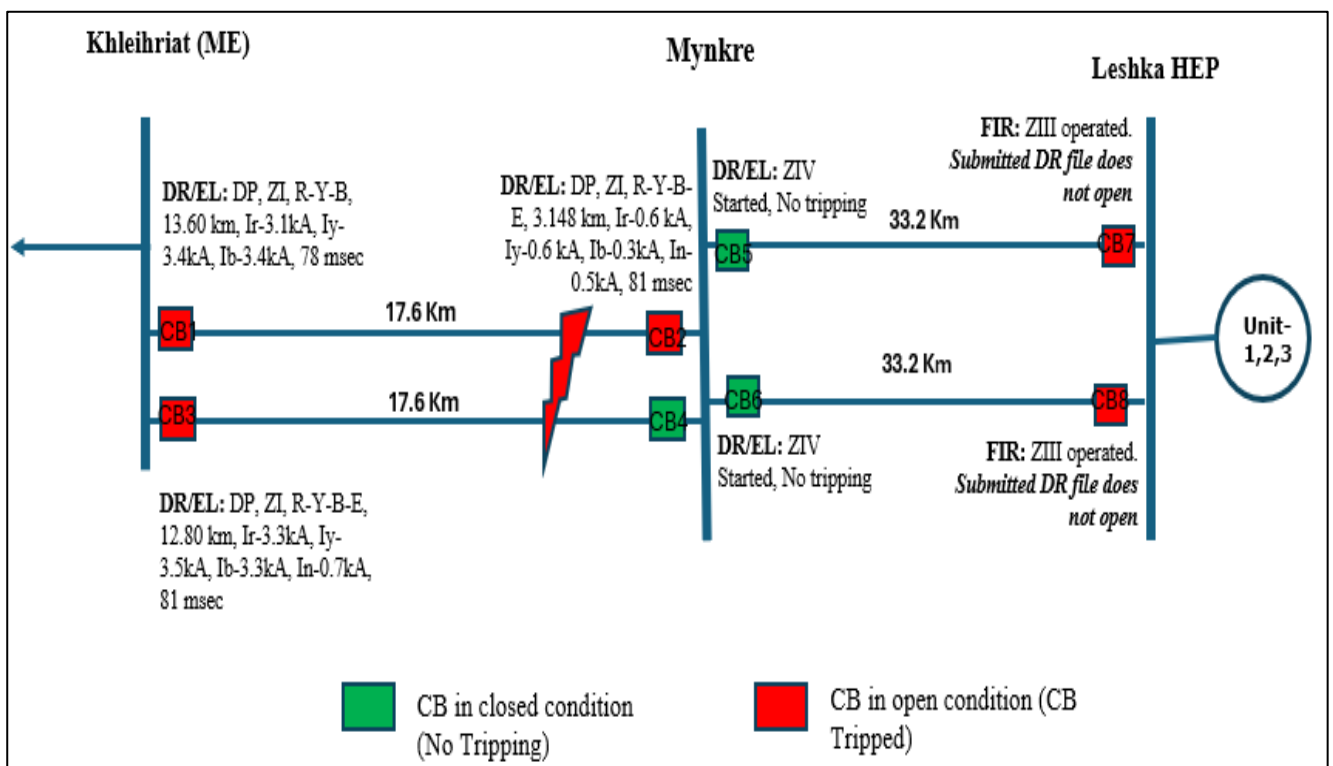
It is therefore requested that the issue may be taken up at the forthcoming PCC meeting so that the protection relays at Kolasib end breaker of Tuirial-Kolasib Line is properly checked / calibrated and to ensure that line maintenance is properly undertaken.

Forum may deliberate

C. FOLLOW-UP AGENDA ITEMS

C.1 Grid Disturbance in Mynkre area and Leshka HEP of Meghalaya Power System on 1st June'25:

At 05:37 Hrs of 01-06-2025, 132kV Mynkre (ME)- Khliehriat(ME) D/C lines and 132kV Mynkre-Leshka D/C lines tripped resulting in grid disturbance in Mynkre area and Leshka HEP of Meghalaya Power System. Generation loss of 84 MW occurred.



As per DR analysis of 132 kV Mynkre (ME)-Khliehriat(ME) 1 line, solid R-Y-B fault (Ir-3.1 kA, Iy-3.4 kA, Ib-3.4 kA) initiated at 05:37:08.630 Hrs which was cleared within 81 msec on operation of DP, ZI.

For 132 kV Mynkre(ME)-Khliehriat(ME) 2 line, R-Y-B-E fault (Ir-3.3 kA, Iy-3.5 kA, Ib-3.3 kA, In-0.7 kA) was cleared from Khliehriat end on DP, ZI, R-Y-B-E, 12.80 km in 81 msec. There was no tripping from Mynkre end due to which fault was feeding from Leshka end of 132kV Leshka-Mynkre D/C lines which was cleared on operation of ZIII from Leshka end (DR file not opening)

Likely fault due to lightning in 132kV Mynkre (ME)-Khliehriat(ME) D/C lines.

Following observation:

- Protection system of Mynkre (ME) of 132kV Mynkre (ME)-Khliehriat(ME)-2 line failed to isolate the fault which led to clearing of the same fault by tripping of healthy 132 kV Mynkre-Leshka D/C lines from Leshka end on ZIII operation.
- Time drift of 7 mins (lag) in submitted DRs from Mynkre end for 132kV Mynkre (ME)-Khliehriat(ME) 1 line & 13 mins (lag) in submitted DRs from Mynkre end for 132kV Mynkre-Leshka D/C lines which needs to be rectified.

MePGCL may update the actions taken on the above mentioned issues.

As per 81st PCC minutes, MePTCL informed that fault was due to lightning. Regarding non-opening of CB at Mynkre end for 132 kV Khliehriat-II line, relay testing to be done by MePTCL. Also, MePTCL informed that GPS was rectified on 16th July'25.

Meghalaya may further update

C.2 (Agenda B7, 82nd PCC) Grid Disturbance in grid event in Khupi, Tenga, Seppa and Dikshi HEP area of Arunachal Pradesh Power System on 4th July'25

Khupi, Tenga, Seppa areas and Dikshi HEP of Arunachal Pradesh Power System were connected with rest of NER Grid through 132 kV Tenga-Balipara line and 132 kV Kameng-Khupi line.

At 22:34 Hrs of 04-07-2025, 132kV Balipara-Tenga line and 132 kV Bus Coupler at Kameng tripped resulting in grid disturbance in Khupi, Tenga, Seppa and Dikshi HEP area of Arunachal Pradesh. Load loss of 25 MW & generation loss of 17 MW occurred.

In 82nd PCCM, Regarding the issue with CB2 (at Tenga end for Balipra line), DoP AR. Pradesh informed that the Dikshi HEP will take corrective actions in September'25.

DoP AR. Pradesh may further update

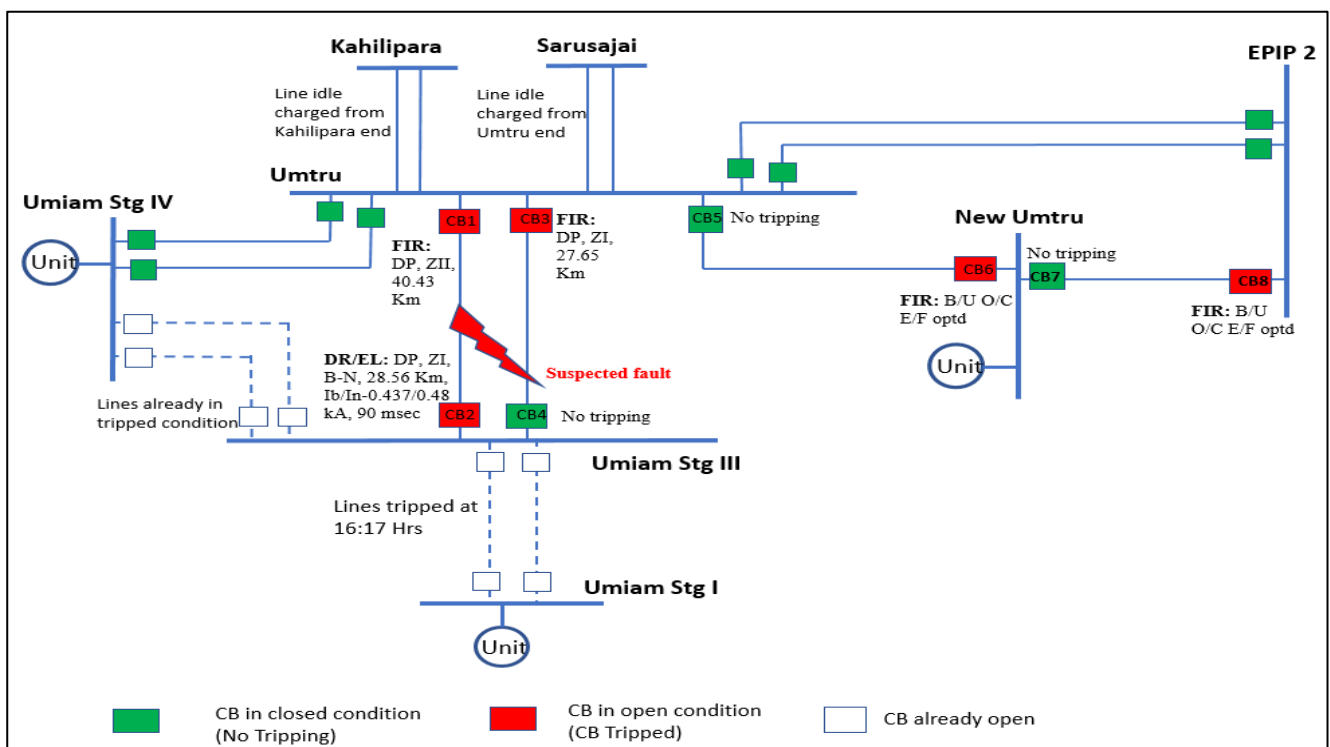
C.3 (Agenda B8, 82nd PCC) Frequent tripping of 132 kV Sanis-Wokha Line during July'25:

132 kV Sanis-Wokha Line tripped 9 number of times during July'25 which is a matter of concern.

In 82nd PCCM, forum noted that most of the tripping were spurious in nature and some tripping may be due to settings issue. Forum urged DoP, Nagaland to analyze the root cause of such trippings and provide a report to NERPC and NERLDC.

C.4 (Agenda B10, 82nd PCC) Grid disturbance in Umiam Stg III and New Umtru areas of Meghalaya power system on 21st July'25:

Umiam Stg III and New Umtru areas of Meghalaya Power System were connected with rest of NER Grid through 132 kV Umtru – Umiam Stg III D/C lines, 132 kV New Umtru – Umtru and 132 kV EPIP 2 – Umtru line. Prior to the event, 132 kV Umiam Stg I – Umiam Stg III line D/C lines tripped at 16:17 Hrs and 132 kV Umiam Stg IV – Umiam Stg III 1 & 2 lines tripped at 16:39 Hrs and 16:17 Hrs respectively. At 16:44 Hrs of 21-07-2025, 132 kV Umtru – Umiam Stg III D/C lines, 132 kV New Umtru – Umtru, and 132 kV EPIP 2 – Umtru II and New Umtru HEP Unit-1 tripped resulting in blackout of Umiam Stg III & New Umtru S/S of Meghalaya power system. Generation loss of 20 MW.



As per DR analysis of 132 kV Umtru-Umiam Stg III Line-1, B-N fault (Ib-437 A, In-480 A) initiated at 16:44:00.235 Hrs which was cleared within 90 msec from Umiam Stg III end on operation of DP, ZI. ZII operated from Umtru end (as per FIR, DR/EL file not opening)

132 kV Umtru-Umiam Stg III Line-2 tripped on DP, ZI from Umtru end (as per FIR, DR/EL not opening). No tripping from Umiam Stg III end.

Following observations:

- Suspected fault in 132 kV Umtru-Umiam Stg III D/C lines.
- Tripping of 132 kV New Umtru-Umtru line on operation of B/U O/C E/F from New Umtru end seems unwanted. Backup protection setting needs to be reviewed.
- Tripping of 132 kV EPIP 2-Umtru line on operation of O/C E/F from EPIP 2 end seems unwanted. Backup protection setting needs to be reviewed.
- DR/EL file at Umtru end for 132 kV Umiam Stg III lines is not opening.
- Non-submission of DR/EL file for 132 kV New Umtru-Umtru line & 132 kV EPIP 2-New Umtru Line which is a violation of Clause 37.2 (c) IEGC-23.
- Non-submission of detailed report of the event which is a violation of Clause 37.2(e) of IEGC-23.

MePGCL may update the action taken on the above-mentioned issues.

Deliberation in 82nd PCC

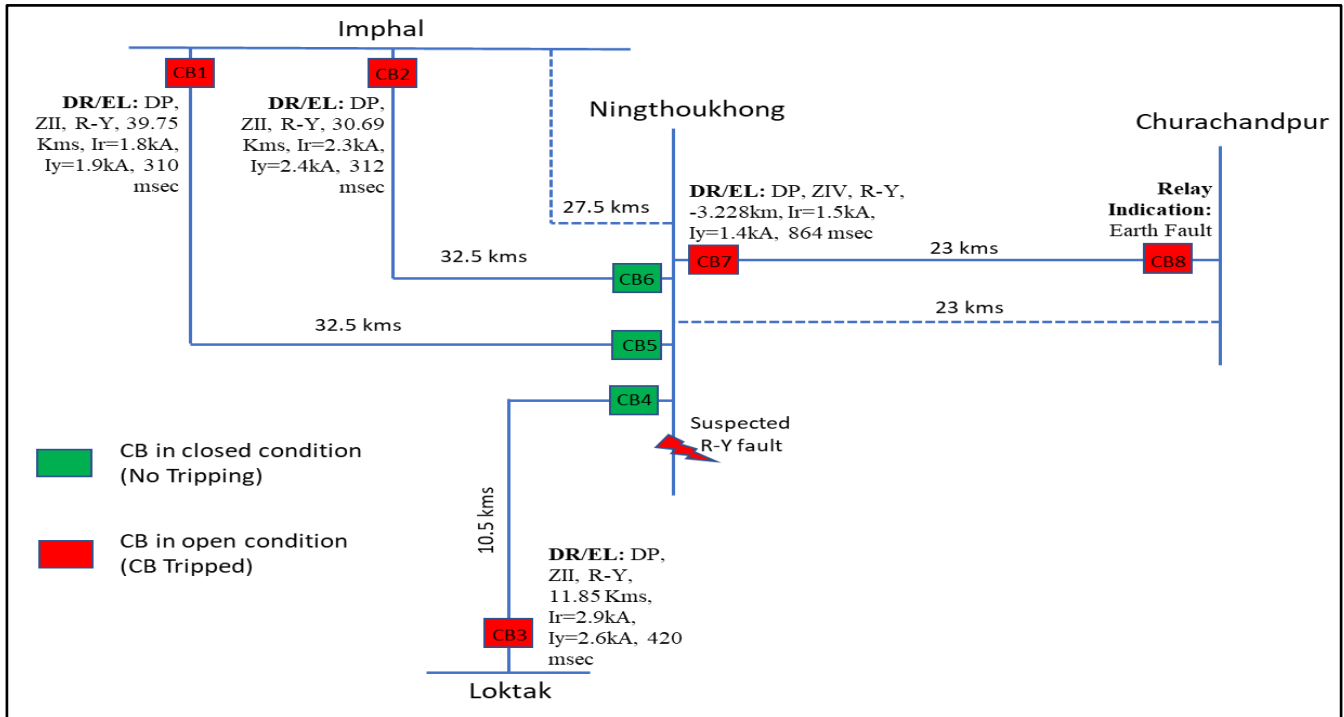
MePGCL informed that EPIP 2-Umtru line tripped not N. Umtru-Umtru and N. Umtru-EPIP II. Further he informed that tripping analysis for the tripping is underway and will be informed to NERPC and NERLDC shortly.

Forum also noted that tripping of Umtru-Umiam stg II (CB3) on Z1 is unwanted and it should have tripped on Zone 2. Forum requested MePGCL review the reach of zones for CB3.

C.5 (Agenda B10, 81st PCC) Grid Disturbance in Ningthoukhong area of Manipur Power System on 9th June'25:

Ningthoukhong area of Manipur Power System is connected with the rest of NER Grid through 132 kV Loktak-Ningthoukhong, 132 kV Ningthoukhong-Imphal 1, 132 kV Ningthoukhong-Imphal ckt 2, 132 kV Ningthoukhong-Imphal ckt 3 and 132 kV Ningthoukhong-Churachandpur 1&2 lines. Prior to the event, 132 kV Imphal-Ningthoukhong 1 was under shutdown since 13.02.2025 and 132 kV Ningthoukhong-Churachandpur 1 is under forced outage since 04.08.2024.

At 13:34 Hrs of 09-06-2025, 132 kV Imphal-Ningthoukhong ckt 2, 132 kV Imphal-Ningthoukhong ckt 3, 132 kV Loktak-Ningthoukhong, 132 kV Ningthoukhong-Churachandpur 2 tripped. Due to tripping of these elements, Ningthoukhong area of Manipur Power System got isolated from NER Grid and collapsed due to no source available in this area. Load loss of 9 MW occurred.



Following observations:

- Suspected fault was either in 132 kV Ningthoukhong S/S or downstream of Ningthoukhong as Z4 trip from Ningthoukhong end for 132 kV Churachandpur end indicating fault in reverse direction.
- It is not clear which protection system operated at Churachandpur end and cleared the fault due to non-availability of DR/EL.
- Non-submission of DR/EL file for CB4, CB5, CB6 & CB8 which is a violation of Clause 37.2 (c) IEGC-23.
- Non-submission of detailed report of the event which is a violation of Clause 37.2(e) of IEGC-23.

MSPCL to share the root cause of the event and provide update on the above-mentioned issues.

As per 81st PCC minutes, Manipur informed that the fault was in Imphal-Ningthoukhong line 3 at a distance of 3 Km from Ningthoukhong end. NERLDC

stated that CB6 should have operated. Further NERLDC stated that the complete analysis of the event could not be done due to non-submission of DRs by MSPCL. Forum asked Manipur to submit the DRs of CB4, CB5, CB6 & CB8 for facilitating complete analysis. Forum urged MSPCL to thoroughly investigate the event and submit a detailed analysis report of the event.

Deliberation (81st PCC):

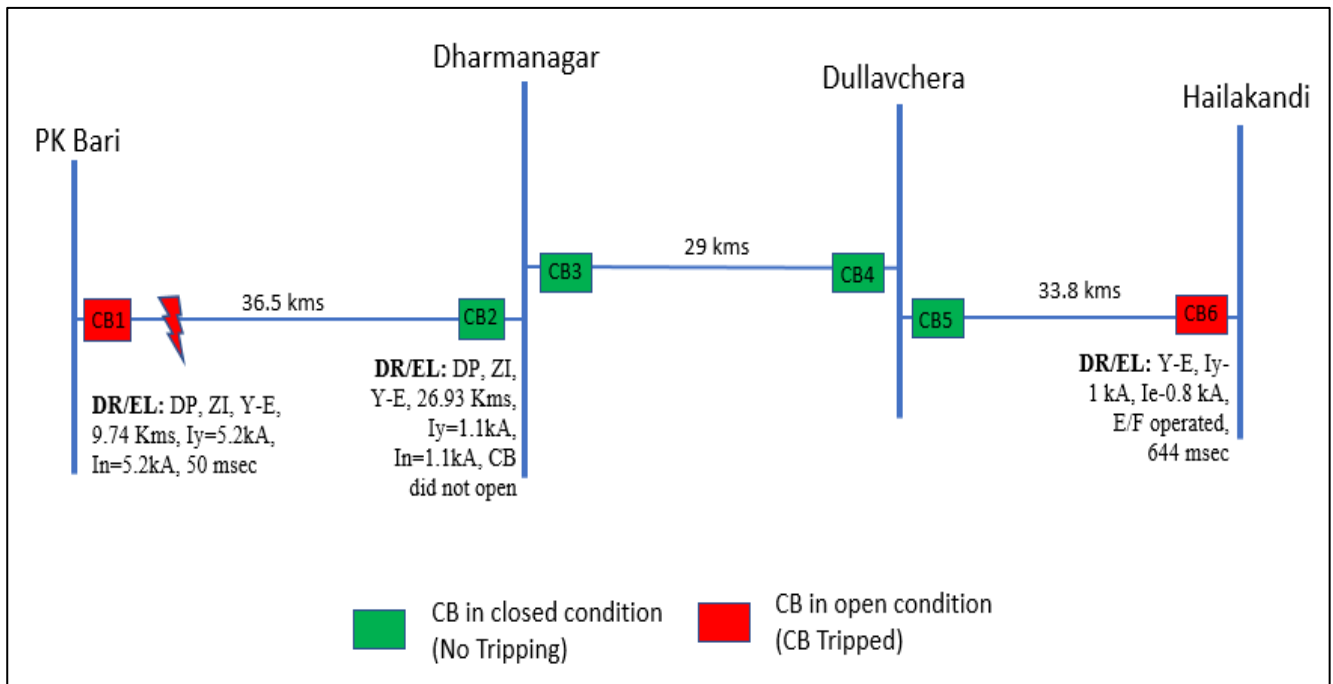
Manipur informed that the fault was in Imphal-Ningthoukong line 3 at a distance of 3 Km from Ningthoukhong end. NERLDC stated that CB6 should have operated. Further NERLDC stated that the complete analysis of the event could not be done due to non-submission of DRs by MSPCL. Forum asked Manipur to submit the DRs of CB4, CB5, CB6 & CB8 for facilitating complete analysis. Forum urged MSPCL to thoroughly investigate the event and submit a detailed analysis report of the event.

MSPCL may further update

C.6 (Agenda B11, 81st PCC) Grid Disturbance in Dharmanagar area of Tripura Power System and Dullavchera area of Assam Power System on 10th June'25:

Dharmanagar area of Tripura Power System and Dullavchera area of Assam Power System were connected with rest of NER Grid via 132 kV Dharmanagar-PK Bari line & 132 kV Hailakandi-Dullavchhhera line.

At 18:45 Hrs of 10-06-2025, 132 kV Dharmanagar-PK Bari line & 132 kV Hailakandi-DULLavchhera line tripped resulting in grid disturbance in Dharmanagar & Dullavchhera areas. Load loss of 35 MW occurred.



As per DR analysis, Y-N fault (Ib-5.2 kA, In-5.2 kA) initiated at 18:40:57.118 Hrs which was cleared within 50 msec from PK Bari on operation of DP, ZI. At Dharmanagar end, ZI trip command issued at 18:25:30.360 Hrs. However, CB did not open at Dharmanagar due to which fault was continuously feeding from Dullavchhara & Hailakandi end. Fault cleared by tripping of healthy 132 kV Hailakandi-Dullavchhara line within 644 msec from Hailakandi end on operation of E/F (DT send).

Following observations:

- Non-opening of CB at Dharmanagar end despite issuance of ZI trip command. Reason of non-opening of CB at Dharmanagar needs to be thoroughly investigated.
- Dullavchhara CB (CB4) failed to clear the fault resulting in clearing of fault by tripping of 132 kV Hailakandi-Dullavchhara line.
- Time drift of 5 mins (lag) observed at PK Bari end & 20 mins (lag) observed at Dharmanagar end for 132 kV PK Bari-Dharmanagar Line. Time drift of 4 min at Hailakandi end for 132 kV Dullavchhara Line which needs to be rectified.
- “CB status” not present in DR digital channel. DR digital channels need to be standardized as per recommendation in FOLD working group-3.

TSECL may update the root cause and actions taken on the above-mentioned issues.

Deliberation (81st PCC):

Tripura informed that a high resistive fault occurred in the 132 kV P K BariDharmangar line and CB2 did not clear the fault as Y Pole of the CB got stuck which will be checked shortly. DCRM testing to be conducted by TSECL. Forum also noted that EF operation at Hailakandi is aggressive and the settings have to be coordinated with EF of Dharamanagar and Dullavchera substations. E/F setting at Hailakandi end for 132 kV Dullavchera line needs to be reviewed & coordinated with ZIII time delay. TMS to be changed.

In 82nd PCCM, AEGCL informed the forum that no relay coordination issue observed at Hailakandi.

Also, requested Tripura to resolve the CB issue at Dharmanagar end of 132 kV Dharmanagar – P K Bari line.

TSECL may further update

C.7 (Agenda B13, 81st PCC) Tripping of 400 kV Bongaigaon-Byrnihat Line & 80 MVAR Bus Reactor at Byrnihat on 12th June'25:

At 06:05 Hrs of 12-06-2025, 400 kV Bongaigaon-Byrnihat Line and 80 MVAR Bus Reactor at Byrnihat tripped.

As per submitted DR, at 06:04:43.888 Hrs, Main & Tie CB at Bongaigaon tripped. DT signal received at Byrnihat (as per FIR).

At the same time, 80 MVAR Bus Reactor at Byrnihat also tripped as 86 relay of Bus Reactor and 400 kV Bongaigaon-Byrnihat line are interconnected (as per FIR)

POWERGRID/MePTCL is requested to furnish:

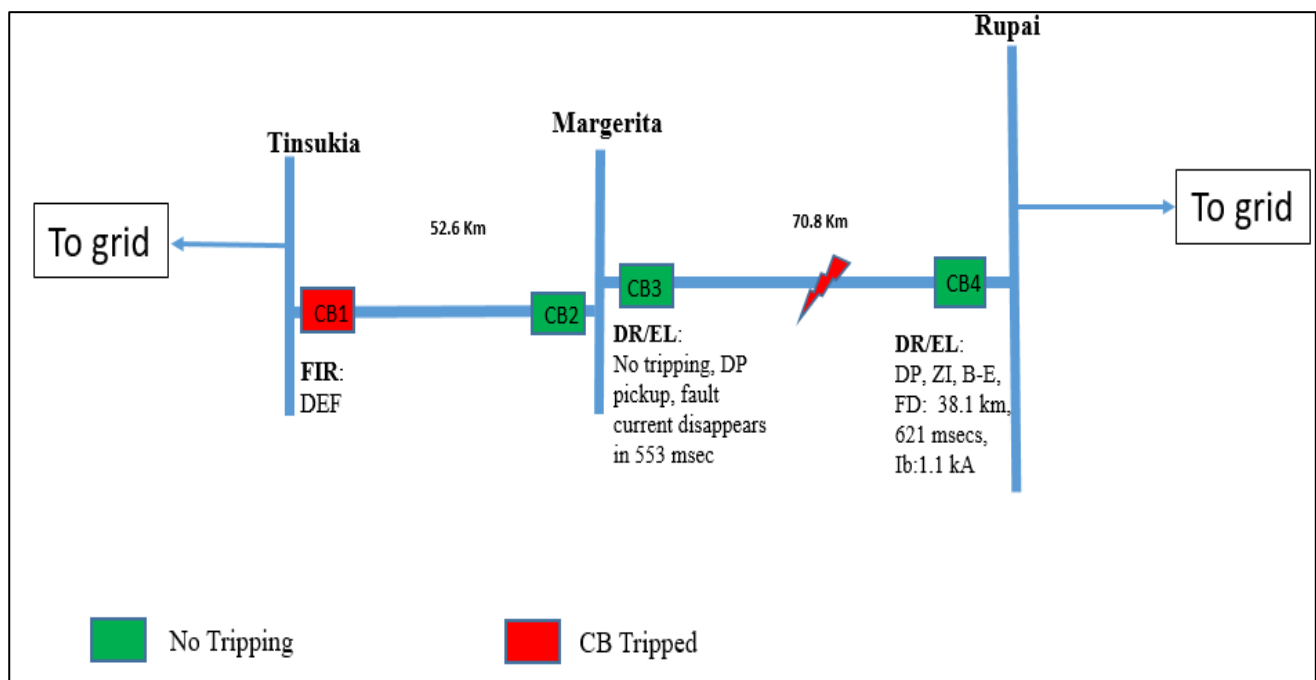
- Root cause of the event.
- Reason of DT receipt at Byrnihat end.
- Reason of interconnection of 86 relay of Bus Reactor at Byrnihat & 400 kV Bongaigaon-Byrnihat Line and rectification of the same to avoid further recurrence.

Deliberation (81st PCC):

Regarding tripping of Bus reactor, Meghalaya informed that there was interconnection of 86 relay of Bus reactor & the 400 kV Bongaigaon - Byrnihat line. Forum asked Meghalaya to separate the 86 relays of both the elements at the earliest.

Meghalaya may update**C.8 (Agenda B14, 81st PCC) Grid Disturbance in Margherita area of Assam Power System:****Event 1:**

At 10:53 Hrs of 17-06-2025, 132 kV Tinsukia – Margherita & 132 kV Rupai-Margherita line tripped leading to blackout of Margherita area of Assam. Load loss of 21 MW occurred.



As per DR analysis, at 10:50:26.946 Hrs, high resistive B-E fault (Ib-1.1 kA, Vbe-51 kV) appears in 132 kV Rupai-Margherita line at a distance of 38.1 Km which was cleared from Rupai end within 621 msec on operation of DP, ZI. No tripping observed at Margherita end (DP pickup, fault current disappears within 553 msec).

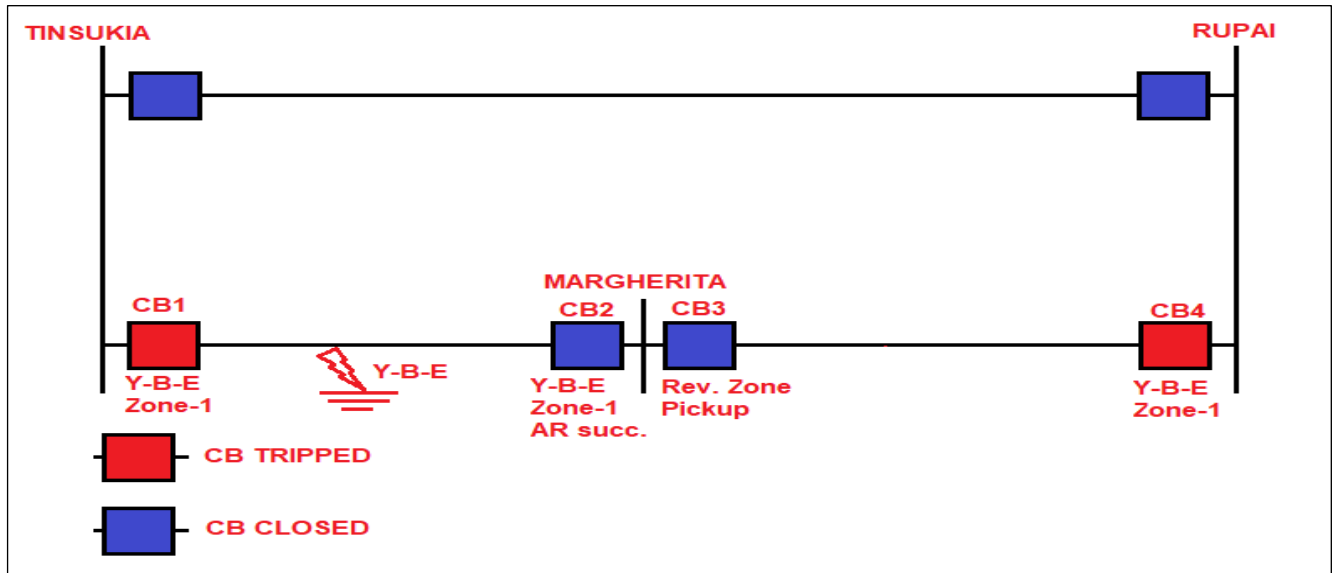
Fault cleared from Tinsukia end on operation of DEF (as per FIR, DR/EL not submitted)

Following observations:

- Protection system at Margherita end for 132 kV Rupai Line failed to isolate the fault leading to clearing of fault by tripping of healthy 132 kV Margherita-Tinsukia line from remote end.
- Time drift of 3 min observed at Rupai end for 132 kV Margherita Line.

Event 2:

At 22:59 Hrs of 22-06-2025, 132 kV Tinsukia – Margherita & 132 kV Rupai-Margherita line tripped leading to blackout of Margherita area of Assam. Load loss of 4 MW occurred.



As per DR analysis, Y-B-E fault in 132 kV Tinsukia – Margherita line cleared from Tinsukia and Margherita end in 90 msecs on operation of DP, ZI. Margherita end (CB2) successfully auto-reclosed.

However, the fault detected by the relay at Rupai end (CB4) of 132 kV Margherita – Rupai line on Zone-1 and led to tripping within 66 msecs leading to the blackout of Margherita GSS. Zone-4 picked up at (CB3) confirming the fault was in 132 kV Tinsukia – Margherita Line.

Following observations:

- Tripping of 132 kV Rupai-Margherita Line on ZI from Rupai end is unwanted. ZI setting at Rupai needs to be reviewed.
- Non-operation of Autorecloser at Tinsukia end for 132 kV Margherita line.
- Time drift of 4 min observed at Margherita end for both the lines.

AEGCL may share the root cause and action taken on the above-mentioned issues.

Deliberation (81st PCC):

Event 1: Forum noted that tripping at Tinsukia on DEF is a maloperation and asked AEGCL to rectify the issue. Further, the forum requested AEGCL coordinate the EF and OC protection settings between Margarita and Tinsukia.

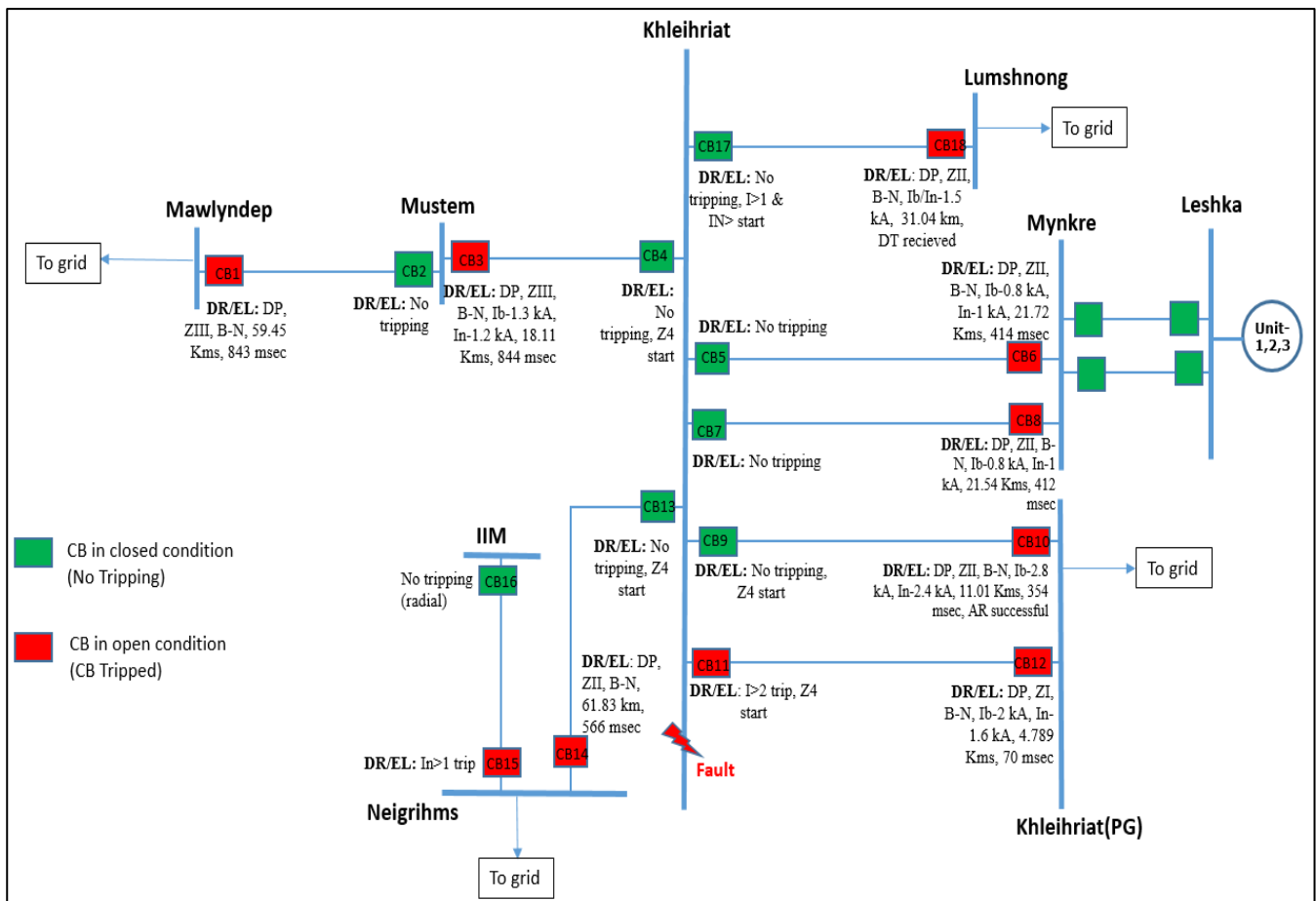
Event 2: Forum noted that zone 1 at Rupai for 132 kV Margherita line is overreaching and requested AEGCL to revise the reach of Zone1 protection. AEGCL informed S/D will be taken for testing of relay.

AEGCL may update

C.9 (Agenda B15, 81st PCC) Grid Disturbance in Leshka, Mynkre, Mustem and IIM areas of Meghalaya Power System on 19th June'25:

Leshka, Mynkre, Mustem and IIM areas of Meghalaya Power System were connected with rest of NER grid via 132 kV Leshka-Mynkre D/C, 132 kV Khleihriat-Mynkre D/C, 132 kV Khleihriat-Mustem, 132 kV Mawlyndep-Mustem & 132 kV Neigrihms-IIM Lines.

At 14:00 Hrs of 19-06-2025, all the lines connected to 132 kV Khleihriat Bus except 132 kV Khleihriat-Khleihriat (PG) I line, 132 kV Mawlyndep-Mustem & 132 kV Neigrihms-IIM lines tripped. Due to these tripping, Leshka, Mynkre, Mustem and IIM areas of Meghalaya Power System got isolated from NER Grid and collapsed due to no source available in these areas.



Root cause:

Fault was in 132 kV Khleihriat Bus. As informed by MePTCL, there was accidental contact of one cable laid by M/S Manav Energy Pvt. Ltd. (who were carrying out works related to earthing in the substation) to the bus isolator of 132 kV Khleihriat(PG)-II line. Since there is no Bus bar protection, fault was cleared by tripping of healthy lines connected to Khleihriat S/S from remote ends on Z2/Z3. There was no tripping from Khleihriat end.

Following observations:

- 132 kV Khleihriat-Khleihriat(PG) II line tripped on ZI from Khl(PG) end. ZI protection seems to have overreached from Khl(PG) end as fault was in Khleihriat Bus. From Khl(ME) end, I>2 trip observed which is inferred unwanted. Highset O/C setting needs to be disabled at Khl(ME) end to avoid any further reoccurrences.
- 132 kV Khleihriat-Khleihriat(PG) I line tripped from Khl(PG) end on operation of DP, ZII. After 3 sec, AR operated successfully which is undesirable. The same needs to be checked by NERTS.
- Tripping of 132 kV Mustem-Khleihriat line on Z3 from Mustem end is inferred unwanted. Z3 reach setting needs to be reviewed and revised as per NER protection philosophy.
- 132 kV Khleihriat-Lumshnong line tripped on ZII from Lumshnong end and no tripping from Khleihriat end (IN>1 start). However, DT received at 13:58:17.814 Hrs which is inferred unwanted. Also, at Lumshnong end, “CB status” showing CB closed which needs to be checked.
- Tripping of 132 kV Neigrihms-IIM line on E/F from Neigrihms end for fault in reverse direction is unwanted. Directionality of E/F relay needs to be enabled and forward direction to be ensured.
- Tripping of Umiam Stg-II Unit-2 for fault in 132 kV Khleihriat Bus is unwanted. The same needs to be thoroughly investigated.
- As 132 kV Khleihriat S/S serves as a crucial S/S in Meghalaya power system, it is advisable to consider upgrading the existing single bus scheme to a Double Main Cum Transfer scheme. This enhancement is essential for ensuring reliability and preventing outage in the event of a bus fault.

- Commissioning of bus bar protection in 132 kV Khleihriat S/S needs to be looked into by MePTCL. Z4 time delay at Khliehriat to be kept at 200 msec till bus bar protection is implemented.
- Time drift of 9 min observed at Mynkre end for Khleihriat line -1&2 lines which needs to be rectified.

MePTCL may update the actions taken on the above-mentioned issues.

Deliberation (81st PCC):

1. MePTCL informed that the Bus fault occurred at Khliehriat (ME) due to accidental contact of cables near the bus.
2. Protection Issues:

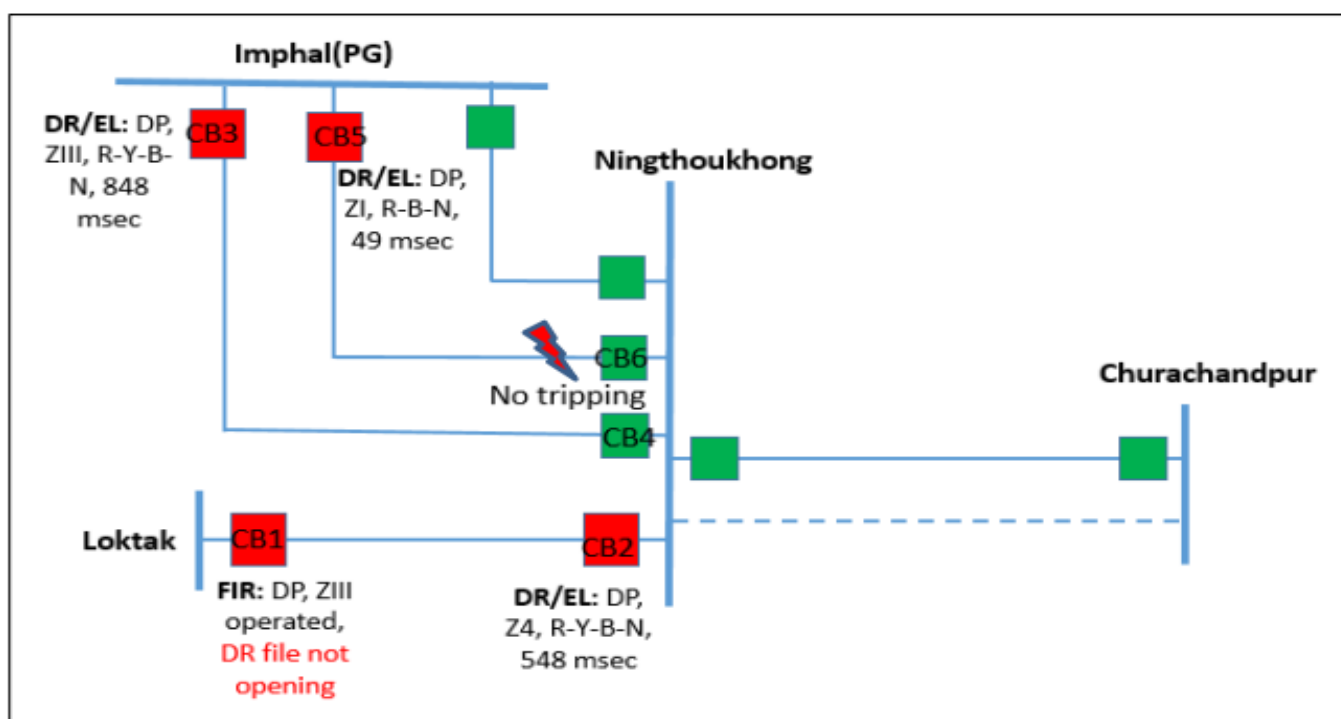
Sl. No.	Issues	Remarks
1	132 kV Khleihriat-Khleihriat(PG) II line tripped on ZI from Khl(PG) end for fault in 132 kV Khleihriat Bus	ZI overreaching issue. ZI reach setting to be reviewed.
2	132 kV Khleihriat-Khleihriat(PG) II line tripped on I>2 from Khl(ME) end	Highset O/C setting to be disabled at Khl(ME)
3	AR operated successfully at Khleihriat(PG) end for 132 kV Khleihriat-Khleihriat(PG) I Line	AR successful due to incorrect mapping which has been rectified.
4	Tripping of 132 kV Mustem-Khleihriat line on Z3 from Mustem end	LFL of the feeder was carried out to ascertain the exact line length and line length indicated was 16.9 Km. Earlier setting was kept as per 12.69 Km. The setting of 132 kV Mustem-Khleihriat line has been revised as per new line length of 16.9 Km on 25th June'25.
5	DT received at Lumshnong end for 132 kV Khleihriat Line	To be checked by MePTCL

6	Tripping of 132 kV Neigrihms-IIM line on E/F from Neigrihms end for fault in reverse direction is unwanted	Rectified
7	Tripping of Uiam Stg-II Unit-2 for fault in 132 kV Khleihriat Bus	GT O/C protection operated. To be checked by MePGCL
8	Time drift of 9 min observed at Mynkre end for Khleihriat line -1&2 lines	GPS rectified on 16th July'25

Concerned utilities may update

C.10 (Agenda B16, 81st PCC) Multiple tripping in Ningthoukhong S/S of Manipur power system on 20th June'25:

At 03:52 Hrs of 20-06-2025, 132 kV Imphal-Ningthoukhong I, 132 kV Imphal-Ningthoukhong II & 132 kV Loktak-Ningthoukhong lines tripped.



As per DR analysis, solid R-B-N fault (Ir-2.4 kA, Ib-0.8 kA, In-1.7 kA) initiated at 03:52:00.925 Hrs which was cleared within 49 msec from Imphal(PG) end on operation of DP, ZI. There was no tripping from Ningthoukhong due to which fault was continuously feeding from other lines at Ningthoukhong.

Fault was cleared by tripping of healthy 132 kV Loktak-Ningthoukhong line & 132 kV Imphal-Ningthoukhong I line on Z4 from Ningthoukhong end within 548 msec and on ZIII from Imphal (PG) within 848 msec.

Protection system of 132 kV Imphal (PG)-Ningthoukhong II line at Ningthoukhong end (CB6) failed to isolate fault in the line resulting in clearing of fault by tripping of healthy lines at Ningthoukhong.

MSPCL to share the root cause of the event & action taken on the above-mentioned issues.

Deliberation (81st PCC):

Forum noted that CB6 should have operated. Manipur informed that the Bays were recently handed over by NERPSIP. Further he informed that final report will be sent after taking a review meeting with NERPSIP team.

MSPCL may update
