AGENDA

FOR

85th PCCM

Govt. of India

Ministry of Power

North Eastern Regional Power Committee

Shillong

North Eastern Regional Power Committee

Agenda for

85th Protection Coordination Sub-Committee Meeting

Date: 06/11/2025 (Thursday)

Time: 13:30 hrs.

Venue: NERLDC Conference Hall, Guwahati

A. CONFIRMATION OF MINUTES

1. CONFIRMATION OF MINUTES OF THE 84th PROTECTION SUB-COMMITTEE MEETING OF NERPC.

Minutes of the 84th PCC Meeting held on 9th October, 2025 at BgTPP, NTPC, Bongaigaon was circulated vide letter No.: NERPC/SE (O)/PCC/2025/377-418 dated 23rd October 2025.

No comments were received from the constituents

Sub-committee may confirm the minutes of the 84th 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

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 (84th PCCM)

Sr No	Utility/ Constituents	Internal Audit		External audit	
		Latest Status	**report**	**Latest Status**	**report**
1.	Ar. Pradesh	Audit of Lekhi will be done in September'25		Planning and Tendering will be done for audit of all 9	NA

		(Total Substation: 09)		SS. Bid document prepared and proposal has been put up to the government for funding approval.	
2.	Assam	12 completed. 80% to be covered by October and 100% by Nov'25. (Total Substation: 82)		Bid Document under preparation. Meeting in October'25 with AERC for tariff adjustment of the cost of audit.	
3.	Manipur	Audit of 8 SS done, rest to done by end of Oct'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, Ningthounkong ss and Imphal (PG) done by NERPC in Aug'25	NA
4.	Meghalaya	Audit of 8 substations done, rest to be done later. (Total Substation: 22)	Reports shared	Audit of 8 substations done by CPRI, 3 more to be done by October'25. Remaining 5 will be done later	Report to be submitted.
5.	Mizoram	Audit of Zuangtui done, others to be		Audit of Kolasib, Aizawl, Melriat (PG), Zuangtui and Luangmual to be	

		done by end of Oct'25. (Total Substation: 13)		done by end of Oct'25 by NERPC.	
6.	Nagaland	Audit of 7 substations completed. (Total 11 S/s).	Report for 4 shared, rest to be shared in one month	Audit of 5 SS to be done in last week of by NERPC. For rest, to be planned later.	
7.	Tripura	Will start audit from Nov.25 (Total Substation: 18)		Offer received from CPRI and ERDA, requested for offer from CBIP and PRDC.	
8.	Powergrid (NERTS)	22 Substations. Schedule given to NERLDC. Audit of 12 SS done	Report for 8 shared, 4 to be shared	Budgetary offer will be taken after SAS upgradation of Misa and Balipara. Audit of 5 substations done by NERPC so far.	
9.	NTL	Audit of P K Bari and S M Nagar to be done in Oct'25. No further update as utility was absent in the meeting		Feb, March'26	
10	KMTL	Audit of New Kohima SS will	Report to be shared next month	Finalizing the auditing party. Will be done by Oct'25.	

		be done by Sep'. No further update as utility was absent in the meeting			
11	MUML/NBTL	No representative		No representative	
12	NEEPCO (Total Substation: 10)	Internal audit plan for FY 2025-26 has been shared. Audit of Kopili done. Audit for rest stations may deviate a little from the original schedule	Audit report of Kopili to be shared next month	Tendering done for Kameng and Turial. PRDC emerged as L1 bidder, contract to be awarded next week. For AGBPP, offer received from CBIP, CPRI and PRDC.	
13.	OTPC (Palatana)	For FY 2025-26, to be done on 6th Sep'25		Done in 2024	shared
14.	NTPC (BgTPP)	For FY 2025-26, to be in Dec25		Done (by CPRI) during 2024. 3 audit recommendation compliance pending.	Complete Report shared. Action plan shared.
15.	NHPC (Loktak)	To be done in Sep-oct'25		Done	Report to be shared shortly
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-I&II done	Report of Umtru, New Umtru will be shared next week. Report of Umiam Stg I and II submitted	Budgetary offer received from CPRI and PRDC. Waiting for offer from CBIP	
19	Dikshi HEP (IPP)	Audit to be done in Oct'25. No further update as utility was absent in the meeting		DoP Ar. Pradesh transmission division has written a letter to the plant, reply still awaited.	

Utilities may further update

B.2 Analysis and Discussion on Grid Disturbances which occurred in NER grid in October'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 October 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 Oct'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 01-10-2025 to 27-10-2025 as on **27-10-2025** 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 %	Total Furnished in 24hrs %	Total furnished %	Total Furnished in 24hrs %	Total furnished %
AEGCL	18	5.56%	83%	5.56%	83%	83%	83%
DoP, Arunachal Pradesh	9	55.56%	**100%**	77.78%	**100%**	22%	**100%**
DoP, Nagaland	10	0%	**100%**	0%	90%	50%	**100%**
MePGCL	3	0%	**100%**	33%	**100%**	66.67 %	**100%**

MePTCL	8	87.5%	87.5%	87.5%	87.5%	37.5%	87.5%
MSPCL	17	18%	59%	18%	59%	18%	59%
MUML	1	0%	**100%**	**100%**	**100%**	**100%**	**100%**
NEEPCO Generation	14	43%	93%	43%	79%	36%	79%
NEEPCO Transmission	18	78%	94%	78%	94%	39%	94%
NHPC	5	20%	40%	20%	80%	60%	80%
NTL	5	40%	80%	40%	80%	40%	80%
OTPC	2	50%	100%	50%	100%	50%	100%
P&ED, Mizoram	11	55%	100%	55%	91%	36%	91%
POWERGRID	42	69%	88%	79%	88%	17%	88%
TSECL	5	40%	**100%**	40%	80%	40%	80%

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.

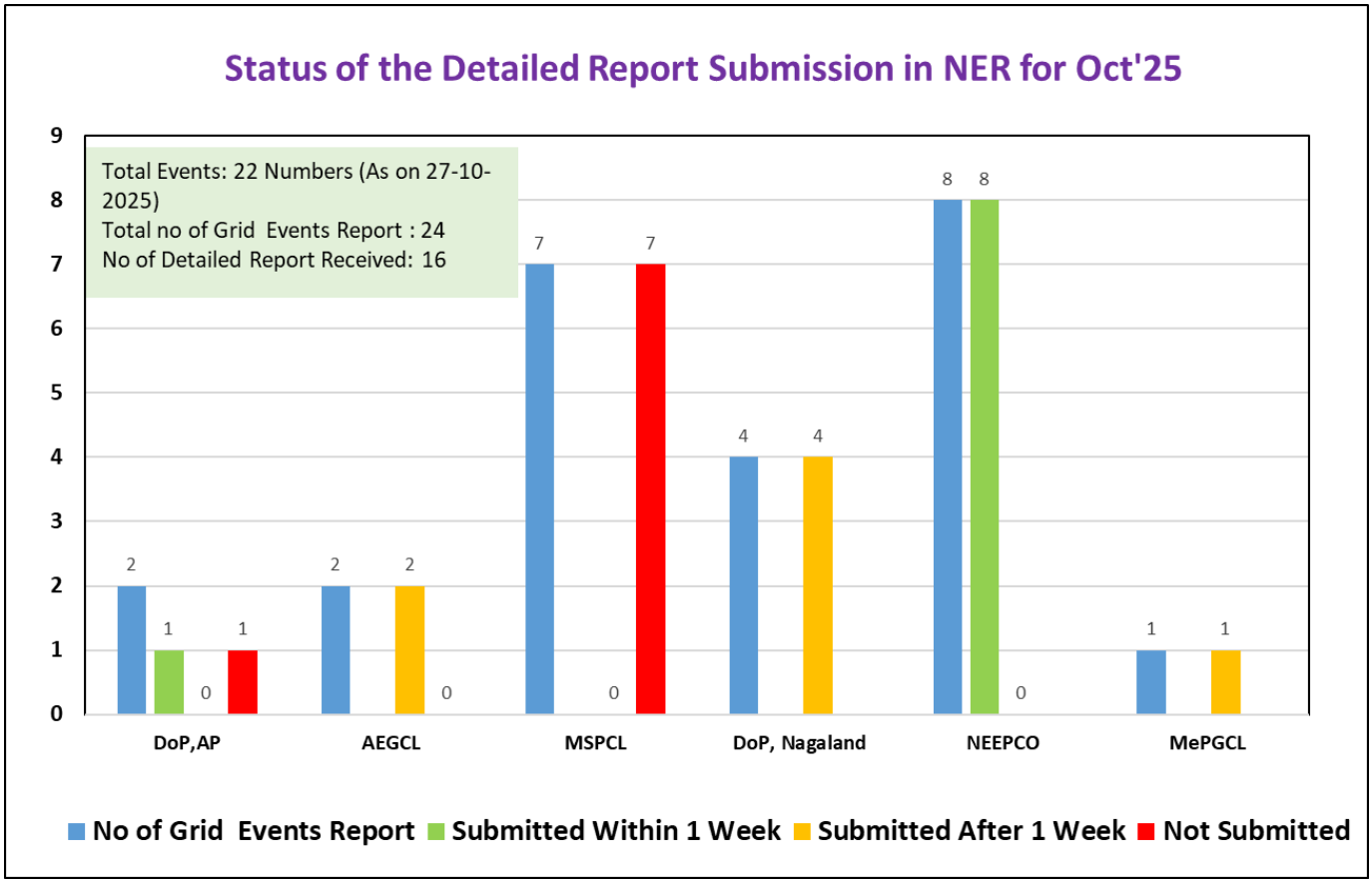
Also, all utilities are requested to nominate a nodal officer responsible for the submission of FIR, DR & EL in Tripping Monitoring Portal (https://tripping.nerldc.in/Default.aspx)

Members may discuss.

B.4 Submission of 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 Detailed Report for the month of **Oct, 2025** as on **27-10-2025** is shown below:



MSPCL has not submitted all detailed report of grid event occurred during Oct'25.

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 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	-	**Performed** on 16th Oct'25 (Report yet to be finalised)
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	-	**Performed** on 14th Oct'25 (Report shared with NERPC)
6	Outage/ tripping of both circuits of 400kV PK Bari (NTL) – Silchar(PG) D/C Lines	-	**Performed** on 13th Oct'25 (Report shared with NERPC)
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 needs 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 82nd PCC**, AEGCL is not agreeing to test without actual load shedding, as this may require disconnection of multiple hard wirings. Forum agreed with the proposal and requested AEGCL to prepare SOP for mock testing. **In 83rd PCC**, AEGCL informed that SOP for mock testing will be shared shortly. **In 84th PCC**, AEGCL requested NERLDC to write email for ensuring coordination APDCL
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)	-	

			wrt to the load shedding due to SPS mock testing.
5	SPS related to Outage/tripping of any one circuit of the 132 kV Khliehriat (PG)- Khliehriat D/C line	-	Planned on 29th Oct'25
6	SPS related to Outage/tripping of any one circuit of 132 kV Leshka – Mynkre- Khliehriat D/C Line	-	Revised for Nov'25

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

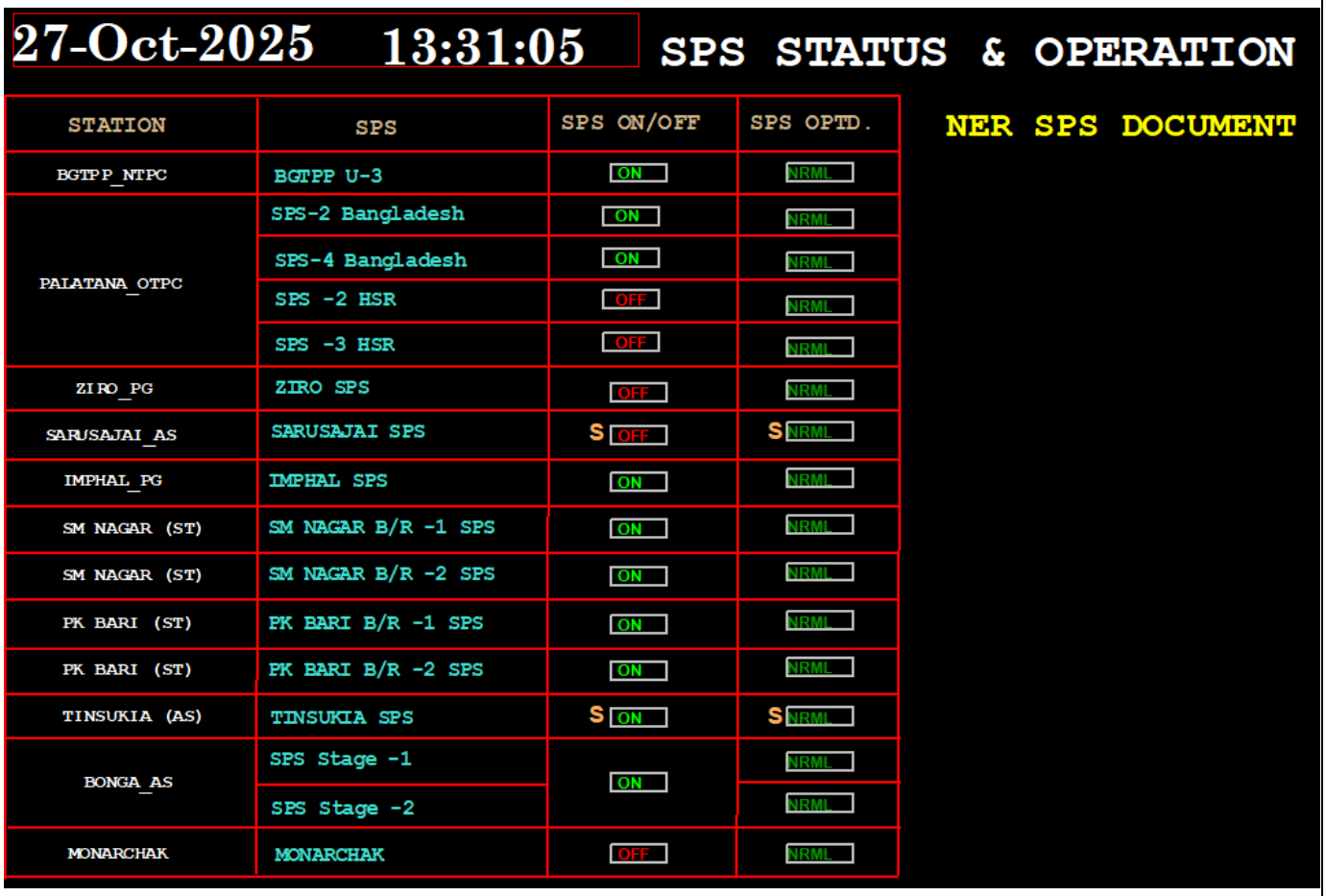
Utilities are requested to share the draft SOP's for the mock testing of SPS scheme scheduled during Nov'25.

B.6 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 Operated (Condition/Logic Wise)	

Present Status of SPS mapping in SCADA Display



Sl. No.	SPS under operation	SPS mapping status in SCADA (YES/No) as per 84th PCCM
1	SPS related to outage of 220 Misa-Samaguri D/C lines	NO AEGCL informed the process will take time as it

		requires OEM supports for the RTU
2	Related to outage of any one circuit of 220 kV Balipara-Sonabil D/C lines	NO AEGCL informed the process will take time as it requires OEM supports for the RTU
3	Related to the outage of any one circuit of the 132 KV Khliehriat (PG)- Khliehriat D/C line	YES On 24-oct-25, mapped in the real time NERLDC SCADA
4	Related to outage of any one circuit of 132 kV Leshka – Mynkre-Khliehriat D/C	YES On 24-oct-25, mapped in the real time NERLDC SCADA
5	Related to 132kV SM Nagar(ISTS) - SM Nagar line to prevent Overloading	NO Not updated during the meeting.
6	SPS related to overloading of 2x160 MVA 220/132 kV ICTs at BTPS	YES SPS mapping is done in NERLC SCADA. However, AEGCL may confirm the wiring.
7	SPS related to overloading 2X315MVA 400/220kV ICTs at Mirza	YES On 24-oct-25, mapped in the real time NERLDC SCADA
8	SPS related to generation evacuation from Loktak HEP	NO As per NHPC, SCADA system is not available at Loktak. Mapping of SPS at Loktak HEP will take time

		& it will be completed after renovation work at Loktak plant.

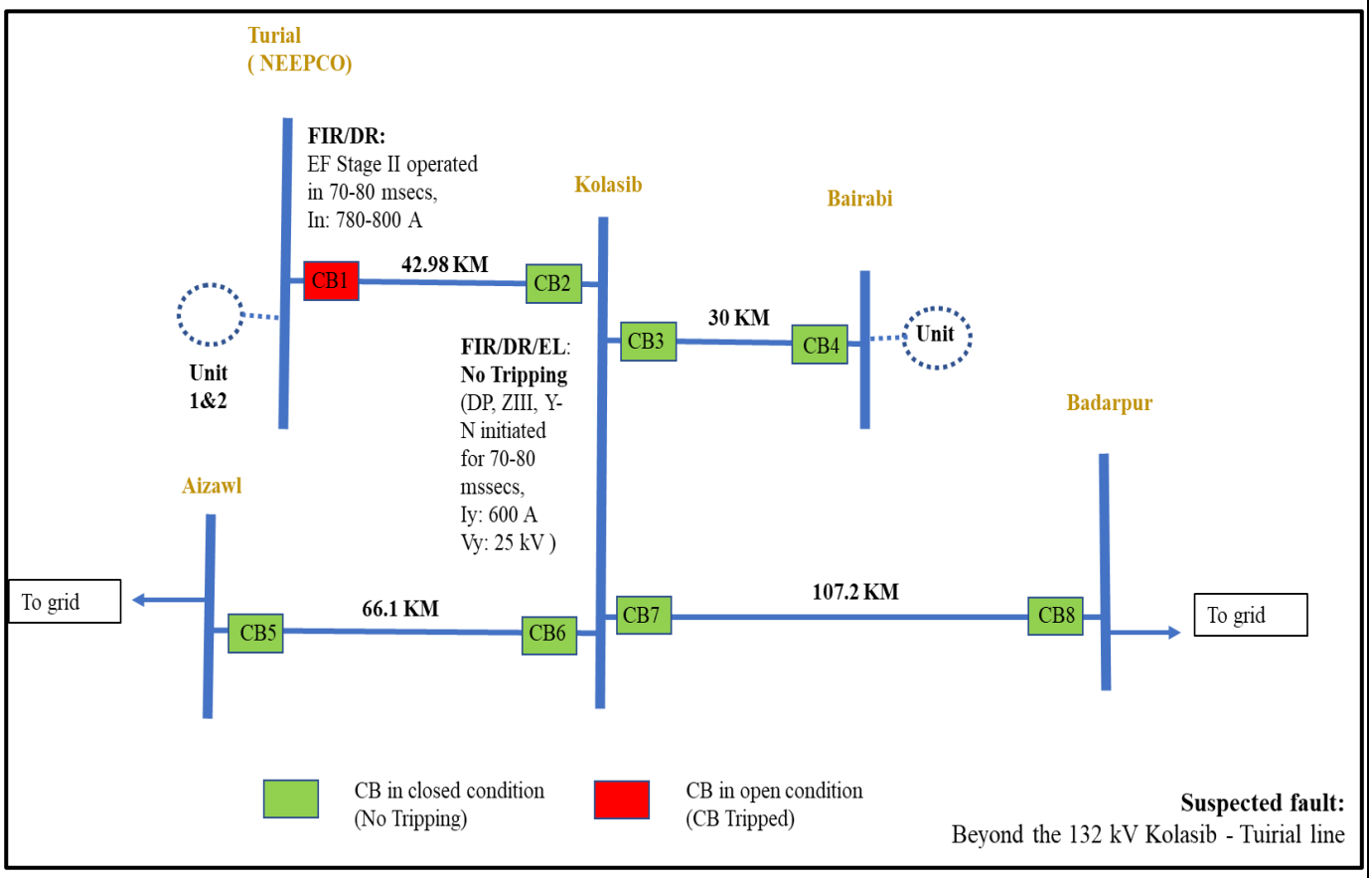
All utilities are requested to update the status of Mapping of SPS in the SCADA Display.

B.7 Repeated tripping of 132 kV Kolasib – Tuirial line on 14th Oct'25:

132 kV Kolasib–Tuirial line tripped three times on 14.10.2025 at 05:47 hrs, 07:34 hrs, and 08:09 hrs respectively.

As informed by Tuirial, the 132 kV Tuirial–Kolasib line breaker at the Tuirial end tripped due to Earth Fault (E/F), which reportedly occurred during the charging of the Bairabi line from the Bawktlang end, as conveyed by Kolasib Substation.

Event Analysis based on the available DR & EL:



The 132 kV Kolasib–Tuirial line tripped at the Tuirial end on operation of Backup Earth Fault (EF) Stage II within 70–80 milliseconds, with a neutral current (In) of 780–800 A in all three instances.

No tripping was observed at the Kolasib end.

The Disturbance Recorder at Kolasib captured the fault as DP, Zone III, Y–E, 595 A for 70–80 msecs, indicating the fault was in the forward direction of Kolasib and not in the reverse direction as initially reported (Bairabi line).

In conclusion, the suspected fault appears to be beyond the 132 kV Kolasib–Tuirial line, most likely in the reverse direction of Tuirial, as the main protection (Distance Relay) at Tuirial did not detect any forward-direction fault.

The tripping at Tuirial end seems to have been initiated by EF Stage II, which appears to be non-directional.

Action Points for Tuirial HPS:

1. Tuirial HPS is requested to check the Main Relay (P442) and share the following for all trippings on 14.10.2025 in the email id nerldcso3@gmail.com: DR files: (.dat & .cfg) & Event logs: (.evt)
2. DR standardization is required at Tuirial end in the backup relay. Please ensure the following signals are recorded: Any Start, Any Trip, Circuit Breaker (CB) Open/Close Status, OC Stage I Start & Trip, EF Stage I Start & Trip, OC Stage II Start & Trip and EF Stage II Start & Trip.
3. A time drift of approximately 31 minutes has been observed in the backup relay at Tuirial which needs to be synchronized with GPS.
4. Share the Single Line Diagram (SLD) of Tuirial Substation for better understanding and analysis.
5. EF Stage II settings not recommended as per NER protection philosophy. Hence, the same may be removed at Tuirial end.

Action Points for P&ED, Mizoram:

1. Mizoram is also requested to share details of any fault or tripping recorded on lines emanating from Kolasib Substation, along with the Disturbance

Recorder (DR) files of the backup relay for all the trippings on 14.10.2025 for correlation and further analysis.

2. Backup OC Stage I protection found non-directional in Main relay at Kolasib for Turial feeder. The directionality should be made forward to avoid any unwanted Main (P442) relay operation.
3. Any Pole Dead (L/H) & All Pole Dead (L/H) to be incorporated for generation of DR in the Main (P442) relay at Kolasib end.

Forum may discuss

B.8 <u>Grid Disturbance in Umrangshu area of Assam on 14th Oct'25:</u>

Umrangshu area of Assam Power System was connected with rest of NER Grid through 132 kV Haflong – Umrangshu Line and 132 kV Khandong – Umrangshu Line.

At 17:08 hrs of 14.10.2025, both the lines tripped resulting in GD at Umrangsho area of Assam Power System.

Sl no	**Name**	**Trip time**	**Restoration time**	**Relay End 1**	**Relay End 2**
1	132 kV Haflong – Umrangshu Line	17:08 Hrs	17:44 Hrs	No tripping	DC power failure
2	132 kV Khandong – Umrangshu Line	17:08 Hrs	17:44 Hrs	No tripping	DC power failure

As per the FIR, both the ISTS line affected due to DC power failure at Umrangshu SS of Assam.

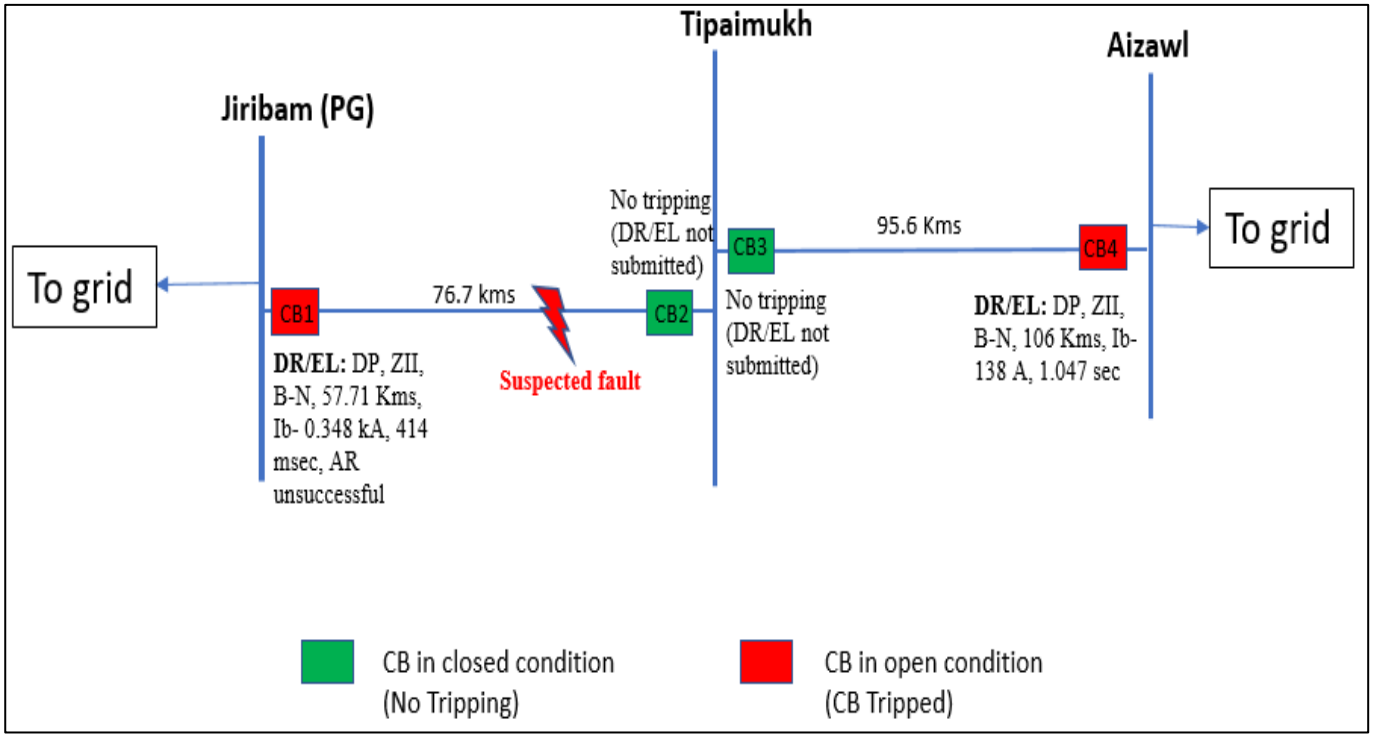
Hence, AEGCL is requested to share the root cause for DC failure and submit the detailed report for the event as per the IEGC.

B.9 Grid Disturbance in Tipaimukh area of Manipur on 10th Oct'25:

Tipaimukh area of Manipur Power System was connected with rest of NER Grid through 132 kV Aizawl - Tipaimukh Line and 132 kV Jiribam - Tipaimukh Line.
At 21:01 hrs of 10.10.2025, both the lines tripped resulting in GD at Tipaimukh area of Manipur Power System.

Sl no	Name	Trip time	Restoration time	Relay End 1	Relay End 2
1	132 kV Aizawl - Tipaimukh Line (Length: 95.6 KM)	21:01	22:03	DP, ZII, B-N, FD: 106 KM, Ib: 138 AMP	No tripping (DR & EL not submitted)
2	132 kV Jiribam - Tipaimukh Line (Length: 76.7 KM)	21:01	13:00 Hrs of 13-10-2025	DP, ZII, B-N, FD: 57.71 KM, 0.3487 KA; AR unsuccessful	**No tripping** (DR & EL not submitted)

Event Analysis based on DR & EL:



For 132 kV Aizawl - Tipaimukh Line: High resistive fault of slowly growing fault current cleared by the Main protection in DP, ZII, B-E. Total fault duration is of 1047 msecs.

For 132 kV Jiribam - Tipaimukh Line: High resistive fault of slowly growing fault current cleared by the Main protection in DP, ZII, B-E in 83 msecs. Total fault duration is of 414 msecs. AR operated after 2.5 seconds and tripped again in 310 msecs.

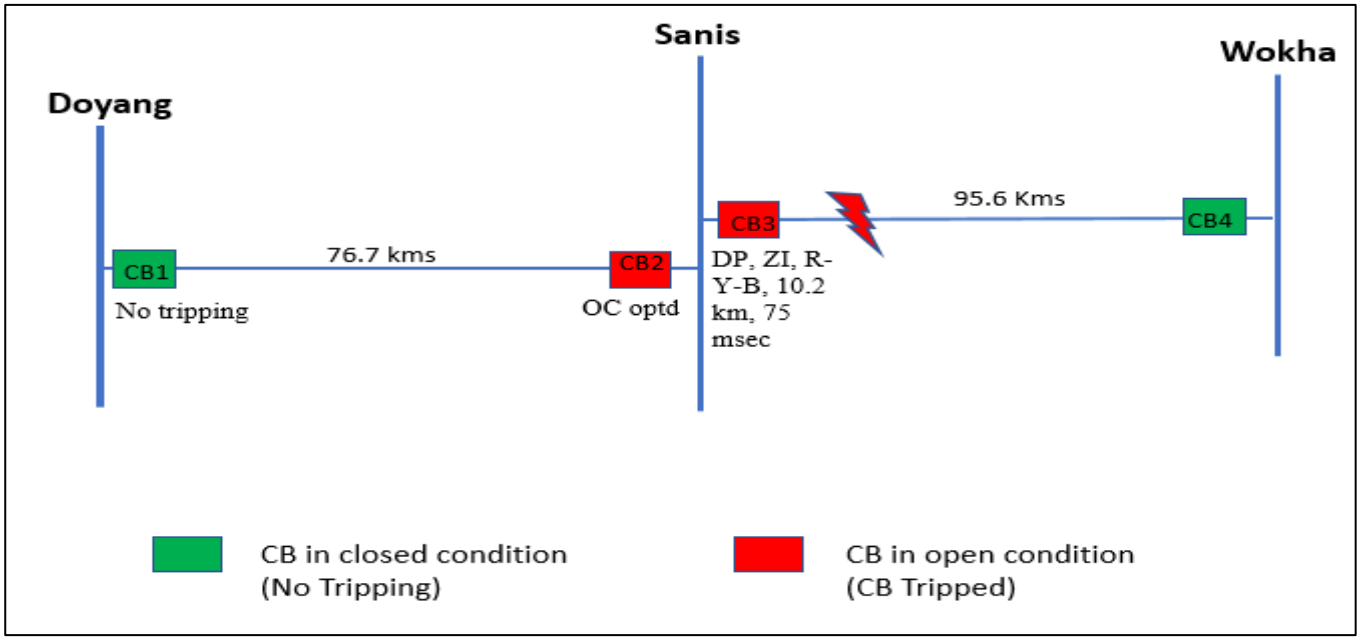
The root cause could not be concluded from the above analysis without the DR & EL of Tipaimukh end.

MSPCL is requested to share the same & inform the CB status observed during the event at Tipaimukh.

However, it seems the fault was in the 132 kV Jiribam- Tipaimukh line.
NERTS is requested to confirm the actual fault location. Also, requested to share the reason for AR operation for ZII fault without carrier received.

B.10 Grid Disturbance in Sanis & Wokha area of Nagaland on 8th Oct'25:

Sanis and Wokha areas of Nagaland Power System are connected with rest of NER Grid through 132kV Chiephbozou-Wokha line and 132kV Doyang-Sanis line.
At 14:20 Hrs of 08-10-2025, 132 kV Doyang-Sanis line and 132kV Sanis-Wokha line tripped. Due to tripping of these lines, Sanis and Wokha areas of Nagaland Power System were isolated from NER Grid.



Before the event, Sanis & Wokha areas are radially feeding via 132 kV Doyang-Sanis- Wokha line.

As per DR analysis for Sanis end of 132 kV Wokha – Sanis line, metallic fault in RYB (Ir-4.2 kA, Iy-3.8 kA, Ib:3.8 kA) initiated at 14:19:11.826 Hrs which was cleared 75 msecs from Sanis on operation of DP, ZI.

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.

Protection issues observed:

- Tripping of 132 kV Doyang-Sanis line from Sanis end for fault beyond the line (reverse direction) seems unwanted.
- DR downloading facility need to be implemented at Siemens make backup relay at Sanis.

During, 83rd & 84th PCC Meeting forum suggested to check the CT polarity for Sanis Substation. However, no action has been taken by DoP Nagaland which a matter of serious concern.

B.11 Multiple GD event at Kohima & associated areas during Oct'25:

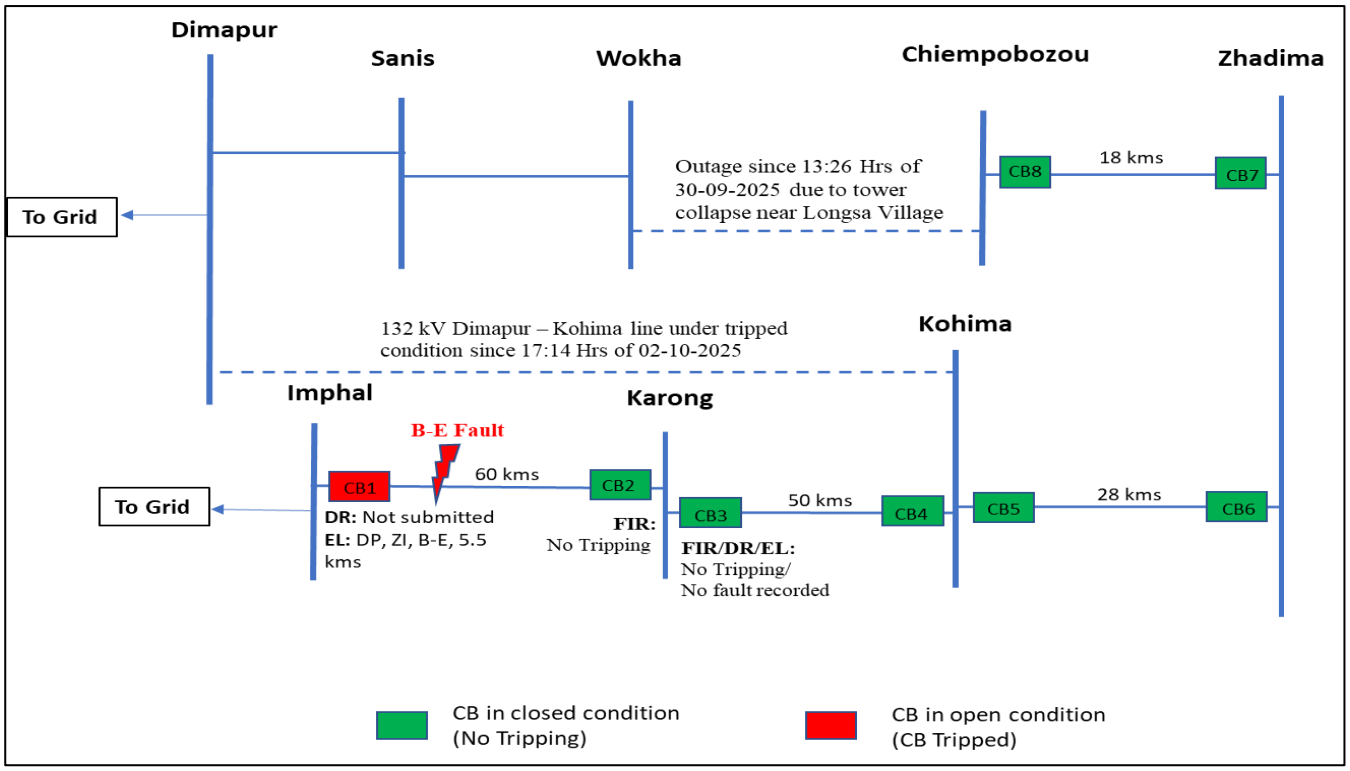
132kV Wokha-Chiphebozou line was under outage from 13:26 Hrs on 30.09.2025 after the Tower collapsed at Longsa Village between Wokha & Chiphebozou. Additionally, frequent tripping in 132 kV Dimapur – Kohima resulted into the radial operation of Kohima from the Kohima – Karong – Gamphazol - Imphal link connecting Manipur power system.

Event I:

Time: 22:09 Hrs of 02-Oct-2025

Load Loss: 20 MW;

Generation Loss: 21 MW;



At 17:16 Hrs on 02.10.2025, 132kV Dimapur - Kohima tripped at Kohima end on B-Phase, Z-1.

At 22:09 Hrs of 02-10-2025, metallic fault appears in the 132 kV Imphal - Karong line which tripped on operation of DP, ZI, B-E, FD: 5.5 kms within 62 msecs at Imphal end resulted into the GD in Karong area of Manipur and Kohima, Zhadima and Chiephobozou areas of Nagaland power system.

Event II:

Time: 21:32 Hrs of 08-10-2025

Load Loss: 25 MW;

Generation Loss: 19 MW;

At 21:31 Hrs of 08-10-2025, 132 kV Dimapur (PG) – Kohima line tripped due to L-L fault on operation of DP, ZI, R-B fault from both the ends. AR not operated from Kohima end.

At 21:32 Hrs of 08-10-2025, metallic fault appears in the 132 kV Imphal - Karong line which tripped at Karong end on overcurrent resulted into the GD in Karong area of Manipur and Kohima, Zhadima and Chiephobozou areas of Nagaland power system.

DoP, Nagaland is requested to ensure the following for the reliability of the capital area:

1. Ensure healthiness of the 132 kV Dimapur - Kohima line by clearing tree/vegetation urgently.
2. Expedite the restoration of 132kV Wokha - Chiphebozou line (under outage from 13:26 Hrs on 30.09.2025 after the Tower collapsed at Longsa Village). Also, share the present status.

B.12 SPS Operation for Overloading of 132 kV S. M. Nagar (NTL) – S. M. Nagar (TPTL) Line:

The System Protection Scheme (SPS) was implemented to prevent overloading of the 132 kV S. M. Nagar (NTL) – S. M. Nagar (TPTL) line when the loading exceeds 450 A (approximately 100 MW).

On 21-Oct-2025, during the shutdown of the 132 kV S. M. Nagar (NTL) – Budhjungnagar line, the SPS operated twice, at 16:55 hrs and 17:09 hrs, respectively, due to overloading of the 132 kV S. M. Nagar (NTL) – S. M. Nagar (TPTL) line up to 105 MW. As a result, a load reduction of 14 MW was initiated at the S. M. Nagar (TPTL) substation.

Only a few details shared with NERLDC after the reconductoring of the line with HTLS ACCC Pune. As HTLS conductor will carry upto 800 A, the required load shedding may not be required for future.

Therefore, TPTL is requested to intimate the status of FTC of the above line and update the bay loading capabilities so that the existing SPS scheme can be reviewed and removed from the system. Additionally, main and backup relay settings for both ends of the line may please be shared with NERLDC.

B.13 <u>Tripping of 132 kV Roing - Chapakhowa 1&2 Line on 6th Oct'25:</u>

Sl no	Name	Trip time	Restoration time	Relay End 1	Relay End 2
1	132 kV Roing – Chapakhowa I line	10:51	22:03	EF, B-E operated in 890 msecs, DT sent; In: 150 A	EF initiated for 890 msecs, In: 152 A, tripped on DT received
2	132 kV Roing – Chapakhowa I line	10:51	13:00 Hrs of 13-10-2025	EF, B-E operated in 890 msecs; DT sent; In:150 A	EF initiated for 890 msecs, In: 152 A, tripped on DT received

Event analysis:

B-E fault changes to RBE after 315 msecs and detected by the backup relay at both the ends indicates the fault within the line.

However, as per FIR submitted by NERTS, the reason for tripping informed as the blasting of R-ph station transformer at chapakhowa end.

Hence, AEGCL is requested to share the root cause for the trippings of both the circuits. Also, EF directionality needs to be reviewed at Chapakhowa end in case the fault is in the reverse direction.

B.14 Review of SPS Functionality for NTPC Bongaigaon during Guwahati Islanding Operation:

NTPC Bongaigaon (3×250 MW) is a participating generator under the proposed Guwahati Islanding Scheme, intended to sustain essential loads of Guwahati and nearby areas during major grid disturbances. As per the existing SPS configuration, the scheme arms at 600 MW generation level in case of both 400 kV lines from Bongaigaon tripping, with a total islanding capability of around 662 MW.

During the review of the Guwahati Islanding Technical Specification, NTPC, vide email dated 23.10.2025, shared observations suggesting that the interaction between the existing SPS and the islanding logic needs detailed evaluation. It is to be assessed whether the SPS should remain active during island formation or be temporarily disabled to prevent inadvertent tripping of generating units under islanded conditions. If disabling is required, the methodology—manual or automatic blocking via islanding controller—should be defined. If SPS functionality does not adversely affect islanded operation, the same may be agreed upon by the forum. It is proposed.

Forum may discuss.

Agenda from NEEPCO

B.15 Frequent tripping of 132kV Turial-Kolasib Line causing generation outage of Turial plant

It may kindly be noted that total instances of tripping of 132 KV Tuirial-Kolasib in this fiscal (up to 24.10.2025) are Fifty Nine (59), out of which Fifty One (51) tripping was recorded between July to October.

This data is excluding Thirteen (13) planned shut-down taken by the state power department for Carrying out line maintenance.

We understand that most of the trippings are attributable to snapping of jumpers, protection failure at Kolasib substation etc.

In between, state power department had taken long day-time shutdown for six (06) days for line maintenance (from 29.09.2025 to 04.10.2025) . It is however surprising to note that the line still recorded Ten (10) tripping in next 20 days after the above-mentioned maintenance.

It may be noted that frequent line-trip with consequent load throw (as both units are running near MCR for most of the duration) and overspeed tripping of the machines are harmful not only for Turbine Generator, HV Transformers and associated Switchyard equipment but also severely affects the penstock, spiral casing due to huge hydraulic stress. Moreover, Tuirial had to incur huge generation & revenue loss on account of these outages.

Therefore, it is requested to discuss the matter in the forum and direct the Power department, Govt. of Mizoram to resolve the issue at the earliest possible to avoid any further tripping please.

Forum may discuss.

Agenda from Powergrid

B.16 <u>Frequent tripping of Dimapur-Kohima line</u>

Recent frequent tripping of 132KV Dimapur-Kohima line (details as given below w.e.f 01.04.2025) due to the fault in the line under Nagaland jurisdiction have been recorded and the same requires the permanent rectification of defects in the line to avoid the frequent tripping's of the above line. On 02.10.2025, during Auto Reclosure attempt & persisting permanent fault in the above line and due to the delay in GIS CB opening at Dimapur end led to 132KV Bus-1 Tripping. It may be noted that CB is 2008 manufacturing and due to frequent feeding of fault recently mechanism related issues have escalated.

Description	Relay Details	Tripping Date	Tripping Time	Restoration Date	Restoration Time
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 1.26 KA Type of Fault-B-N, Distance-38.98 KM	15-04-2025	14:56:00	15-04-2025	15:11:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 2.094 KA Type of Fault- B-N , Distance- 39.01 KM	17-04-2025	13:34:00	17-04-2025	14:19:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 1.76 KA Type of Fault-B-N, Distance-49.123 KM	23-04-2025	16:04:00	23-04-2025	16:38:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 1.69 KA Type of Fault- B-N , Distance- 18.62 KM	27-04-2025	04:00:00	27-04-2025	14:46:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 1.74 KA Type of Fault-B-N, Distance-18.17 KM	31-05-2025	00:24:00	31-05-2025	00:39:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 3.1 KA Type of Fault-B-N, Distance-16.6 KM	26-06-2025	10:41:00	26-06-2025	11:09:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 5.6 KA Type of Fault-B-N, Distance-4.533 KM	24-07-2025	23:54:00	24-07-2025	23:54:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 2.48 KA Type of Fault-Y-B-N, Distance-40.87 KM	26-07-2025	14:08:00	26-07-2025	14:49:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 1.35 KA Type of Fault- R-N, Distance-23.507 KM	15-08-2025	23:06:00	15-08-2025	23:06:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 3.0 KA Type of Fault-B-N, Distance-14.69 KM , Fault Angle - 31.06 degree	25-08-2025	19:54:00	25-08-2025	19:54:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 932 A Type of Fault-B-N, Distance-45.32 KM	09-09-2025	09:25:00	09-09-2025	09:25:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 2.85 KA Type of Fault-B-N, Distance-14.86 KM , Fault angle - 30 degree	09-09-2025	12:05:00	09-09-2025	12:05:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 2.37 KA Type of Fault-B-N, Distance-14.12 KM	18-09-2025	13:42:00	18-09-2025	13:42:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 1.18 KA Type of Fault-B-N, Distance-58 KM	24-09-2025	11:52:00	24-09-2025	12:12:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 3.3 KA Type of Fault-B-N, Distance-14.44 KM	24-09-2025	12:32:00	24-09-2025	15:11:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 1.4 KA Type of Fault-B-N, Distance- 32.86 KM	24-09-2025	16:05:00	24-09-2025	16:05:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 1.0 KA Type of Fault-B-N, Distance-57.84 KM	25-09-2025	10:52:00	25-09-2025	14:10:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 3.33 KA Type of Fault-B-N, Distance-15.06 KM	30-09-2025	16:01:00	30-09-2025	16:01:00
132kV DIMAPUR-KOHIMA(NAGALAND)-1	Fault Current- 2.0 KA Type of Fault-B-N, Distance-22.41 KM	02-10-2025	17:14:00		

In continuation to above, this is to state that there has been frequent tripping of132kV Dimapur-Kohima feeder which has led to numerous operations of the GIS CB at Dimapur end. This is to intimate that such frequent operation of CB at Dimapur end is not desired which may lead to major grid blackout in future if such frequent CB operation persists. Hence, until the frequent tripping issue of the 132kV Dimapur-Kohima feeder is resolved, the Auto Reclose function at Dimapur end shall be kept OFF. This is for kind discussion please.

In light of the above, the forum is requested to allow keeping the AR OFF at Dimapur end for 132kV Kohima feeder.

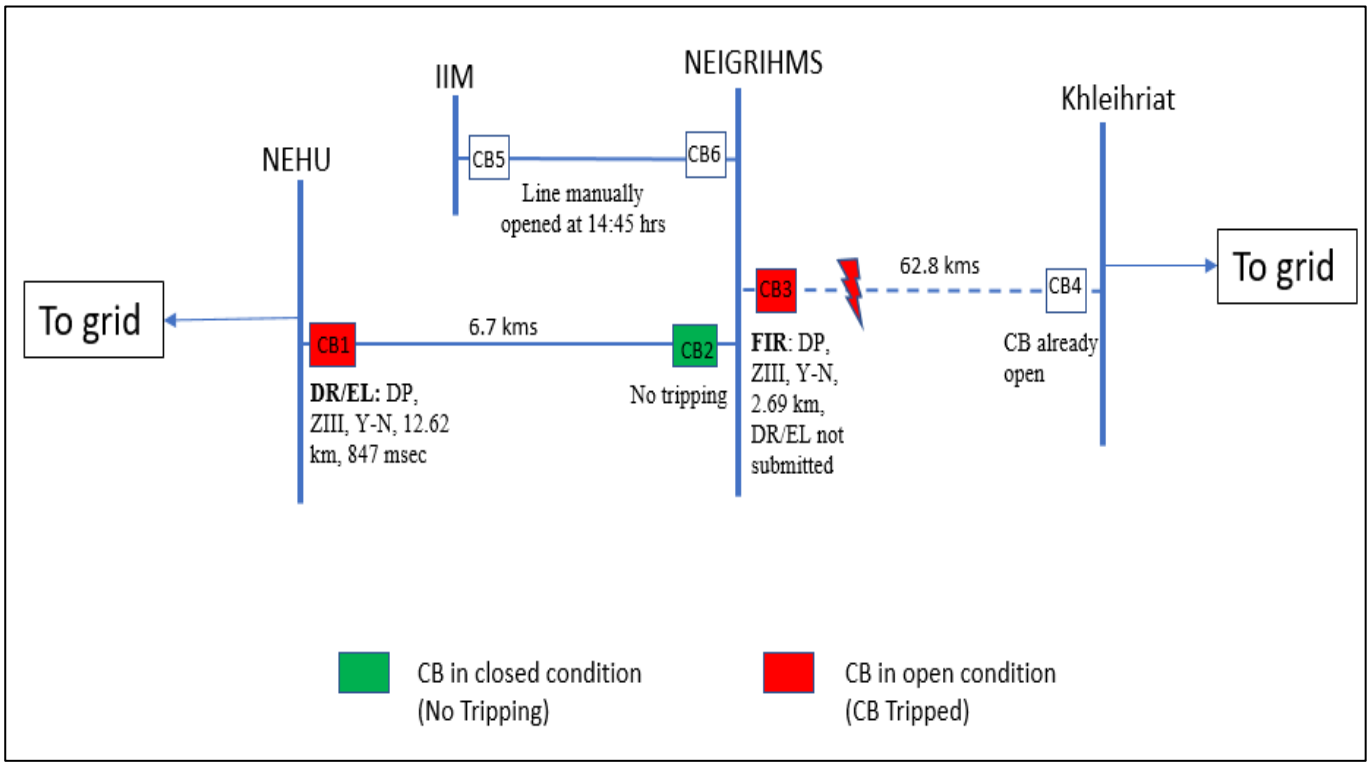
Forum may discuss

C. FOLLOW–UP AGENDA ITEMS

C.1 Grid Disturbance in NEIGRIHMS & IIM areas of Meghalaya Power System on 6th Sept'25:

NEIGRIHMS and IIM areas of Meghalaya Power System are connected with rest of NER Grid via 132 kV NEIGRIHMS-Khliehriat line and 132 kV NEIGRIHMS-NEHU line. Prior to the event, 132 kV NEIGRIHMS-Khliehriat line was under tripped condition since 14:29 Hrs of 06-09-2025.

At 14:41 Hrs of 06-09-2025, while charging attempt of 132 kV NEIGRIHMS-Khleihriat Line, 132 kV NEIGRIHMS-NEHU line tripped resulting in grid disturbance of NEIGRIHMS and IIM areas of Meghalaya Power System. Load loss of MW occurred.



As per DR analysis, at 14:27:26.076 Hrs, R-Y-B fault started in 132 kV NEIGRIHMS-Khleihriat line which was cleared within 582 msec from Khleihriat end on operation of DP, ZII. Fault cleared within 65 msec from NEIGRIHMS end on operation of DP, ZI. Ir-3.9 kA, Iy-4.07 kA, Ib-4.16 kA.

At 14:41 hrs, charging of 132 kV NEIGRIHMS-Khleihriat line was attempted and tripped in DP, ZIII, Y-N, FD: 2.69 Km from NEIGRIHMS end (DR/EL not submitted) At 14:37:06.334 hrs, Y-N fault initiated and cleared within 847 msec from NEHU end on operation of DP, ZIII. No tripping from NEIGRIHMS end.

Root cause: Conductor snapped at T-Loc 42.

MePTCL to take the following actions:

- Review ZII time delay of CB4 and set as per protection philosophy.
- Share the reason why CB3 did not detect the fault in ZI and waited for ZIII time delay despite having fault at a distance of 2.69 km from NEIGRIHMS.
- Tripping of New Umtru Unit-1 seems unwanted. The same needs to be thoroughly investigated.
- Time drift observed: 2 min at Khleihriat end for 132 kV NEIGRIHMS line; 4 min at NEHU for NEIGRIHMS line. Availability/healthiness of GPS needs to be ensured and time to be adjusted as per grid code.

Deliberation of 84th PCCM

The forum noted that CB3 should have seen the fault in Zone 1or Zone II given that the CB1 has seen the fault in ZIII.

Meghalaya informed that there are no issues with the relays for CB3 as the fault was highly resistive nature (voltage drop 3-4 kV) at 14:41 hrs. Hence, DPR not able to capture the actual distance. However, the same relay operated correctly at 14:27 hrs (first tripping) due to jumper snapping.

Forum advised Meghalaya to check the distance protection settings for CB3. PGCIL informed that Meghalaya may trans play the fault to check the actual operation of CB3 relay during the fault and take actions accordingly.

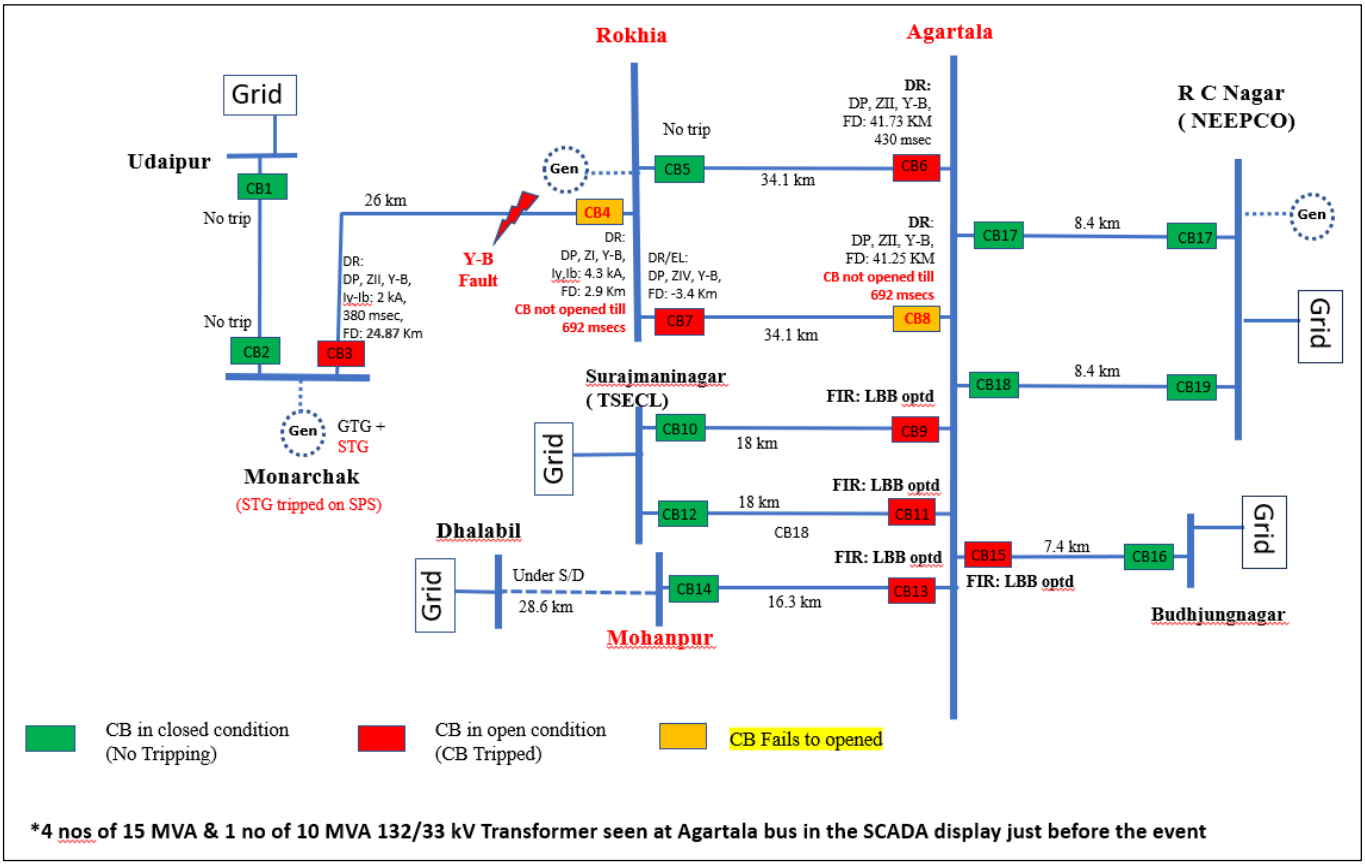
Regarding tripping of New Umtru Unit 1, MePGCL informed that OEM has been invited to review the protection system

Meghalaya to update

C.2 Grid Disturbance in Rokhia and Mohanpur S/S of Tripura Power system on 18th Sept'25:

Rokhia Substation of Tripura is connected with rest of the grid via 132 kV Rokhia – Agartala 1 & 2 line and 132 kV Rokhia - Monarchak Line. Mohanpur S/S of Tripura System is connected with rest of the grid via 132 kV Agartala – Mohanpur only (132 kV Mohanpur - Dhalabil under S/D)

At 10:35 Hrs of 18-09-2025, all the connected circuits to Rokhia and Mohanpur S/S got tripped simultaneously resulted into the blackout of the Rokhia and Mohanpur S/S of Tripura. Load loss of 17 MW and Generation loss of 39 MW occurred.



*4 nos of 15 MVA & 1 no of 10 MVA 132/33 kV Transformer seen at Agartala bus in the SCADA display just before the event

Event Analysis:

- At 10:35 Hrs, Y-B fault of solid nature appeared in the 132 kV Monarchak – Rokhia line which cleared from Monarchak end correctly. The fault detected at Rokhia end in ZI & issued trip command immediately however the CB fails to opened at Rokhia end resulted into the tripping of 132 kV Rokhia – Agartala 1 after 430 msecs.
- 132 kV Rokhia – Agartala 2-line CB fails to open after trip command issued by the DP relay in ZII. The same line tripped from Rokhia end on operation of

Z IV (reverse) in 692 msecs from the initiation of the fault resulted into the GD at Rokhia SS.

- LBB operated at Agartala bus during CB stuck of Rokhia II line caused tripping of 4 lines, however, 132 kV AGTCCPP – Agartala 1 & 2 line not tripped. LBB operation at Agartala SS caused the GD at radially fed Mohanpur area of Tripura.

Similar stuck breaker condition also observed at Rokhia during the similar Y-B fault in 132 kV Rokhia – Monarchak line at 11:25 Hrs of 24.09.2025.

Deliberation in the 84th PCC Meeting (Ref: Agenda B.8):

1. Regarding non-operation of CB4, Tripura informed that control cable had got burnt which is yet to be replaced. Forum instructed TPTL to carry out the tests like CRM and DCRM tests for the CB within one week and ensure that there are no joints in the control cable.
2. Forum also requested PowerGrid to take an online training program on CB maintenance.
3. Regarding non-operation of CB8, TPTL informed that master trip relay contact had got burnt and will change the relay shortly.
4. Forum also noted that LBB operation has not taken place correctly at Agartala and instructed TPTL to provide LBB healthiness report to NERPC and NERLDC.
5. Disturbance Recorder (DR) lack proper recording of CB OPEN & CLOSE status as well as LBB operation in each of the connected element at Agartala and Rokhia which needs to be ensured.
6. Forum emphasized upon the regular maintenance of the substation equipment for ensuring healthiness of protection system and requested **all the utilities to provide their maintenance procedure to NERPC and NERLDC.**

NERLDC shared a letter to higher authorities of the TPTL & TPGCL vide email dated 22-10-2025 attached as **Annexure I.**

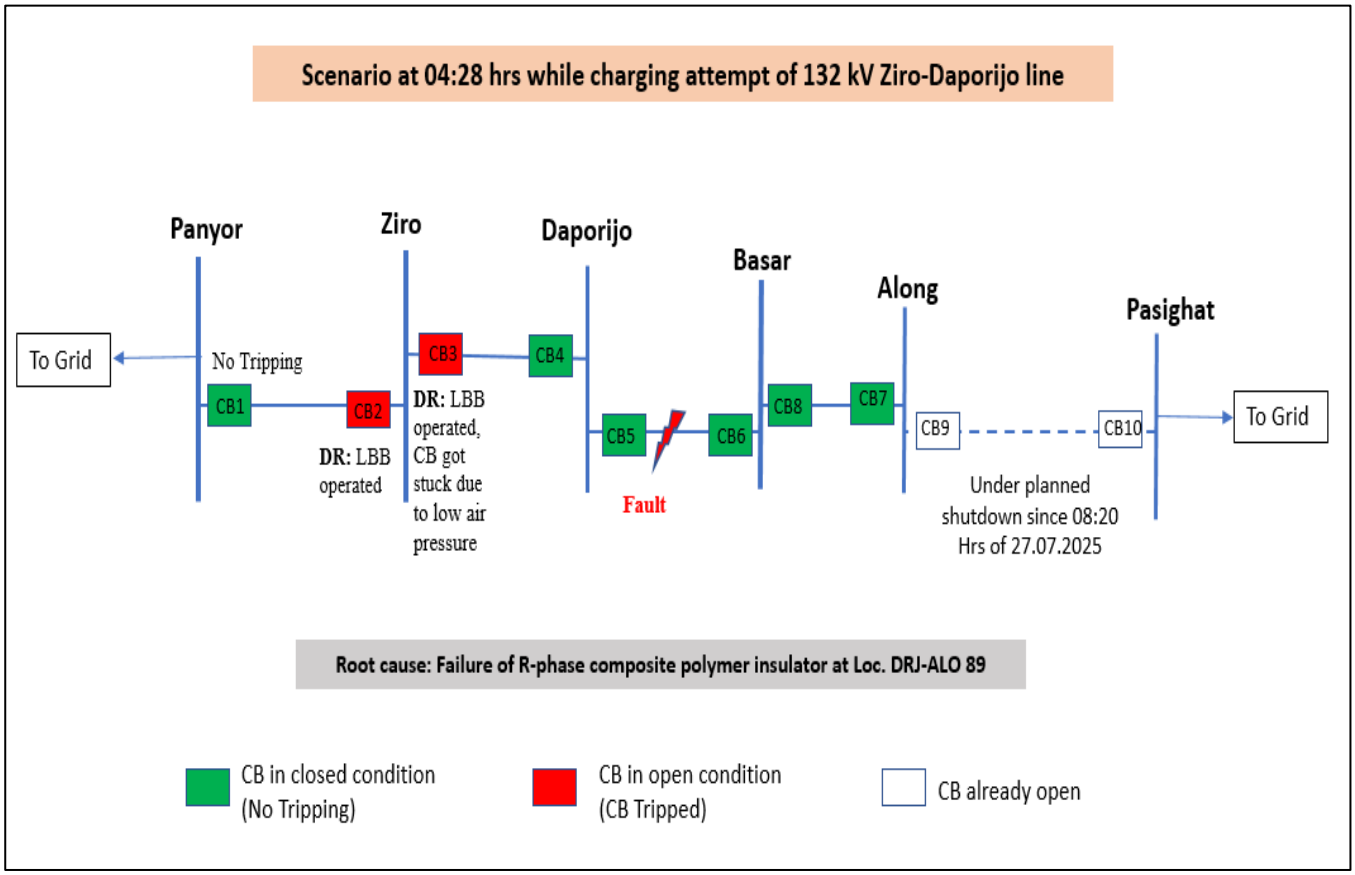
TPTL & TPGCL is requested to share the action taken against the points deliberated during 84th PCCM.

C.3 (Ref: Agenda B.6 , 84th PCC Meeting) Grid Disturbance in Ziro, Daporijo, Basar and Along area of Arunachal Pradesh Power System on 13th Aug'25:

Ziro, Daporijo, Basar and Along areas of Arunachal Pradesh Power System are connected to the rest of NER grid through 132 kV Panyor-Ziro and 132 kV Along-Pasighat lines. Prior to the event, 132 kV Along-Pasighat line was under planned shutdown since 08:20 Hrs of 27.07.2025.

At 03:33 Hrs of 13-08-2025, 132 kV Ziro-Daporijo line tripped which resulted into blackout in Daporijo,Basar and Along areas of Arunachal Pradesh.

At 04:27 Hrs of 13-08-2025, 132 kV Panyor-Ziro line also got tripped while charging attempt of 132 kV Ziro-Daporijo line due to fault in 132 kV Daporijo-Basar line. Due to this tripping, Ziro area was blackout along with Daporijo, Basar & Along substations due to no source available in these areas.



Event Analysis:

- At 03:31:02.182 hrs, High resistive B-N fault (Ib-189 A, In-146 A, Vb-74 kV) in 132 kV Ziro-Daporijo line cleared on operation of E/F protection from Ziro end. No tripping from Daporjo end (radial)

- While charging attempt of 132 kV Ziro-Daporijo line at 04:24 Hrs, line was charged from Ziro end and at 04:28 hrs during closing of CB at Daporijo end, fault occurred in 132 kV Daporijo–Basar line due to the failure of the R-phase composite polymer insulator at Loc. DRJ-ALO 89.
- Protection system of 132 kV Daporijo-Basar line failed to isolate the fault. CB at Ziro for 132 kV Daporijo line failed to open due to low air pressure, LBB protection operated at Ziro leading to tripping of 132 kV Panyor-Ziro line.

Similar incident of insulator failure of 132 kV Daporijo-Basar line occurred on 19th Sept'25.

DoP Arunachal Pradesh to take the following actions:

- Share the reason of non-operation of protection system of 132 kV Daporijo-Basar line.
- DR time drift of 2 min observed at Ziro end for 132 kV Daporijo line which needs to be rectified. Availability/healthiness of GPS needs to be ensured and time to be adjusted as per grid code.
- Frequent damage to insulators occurred between Tower Nos. DRJ-ALO 89 and 90 which likely due to area being lightning-prone. Installation of lightning arresters (LA) at this location, along with improvements to the tower earthing, to mitigate future occurrences.

Deliberation in 84th PCC Meeting:

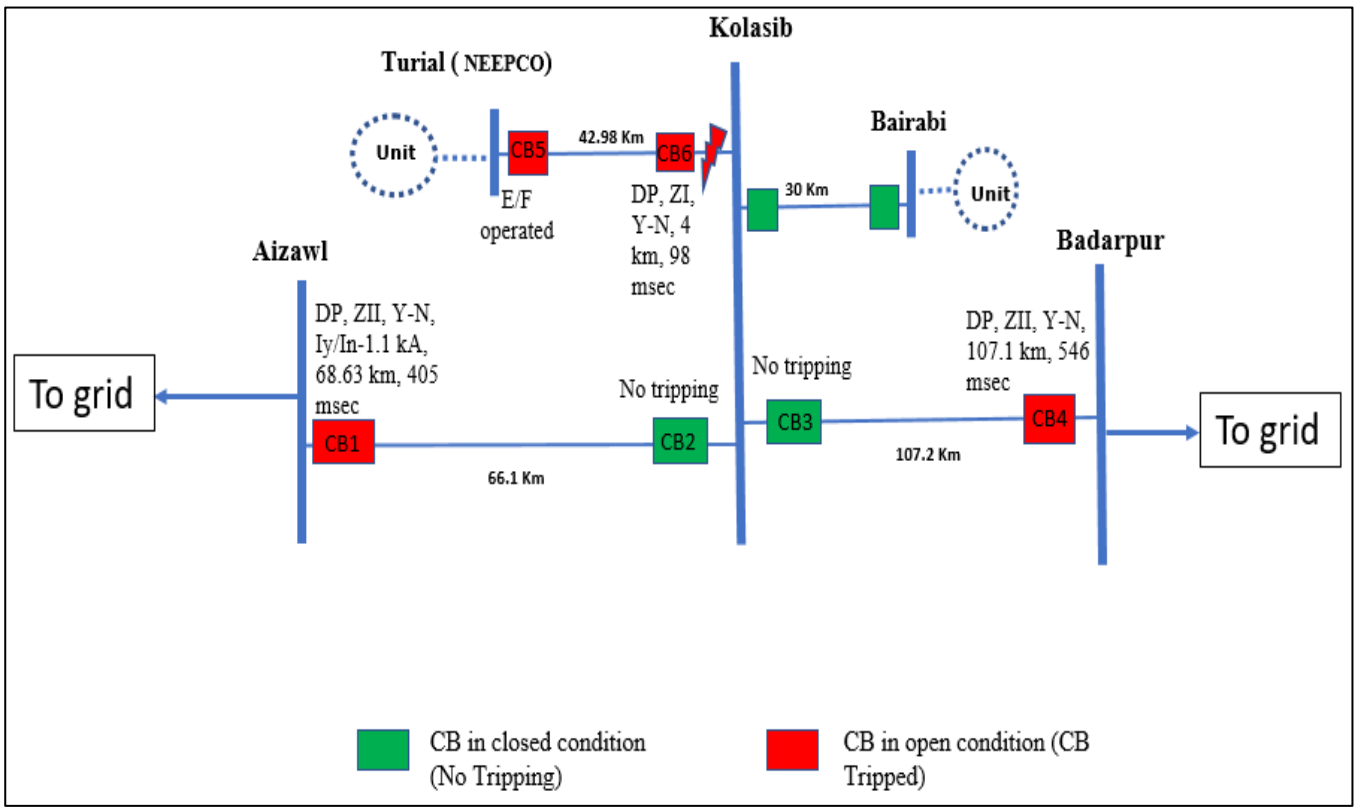
1. DoP Ar. Pradesh informed that the tripping occurred due to puncturing of insulator by lightning strike. Regarding non-operation of CB#5, he informed that the matter is being looked into.
2. Regarding non-operation of CB3, PGCIL informed that the CB got stuck. He further informed that the CB was of pneumatic type which has been replaced with spring charging type.
3. Forum requested DoP Arunachal Pradesh to check the TFR of the towers along the Daporijo-Basar line and ensure maintenance of their protection equipment.

Hence, DoP to share the status of Deliberation point 1 & 3.

C.4 (Ref: Agenda B.10, 84th PCC) Grid Disturbance in Kolasib, Tuirial & Bairabi HEP of Mizoram Power System on 15th Sept'25:

Kolasib, Tuirial HEP & Bairabi HEP of Mizoram Power System is connected to the rest of the NER grid through 132 kV Kolasib-Badarpur and 132 kV Kolasib -Aizawl lines.

At 15:51 Hrs of 15-09-2025, 132 kV Kolasib-Badarpur and 132 kV Kolasib – Aizawl lines tripped resulting in grid disturbance in Kolasib, Tuirial & Bairabi HEP of Mizoram Power System. Generation loss of 58 MW occurred & load loss of 10 MW occurred.



As per DR analysis, Y-N fault (Iy-1.1 kA, In-1.1 kA) initiated at 15:51:25.738 Hrs which was cleared within 405 msec from Aizawl end on operation of DP, ZII and within 546 msec from Badarpur end on operation of DP, ZII. There was no tripping from Kolasib end.

For 132 kV Tuirial - Kolasib line, Y-N fault (Iy-0.83 kA, In-1.2 kA) cleared within 98 msec from Kolasib end on operation of DP, ZI.

At Tuirial end, ZII initiated at 15:51:31.370 hrs for 93 msecs. However, any trip signal observed caused likely due to operation of backup E/F.

As informed by P&ED Mizoram, Y-ph conductor connecting Isolator & CB broken.

P&ED Mizoram & NEEPCO to take the following actions:

- Likely High set E/F enabled at Tuirial end of 132 kV Kolasib line which need to be disabled.
- E/F setting needs to be reviewed at Tuirial & Kolasib end along with its directionality.
- P&ED Mizoram to review relay setting of all elements at Kolasib S/S.
- As informed by P&ED Mizoram, in 132 kV Kolasib-Tuirial line, Line CVT not present at Kolasib end which needs to be looked into by P&ED Mizoram.
- Non-submission of Detailed analysis report of the event by P&ED Mizoram which is a violation of Clause 37.2 (e) of IEGC regulation 2023.

It is to be noted that during the month of September'25, there were 15 instances of tripping of 132 kV Tuirial-Kolasib line causing frequent generation loss of Tuirial HEP (2x30 M) machine due to loss of evacuation path which is a matter of serious concern.

Deliberation during 84th PCC Meeting:

1. Mizoram informed that fault occurred in the Turial-Kolasib line and **line CVT** is available on the Turial-Kolasib line. However, NERLDC raised the availability as Kolasib end using Bus PT for protection 132 kV Kolasib – Turial line as observed during the DR as well as SLD shared after the incident. Hence, Mizoram to cross check once again.
   Hence, fault in the broken Y-ph conductor connecting CB to Islotaor seen by the Bus PT in ZI which seems correct.
2. Likely High set E/F enabled at Tuirial end of 132 kV Kolasib line which need to be disabled at Tuirial. E/F setting needs to be reviewed at Tuirial & Kolasib end along with its directionality.
3. Additionally, the forum requested Mizoram to take all measures to maintain the healthiness of the Turial-Kolasib line.
4. NERPC audit planned for Kolasib SS during Last week of Oct'25.

Hence, P&ED, Mizoram to share the action plan against deliberation point no 1 & 4 and NEEPCO for point no.2.

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ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[Formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केंद्र/ North Eastern Regional Load Despatch Centre
कार्यालय: पावर हाउस, काहिलिपारा, गुवाहाटी- 781019(असम)
Office: Power House, Kahelipara, Guwahati- 781019 (Assam)
CIN: U40105DL2009GOI188682, Website: www.nerldc.in, E-mail: nerldc@grid-india.in, Mob: 6901274070

Ref: NERLDC/SO/ 2025/14/ 8415 ***दिनांक/Date: 22.10.2025***

सेवा में/To:

1. AGM (Generation), TPGCL, Bidyut Bhaban, Banamalipur, Agartala, Tripura-799001
2. GM (Transmission), TPTL, Urja Bhawan, 79 Tilla, Agartala, West Tripura - 799006

प्रतिलिपि/Copy to:

1. Member Secretary, NERPC, Shillong- 793006
2. Managing Director, TSECL, Bidyut Bhaban, Banamalipur, Agartala, Tripura-799001
3. CGM(I/C), NERLDC
4. DGM, System Operation Division, SLDC, 79 tilla, Agartala, Tripura- 799006

बिषय/Sub: त्रिपुरा प्रणाली में ब्रेकर अटक जाने के कारण मल्टीपल ग्रिड समस्या/ Multiple Grid event due to stuck breaker in Tripura system.

महोदया / महोदय,

जैसा कि आप जानते हैं, पिछले कुछ दिनों में 132 केवी रोखिया और अगरतला सबस्टेशन पर बार-बार ब्रेकर अटकने की समस्या देखी गई है। ब्रेकर अटकने के कारण, कई तत्वों ट्रिप हो गए और ग्रिड में डिस्टर्बेंस हुई, जो बेहद चिंताजनक है और ग्रिड सुरक्षा के लिए ख़तरा है। घटनाओं का सारांश नीचे दिया गया है।

18 सितंबर, 25 को ग्रिड कार्यक्रम का संक्षिप्त विवरण:

दिनांक 18-09-2025 को 10:35 बजे, रोखिया और मोहनपुर सबस्टेशन से जुड़े सभी सर्किट एक साथ ट्रिप हो गए, जिसके परिणामस्वरूप त्रिपुरा के रोखिया और मोहनपुर सबस्टेशन ब्लैकआउट हो गए। उपर्युक्त घटना में 17 मेगावाट की लोड हानि और 39 मेगावाट की उत्पादन हानि हुई। उपरोक्त मल्टीपल ट्रैपिंग और ग्रिड डिस्टर्ब का मुख्य कारण 132 केवी रोखिया-मोनार्चक लाइन के 132 केवी रोखिया सब-स्टेशन पर ब्रेकर अटकना और 132 केवी रोखिया-अगरतला के 132 केवी अगरतला सब-स्टेशन पर ब्रेकर अटकना है । उपरोक्त घटना और उसके विश्लेषण का विवरण परिशिष्ट -I में संलग्न है |

<u>24 सितंबर, 2025 को ग्रिड कार्यक्रम का संक्षिप्त विवरण:</u>

यह देखा गया है कि 24.09.2025 को 11:25 बजे 132 केवी रोखिया-मोनार्चक लाइन के वाई-बी फॉल्ट के दौरान रोखिया सबस्टेशन पर इसी तरह के ब्रेकर फंस गई थी।

उपरोक्त घटना में सभी जुड़े हुए तत्व 132 केवी रोखिया सबस्टेशन ट्रिप हो गए जिसके परिणामस्वरूप रोखिया का ब्लैकआउट हो गया। 3 मेगावाट का लोड लॉस और 12 मेगावाट का उत्पादन नुकसान उपरोक्त ग्रिड डिस्टर्बेंस में हुआ। उपरोक्त घटना और उसके विश्लेषण का विवरण **परिशिष्ट -II** में संलग्न है ।

दिनांक 24.09.2025 के ई-मेल के माध्यम से एनईआरएलडीसी ने टीपीटीएल से 18.09.2025 को होने वाले घटना के लिए मूल कारण और विस्तृत रिपोर्ट प्रस्तुत करने का अनुरोध किया है। तथापि, इस संबंध में आज तक टीपीटीएल से कोई पत्र प्राप्त नहीं हुआ है।

09.10.2025 को एनटीपीसी, बोंगाईगांव में आयोजित 84वीं पीसीसी बैठक के दौरान इस मुद्दे को फिर से उठाया गया। चूंकि टीपीजीसीएल के प्रतिनिधि उपरोक्त बैठक में उपस्थित नहीं थे, इसलिए टीपीटीएल के प्रतिनिधि ने फोरम को निम्नलिखित जानकारी दी:

1. 132 केवी रोखिया-मोनारचक लाइन के लिए रोखिया (टीपीजीसीएल) में ब्रेकर न खोले जाने का कारण नियंत्रण केबल संबंधी समस्याओं के कारण था। नियंत्रण 700 मीटर लंबाई की है और इसमें जोड़ हैं, जिसने खराबी में योगदान दिया। यही समस्या 24 सितंबर 2025 को फिर से देखी गई।
2. 18.09.2025 के आयोजन के दौरान 132 केवी अगरतला-रोखिया 2 लाइन के लिए अगरतला (टीपीटीएल) में मास्टर ट्रिप रिले कीसमस्या के कारण ब्रेकर काम नहीं किया था।

फोरम ने त्रिपुरा प्रणाली में देखी गई कई ब्रेकर विफलताओं पर चिंता व्यक्त की और निम्नलिखित कार्यों की सलाह दी:

1. एक सप्ताह के भीतर रोखिया और अगरतला में ब्रेकर के लिए डीसीआरएम और समय परीक्षण करें। इसके अलावा नियंत्रण केबल में किसी भी जोड़ से बचें।
2. एलबीबी रिले की जांच करें और अगरतला बस से जुड़े सभी तत्वों के लिए उचित कनेक्टिविटी सुनिश्चित करें।
3. अगरतला और रोखिया दोनों सबस्टेशनों पर सभी तत्वों के लिए डिस्टर्बेंस रिकॉर्डर में सीबी ओपन/क्लोज स्थिति और एलबीबी संचालन की उचित रिकॉर्डिंग सुनिश्चित करें। डीआर मानकीकरण तुरंत पूरा किया जाएगा।
4. प्रभावी निगरानी और घटना विश्लेषण की सुविधा के लिए घटनाओं के दौरान एससीएडीए प्रणाली के माध्यम से अगरतला की ब्रेकर और आइसोलेटर स्थिति सुनिश्चित करना।

उपरोक्त को ध्यान में रखते हुए, और त्रिपुरा प्रणाली के विश्वसनीय संचालन की गंभीरता को ध्यान में रखते हुए, एक बार फिर यह अनुरोध किया जाता है कि टीपीजीसीएल और टीपीटीएल भविष्य में इस

तरह की ग्रिड डिस्टर्बेंस की पुनरावृत्ति को रोकने के लिए सभी आवश्यक उपाय करें। आपसे यह भी अनुरोध है कि आप ऊपर उल्लिखित मुद्दों के समाधान के लिए की गई सुधारात्मक कार्रवाइयों के बारे में इस कार्यालय को सूचित करें।

इस संबंध में आपके सहयोग से सुरक्षित, संरक्षित और विश्वसनीय ग्रिड संचालन का अनुरोध किया जाता है।

धन्यवाद एवं सादर सहित|

Madam/Sir,

As you are aware that in past few days repeated intances of stuck breaker condition has been observed at 132 KV Rokhia and Agartala substation. Due to the stuck breaker, tripping of mutiple elements and grid disturbances have occured which is very concerning and is a threat to grid security. The gist of the events are given below.

Brief details of the Grid Event on 18th Sep'25:

At 10:35 Hrs on 18-09-2025, all the connected circuits to Rokhia and Mohanpur S/S tripped simultaneously resulted into the blackout of the Rokhia and Mohanpur S/S of Tripura. Load loss of 17 MW and generation loss of 39 MW occurred in the above event. The prime reason for above multiple trappings and grid disturbance is due to stuck breaker at 132 kV Rokhia Sub-Station of 132 Kv Rokhia - Monarchak line and stuck breaker at 132 kV Agartala Sub-Station of 132 kV Rokhia- Agartala line. Details of the above event and its analysis is attached at **Annexure-I**

Brief details of the Grid Event on 24th Sep'25:

It has been observed that a similar stuck breaker condition occurred at Rokhia Substation during a Y–B fault of in the 132 kV Rokhia–Monarchak line at 11:25 Hrs on 24.09.2025.

In the above event all connected elements 132 KV Rokhia S/S tripped resulting in blackout of Rokhia S/S. Load loss of 3 MW and generation loss of 12 MW occurred in the above grid disturbance. Details of the above event and its analysis is attached at **Annexure-II**

Vide e-mail dated 24.09.2025 NERLDC has requested TPTL to furnish the root cause and the detailed report for the event on 18.09.2025. However, in this regard till date no communication has been received from TPTL.

The issue was again raised during the 84th PCC Meeting held at NTPC, Bongaigaon on 09.10.2025. As representative of TPGCL was not present in the above meeting, the representative from TPTL informed the forum the following:

1. Non-opening of CB at Rokhia (owned by TPGCL) for 132 kV Rokhia–Monarchak Line was due to control cable issues. The control cable is of 700 meters length and has joints, which contributed to the malfunction. The same problem was observed again on 24th September 2025.
2. Non-opening of CB at Agartala (owned by TPTL) for 132 kV Agartala–Rokhia 2 Line during the 18.09.2025 event was due to an issue with the Master Trip Relay.

The forum expressed concern over multiple CB failures observed in the Tripura system and advised the following actions:

1. Perform DCRM and timing tests for the CBs at Rokhia and Agartala within one week. Also avoid any joints in control cable.
2. Check the LBB relay and ensure proper connectivity to all the elements connected to the Agartala Bus.
3. Ensure proper recording of CB OPEN/CLOSE status and LBB operations in the Disturbance Recorder for all elements at both Agartala and Rokhia substations. DR standardization shall be completed immediately.
4. Ensure CB and Isolator status of Agartala through the SCADA system during events to facilitate effective monitoring and event analysis.

In view of the above, and considering the criticality of reliable operation of Tripura system, it is once again requested that TPGCL and TPTL take all necessary measures to prevent recurrence of such grid disturbances in future. You are also requested to intimate this office regarding the corrective actions taken to address the issues mentioned above.

Your cooperation in this regard is requested for safe, secure, and reliable grid operation.

भवदीय / Yours sincerely,

BISWAJIT SAHU Digitally signed by BISWAJIT SAHU Date: 2025.10.22 12:11:05 +05'30'

(विश्वजीत साहू / Biswajit Sahu)
मुख्य महाप्रबंधक (एस.ओ) /C.G.M. (S.O.)
उपूक्षेभाप्रेके, गुवाहाटी / NERLDC, Guwahati

संलग्नक /Enclosures:

1. **Annexure I**: NERLDC Detailed Report for the GD on 18.09.2025
2. **Annexure II**: NERLDC Detailed Report for the GD on 24.09.2025
3. **Annexure III**: NERLDC Email communication dated 24.09.2025