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Agenda
for
81st PCCM

Govt. of India

Ministry of Power

North Eastern Regional Power Committee

Shillong

North Eastern Regional Power Committee

Agenda for

81st Protection Coordination Sub-Committee Meeting

Date: 24/07/2025 (Thursday)

Time: 11:00 hrs.

Venue: NERPC conference Hall, Shillong

A. CONFIRMATION OF MINUTES

1. CONFIRMATION OF MINUTES OF THE 80th PROTECTION SUB-COMMITTEE MEETING OF NERPC.

Minutes of the 80th PCC Meeting held on 19th June, 2025 at NERPC Conference Hall, Shillong was circulated vide letter No.: NERPC/SE (O)/PCC/2025/302-343 dated 1st July 2025.

No comments were received from the constituents

Sub-committee may confirm the minutes of the 80th 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 (80th PCCM)

Sr No	Utility/ Constituents	Internal Audit		External audit	
		Latest Status	**report**	**Latest Status**	**report**
1.	Ar. Pradesh	Lekhi SS next month. Manpower shortage issue	Report of Chimpu shared for FY 2024-25.	Planning and Tendering will be done for audit of all 9	NA

		hampering the internal audit (Total Substation: 09)	Planning to be done for 2025-26	SS. Bid document being prepared. NERPC conducted audit of Along and Pashighat on ~~4th and~~ 5th June'25	
2.	Assam	For FY 2025-2026, audits to start from July'25. (Total Substation: 75)	Submitted for FY 2024-25. Planning to be done for 2025-26. To be done and by July 2026	Proposing a team of protection experts from NER utilities to carry out the audits. Assam and PowerGrid have sent the list of protection experts. Others are requested to end the list. Other states raised the issue of manpower shortage. MS NERPC suggested that the state can carry out the audit by hiring reputed external agencies.	Submitted for phase 2017-2022. External audit of only Karimganj S/s is left
3.	Manipur	For FY 2025-26, audit to be done in Aug-Sept'25 (Total Substation: 08)	Submitted for FY 2024-25. Planning to be done for 2025-26. To be done august 2026	8 SS to be done, Schedule to be decided, subject to law and Order situation. Audit of Yurembam ss, Ningthounkong ss and Imphal(PG) may be done by NERPC team in July'25	NA

4.	Meghalaya	Internal audit of 132kV Subtations completed for FY 2024-25. For FY 2025-26, audits will start from July'25 (Total Substation: 22)	Reports shared for FY 2024-25. Planning to be done for 2025-26 (July 25)	Audit of 6 SS (Killing, EPIP I, EPIP II, NEHU, Mawlai and Mawphlang) done. For other substations, lowest Offer received from CPRI. Proposal submitted to Board for approval.	Report shared
5.	Mizoram	For FY 2025-26, audits to start from July'25 subject to rainfall condition. Tentative plan shared with NERPC and NERLDC. (Total Substation: 10)	Report shared for FY 2024-25. Planning to be done for 2025-26(July2025)	List of external agencies awaited. Searching for parties to conduct audit. Audit of Kolasib, Aizawl, Melriat (PG), Zuangtui and Luangmual may be done in Aug'25 by NERPC.	NA
6.	Nagaland	For FY 2025-26, audit will start next month(Total 11 S/s)	Report shared for FY 2024-25. Action plan to be shared. Planning to be done for 2025-26(July2025)	Audit of 5 SS to be done in Aug'25 by NERPC. For rest, to be planned later.	NA
7.	Tripura	Will start audit from Nov.25 (Total Substation: 18)	Shared for 13 SS for FY 2024-25. But, NERPC informed that the report is	List of external agencies awaited. Facing financial constraints.	NA

			incomplete as all the formats have not been provided. TSECL to provide complete formats by April'25. Planning to be done for 2025-26	Requesting NERPC to conduct the audits. MS NERPC stated that audit of Udaipur, Rokhia and Agartala may be conducted in Sept'25 by NERPC.	
8.	Powergrid (NERTS)	22 Substations	Report shared. Internal audit plan for FY 2025-26 has been shared. Audit of 2 SS are done very month. 2 done in June'25	Planning for external agencies. Matter is under process. Audit of Roing and Tezu was conducted by NERPC on 4th and 5th June'25	
9.	NTL	No representative	To be shared soon	No representative.	
10	KMTL	completed the internal audit for 400/220 KV GIS Substation, New Kohima in July 2024..	Internal audit for FY 2025-26 will be conducted tentatively during July'25	Requested forum to suggest the External audit panel members.	
11	MUML/NBTL	Internal audit plan for 2025-26 has been shared	Internal Audit done for FY 2024-25. Planning to be done for 2025-26	Forum advised to Plan for March'26	

12	NEEPCO (Total Substation: 10)	Internal audit plan for FY 2025-26 has been shared. Will start in Nov.25	All shared for FY 2024-25. Planning to be done for 2025-26	Discussion with CPRI underway. Doyang in May 2025. Waiting for price offer.	
13.	OTPC (Palatana)	For FY 2025-26, to be done I Aug-Sept25	Shared for FY 2024-25. Planning to be done for 2025-26	Done	shared
14.	NTPC (BgTPP)	For FY 2025-26, to be in Nov.25	Shared for FY 2024-25. Planning to be done for 2025-26(November 25)	Done (by CPRI)	Complete Report shared. Action plan shared.
15.	NHPC (Loktak)	To be done in July'25	Internal audit to be done before June 2025(July/August 2025)	To be done in July'25	
16.	APGCL	Utilities to update status			
17.	TPGCL				
18.	MEPGCL	Audit of Stg III and stg IV to be done by Nov'25. Internal audit plan for all S/S for FY 2025-26 to be shared.	Report shared	External audits of all generating stations were done in 2021. Audit of Umiam Stg-I & Stg-IV planned during Nov'25. For other	

		Leshka and Umiam stgIV done last month		S/S, planning being done.	
19	Dikshi HEP (IPP)	DoP Ar. Pradesh transmission division has written a letter to the plant, reply still awaited.		DoP Ar. Pradesh transmission division has written a letter to the plant, reply still awaited.	

Further deliberations of 80th PCCM

MS NERPC advised that –

1. Captive power plants connected with the grid can also conduct the internal and external audits and requested SLDCs to coordinate with them.
2. the external audit reports of the utilities to be studied by a team comprising of member from NERPC, NERLDC and PowerGrid and list of recommended actions to be finalised and presented in PCC meetings so that the regular update may be taken on work progress.
3. He also suggested audit team to inspect UFR during audit.

Forum may deliberate

B.2 Analysis and Discussion on Grid Disturbances which occurred in NER grid in June'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 May 2025 based on the draft report prepared by NERLDC (attached as **annexure B.2**).

B.3 Status of submission of FIR, DR & EL outputs for the Grid Events for the month of June'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 01-06-2025 to 30-06-2025 as on **15-07-2025** is given below:

Owner Name	No. of Tripping	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 Furnished in 24hrs %	Total furnished %
AEGCL	40	0.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%	100.00%
APGCL	2	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
DoP, Arunachal Pradesh	21	51.35%	48.65%	100.00%	78.38%	21.62%	100.00%	75.68%	21.62%	97.30%
DoP, Nagaland	12	41.18%	58.82%	100.00%	35.29%	64.71%	100.00%	17.65%	82.35%	100.00%
KMTL	2	50.00%	50.00%	100.00%	50.00%	50.00%	100.00%	50.00%	50.00%	100.00%
MePGCL	4	33.33%	66.67%	100.00%	33.33%	66.67%	100.00%	0.00%	50.00%	50.00%
MePTCL	38	98.33%	1.67%	100.00%	95.00%	5.00%	100.00%	86.67%	13.33%	100.00%
MSPCL	15	25.00%	50.00%	75.00%	37.50%	31.25%	68.75%	43.75%	31.25%	75.00%
NEEPCO	5	41.18%	52.94%	94.12%	58.82%	41.18%	100.00%	58.82%	35.29%	94.12%
NHPC	5	33.33%	50.00%	83.33%	33.33%	50.00%	83.33%	33.33%	50.00%	83.33%
NTL	1	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%	0.00%	100.00%	100.00%
OTPC	2	50.00%	50.00%	100.00%	50.00%	50.00%	100.00%	50.00%	50.00%	100.00%
P&ED Mizoram	4	0.00%	50.00%	50.00%	0.00%	50.00%	50.00%	0.00%	50.00%	50.00%
POWERGRID	22	57.14%	42.86%	100.00%	71.43%	28.57%	100.00%	76.19%	23.81%	100.00%
TSECL	8	0.00%	91.67%	91.67%	8.33%	91.67%	100.00%	0.00%	100.00%	100.00%

FIR/DR/EL submission status of utilities having tripping of Generating Units as on 15-07-2025:

Owner Name	No. of tripping	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 Furnished in 24hrs %	Total furnished %
MePGCL GENERATION	4	100.00%	0.00%	100.00%	75.00%	25.00%	100.00%	75.00%	25.00%	100.00%
NEEPCO GENERATION	12	33.33%	66.67%	100.00%	75.00%	25.00%	100.00%	75.00%	25.00%	100.00%
NHPC GENERATION	1	100.00%	0.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%	100.00%
OTPC GENERATION	2	0.00%	100.00%	100.00%	100.00%	0.00%	100.00%	100.00%	0.00%	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.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)

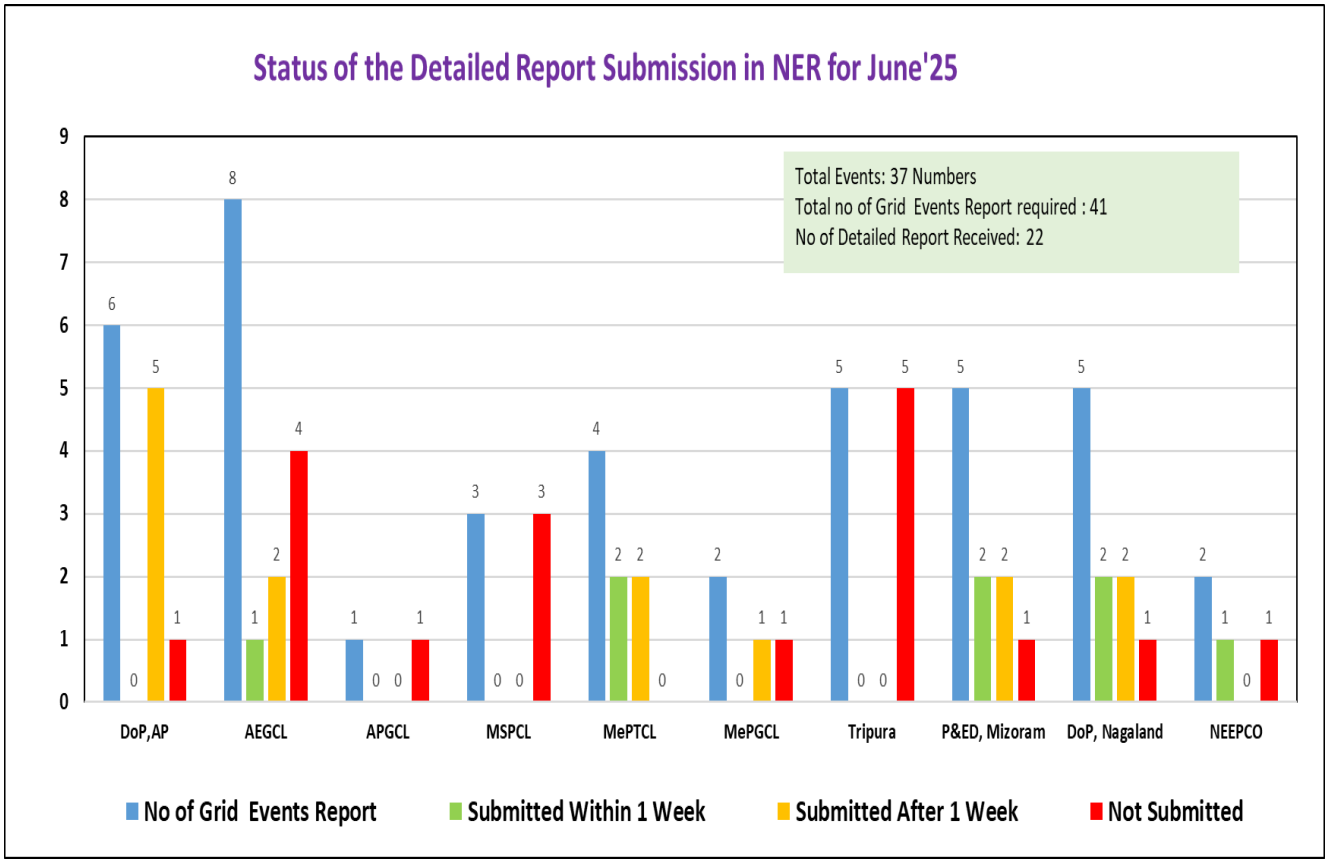
All the utilities are requested to submit details of tripping of downstream feeder on monthly basis in the google spreadsheet prepared by NERLDC.

https://docs.google.com/spreadsheets/d/1rlksf6KO9LgQQ6bwMRDmbwm906We1ysfR7KjrTxhG34/edit?gid=0#gid=0

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 **June, 2025** as on **15-07-2025** is shown below:



APGCL, MSPCL, Tripura and NERTS have not submitted the detailed report of grid events. Also, we have received 8 reports within one week of time and 12 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 <u>Non-operation of auto recloser in Important Grid Elements for transient faults in June 2025:</u>

Sl. No.	Element Name	Tripping Date and Time	RELAY_A	RELAY_B	Auto-Recloser not Operated	Remarks from Utility
1	132 kV Agia - Nangalbibra Line	03-06-2025 00:48:00	No Tripping	DP, ZI, 45.93 km	Nangalbibra (MePTCL)	
2	132 kV Loktak - Rengpang Line	04-06-2025 11:48:00	DP, ZI, B-E, FD: 1.9 kA, 18.72 Km	No Tripping	Loktak (NHPC)	
3	132 kV Rupai - Tinsukia Line	07-06-2025 09:32:00	DP, ZI, Y-B-E, 35.3km	DP, ZI, Y-B-E	Both ends (AEGCL)	
4	220 kV Jawaharnagar - Samaguri Line	12-06-2025 03:05:00	DP, ZI, R-E	DP, ZI, R-E, 91.9 Km	Both ends (AEGCL)	

Sl. No.	Element Name	Tripping Date and Time	RELAY_A	RELAY_B	Auto-Recloser not Operated	Remarks from Utility
5	132 kV Golaghat - Mariani (AEGCL) Line	14-06-2025 03:50:00	DP, ZI, R-B-E, 38.2 Km	DP, ZI, R-B-E, 12.2 Km	Both ends (AEGCL)	
6	220 kV-MAWNGAP-BYRNIHAT (KILLING)-1	15-06-2025 13:40:00	DP, ZI, R-E	DP, ZI, Y-E, AR successful, fault reappeared on reclaim time	Mawngap (MePTCL)	
7	132 kV Dimapur - Doyang 2 Line	15-06-2025 15:38:00	DP, Y-E, ZII, 95.3 Km, Carrier aided tripping, AR successful	DP, ZI, Y-E, 64 Kms	Doyang (NEEPCO)	
8	132 kV Margherita - Rupai Line	17-06-2025 10:53:00	No Tripping	DP, ZI, B-E, 38.1 km	Rupai (AEGCL)	
9	132 kV Gohpur - North Lakhimpur 1 Line	22-06-2025 06:24:00	DP, ZI, R-E, 59.2 km	DP, ZI, R-E	Both ends (AEGCL)	

Sl. No.	Element Name	Tripping Date and Time	RELAY_A	RELAY_B	Auto-Recloser not Operated	Remarks from Utility
10	132 kV Hailakandi - Panchgram Line	22-06-2025 21:52:00	DP, ZI, Y-E, AR successful	DP, ZI, Y-E	Panchgram (AEGCL)	
11	132 kV Margherita - Tinsukia Line	22-06-2025 22:59:00	DP, ZI, Y-B-E, AR successful	DP, ZI, Y-B-E	Tinsukia (AEGCL)	
12	220 kV Dimapur - Misa 1 Line	23-06-2025 01:20:00	DP, ZI, R-Y-E, 123.5 Km	DP, ZI, R-Y-E, AR successful	Dimapur (PG)	
13	132 kV Panchgram - Lumshnong Line	23-06-2025 21:05:00	DP, ZI, Y-B-E, 46.9 Km	DP, ZI,Y-B-E, 6.085 Km	Both ends (AEGCL)	
14	132 kV Namsai - Tezu Line	25-06-2025 15:15:00	DP, ZI, R-E	DP, ZI, R-E, AR successful	Namsai (PG)	
15	132 kV Daporijo - Ziro Line	27-06-2025 11:48:00	DP, ZI, R-E, 68.2 km	DP, ZI, R-E, 62.80 Km, AR successful	Daporijo (DoP AP)	

Utilities may update

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

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

As on 15.07.2025, **NETC, MUML, NBTL, KMTL, DoP Nagaland, MePTCL, POWERGRID, NTPC, OTPC, NEEPCO (Panyor, Kameng, Kopili, Pare, Monarchak) & MePGCL** has submitted protection performance indices for the month of June'25.

Sl. No.	Name of Transmission Licencee	D= (Nc/ Nc+Nf)	S= (Nc/ Nc+Nu)	R= (Nc/ Nc+Ni)	Remarks
1	NETC	-	-	-	No bay owned by NETC
2	MUML	-	-	-	No tripping during June'25
3	NBTL	-	-	-	No tripping during June'25
4	KMTL	1	1	1	
4	DoP Nagaland	1	1	1	
5	MePTCL	0.945	1	0.945	
	Mustem	0.5	1	0.5	At 14:00 Hrs of 19.06.2025, 132 kV Mustem-Khleihriat Line tripped. Operation of Z3 instead of Z2 from Mustem end.
	Lumshnong	0.857	1	0.857	Failed opening of CB at Lumshnong end for 132 kV Khleihriat line on 25.06.2025
6	POWERGRID	1	1	1	
7	DoP Arunachal Pradesh	-	-	-	Not Submitted
8	AEGCL	-	-	-	Not Submitted

9	NTL	-	-	-	Not Submitted
10	MSPCL	-	-	-	Not Submitted
11	P&ED Mizoram	-	-	-	Not Submitted
12	TSECL	-	-	-	Not Submitted

Sl. No.	**Name of Generating Company**	**D= (Nc/ Nc+Nf)**	**S= (Nc/ Nc+Nu)**	**R= (Nc/ Nc+Ni)**	**Remarks**
1	NTPC	1	1	1	
2	OTPC	1	1	1	
3	NEEPCO	1	0.46	0.46	
	Panyor	1	1	1	
	Kameng	1	0.25	0.25	Unwanted tripping of 132 kV Bus coupler at Kameng on 12.06.2025 & 23.06.2025, unwanted tripping of 400/132 kV ICT at Kameng on 14.06.2025
	Kopili	1	0.2	0.2	On 26.06.2025, failure in the Station DC charger, which led to the interruption of DC supply to essential protection and control circuit leading to tripping of Kopili Unit-1,2,3,4
	Monarchak	1	1	1	
	Pare	1	1	1	
4	MePGCL	1	1	1	
5	NEEPCO(AGBPP, Doyang)	-	-	-	Not Submitted

6	NHPC	-	-	-	Not Submitted
7	APGCL	-	-	-	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.7 Time Drift issue of submitted Disturbance recorder during June 2025:

As per Regulation No. 17(1) of IEGC 2023- All users shall keep the recording instruments (disturbance recorder and event logger) in proper working condition.
As per Regulation No. 17(3) of IEGC 2023, the time synchronization of the disturbance recorders shall be corroborated with the PMU data or SCADA event loggers by the respective RLDC. Disturbance recorders which are non- compliant shall be listed out for discussion at RPC.
List of elements with time drift issue in the submitted DRs for June 2025 are as follows:

SL No	Element Name	Tripping Date and Time	SENDOWNER	RENDOWNER	Time synch
1	132 kV-Myntdu Leshka-Mynkre 1 Line	01-06-2025 05:37:00	MePGCL	MePTCL	13 min (lag) at Mynkre
2	132KV-Myntdu Leshka-Mynkre 2 Line	01-06-2025 05:37:00	MePGCL	MePTCL	13 min (lag) at Mynkre
3	132KV-Mynkre (ME)-Khliehriat(ME)-1	01-06-2025 05:37:00	MePTCL	MePTCL	7 min (lag) at Mynkre
4	220 kV BTPS - Rangia 2 Line	03-06-2025 01:16:00	AEGCL	AEGCL	1 Hr (Main II relay) at BTPS

SL No	Element Name	Tripping Date and Time	SENDOWNER	RENDOWNER	Time synch
5	220 kV BTPS - Rangia 2 Line	06-06-2025 12:38:00	AEGCL	AEGCL	1 Hr (Main II relay) at BTPS
6	220 kV Byrnihat - Misa 1 Line	08-06-2025 11:39:00	MePTCL	POWERGRID	6 min at Byrnihat
7	132 kV Dullavcherra - Hailakandi Line	10-06-2025 10:16:00	AEGCL	AEGCL	28 min – Dullavchhera 4 min- Hailakandi
8	132 kV Dharmanagar - P K Bari Line	10-06-2025 18:45:00	TSECL	TSECL	5 min (lag) at PK Bari 20 min (lag) observed at Dharmanagar
9	132KV-Mynkre (ME)-Khliehriat(ME)-1	19-06-2025 14:00:00	MePTCL	MePTCL	9 min at Mynkre
10	132KV-Mynkre (ME)-Khliehriat(ME)-2	19-06-2025 14:00:00	MePTCL	MePTCL	9 min at Mynkre
11	132 kV Hailakandi - Panchgram Line	22-06-2025 21:52:00	AEGCL	AEGCL	5 min at Panchgram
12	132 kV Margherita - Tinsukia Line	22-06-2025 22:59:00	AEGCL	AEGCL	4 min at Margherita

SL No	Element Name	Tripping Date and Time	SENDOWNER	RENDOWNER	Time synch
13	132 kV Along-Basar Line	23-06-2025 16:52:00	DoP AP	DoP AP	1 Hr at Along
14	132 kV Panchgram - Lumshnong Line	23-06-2025 21:05:00	AEGCL	MePTCL	5 min at Panchgram
15	132 kV Agartala - Rokhia 1 Line	28-06-2025 06:06:00	TSECL	TSECL	32 min at Rokhia
16	132 kV Agartala - Rokhia 2 Line	28-06-2025 06:06:00	TSECL	TSECL	3 min at Rokhia
17	132 kV Monarchak - Rokhia Line	28-06-2025 06:06:00	NEEPCO	TSECL	3 min at Rokhia

Utilities should ensure that the submitted DR and EL files have correct time synchronisation for proper analysis purposes.

As per 80th PCC minutes, Availability/healthiness of GPS needs to be ensured and time to be adjusted as per grid code.

Members may discuss

B.8 Repeated tripping of 220 kV Misa-Kopili-II Line during July'25:

220 kV Misa-Kopili II line tripped multiple times (3 times) during July'25 which is a matter of serious concern.

The details of tripping are tabulated as below:

Sl. No.	Name of Element	Tripping Date & Time	DR Analysis (End A)	DR Analysis (End B)

1	220 kV Misa-Kopili II Line	21:54 Hrs of 01-07-2025	DT received	CB tripped (DT send as per FIR)
2	220 kV Misa-Kopili II Line	23:32 Hrs of 01-07-2025	DT received	CB tripped (DT send as per FIR)
3	220 kV Misa-Kopili II Line	01:49 Hrs of 03-07-2025	DT received	CB tripped (DT send as per FIR)

As per DR signal, there was no fault observed in the system.

Spurious DT send from Kopili end to Misa end which resulted in tripping of 220 kV Misa-Kopili II Line.

NEEPCO is requested to thoroughly investigate the issue of DT send from Kopili end to prevent further recurrence of this event.

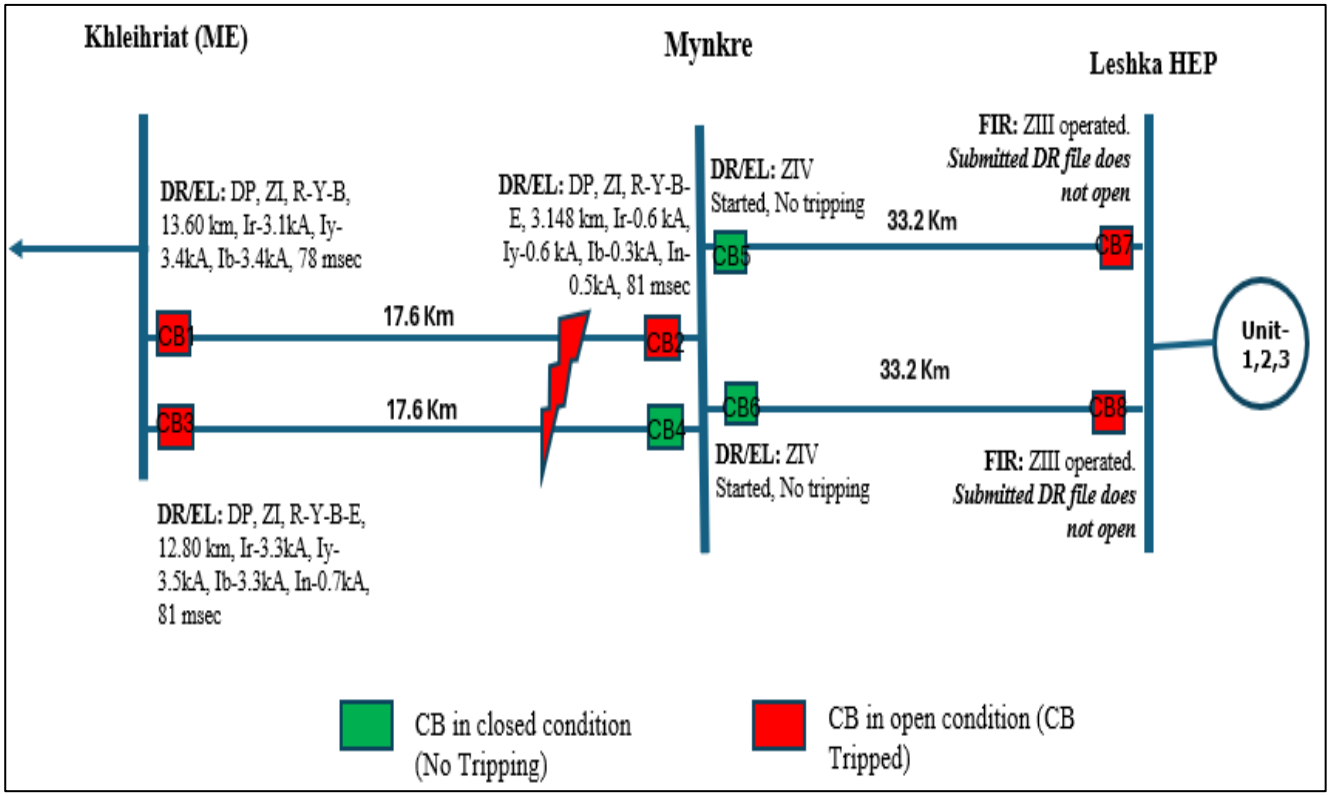
Also, NEEPCO is requested to conduct end-to-end relay testing in co-ordination with POWERGRID.

Similar event occurred at 11:21 Hrs of 16.04.2025.

Members may discuss

B.9 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:

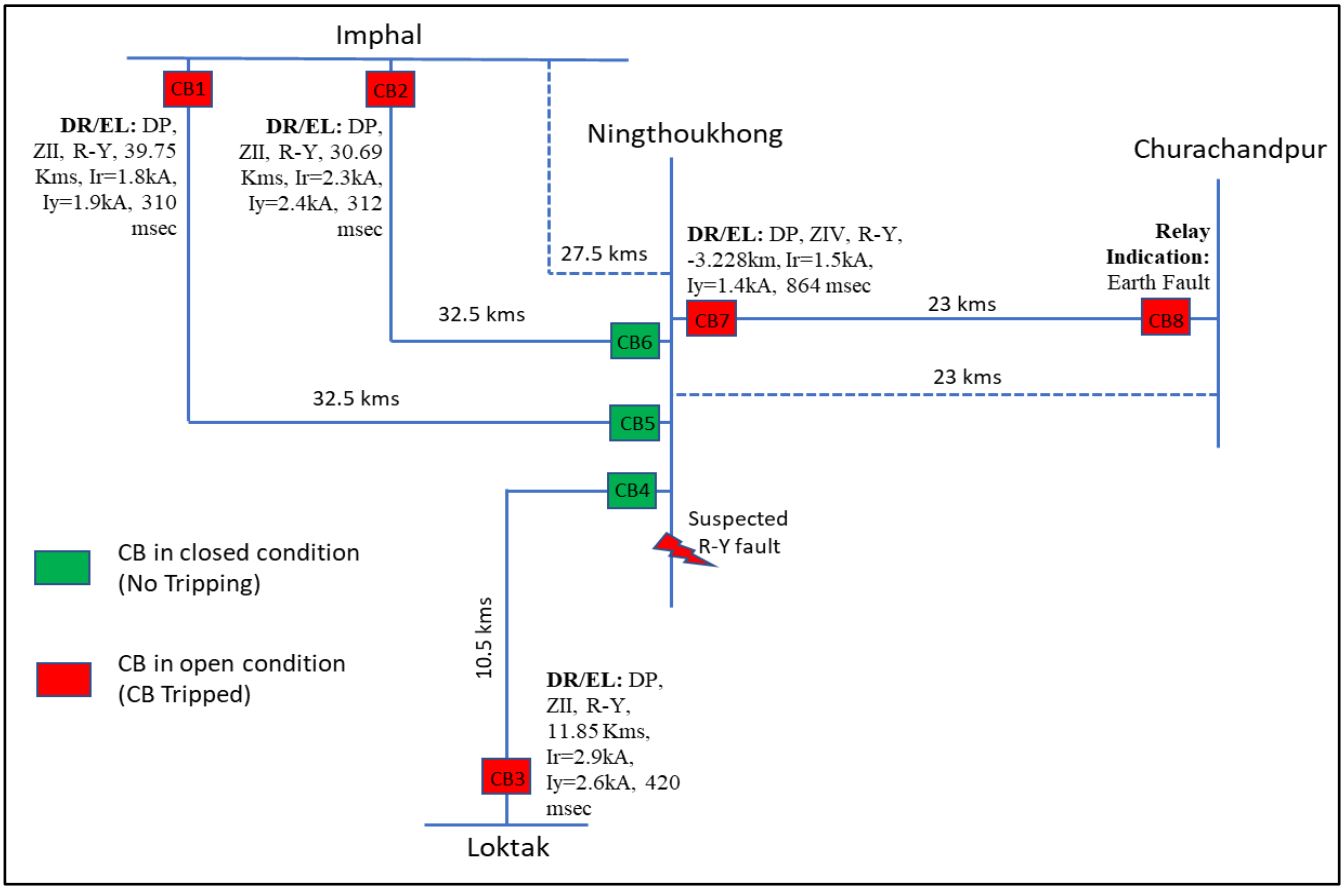
- Protection system of Mynkre (ME) of 132kV Mynkre (ME)-Khliehriat(ME)-2 line failed to isolate the fault which led to clearing of the same fault by tripping of healthy 132 kV Mynkre-Leshka D/C lines from Leshka end on ZIII operation.
- Time drift of 7 mins (lag) in submitted DRs from Mynkre end for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

B.10 <u>Grid Disturbance in Ningthoukhong area of Manipur Power System on 9th June'25:</u>

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.

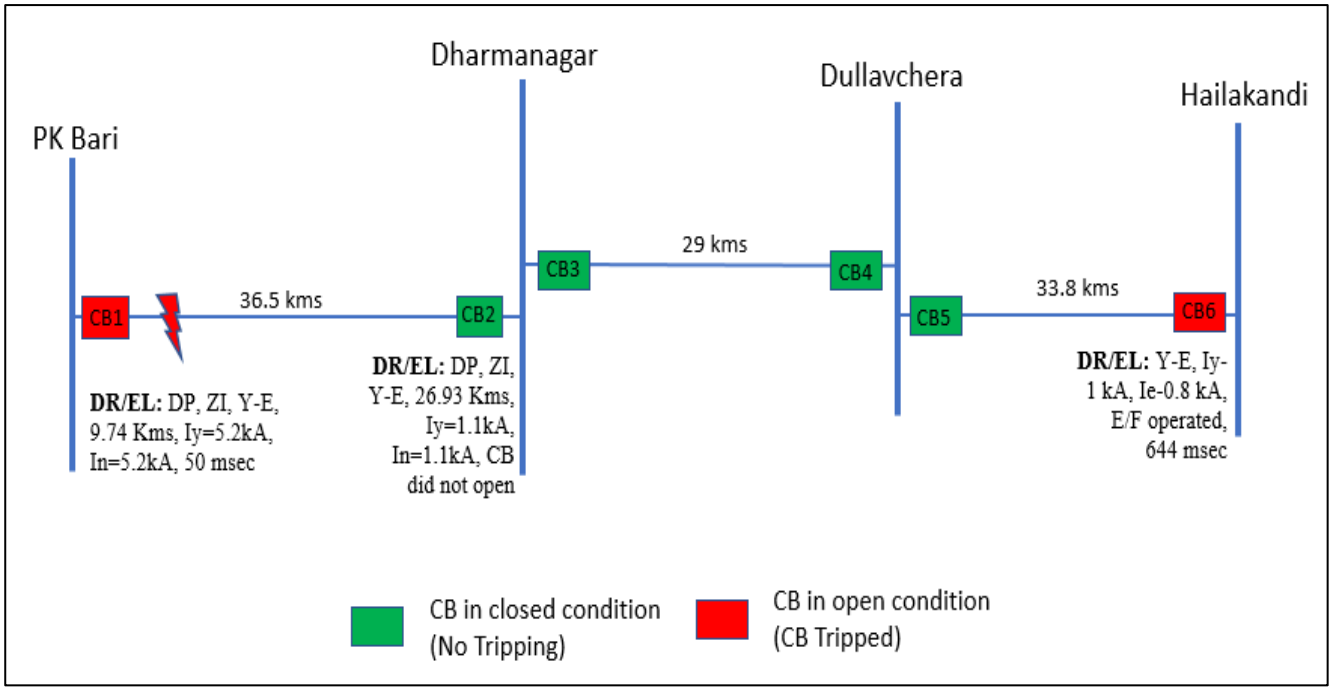
- It is not clear which protection system operated at Churachandpur end and cleared the fault due to non-availability of DR/EL.
- Non-submission of DR/EL file for CB4, CB5, CB6 & CB8 which is a violation of Clause 37.2 (c) IEGC-23.
- Non-submission of detailed report of the event which is a violation 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.

B.11 <u>Grid Disturbance in Dharmanagar area of Tripura Power System and Dullavchera area of Assam Power System on 10th June'25:</u>

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 Dullavchhera & Hailakandi end. Fault cleared by tripping of healthy 132 kV Hailakandi-Dullavchhera line within 644 msec from Hailakandi end on operation of E/F (DT send).

Following observations:

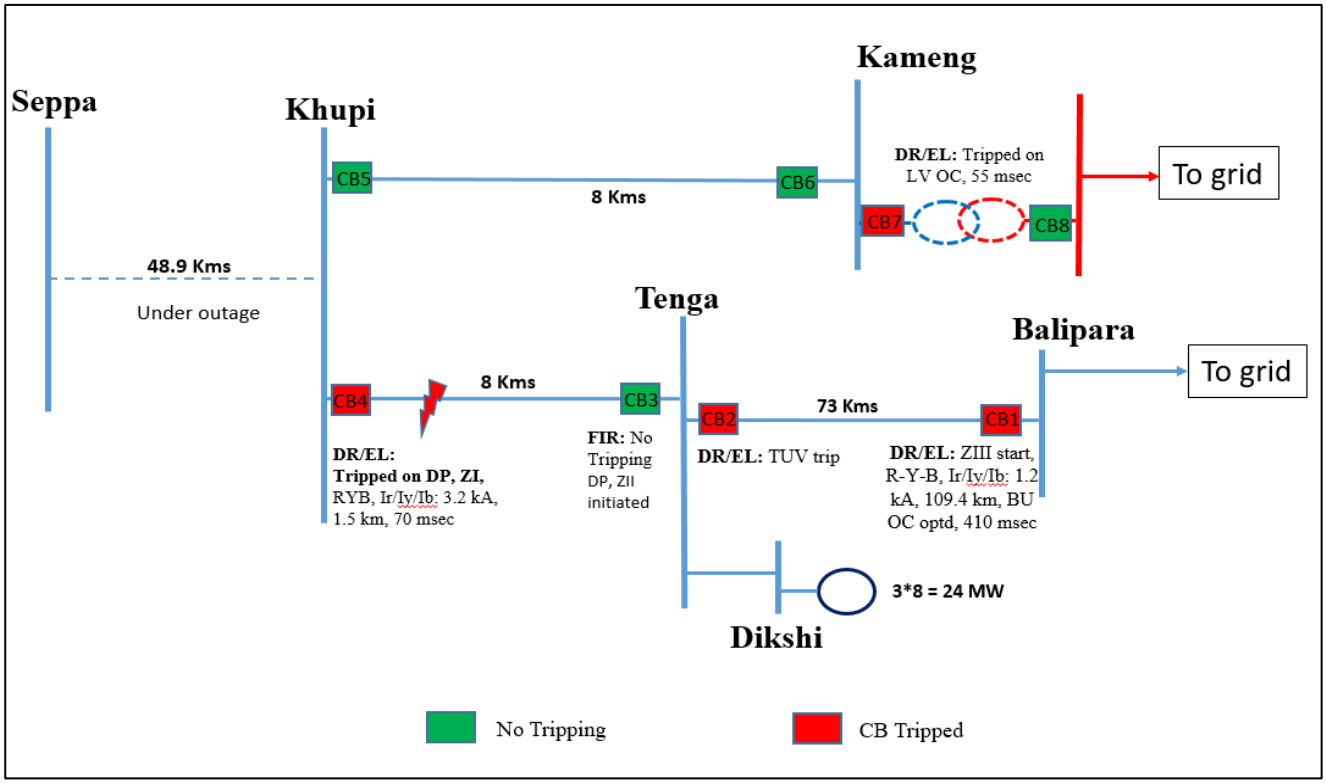
- Non-opening of CB at Dharmanagar end despite issuance of ZI trip command. Reason of non-opening of CB at Dharmanagar needs to be thoroughly investigated.
- Dullavchhera CB (CB4) failed to clear the fault resulting in clearing of fault by tripping of 132 kV Hailakandi-Dullavchhera line.
- Time drift 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 Dullavchhera 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.

B.12 <u>Grid Disturbance in Khupi, Tenga, Seppa and Dikshi HEP area of Arunachal Pradesh Power System:</u>

<u>Event 1: At 12:26 Hrs of 14.06.2025-</u> Load Loss of 23 MW & Generation Loss of 7.2 MW

At 12:26 Hrs of 14-06-2025, 132 kV Tenga - Khupi, 132kV Balipara -Tenga and 400kV ICT at Kameng tripped.



As per available DR & EL data, 3 phase metallic fault initiated in the 132 kV Khupi – Tenga line cleared from Khupi end in DP, ZI, RYB, Ir/Iy/Ib: 3.2 kA, 1.5 km in 70 msecs. Tenga end located the fault in ZII (as per FIR).

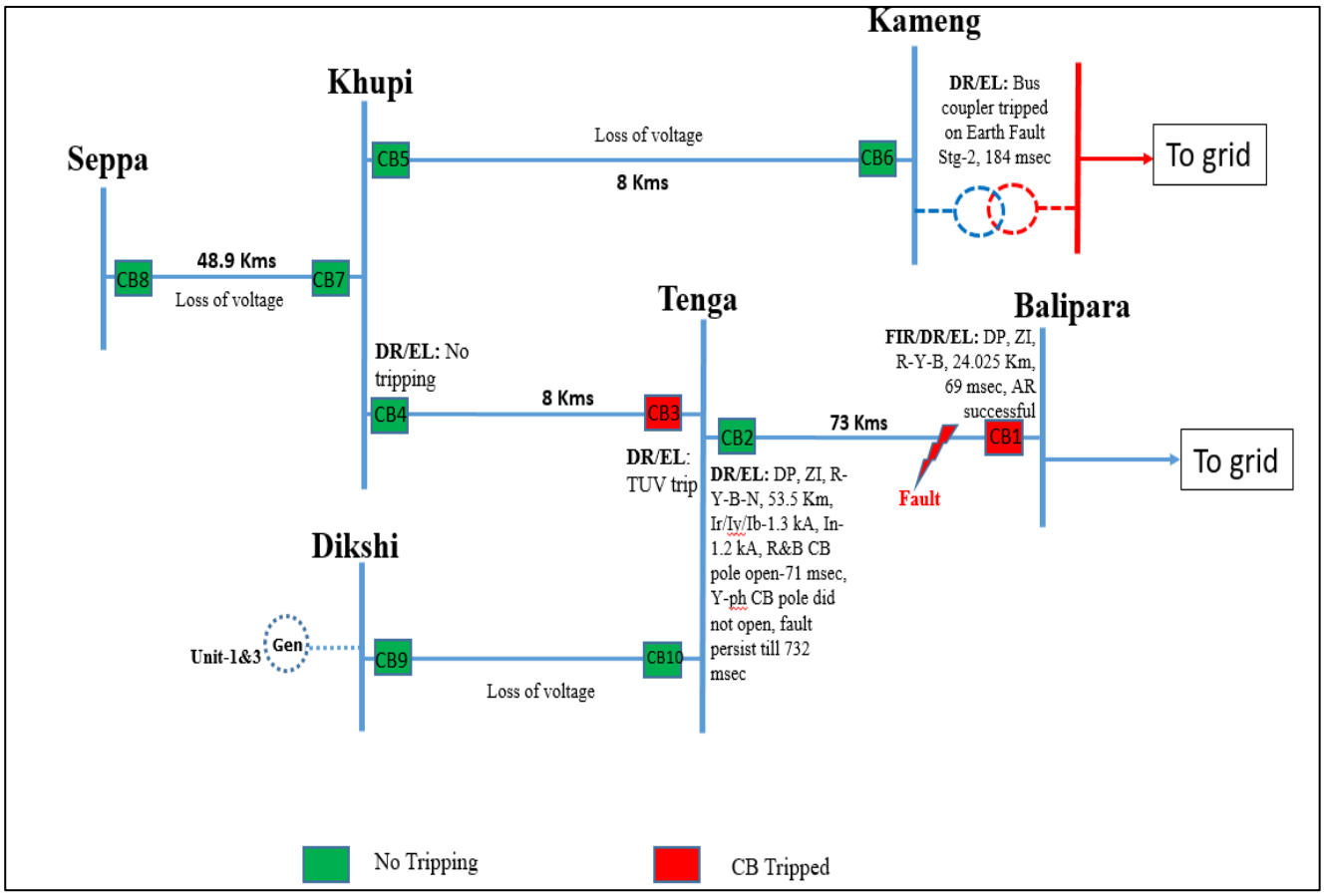
Tripping of 132 kV Balipara – Tenga line on operation of OC within 410 msecs. DPR detected the fault in ZIII.

Following observations:

- Non-operation of protection system at Tenga for 132 kV Khupi line.
- Tripping of 132 kV Balipara – Tenga line on operation of OC within 410 msecs. Overcurrent TMS need to be coordinated with ZII timing of CB3.
- Tripping of ICT at Kameng on LV side on operation of Backup DT OC wiithin 55 msecs seems unwanted.

Event 2: At 10:28 Hrs of 23.06.2025- Load loss of 34 MW & generation loss of 10 MW

At 10:28 Hrs of 23-06-2025, 132 kV Balipara-Tenga, 132 kV Tenga-Khupi, 132 kV Kameng-Khupi lines & 400/132 kV Kameng ICT tripped leading to grid disturbance in Khupi, Tenga, Seppa and Dikshi HEP area of Arunachal Pradesh.



As per DR analysis, solid R-Y-B-N fault occurred in 132 kV Balipara-Tenga Line at distance of 53.5 Km from Tenga end which was cleared within 69 msec from Balipara end on operation of DP, ZI (AR successful). ZI trip command issued from Tenga end and R & B-phase CB pole opened after 71 msec. However, Y-ph CB pole did not open and fault current persisted till 732 msec.

At 10:27:56.138 Hrs, 132 kV Bus coupler at Kameng tripped on operation of E/F stg-2 within 184 msec from initiation of fault.

Following observations:

- **Non-opening of Y-ph CB pole at Tenga end for 132 kV Balipara Line**: At Tenga end, fault initiated at 10:27:41.981 Hrs. ZI trip command issued and R & B-phase CB pole opened after 71 msec. However, Y-ph CB pole did not open and fault current persisted till 732 msec. Non-opening of Y-ph CB pole needs to be investigated by DoP Arunachal Pradesh.

- **Unwanted tripping of 132 kV Bus Coupler at Kameng**: At 10:27:56.138 Hrs, 132 kV Bus coupler at Kameng tripped on operation of E/F stg-2 which is inferred unwanted.

Similar incident occurred on 05.05.2024, 09.07.2024, 11.07.2024, 19.07.2024, 12.08.2024 & 18.08.2024, 17.04.2025, 24.04.2025.

DoP Arunachal Pradesh & NEEPCO to share the root cause and action taken on the above mentioned issues.

B.13 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)

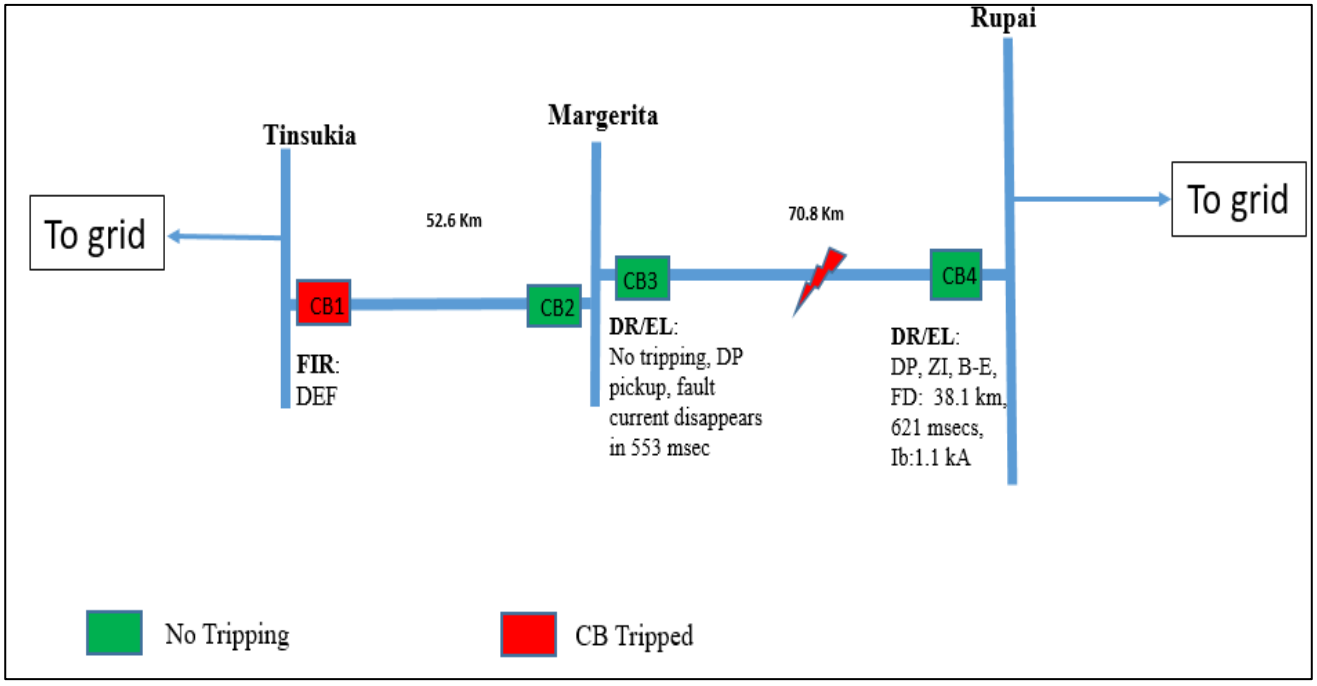
POWERGRID/MePTCL is requested to furnish:

- 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.

B.14 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 Margerita end (DP pickup, fault current disappears within 553 msec).

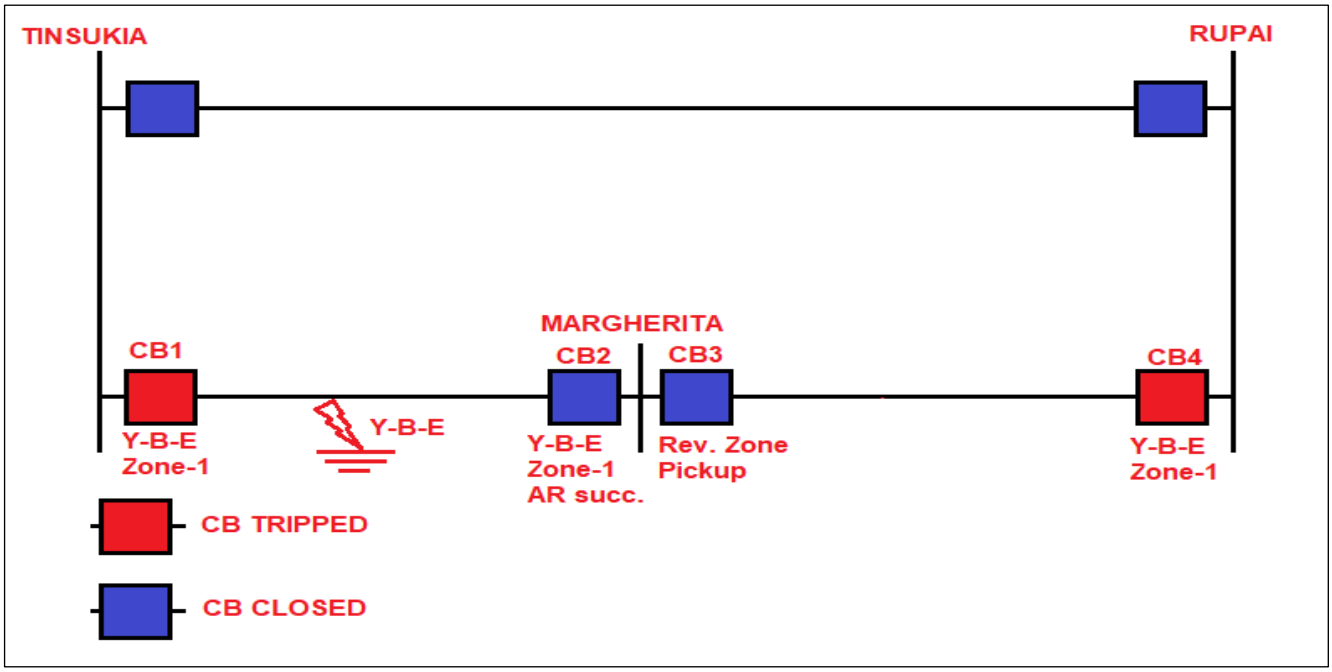
Fault cleared from Tinsukia end on operation of DEF (as per FIR, DR/EL not submitted)

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:

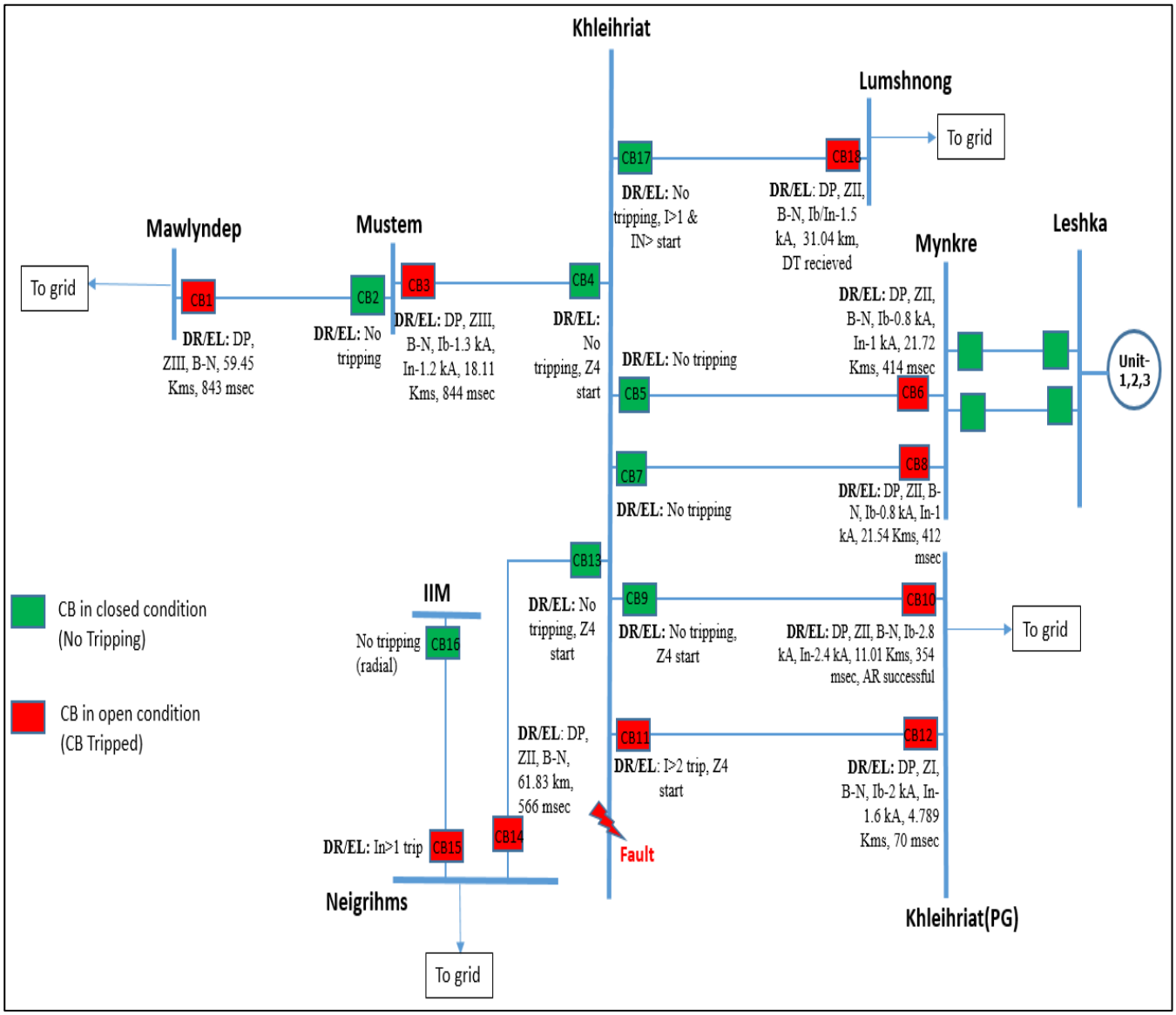
- Tripping of 132 kV Rupai-Margherita Line on ZI from Rupai end is unwanted. ZI setting at Rupai needs to be reviewed.
- Non-operation of Autorecloser at Tinsukia end for 132 kV Margherita line.
- Time drift of 4 min observed at Margherita end for both the lines.

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

B.15 <u>Grid Disturbance in Leshka, Mynkre, Mustem and IIM areas of Meghalaya Power System on 19th June'25:</u>

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.

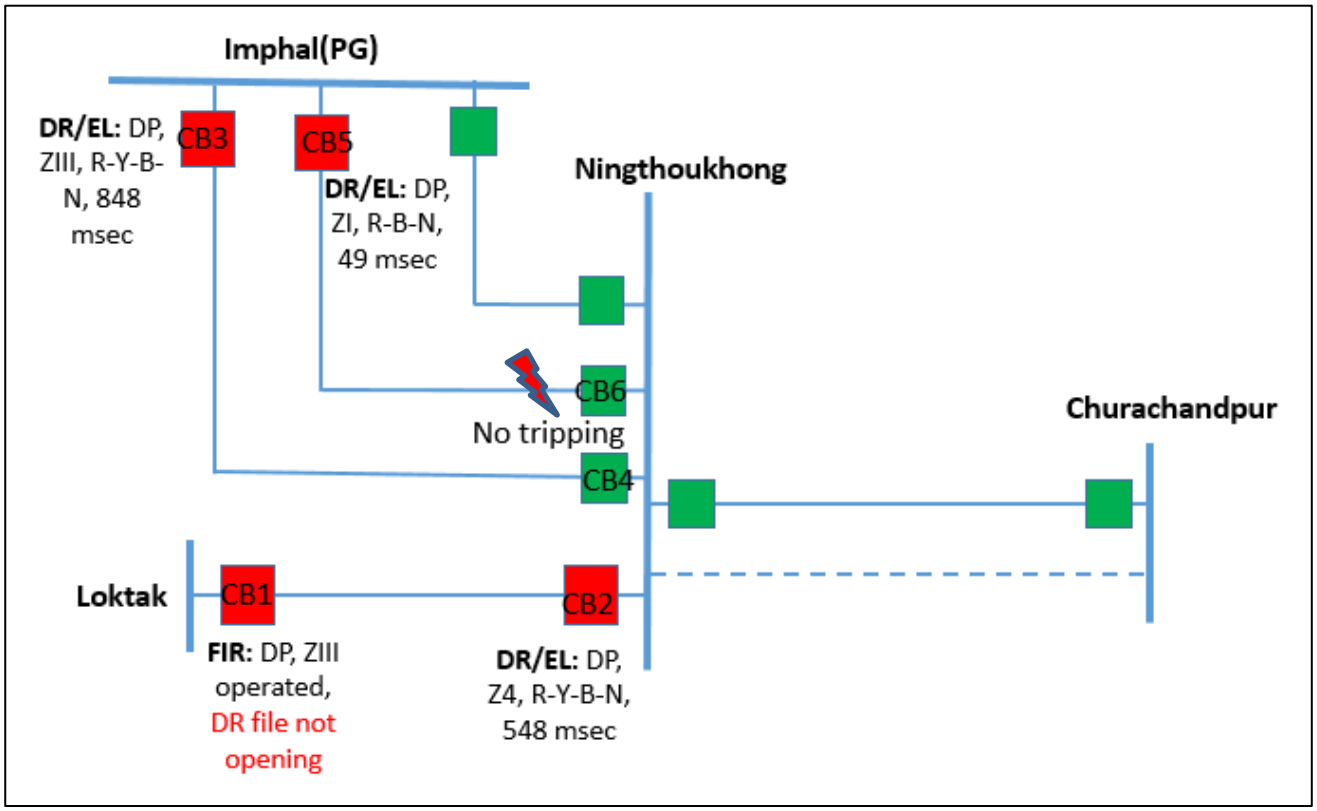
Following observations:

- 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.

B.16 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.

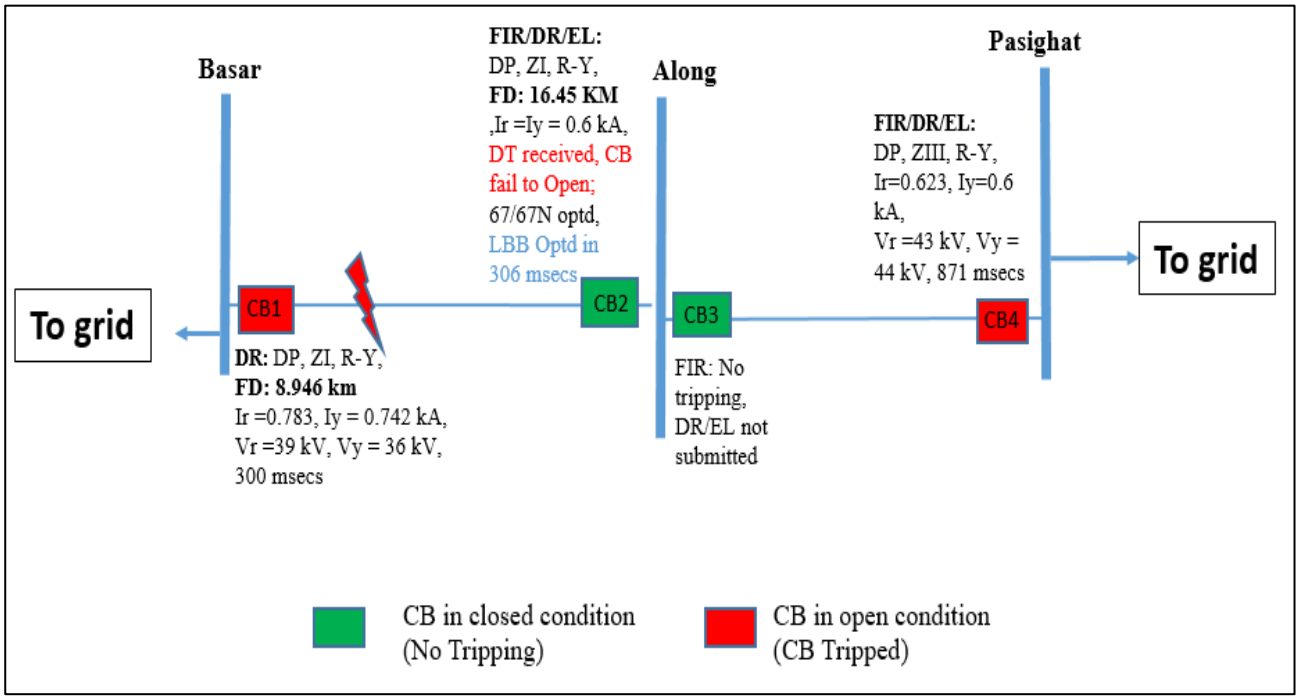
Protection system of 132 kV Imphal(PG)-Ningthoukhong II line at Ningthoukhong end (CB6) failed to isolate fault in the line resulting in clearing of fault by tripping of healthy lines at Ningthoukhong.

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

B.17 Grid Disturbance in Arunachal Pradesh Power System on 21st June'25 & 23rd June'25:

Event 1: At 05:15 Hrs of 21-06-2025

At 05:15 Hrs of 21-06-2025, 132 kV Basar-Along and 132 kV Along-Pasighat lines tripped resulting in blackout of Along area of Arunachal Pradesh. Load loss of 3 MW occurred.



As per DR analysis, resistive R-Y fault (Ir-0.783 kA, Iy-0.742 kA) initiated at 05:14:17.444 Hrs in 132 kV Basar-Along line which was cleared within 300 msec from Basar end on operation of DP, ZI (delayed CB opening). However, CB fails to opens from Along end despite issuance of trip command by distance protection relay in ZI and the fault continued to feed from Roing side till 871 msecs. The fault was cleared from Roing end of 132 kV Pasighat - Roing line after 871 msecs on operation of DP, ZIII.

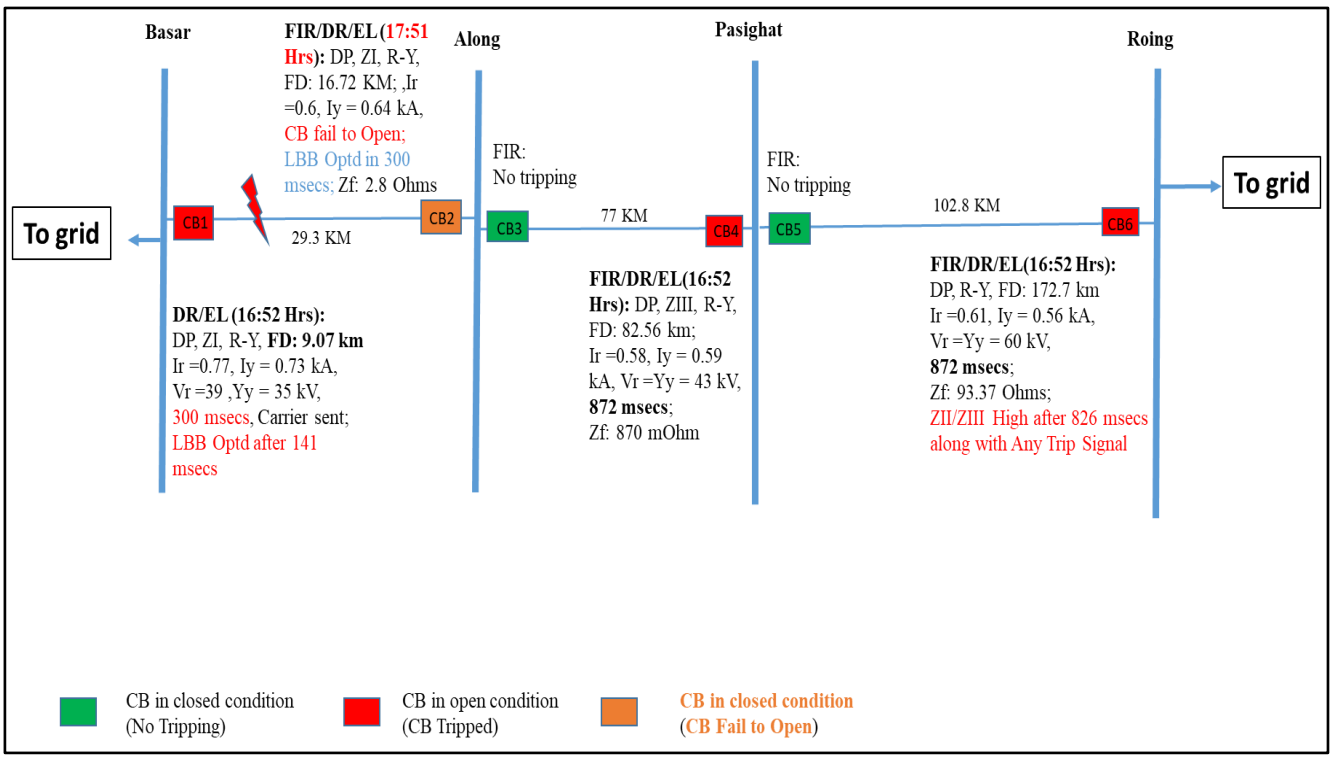
Following observations:

- **Delayed operation of CB (CB1) at Basar**: At Basar end, fault initiated at 05:14:17.444 Hrs and ZI trip command issued at 05:14:17.467 Hrs. However, CB opened after 276 msec which is undesirable.
- **Non operation of CB (CB2) at Along**: The distance protection at Along end issued the trip command. However, CB fails to open which is undesirable.

- **LBB protection at Along SS**: DR of 132 kV Basar - Along line at Along showing LBB Operation after 306 msecs. However, CB did not open at Along S/S. LBB time delay needs to be reviewed and set as per NERPC protection philosophy.
- **DT received at CB (CB2) at Along**: At 05:10:33.574 Hrs, DT received at Along end. However, no DT sent from the Basar end.
- **DR time drift at Along (CB2)**: DR for main relay at Along showing fault initiation time of 05:10:33.523 Hrs which indicates DR time drift of 5 minutes.

Event 2: At 16:52 Hrs of 23-06-2025

At 16:52 Hrs of 23-06-2025, 132 kV Basar – Along, 132 kV Along-Pasighat and 132 kV Pasighat - Roing lines tripped resulting in blackout of Along, Pasighat, Napit & Niglok area of Arunachal Pradesh. Load loss of 21 MW occurred.



Following observations:

- **Delayed operation of CB (CB1) at Basar**: The relay associated with CB1 at Basar detected an R-Y fault in Zone-1 and issued an immediate trip command. However, the fault persisted for approximately 300 milliseconds, indicating a delay in CB1 operation, which is unwanted. DoP, Arunachal/NERTS is

requested to identify the root cause & ensure the healthiness of CB & LBB at Basar SS of Arunachal Pradesh.

- **Non operation of CB (CB2) at Along**: The distance protection at Along end issued a trip command for the fault. However, CB2 failed to open, which is undesirable and undermines the reliability of the protection system. DoP, Arunachal Pradesh is requested to take corrective action to avoid reoccurrence in future.
- **LBB protection at Along SS**: The Disturbance Recorder of the 132 kV Basar–Along line at Along shows that the LBB operated only after 300 milliseconds, despite a breaker failure (CB2 stuck) condition. DoP, Arunachal is requested to confirm the reason for non-operation LBB at Along SS during the CB stuck condition. Also, make necessary modification/corrective on immediate basis.
- **Time drift of relay (CB2) at Along**: Time drift of 1 hr present present at Along end. Immediate time synchronization is required at Along end.
- **Tripping of (CB6) at Roing:** NERTS is requested to investigate the protection function responsible for tripping at Roing SS.
- **Relay Coordination Issue with CB4 & CB6 at Pasighat & Roing:** The 132 kV Along- Pasighat Line & 132 kV Roing - Pasighat Line at Pasighat & Roing tripped after 872 msecs from the initiation of the R-Y fault. The Z3 reach may be relooked for providing Pasighat end of 132 kV Along - Pasighat line preference to clear the fault in ZIII to avoid Grid Disturbance at Pasighat substation in future.

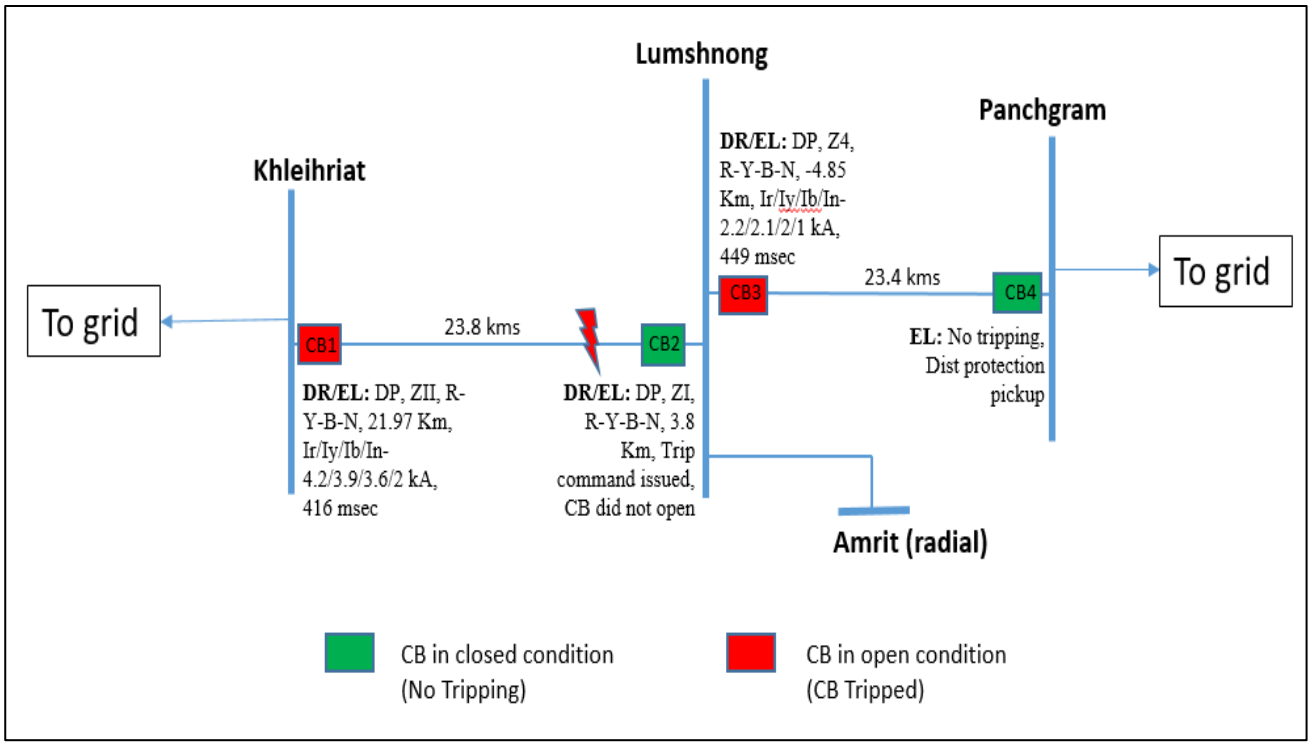
Similar event occurred on 07.04.2024, 17.04.2024, 13.06.2024, 08.12.2024, 23.01.2025, 05.02.2025, 15.02.2025, 15.05.2025, 23.05.2025.

DoP Arunachal Pradesh to share the root cause and action taken on the above mentioned issues.

B.18 <u>Grid Disturbance in Lumshnong & Amrit areas of Meghalaya Power System on 25th June'25:</u>

Lumshnong & Amrit areas of Meghalaya Power System is connected to the rest of NER Power System via the 132 kV Lumshnong–Panchgram line and 132 kV Khliehriat–Lumshnong line.

At 23:25 Hrs of 25.06.2025, 132 kV Khliehriat–Lumshnong and 132 kV Lumshnong–Panchgram lines tripped resulting in blackout of Lumshnong & Amrit areas of Meghalaya. Load loss of 18 MW occurred.



As per DR analysis, R-Y-B-N fault (Ir-4.2 kA, Iy-3.9 kA, Ib-3.66 kA, In-2 kA) initiated at 23:24:29.571 Hrs in 132 kV Khleihriat-Lumshnong line which was cleared within 416 msec from Khleihriat end on operation of DP, ZII. From Lumshnong end, ZI trip command issued 23:23:42.094 Hrs. However, CB did not open. As a result of which fault was continuously feeding from Panchgram end.

Fault cleared by tripping of healthy 132 kV Lumshnong-Panchgram line on Z4 from Lumshnong end within 449 msec. (no tripping from Panchgram end, Dist. Protection pickup)

Following observations:

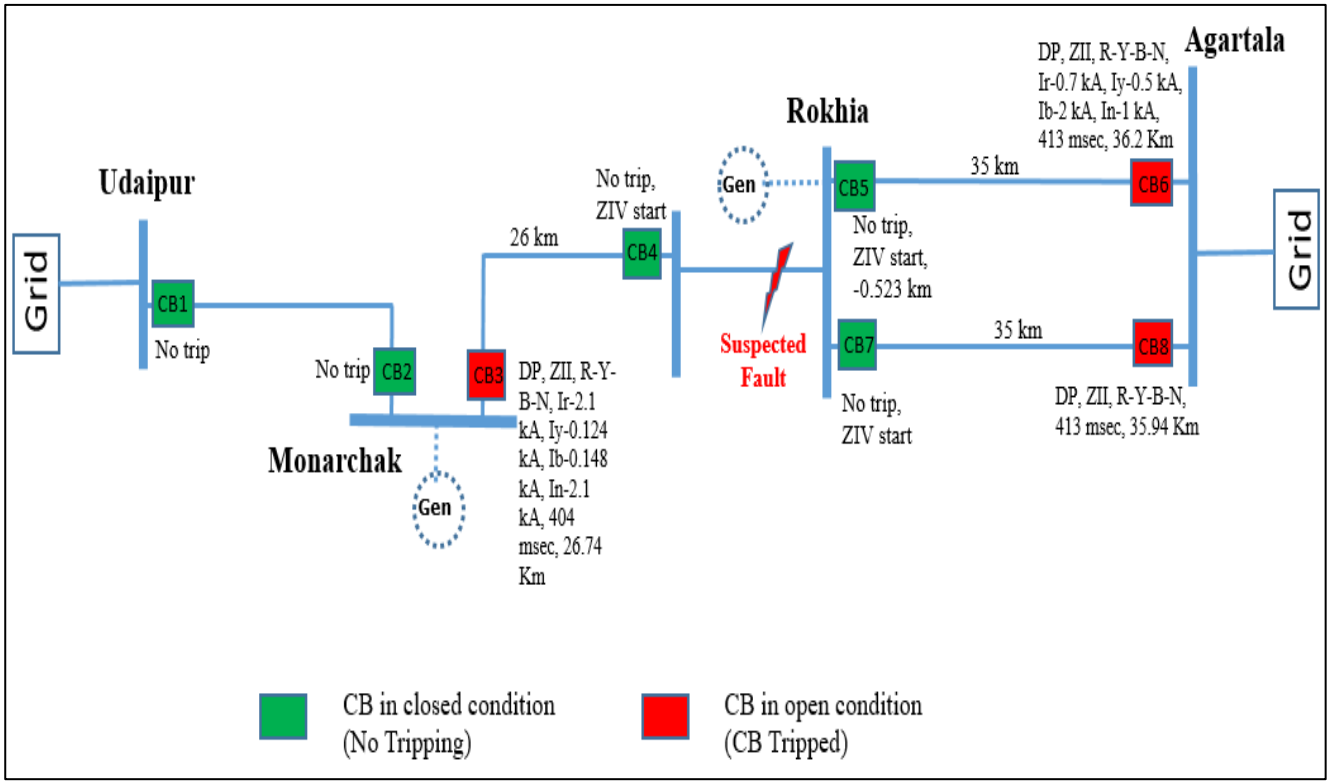
- Non-opening of CB at Lumshnong (CB2) for 132 kV Khleihriat Line despite issuance of ZI trip command.
- Non-tripping of 132 kV Panchgram-Lumshnong line from Panchgram end (CB4) on ZII. ZII setting needs to be reviewed and set as per NERPC protection philosophy.
- ZIV time delay at Lumshnong end (CB3) for 132 kV Panchgram line needs to be reviewed and set as per protection philosophy.

MePTCL & AEGCL may update the actions taken on the above mentioned issues.

B.19 <u>Grid Disturbance in Rokhia area of Tripura Power System on 28th June'25:</u>

Rokhia area of Tripura power system is connected with rest of the grid via 132 kV Rokhia – Agartala 1 & 2 line and 132 kV Rokhia -Monarchak Line.

At 06:06 Hrs of 28-06-2025, 132 kV Rokhia – Agartala 1 & 2 line and 132 kV Rokhia -Monarchak Line tripped. Due to tripping of these elements, Rokhia area of Tripura power system got isolated from NER grid due to load generation mismatch in this area. Generation loss of 11 MW & load loss of 19 MW occurred.



Suspected R-Y-B-N fault of solid nature in Rokhia S/S or 132 kV Old Rokhia-New Rokhia Link feeder which was cleared by tripping of all the healthy lines connected to Rokhia S/S from remote ends on operation of DP, ZII.

Following observations:

- Non-availability of protection system in 132 kV Old Rokhia-New Rokhia link feeder is a matter of concern. LDP needs to be implemented in the link feeder.

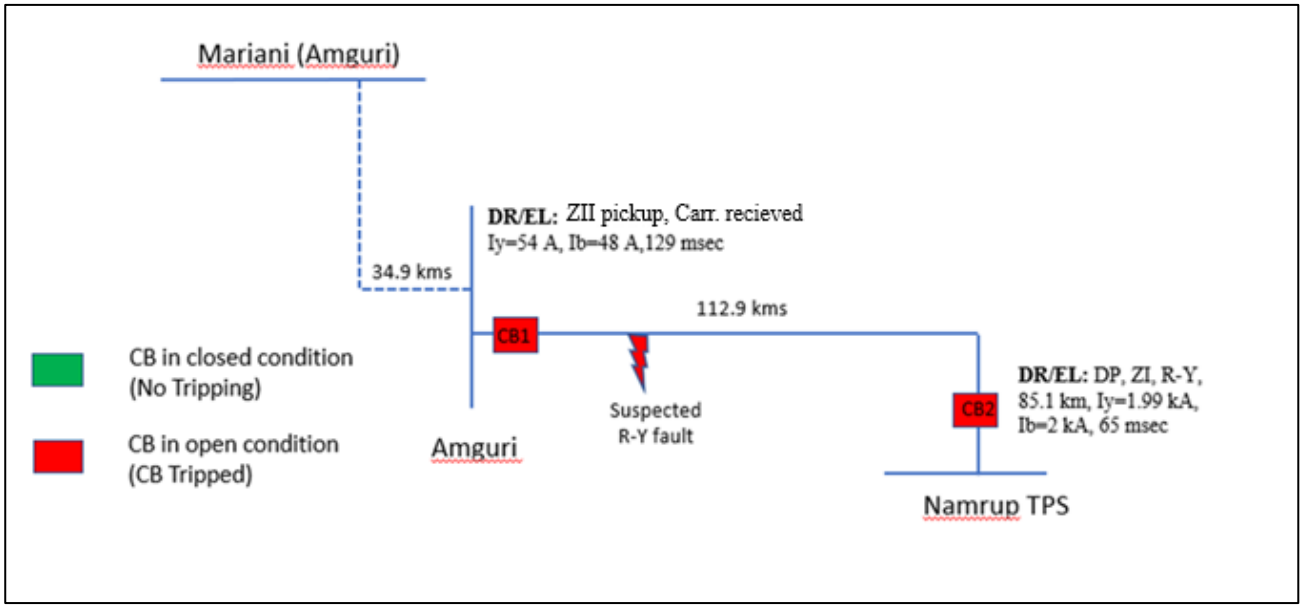
- Non-availability of Bus bar protection at Rokhia S/S. Bus bar protection needs to be implemented in all generating station switchyards as per NERPC Protection protocol.
- Z4 time delay at Rokhia to be reduced to 200 msec till Bus Bar protection is implemented.
- DR digital channel is not standardized at Agartala & Rokhia end for 132 kV Agartala-Rokhia I & II Lines. The same needs to be standardized as per recommendation in FOLD working group-3.
- Detailed report of the event not submitted by TSECL which is a violation of Clause 37.2 (e) IEGC-23.

Similar event occurred at 13:32 Hrs of 28-06-2025. Such repeated grid disturbances are the cause of concern.
During 2024, similar incident occurred on 13.07.2024.

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

B.20 <u>Grid Disturbance in Amguri (Jackson) area of Assam Power System area of Assam Power System on 26-06-2025:</u>

Amguri (Jackson) area of Assam Power System was connected to the rest of NER Grid through 220 kV Amguri (Jackson)–Namrup (NTPS) line. Prior to the event, 220 kV Amguri (Jackson)–Mariani (AS) line was under planned shutdown.
At 15:17 Hrs of 26-06-2025, 220 kV Amguri (Jackson)–Namrup (NTPS) line tripped. This tripping led to blackout in Amguri (Jackson) area of Assam power system. Generation loss of 33 MW occurred.



As per DR analysis, Y-B fault (Iy- 1.99 kA, Ib- 2 kA) initiated at 15:19:29.0520 Hrs which was cleared within 65 msec from Namrup TSS end. From Amguri end, Carrier/ DT received (Iy- 54 A, Ib- 48 A).

Following observations:

- 90% 3rd order Harmonic has been observed in DR signal at Amguri end. In this case IBR was obeying LVRT/HVRT Compliance and supply Reactive VAR current was leading the Voltage signal.
- The functionality of such renewable sources with numerous converter control options is much different than the conventional synchronous machine based generating units this lead to Non-homogeneity Issue in IBR Protection.
- Weak infeed issue was observed due to PSD of 220 kV Amguri - Mariani Line and 220 kV Amguri (Jackson)–Namrup (NTPS) line tripped due to DT signal receive from NTPS end.

AEGCL is requested to explore:

- DEF based carrier added protection in case of IBR related protection.
- Weak Infeed Echo scheme.

B.21 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 ISTS operational SPS 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	-	
2	Overloading of any one of the 400/132kV, 2x360 MVA ICTs at Panyor LowerHydro Power Station	-	
3	Outage of 132 kV Panyor HPS-Ziro Line	Operated successfully on 30th May'25	
4	SPS at Tezu substation related to prevention of Under Voltage scenario in Arunachal Pradesh power system	-	
5	SPS at Namsai substation related to prevention of Under Voltage scenario in Arunachal Pradesh power system	-	
6	Related to the safe evacuation of power from BgTPP(NTPC) generation	-	
7	Outage/tripping of 400 kV New Kohima – Imphal D/C Line	-	
8	Outage/ tripping of both circuits of 400 kV SM Nagar(NTL) -PK Bari(NTL) D/C Line	-	

9	Outage/ tripping of both circuits of 400kV PK Bari (NTL) – Silchar(PG) D/C Lines	-	
10	Outage/tripping of 400 kV Palatana – Surajmani Nagar line (charged at 132 kV)	Operated successfully on 29th May'25 & 11th June'25	
11	Outage/tripping of both 400/132 kV, 2x125 MVA ICTs at Palatana	-	
12	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 state operational SPS 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	-	
2	Outage of 220 kV BTPS (Salakati) – Rangia I & II Line	Operated successfully on	

		21st & 26th June'25	
3	Outage/tripping of 220 kV Azara-Sarusajai D/C Line	-	
4	SPS related to tripping of 220 kV Misa- Samaguri DC Line	-	
5	SPS related to Outage/tripping of any one circuit of 220 kV Balipara-Sonabil D/C	Operated successfully on 9th April'25	
6	SPS at Pasighat substation for preventing Overloading of 132 kV Tinsukia-Rupai/132 kV Tinsukia-Ledo Lines	Operated successfully on 11th June'25	
7	SPS at BTPS(Assam) substation related to overloading of any of the 2x160 MVA ICTs at BTPS(Assam)	-	
8	SPS related to Outage/tripping of any one circuit of the 132 kV Khliehriat (PG)- Khliehriat D/C line	-	
9	SPS related to Outage/tripping of any one circuit of 132 kV Leshka – Mynkre- Khliehriat D/C Line	-	
10	SPS related to Outage/tripping of any one circuit of 132 kV Dimapur(PG)- Dimapur(NA) D/C Line	-	
11	SPS related to secure evacuation of power from the Monarchak (NEEPCO) Power Plant	Operated successfully on 7th July'25	-
12	SPS related to Overloading of 132 kV Surajmaninagar (TSECL)-Surajmaninagar (NTL) Line	-	

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

C. FOLLOW–UP AGENDA ITEMS

C.1 Status on remedial measures actions on non-operation of auto recloser in Important Grid Elements for transient faults occurred in last few months:

Utilities updated in 80th PCCM as provided in the table below:

Sl No	Element Name	Tripping date and time	Relay End1	Relay End2	A/R not Operated	Remarks from Utility (80th PCCM)
1	132 kV Bokajan - Dimapur Line	10-11-2024 13:08	DP, ZI, Y-E, FD: 20.3 kms	DP, ZI, Y-E, FD: 8.4 KM, AR Successful	Bokajan (AEGCL)	Issues with pneumatic breakers at Bokajan end. New CBs in transit, to reach the site by end of June'25. After that 1 week required for installing the CBs.
2	132 kV Daporijo - Ziro Line	13-01-2025 15:00:00	DP, ZI, B-E, AR Not Operated	DP, ZI, B-E, FD: 67.724Kms, A/R Operated Successfully	Daporijo (DoP AP)	Relay logic issues, will be checked by experts from outside state after rainy season. Issue with pneumatic CBs. Procurement of new CBs underway.

3	132 kV AGTCCPP - Kumarghat Line	16-03-2025 20:32:00	DP, ZI, B-E, FD: 22.08 Kms, A/R Not Operated	DP, ZI, B-E, FD: 76.656 Kms, A/R Operated Successfully	AGTCCPP (NEEPCO)	Powergrid has provided the solution, to be implemented shortly.
4	132 kV Basar-Daporijo Line	19-03-2025 08:44:00	DP, ZI, R-Y, FD: 33.15 km, A/R Not Operated	DP, ZI, R-Y, A/R Operated Successfully	Basar (DoP, Arunachal Pradesh)	To be resolved by end of July'25
5	132 kV Jiribam - Tipaimukh Line	05-04-2025 20:05:00	DP, ZI, R-E, FD: 48.14 Kms , AR Operated Sucessfully	DP, R-E,16.7 KM, Ir-0.81 KA	Tipaimukh (MSPCL)	MSPCL to look into the issue as Law and order situation improves.
6	132 kV Pare - Itanagar Line	05-04-2025 22:30:00	DP, ZI, R-E	DP, ZII, R-E, FD: 29.9 KM	Both Ends	Carrier aided AR logic needs to be checked and end-to-end testing to be done. By Sep'25
7	132 kV Gohpur-Itanagar Line	28-04-2025 10:15	DP, ZII, B-N, 40.3 Km, AR not operated	DP, ZI, B-N, 0.89 Km, AR successful	Gohpur (AEGCL)	Carrier healthy signal wire loose. Applied for Shutdown to rectify the issue.
8	132 kV Pare - Itanagar Line	05-05-2025 12:22	DP, ZI, Y-B, FD: 5.26 kms, A/R Not operated	DP, ZI, Y-B, FD: 22.674 kms, A/R Operated Sucessfully	Pare(NEEPCO)	To be investigated. End-to-end testing will be conducted.

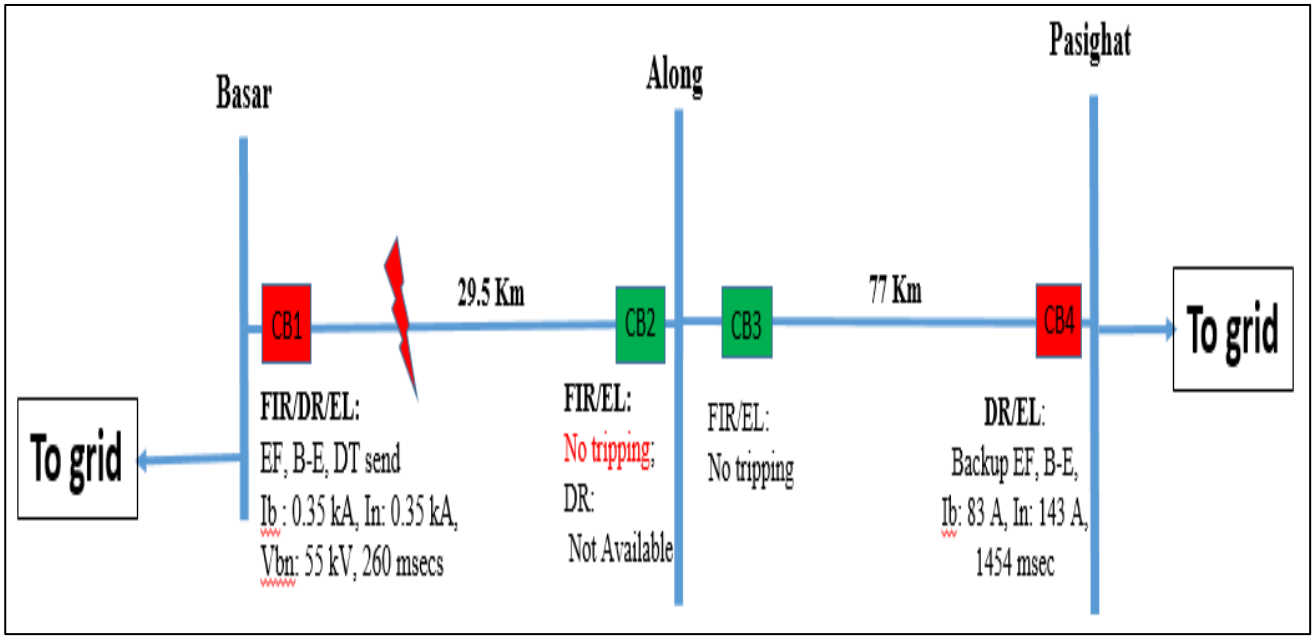
9	400 kV Misa - Silchar 1 Line	08-05-2025 06:09	DP,ZI, B-E,FD: 130.85 KM, A/R Successful	DP, ZI, R-E,FD: 2.638 Kms, A/R Not operated	Silchar(POWERGRID)	D60 relay issue. Planning to replace.
10	132 kV Hailakandi - Panchgram Line	10-05-2025 05:35	DP, ZI,R-E, A/R Successful	DP, ZII,R-E,FD: 19.8 KM, A/R Not operated	Panchgram (AEGCL); Carrier aided tripping absent in the line	Carrier faulty, so no carrier aided tripping, so no AR. S/D to be taken for AR testing.
11	132 kV AGTCCPP - Kumarghat Line	12-05-2025 05:20	DP, ZI, R-E, FD: 76.95 Kms, A/R Not operated	DP, ZI, R-E, FD: 76.95 Kms, A/R Operated Sucessfully	AGTCCPP(NEEPCO)	PLCC wiring issue, to be rectified in shutdown in June 25.
12	220KV-MAWNGAP-BYRNIHAT (KILLING)-2	13-05-2025 11:36	DP, ZI, R-E, FD: 90.14 kms, A/R Not operated	DP, ZI, R-E, FD: 7.34 kms, A/R Not operated	Both ends (MePTCL)	Single phase fault was identified as 3 phase fault by the relay. so No AR. Issue in BCU. S/D to be taken for its rectification by end of June'25.
13	220 kV Misa - Samaguri 1 Line	13-05-2025 12:37	DP, ZI, R-E,FD: 9.55 KM, A/R Successful	DP, ZI, R-E, A/R Not operated	Samaguri(AEGCL)	AEGCL informed that Samaguri end bay owned by POWERGRID. The issue will be

						checked jointly and S/D will be taken for its rectification
14	132 kV Ranganadi-Itanagar line	16-05-2025 19:39	DP, ZI, Y-E, FD: 25.11 km, A/R Operated Unsuccessfully (due to persistent fault)	DP, ZI, R-Y-E, FD: 31.9 km, A/R Not Operated	Itanagar (DoP, Arunachal Pradesh)	To be investigated. End-to-end testing will be conducted.

Utilities may further update

C.2 Grid Disturbance in Along area of Arunachal Pradesh Power system on 15-05-2025:

At 04:31 hrs & 04:32 hrs of 15-05-2025, 132 kV Basar-Along & 132 kV Along-Pasighat line tripped respectively resulting in grid disturbance in Along area of Arunachal Pradesh power system. Load loss of 2.5 MW.



As per DR/EL analysis, high resistive B-N fault (Ib- 325 A, In-325 A) initiated at 04:31:35.760 Hrs in 132 kV Along-Basar line which was cleared within 260 msec from Basar end on operation of E/F protection (DT send). There was no tripping

from Along end due to which fault was continuously feeding from Pasighat end of 132 kV Along line which was cleared within 1.45 sec on operation of B/U E/F from Pasighat end (IN>2 trip observed at 04:31:22.552 hrs)

Following observations:

- Vegetation fault occurred in 132 kV Basar-Along line.
- Relay at Along for 132 kV Basar line (CB2) failed to detect the fault in the line (DR not available) resulting in clearing of fault by tripping of healthy 132 kV Along-Pasighat line from Pasighat end.
- B/U E/F protection at Basar end for 132 kV Along line needs to be reviewed.
- Both 67/67N operated & IN>2 trip operated at Pasighat end for 132 kV Along line. The same needs to be checked. IN>2 Trip command seems unwanted and the same needs to be disabled as per NERPC protection philosophy.
- Time drift of 1-2 minutes observed at Along for both the lines.

DoP Arunachal Pradesh may update the actions taken on the above-mentioned issues.

Deliberation of 80th PCCM

Regarding non-operation of Along CB, DoP Ar. Pradesh informed that new CB has come to the site and they will be installed shortly during shutdown.

Regarding tripping at Basar end, NERPC stated that EF tripping occurred very fast and TMS may been set a very less value. NERPC suggested to increase the TMS so that the tripping time becomes 800 msec for the same fault current. Also, NERPC asked DoP submit the settings of DOC/DEF relay as both relays operated for the fault.

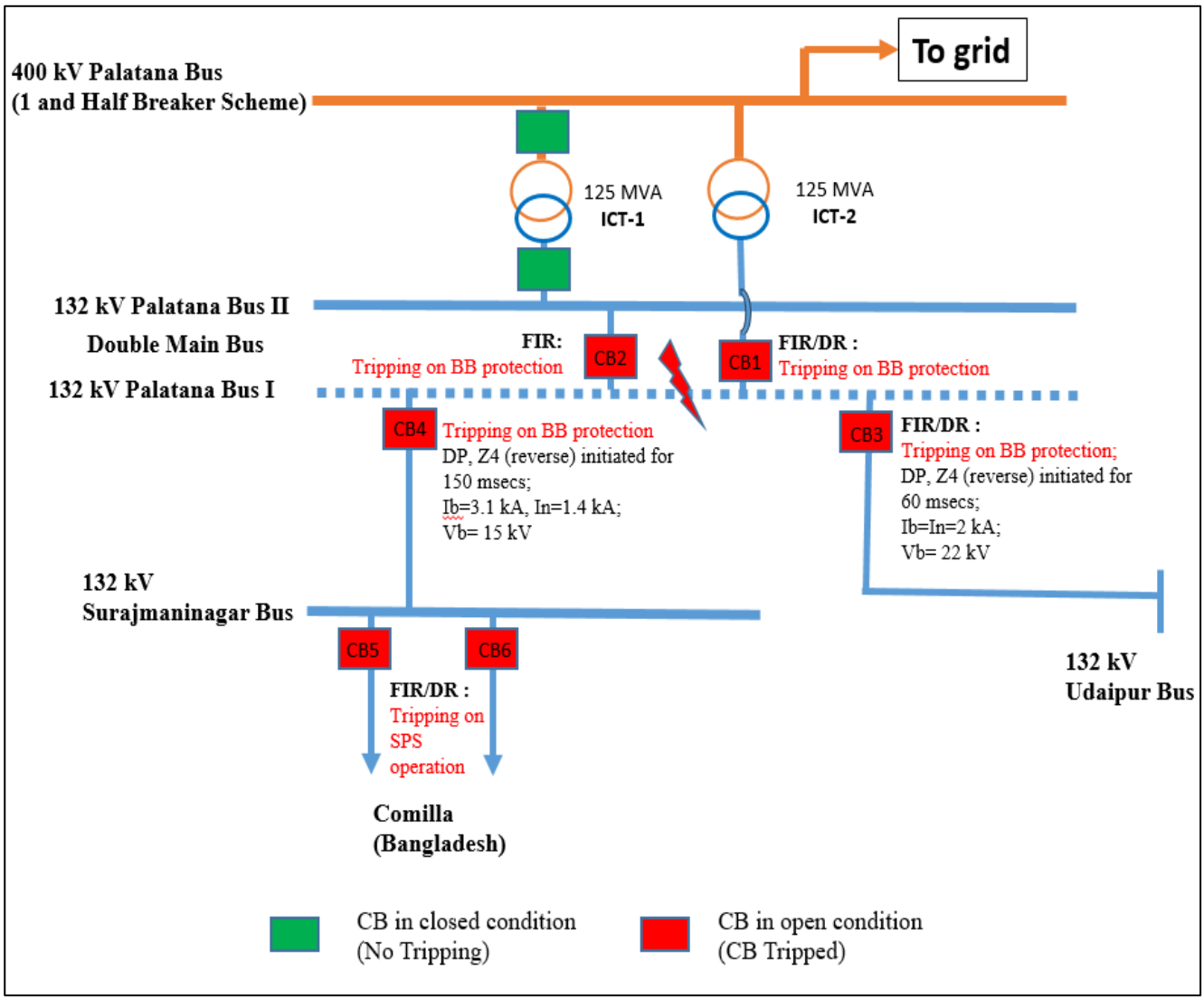
Regarding tripping at Pashighat end, NERLDC informed that the IN>2 was enabled. NERPC advised Arunachal Pradesh to disable the IN>2 function.

DoP Arunachal Pradesh may update

C.3 Repeated tripping of 132 kV Palatana Bus-I on 29th May'25:

Event 1: At 06:42 Hrs of 29.05.2025

At 06:42 Hrs of 29-May-25, 132 kV Palatana Bus-I tripped resulting in tripping of all elements connected to Bus-I namely., 132 kV Palatana-Surajmaninagar, 132 kV Palatana-Udaipur lines & 400/132 kV ICT-II at Palatana. SPS related to Bangladesh operated due to tripping of 132 kV Palatana-Surajmaninagar Line leading to disconnection of 132 kV Surajmaninagar-Comilla D/C lines. (Comilla load disconnection of 28 MW)



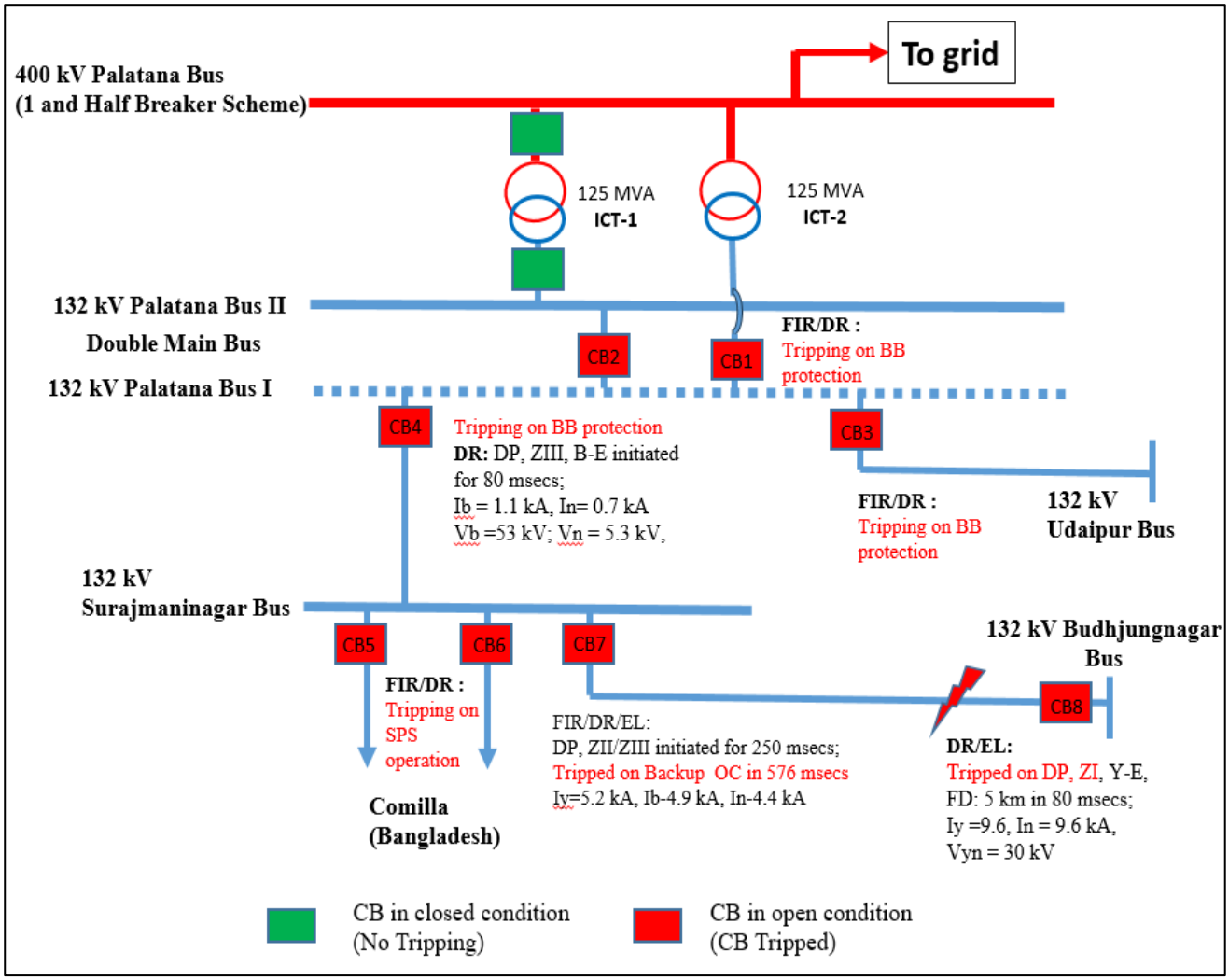
As per DR analysis, B-N fault of metallic nature initiated likely in the 132 kV Surajmaninagar Bus I which was cleared on operation Bus bar protection of 132 kV Main Bus I in 70-80 msecs.

The same fault was detected by the main protection of 132 kV Palatana – Surajmaninagar line & 132 kV Palatana – Udaipur line in ZIV i.e. reverse direction.

DR time drift of 1 Hr observed at Palatana end for Surajmaninagar line & 8 min for Udaipur line.

Event 2: At 13:08 Hrs of 29.05.2025

At 13:08 Hrs of 29-May-25, 132 kV Palatana Bus-I tripped resulting in tripping of all elements connected to Bus-I. SPS related to Bangladesh operated due to tripping of 132 kV Palatana-Surajmaninagar Line leading to disconnection of 132 kV Surajmaninagar-Comilla D/C lines (Comilla load disconnection of 28 MW)



As per DR analysis, Y-N fault of metallic nature initiated at 13:08:01.059 Hrs in 132 kV Surajmaninagar – Budhjungnagar line which was cleared from Budhjangnagar in 80 msecs on DP, ZI & Surajmaninagar in 576 msecs on operation of B/U O/C protection (ZII/ZIII started and deactivated after 250 msec)

The same fault was detected by main protection of 132 kV Palatana – Surajmaninagar line in ZIII. However, Bus bar protection of 132 kV Main Bus I

sensed the fault & immediately issued trip command to all the feeder connected to the Bus I.

Protection issues:

- Operation of Bus Bar protection due to external fault seems unwanted. Healthiness of BB protection need to be ensured to avoid such misoperation in future.
- DP, ZII/ZIII deactivated at Surajmaninagar for Budhjungnagar line after 250 msecs during forward fault of metallic nature seems unwanted.
- DR time drift of around 10 min observed at Surajmaninagar end for 132 kV Budhjungnagar line. DR time drift of 1 Hr observed at Palatana end for 132 kV Surajmaninagar Line and 8 min for 132 kV Udaipur line.

OTPC & TSECL may update share the root cause and provide update on the above mentioned issues.

In 80th PCCM, OTPC informed regarding both the events that they looked into the root cause of the fault but no issue was found. Hitachi engineer (OEM) will come on 26th June to look into the issue.

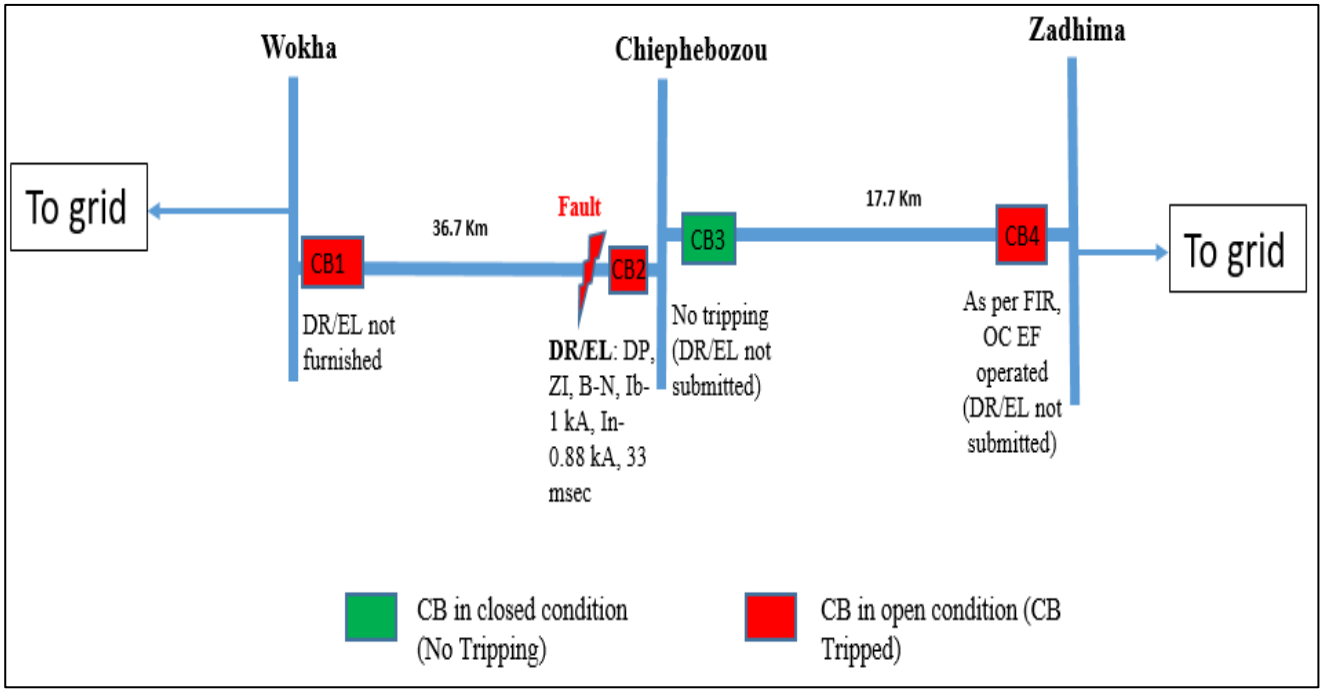
Forum suggested to check the CT polarity and conduct the Bus Bar stability test during the Hitachi visit.

OTPC may update

C.4 Grid disturbance in Nagaland Power System during May'25:

Event 1: Grid disturbance in Chiephebozou area of Nagaland on 22-05-2025

At 16:42 Hrs of 22-05-2025, 132 kV Wokha - Chiephobozou and 132 kV Zhadima - Chiephobozou lines tripped resulting in grid disturbance of Chiepebozou area of Nagaland. Load loss of 1.2 MW occurred.



As per DR analysis of 132 kV Wokha-Chiephebozou line, solid B-N fault (Ib-1 kA, In-0.88 kA) initiated at 16:09:08.490 Hrs and cleared within 33 msec from Chiephebozou end on operation of DP, ZI. As per FIR, OC EF operated at Zadhima end for 132 kV Chiephebozou line.

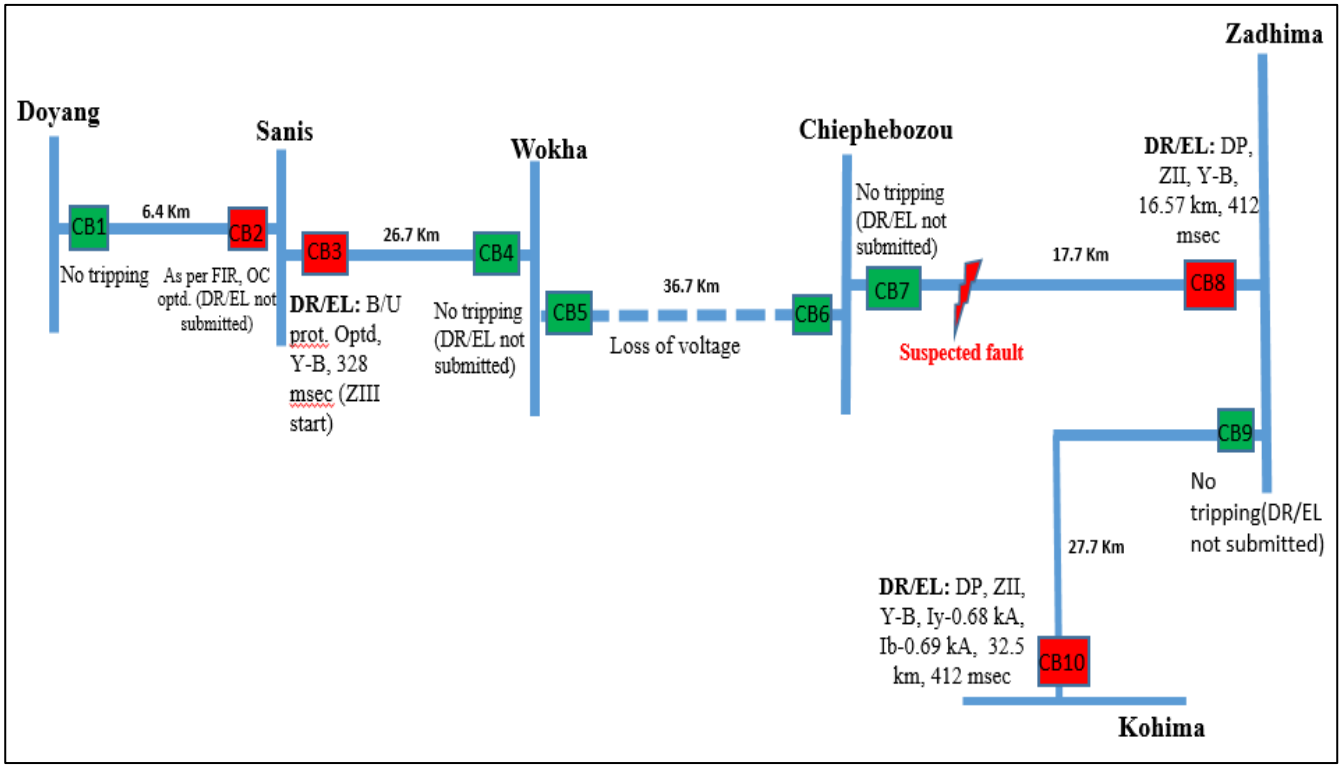
Following observations:

- Tripping of 132 kV Zadhima-Chiephebozou line on operation of OC EF for fault beyond the line is inferred unwanted.
- DR/EL not submitted for tripping of 132 kV Zadhima-Kohima line & Wokha end for Chiephebozou line which is a violation of Clause 37.2 (c) of IEGC-23.

DoP Nagaland may share the root cause of the event and provide update on the above-mentioned issues.

Event 2: Grid disturbance in Sanis, Wokha, Chiephebozou & Zadhima areas of Nagaland on 31-05-2025

At 01:32 Hrs of 31-05-2025, 132 kV Zadhima-Kohima, 132 kV Doyang-Sanis & 132 kV Sanis-Wokha lines tripped resulting in grid disturbance of Sanis, Wokha, Chiephebozou & Zadhima areas of Nagaland. Load loss of 2 MW occurred.



As per DR analysis, Y-B fault (Iy-0.68 kA, Ib-0.69 kA) initiated at 01:48:31.562 Hrs which was cleared within 412 msec from Kohima end on operation of DP, ZII. No tripping from Zadhima end.

132 kV Chiephebozou-Zadhima line tripped on ZII from Zadhima end within 412 msec. No tripping from Chiephebozou end.

132 kV Sanis-Wokha line likely tripped on B/U protection (ZIII start in main relay) within 328 msec. No tripping from Wokha end.

Following observations:

- Suspected fault in 132 kV Zadhima-Chiephebozou line at a distance of 16.57 Km (as per FIR)
- Non-opening of CB7 is a matter of concern.
- 132 kV Sanis-Wokha line tripped within 328 msec on B/U protection. B/U protection setting needs to be reviewed.
- Tripping of 132 kV Doyang-Sanis line on OC protection from Sanis end for fault in reverse direction seems unwanted. Directonality of B/U protection needs to be checked and kept forward direction.
- DR/EL not submitted for CB1, CB2, CB3(B/U protection), CB4, CB5, CB7 & CB9 which is a violation of Clause 37.2 (c) of IEGC-23.

- DR time drift of 16 min observed at Kohima end for Zadhima line, 26 min at Zadhima end for 132 kV Chiepebozou line, 13 min at Sanis end for Wokha line.

Similar incident occurred on 27.06.2024.

DoP Nagaland may share the root cause of the event and provide update on the above-mentioned issues.

In 80th PCCM, DoP Nagland informed that there are multiple relay setting issues along the Doyang-Sanis-Wokha-Chiephebozou-Zadima-Kohima link and requested NERPC to help coordinate the settings. MS NERPC instructed to resolve the issue in coordination with NERPC and NERLDC at the earliest.

MS NERPC informed that a protection(relay) setting review committee to be formed to review the relay setting in NER. This committee members will impart training between 10 to 11:30 Hrs to all stakeholder before start of monthly PCC meeting.
All States/Utilities to bring relay setting at Substations including Nagaland. PRDC and State to check setting in data base and verify as per NER protection philosophy.

DoP Nagaland may update

C.5 Status on resolution of protection issues as discussed in 80th and 79th PCCM

SN	***Protection issues to be resolved as decided in previous PCC meetings***	***Concerned Utility***	***Previous status***	***status (80th PCCM)***
1.	LDP on Rokhia-N.Rokhia link	TSECL	RoW issue resolved. Work to be completed by next PCC	Commissioning team will come on 27th June'25
2.	BB protection stability test at Doyang	NEEPCO	Hitachi provided the offer, but there is issue with terms of payment, will be resolved by end of May'25	July'25

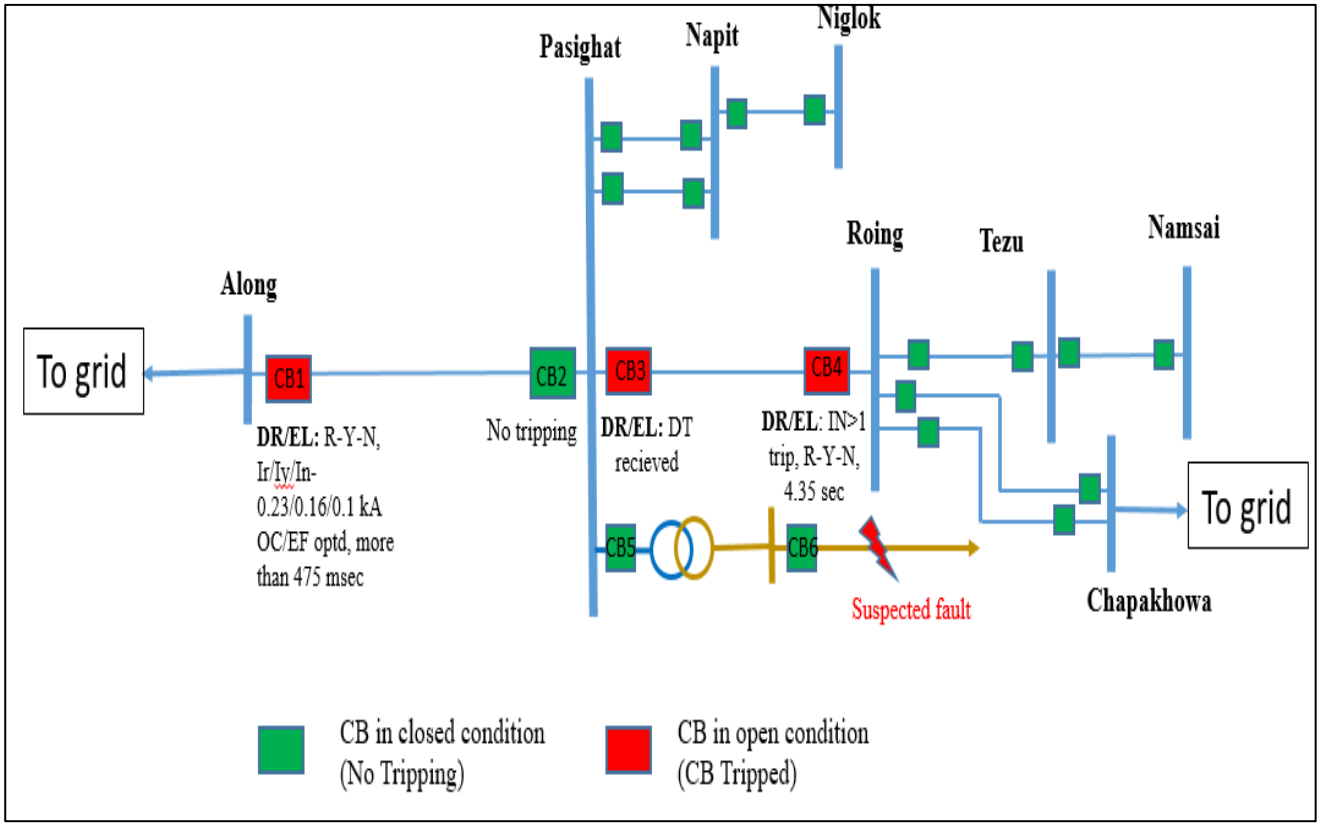
3.	Modification of SPS Scheme related to the outage of 132 kV Leshka –Khliehriat D/C after LILO at 132 kV Mynkre S/S	MePTCL	Matter has been taken up with NERPSIP. Also, Protection coupler is not present there, in talk with ABB	Configuration done, cable termination done, SPS implementation and testing to be done after high hydro season
4.	**Grid Disturbance in Tuirial S/S of NEEPCO & Kolasib and Bairabi areas of Mizoram Power System on 20-03-2025:** Protection system of 132 kV Kolasib-Turial line failed to isolate the fault. P&ED Mizoram needs to ensure healthiness of protection system of 132 kV Kolasib-Tuirial line.	MIzoram	Mizoram to conduct relay testing for checking the healthiness for 132 kV Kolasib – Tuirial and 132 kV Kolasib – Bairabi line.	Relay testing to be done as weather improves and settings coordination will be done before next PCC.
5.	**Grid Disturbance in Mawlyndep area of Meghalaya Power system on 23-03-2025**: "Carrier send" signal high at Mawlyndep	MePTCL	NERLDC highlighted in 78th PCCM that there was no carrier aided tripping at Mustem despite carrier received from Mawlyndep end.	Protection coupler at Mustem is defective due to which carrier aided tripping did not occur at

	end. However, 132 kV Mustem-Mawlyndep line tripped after ZII time delay. The same needs to be checked by MePTCL.		Forum directed MePTCL to look into and resolve the matter at the earliest and install GPS.	Mustem. that communication team is trying to replace the defective coupler. However, no spare is available. Spare protection coupler of other substations to be used.

Utilities may further update

C.6 Grid Disturbance in Pasighat and radially connected Napit & Niglok areas of Arunachal Pradesh on 22-04-2025:

At 00:37 Hrs of 22-04-2025, 132 kV Along-Pasighat & 132 kV Roing - Pasighat lines tripped resulting in grid disturbance in Pasighat and radially connected Napit & Niglok areas of Arunachal Pradesh. Load loss of 22 MW occurred.



As per DR analysis, R-Y-N fault with Ir-237 A, Iy-167 A, In-107 A observed which was cleared in more than 475 msec from Along end on operation of OC/EF protection. No tripping from Pasighat end as per submitted DR. Fault duration recorded at Pasighat EL - 3.726 sec.

For 132 kV Roing-Pasighat Line, R-Y-N fault initiated at 00:37:16.786 Hrs and cleared within 4.35 sec on operation of E/F from Roing end and DT recieved at Pasighat end.

Following observations:

- Protection system of downstream feeder and HV side of transformer failed to isolate the fault resulting in clearing of fault by tripping of healthy 132 kV Along-Pasighat and 132 kV Roing-Pasighat Lines.
- For DR submitted for 132 kV Along-Pasighat & 132 kV Roing-Pasighat lines, pre-fault data is not visible which is the cause of concern. As per DR Standardisation report of FOLD Working Group 3, pre-fault data of 500 msec and post fault data of 2500 msec should be visible in the DR window.
- DR Time drift of 2 min observed at Pasighat for 132 kV Along Line and 13 min for 132 kV Roing Line.

- Non-submission of detailed report by DoP Arunachal Pradesh which is a violation of Clause 37.2 (e) of IEGC regulation 2023.

Similar kind of event occurred at 16:01 Hrs of 03-05-2025 in which tripping of 132 kV Along-Pasighat & 132 kV Roing - Pasighat lines led to loss of power in Pasighat, Napit & Niglok areas of Arunachal Pradesh. Such repeated grid disturbances are the cause of concern.

During 2024, similar incident occurred on 24.09.2024, 25.09.2024, 16.11.2024 and 08.12.2024.

As per 79th PCC minutes,

DoP Ar. Pradesh apprised that the fault was in downstream 33kV line and HV side of ICT at Pasighat which was not cleared by HV side Transformer due to faulty trip coil. The same has been replaced. Other 132/33 kV Transformer trip coil is faulty. The same will be kept isolated till the issue is rectified. NERLDC informed that such incident reoccurred on 3rd May'25. Forum opined that the downstream fault should have been cleared by 33 kV feeder itself or the HV side of the ICT and exhorted DoP Ar. Pradesh to resolve the issues at the earliest.

Deliberation of 80th PCCM

DoP AR. Pradesh informed that 33kV Vacuum CB of the downstream line will be replaced shortly. Forum also instructed to check the protection settings of the downstream line and the 132/33kV ICT.

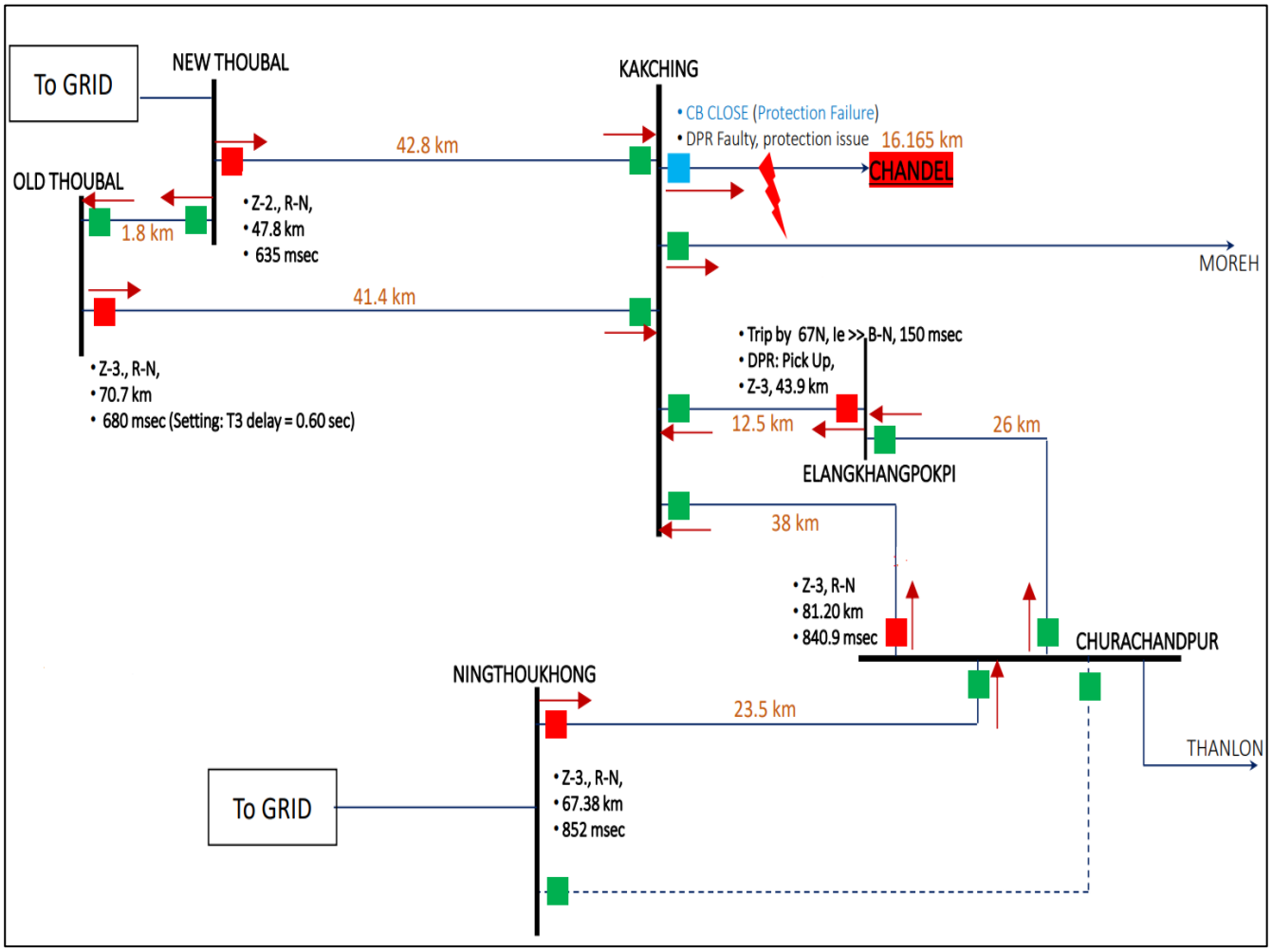
ED, NERLDC raised the concern that the protection protocol for 33kV feeders is not covered under NER protection protocol and therefore the settings of 33kV feeders are not standardized. Forum noted that protection protocol for 33kV feeders may be included in NER protection protocol. Assam informed that they follow a standard settings protocol for distribution feeders. Forum requested Assam to share the same with NERPC and NERLDC.

C.7 Grid disturbance in Churachandpur, Elangkankpokpi, Thanlon, Kakching, Chandel and Morey areas of Manipur and Tamu area Myanmar Power system on 28-04-2025:

Churachandpur, Elangkankpokpi, Thanlon, Kakching, Chandel and Morey areas of Manipur and Tamu area Myanmar Power system were connected to rest of NER grid through 132 kV Ningthoukhong-Churachandpur II, 132 kV Old Thoubal-Kakching

& 132 kV New Thoubal-Kakching Lines. Prior to the event, 132 kV Ningthoukhong-Churachandpur I line is under outage since13:48 Hrs of 04.08.2024.

At 13:43 Hrs of 28-04-2025, 132 kV Ningthoukhong-Churachandpur II, 132 kV Old Thoubal-Kakching, 132 kV New Thoubal-Kakching & 132 kV Churachandpur-Kakching Lines tripped. Load loss of 30 MW occurred.



As per DR analysis of 132 kV Ningthoukhong-Churachandpur II Line, R-N fault (Ir-1.26 kA, In-1 kA) initiated at 13:42:32.292 Hrs which was cleared within 852 msec from Ningthoukhong end on operation of DP, ZIII.

At 13:42:20.911 Hrs, 132 kV Old Thoubal-Kakching Line tripped from Old Thoubal end (as per EL, DR file not opening)

Suspected fault is beyond Churachandpur and Kakching Substations as fault distance of 67.38 Km from Ningthoukhong end.

Following observations:

- Exact location of fault could not be concluded as DR/EL not submitted by MSPCL.

- It is unclear which protection system operated and cleared the fault from Old Thoubal end for 132 kV Kakching Line.
- SOE not recorded for tripping of 132 kV Churachandpur-Kakching Line & 132 kV Old Thoubal-Kakching Line. The same needs attention from MSPCL/SLDC Manipur team.
- Non-submission of flash report and detailed report by MSPCL which is a violation of Clause 37.2 (b) & 37.2 (e) of IEGC regulation 2023.

Similar incident ocurred on 05.07.2024.

As per 79th PCC minutes,

Sl. No.	**Observations**	**Remarks**
1	Exact location of fault could not be concluded.	Vegetation fault was in 132 kV Kakching-Chandel Line
2	Protection system of 132 kV Kakching-Chandel line failed to isolate the fault.	Protection Circuit checked and distance relay replaced, settings and PSL tested.
3	132 kV New Thoubal-Kakching line tripped on ZII from New Thoubal end within 635 msec. ZII time delay needs to be revised as per protection philosophy.	Settings reviewed, will be updated once approved.
4	132 kV Old Thoubal-Kakching Line on ZIII from Old Thoubal end within 680 msec. ZIII time delay needs to revised as per protection philosophy.	Settings reviewed, will be updated once approved.
5	132 kV Elangkankpokpi-Kakching line tripped on E/F from Elangkaknkpokpi end within 150 msec. B/U E/F protection needs to be coordinated with ZIII time delay as per protection philosophy. Phase sequence issue observed	Settings reviewed, settings changed as per standard template, testing yet to be done.

6	132 kV Churachandpur-Kakching line tripped on ZIII from Churachandpur end within 841 msec which is inferred unwanted. ZIII reach needs to be reviewed and set as per protection philosophy.	Setting review yet to be done
7	132 kV Ningthoukhong-Churachandpur II line tripped on ZIII from Ningthoukhong end within 852 msec	Forum urged MSPCL to review the ZIII reach at Ningthoukhong end.
8	DR/EL not submitted for tripping of 132 kV New Thoubal-Kakching, 132 kV Old Thoubal-Kakching, 132 kV Churachandpur-Elangkankpokpi & 132 kV Elangkankpokpi-Kakching Lines	Forum asked MSPCL to submit all the DR/EL files

NERPC highlighted that ZIII should not have operated at Ningthounkong end for Churanchandpur line and instructed Mizoram to check the reach of ZIII and limit it to the 100% of Main line + 100% of the longest line at remote end.

In 80th PCCM, MSPCL stated that the update on all the points will be provided within this month. MS NERPC instructed to discuss the agenda in next PCC meeting.

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ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड

GRID CONTROLLER OF INDIA LIMITED

Formerly Power System Operation Corporation Limited

North Eastern Regional Load Despatch Centre, Shillong

जून, 2025 माह के लिए ग्रिड घटना की विस्तृत विश्लेषण रिपोर्ट

Detailed Analysis Report of Grid Event for the month of June, 2025

Table of Contents

Sl No	Area Affected	GD/GI/Near miss	Date & Time
1	Grid Disturbance in Mynkre area and Leshka HEP of Meghalaya Power System	GD-I	05:37 Hrs of 01-06-2025
2	Grid Disturbance in Karbi Langpi HEP of Assam Power System	GD-I	16:10 Hrs of 02-06-2025
3	Grid Disturbance in Zuangtui, Serchhip, Saitual and Vankal area of Mizoram Power System	GD-I	05:54 Hrs of 03-06-2025
4	Grid Disturbance in Rengpang area of Manipur Power System	GD-I	11:48 Hrs of 04-06-2025
5	Grid Disturbance in Meluri area of Nagaland Power System	GD-I	03:20 Hrs of 05-06-2025
6	Grid Disturbance in Meluri area of Nagaland Power System	GD-I	04:07 Hrs of 05-06-2025
7	Grid Disturbance in Dhaligaon, Gossaigaon, Barpeta, APM and part load of Barnagar areas of Assam Power System	GD-I	05:18 Hrs of 09-06-2025
8	Grid Disturbance in Tangla area of Assam Power System	GD-I	09:48 Hrs of 09-06-2025
9	Grid Disturbance in Udaipur area of Tripura Power System	GD-I	12:23 Hrs of 09-06-2025
10	Grid Disturbance in Ningthoukhong area of Manipur Power System	GD-I	13:34 Hrs of 09-06-2025
11	Grid Disturbance in Dharmanagar area of Tripura Power System and Dullavchera area of Assam Power System	GD-I	18:45 Hrs of 10-06-2025
12	Grid Disturbance in grid event in Napit and Niglok area of Arunachal Pradesh Power System	GD-I	16:30 Hrs of 11-06-2025
13	Grid Disturbance in grid event in Sanis area of Nagaland Power System	GD-I	16:53 Hrs of 13-06-2025
14	Grid Disturbance in grid event in Khupi, Tenga and Dikshi HEP area of Arunachal Pradesh Power System	GD-I	12:26 Hrs of 14-06-2025

15	Grid Disturbance in grid event in Zhadima, Chiephobozou, Wokha and Sanis areas of Nagaland Power System	GD-I	01:06 Hrs of 15-06-2025
16	Grid Disturbance in grid event in Margherita area of Assam Power System	GD-I	10:53 Hrs of 17-06-2025
17	Grid Disturbance in Leshka, Mynkre, Mustem and IIM areas of Meghalaya Power System	GD-I	14:00 Hrs of 19-06-2025
18	Grid Disturbance in Along area of Arunachal Pradesh Power System	GD-I	05:15 Hrs of 21-06-2025
19	Grid Disturbance in Rangia, Amingaon, Kamalpur, Sipajhar, Tangla, Nalbari & Nathkuchi areas of Assam Power System	GD-I	19:14 Hrs of 21-06-2025
20	Grid Disturbance in grid event in Margherita area of Assam Power System	GD-I	22:59 Hrs of 22-06-2025
21	Grid Disturbance in Tenga, Khupi, Seppa & Dikshi areas of Arunachal Pradesh Power System & 132 kV Kameng S/S of NEEPCO	GD-I	10:28 Hrs of 23-06-2025
22	Grid Disturbance in Sihhmui area of Mizoram Power System	GD-I	14:56 Hrs of 23-06-2025
23	Grid Disturbance in Along, Pasighat, Napit & Niglok areas of Arunachal Pradesh power system	GD-I	16:52 Hrs of 23-06-2025
24	Grid Disturbance in Along area of Arunachal Pradesh Power System	GD-I	10:59 Hrs of 24-06-2025
25	Grid Disturbance in Lumshnong area of Meghalaya Power System	GD-I	03:13 Hrs of 25-06-2025
26	Grid Disturbance in Lumshnong & Amrit areas of Meghalaya Power System	GD-I	23:25 Hrs of 25-06-2025
27	Grid Disturbance in Rangia, Amingaon, Kamalpur, Sipajhar, Tangla, Nalbari, AIIMS & Nathkuchi areas of Assam Power System	GD-I	09:42 Hrs of 26-06-2025
28	Grid Disturbance in Zhadima, Chiephobozou, Wokha and Sanis areas of Nagaland power system	GD-I	10:41 Hrs of 26-06-2025
29	Grid disturbance in Amguri(Jacson) area of Assam power system	GD-I	15:17 Hrs of 26-06-2025
30	Grid Incidence in Kopili HEP of NEEPCO Power System	GI-II	19:34 Hrs of 26-06-2025
31	Grid Disturbance in Rokhia area of Tripura Power System	GD-I	06:06 Hrs of 28-06-2025

32	Grid Disturbance in Saitual area of Mizoram Power System	GD-I	15:38 Hrs of 28-06-2025
33	Grid Disturbance in Amrit area of Meghalaya Power System	GD-I	17:45 Hrs of 28-06-2025
34	Grid Disturbance in Rengpang area of Manipur Power System	GD-I	09:25 Hrs of 29-06-2025
35	Grid Disturbance in Saitual area of Mizoram Power System	GD-I	09:52 Hrs of 30-06-2025
36	Grid Disturbance in Bairabi HEP of Mizoram Power System	GD-I	13:09 Hrs of 30-06-2025
37	Grid Disturbance in Tuirial HEP of NEEPCO Power System	GD-I	13:15 Hrs of 30-06-2025

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

Detailed Report of Grid Disturbance in Mynkre area and Leshka HEP of Meghalaya Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

Date (दिनांक):20-01-2025

1. **Event Summary (घटना का सारांश):**

   Mynkre area and Leshka HEP of Meghalaya Power System was connected with rest of NER Grid via 132kV Mynkre (ME)-Khliehriat(ME) D/C lines and 132kV Mynkre-Leshka D/C lines. At 05:37 Hrs of 01-06-2025, 132kV Mynkre (ME)- Khliehriat(ME) D/C lines and 132kV Mynkre-Leshka D/C lines tripped. Due to tripping of these elements, Mynkre area and Leshka HEP of Meghalaya Power System were isolated due to loss of evacuation path.

2. **Time and Date of the Event (घटना का स मय और दिनांक):** 05:37 Hrs of 01-06-2025

3. **Event Category (ग्रिड घटना का प्रकार):** GD-I

4. **Location/Control Area (स्थान/नियंत्रण क्षेत्र):** Mynkre area and Leshka HEP of Meghalaya Power System.

5. **Antecedent Conditions (पूर्ववर्ती स्थिति):**

	Frequency in Hz	Regional Generation (MW)	Regional Demand (MW)
Pre-Event (घटना पूर्व)	49.98	2634	1610
Post Event (घटना के बाद)	49.98	2565	1638

Pre and post data of 1 minute before and after the event

Important Transmission Line/Unit if under outage (before the event))महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है(	Leshka Unit 3 tripped at 15:30 Hrs of 01-06-2025.
Weather Condition (मौसम स्थिति)	Normal

6. **Load and Generation loss (लोड और जेनरेशन हानि):** Generation loss of 84 MW

7. **Duration of interruption (रुकावट की अवधि):** 14 min

8. **Network across the affected area (प्रभावित क्षेत्र का नक्शा):**

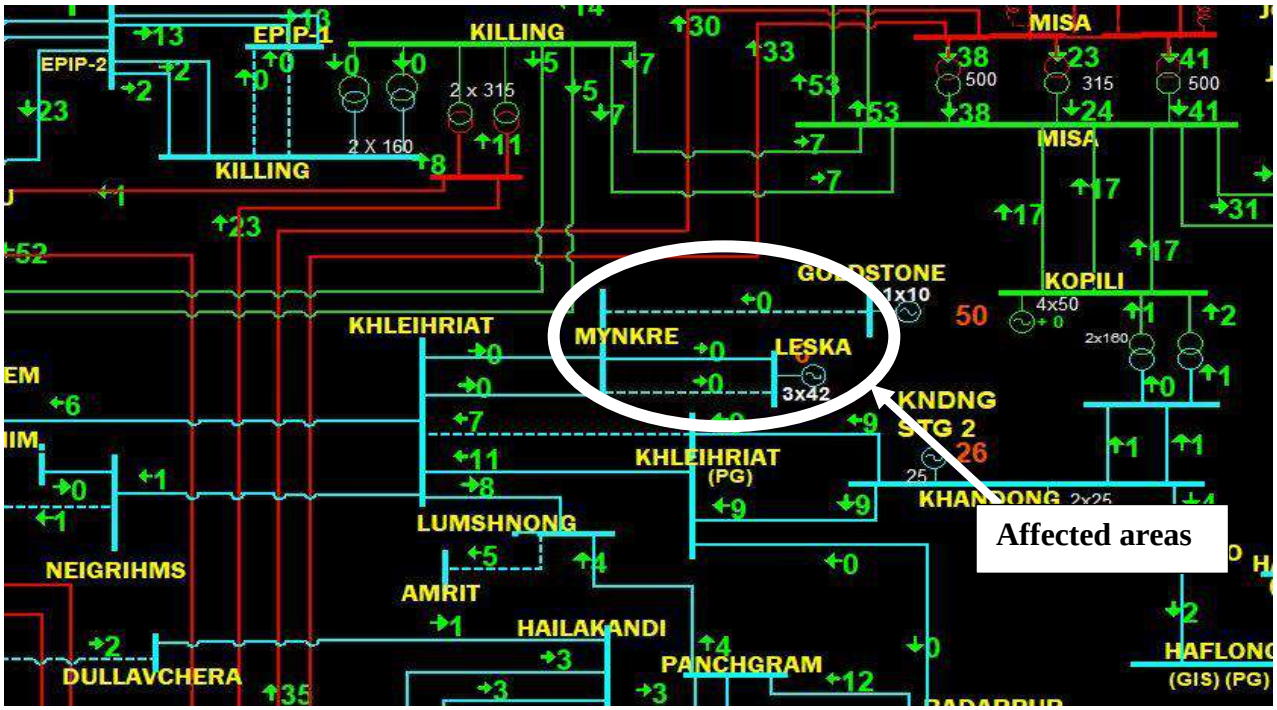


Figure 1: Network across the affected area

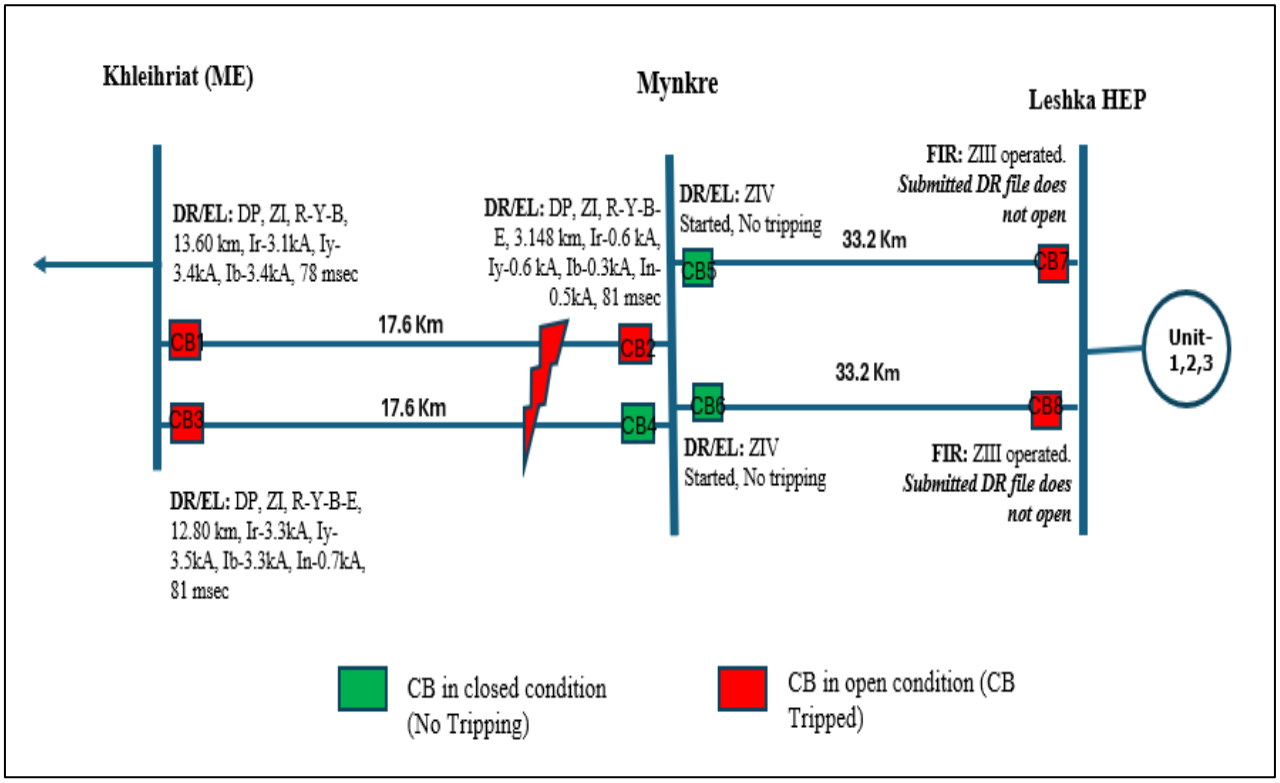
9. **Details of Equipment Failure (if any during the event) (उपकरण विफलता का विवरण):** **NIL**

10. **Major Elements Tripped (प्रमुख ट्रिपिंग):**

Sl no	Name	Trip time (hh:mm)	Restoration time (hh:mm)	Relay End 1	Relay End 2
1	132 kV LESHKA-Mynkre-I	05:37 Hrs	05:51 Hrs	DP, ZIII, R-Y-B-E	ZIV Started, No Tripping
2	132 kV LESHKA-Mynkre-II	05:37 Hrs	05:52 Hrs	DP, ZIII, R-Y-B-E	ZIV Started, No Tripping
3	132 kV Mynkre-Khleihriat-I	05:37 Hrs	06:01 Hrs	DP, ZI, R-Y-B-E, 3.148 km	DP, ZI, R-Y-B, 13.60 km
4	132 kV Mynkre-Khleihriat-II	05:37 Hrs	07:03 Hrs	No Tripping	DP, ZI, R-Y-B-E, 12.80 km

5	Leshka Unit 1	05:37 Hrs	-	Loss of evacuation path
6	Leshka Unit 2	05:37 Hrs	07:13 Hrs	Loss of evacuation path
7	Leshka Unit 3	05:30 Hrs	07:11 Hrs	Details awaited

11. Event Analysis (Based on PMU, SCADA & DR) (घटना का विश्लेषण):



As per DR analysis of Khleihriat of 132kV Mynkre (ME)-Khliehriat(ME) 1 line, solid R-Y-B fault (Ir-3.1kA, Iy-3.4kA, Ib-3.4kA) initiated at 05:37:08.630 Hrs and fault cleared in 78 msec on DP, ZI, R-Y-B, FD: 13.60 Kms. Fault was cleared from Mynkre end in 81 msec on DP, ZI, R-Y-B-E, FD: 3.148 kms (Ir-0.6 kA, Iy-0.6 kA, Ib-0.3kA, In-0.5kA). For 132kV Mynkre (ME)-Khliehriat(ME) 2 line, R-Y-B-E fault (Ir-3.3kA, Iy-3.5kA, Ib-3.3kA, In-0.7kA) was cleared from Khliehriat end on DP, ZI, R-Y-B-E, 12.80 km in 81 msec. No tripping from Mynkre end. ZIV started with no tripping from Mynkre ends for 132kV Mynkre-Leshka D/C lines.

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

Protection system of Mynkre (ME) of 132kV Mynkre (ME)-Khliehriat(ME)-2 line failed to clear the fault which lead to clearing of the same fault from remote ends by tripping of 132kV Mynkre-Leshka D/C lines from Leshka end on ZIII operation.

12. Protection/Operational issues observed (सुरक्षा/परिचालन संबंधी समस्या):

- Non operation of protection system at Mynkre (ME) of 132kV Mynkre (ME)-Khliehriat(ME)-2 line which lead to clearing of the same fault from remote ends.
- Time drift of 7 mins (lagging) in submitted DRs from Mynkre end for 132kV Mynkre (ME)-Khliehriat(ME) 1 line
- Time drift of 13 mins (lagging) in submitted DRs from Mynkre end for 132kV Mynkre-Leshka D/C lines
- DR from Leshka ends for 132kV Mynkre-Leshka D/C lines does not open due to invalid sampling frequency.

13. Action Taken/Remedial Measures (सुधारात्मक उपाय): NIL

14. Non-compliance observed (विनियमन का गैर-अनुपालन):

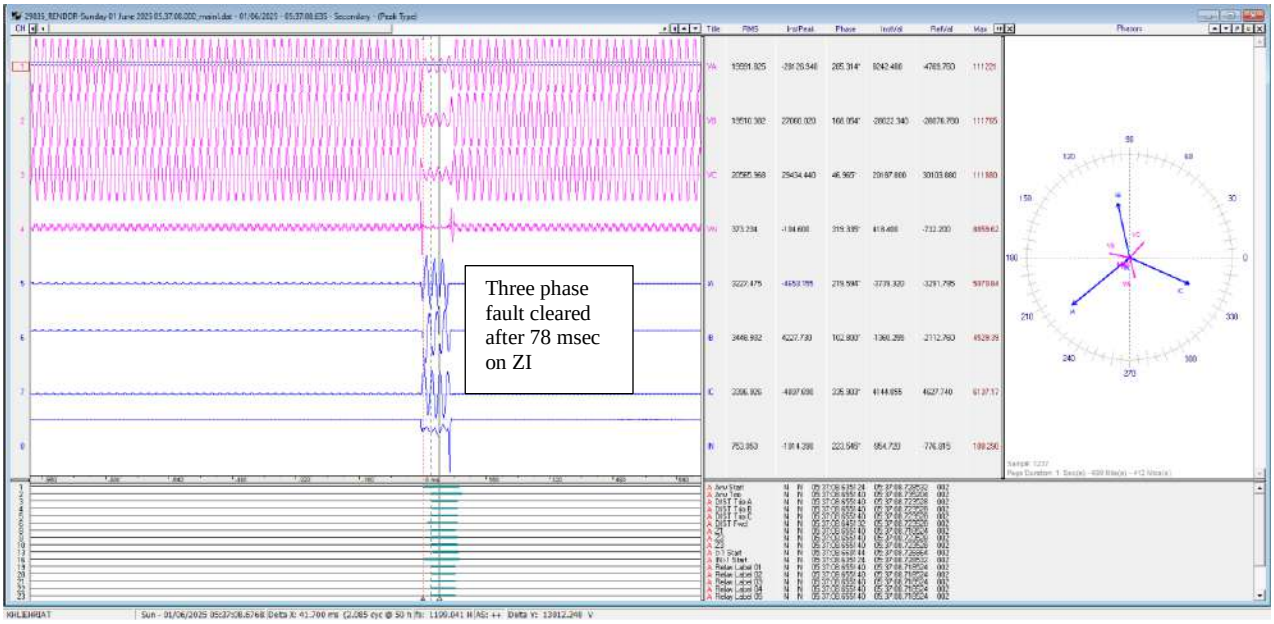
Sl. No.	Issues	Regulation Non-Compliance	Utilities
1.	**Flash Report received within 8hrs?**	IEGC section 37.2 (b)	***MePTCL & MePGCL***
2.	**Whether DR/EL provided within 24 Hours?**	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	**No violation**
3.	**Detailed Report received within 7 days?**	IEGC section 37.2 (e)	***MePTCL***
4.	**DR Time Synchronization Issues**	IEGC section 17.3	***MePTCL***
5.	**Any other non-compliance**		

15. Key Lessons Learnt (प्रमुख अधिगम बिंदु):

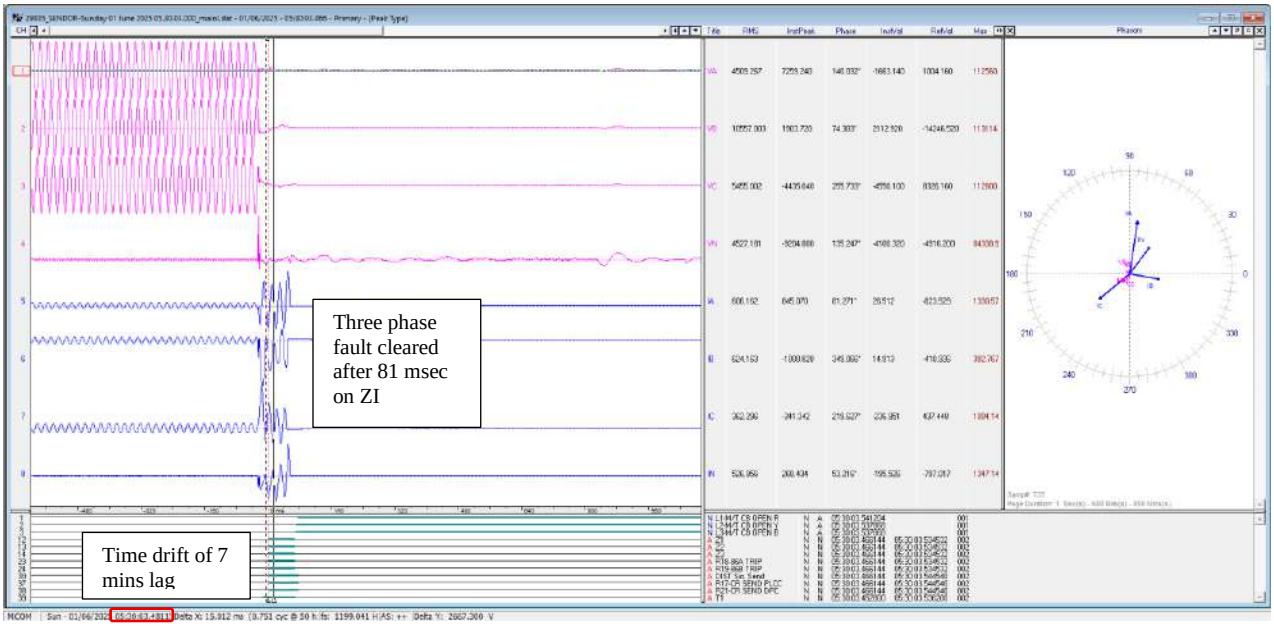
- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of protection system needs to be ensured at all times.

Annexure : Disturbance recorder snips showing faults and digital signals

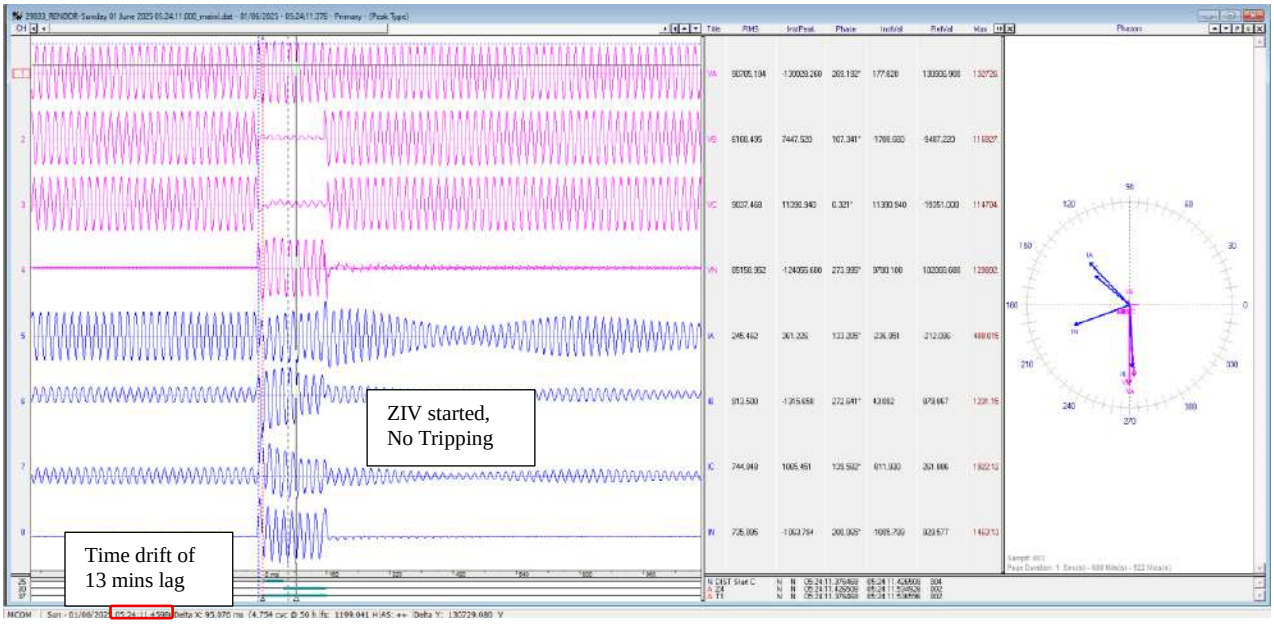
2.1. DR Snapshot of Khleihriat for 132kV Mynkre (ME)-Khliehriat(ME) 1 line



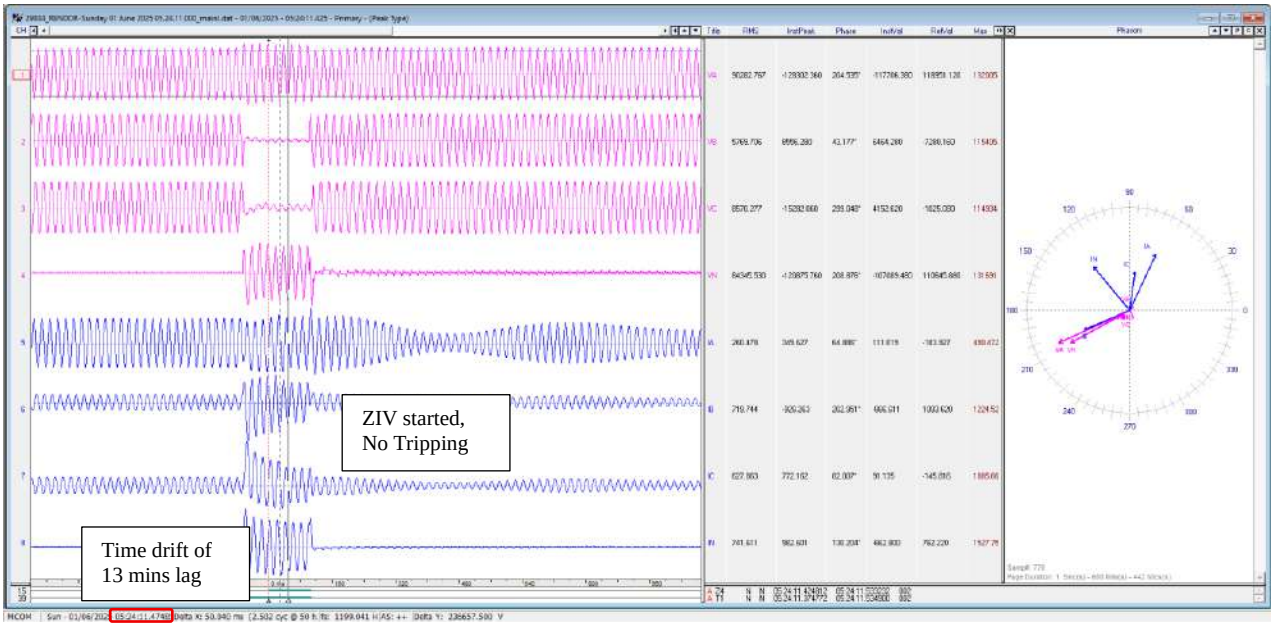
2.2. DR Snapshot of Mynkre for 132kV Mynkre (ME)-Khliehriat(ME) 1 line



2.3 DR Snapshot of Mynkre for 132KV-Myntdu Leshka-Mynkre 1 Line



2.3 DR Snapshot of Mynkre for 132KV-Myntdu Leshka-Mynkre 2 Line



ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

Detailed Report of Grid Disturbance in Blackout of Karbi Langpi HEP of Assam Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

Date (दिनांक):10-06-2025

1. **Event Summary (घटना का सारांश):**

Karbi Langpi HEP of Assam Power System was connected with rest of NER Grid through 132 kV Sarusajai - Karbi Langpi D/C line.

At 16:10 Hrs of 02-06-2025, 132 kV Sarusajai-Karbi Langpi 1&2 lines tripped. Due to the tripping of these elements, Karbi Langpi HEP of Assam Power System was isolated from NER Grid and blacked out.

Power was extended to Karbi Langpi HEP of Assam Power System by charging 132 kV Sarusajai-Karbi Langpi 1 line at 16:21 hrs

2. **Time and Date of the Event (घटना का स मय और दिनांक):** 16:10 Hrs of 02-06-2025
3. **Event Category (ग्रिड घटना का प्रकार): GD-I**
4. **Location/Control Area (स्थान/नियंत्रण क्षेत्र):** Karbi Langpi HEP of Assam
5. **Antecedent Conditions (पूर्ववर्ती स्थिति):**

	Frequency in Hz	Regional Generation (MW)	Regional Demand (MW)
Pre-Event (घटना पूर्व)	49.90	3070	2409
Post Event (घटना के बाद)	49.90	2989	2341

Pre and post data of 1 minute before and after the event

Important Transmission Line/Unit if under outage (before the event))महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है(	NIL
Weather Condition (मौसम स्थिति)	Normal

6. **Load and Generation loss (लोड और जेनरेशन हानि): Generation loss of 100 MW**
7. **Duration of interruption (रुकावट की अवधि): 11 min**
8. **Network across the affected area (प्रभावित क्षेत्र का नक्शा):**

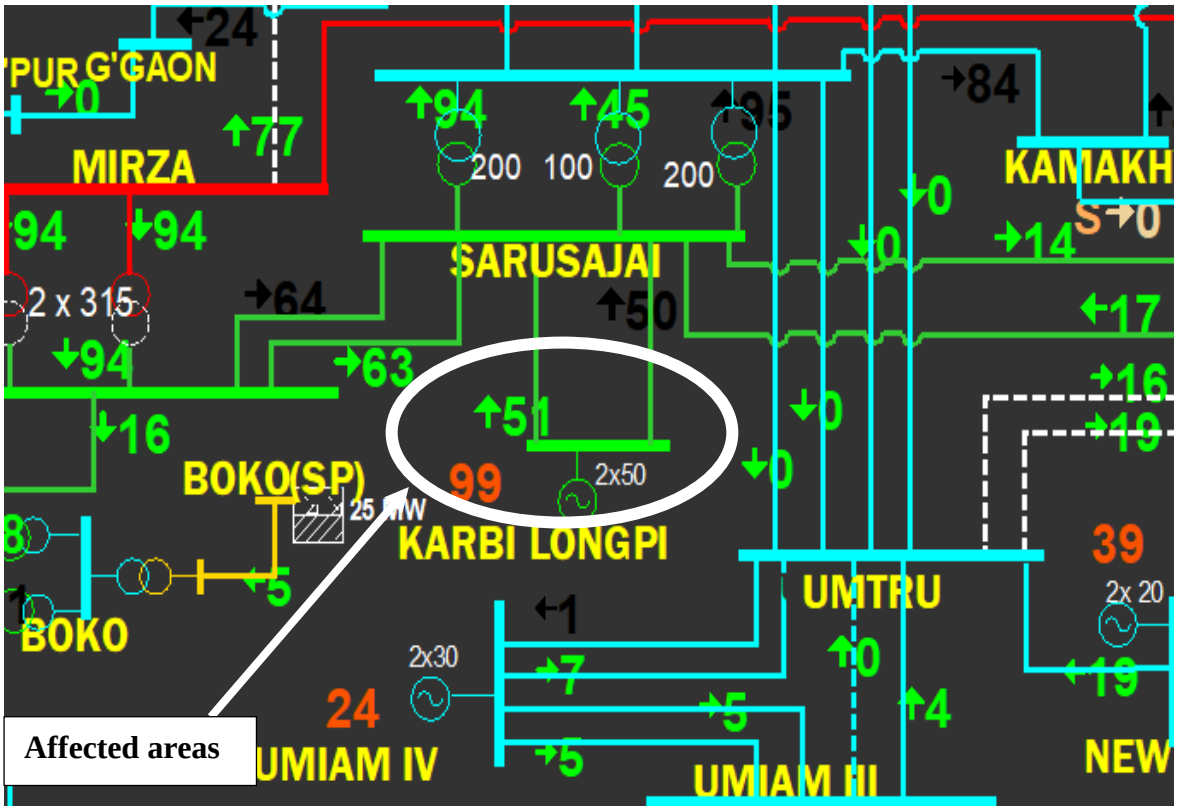
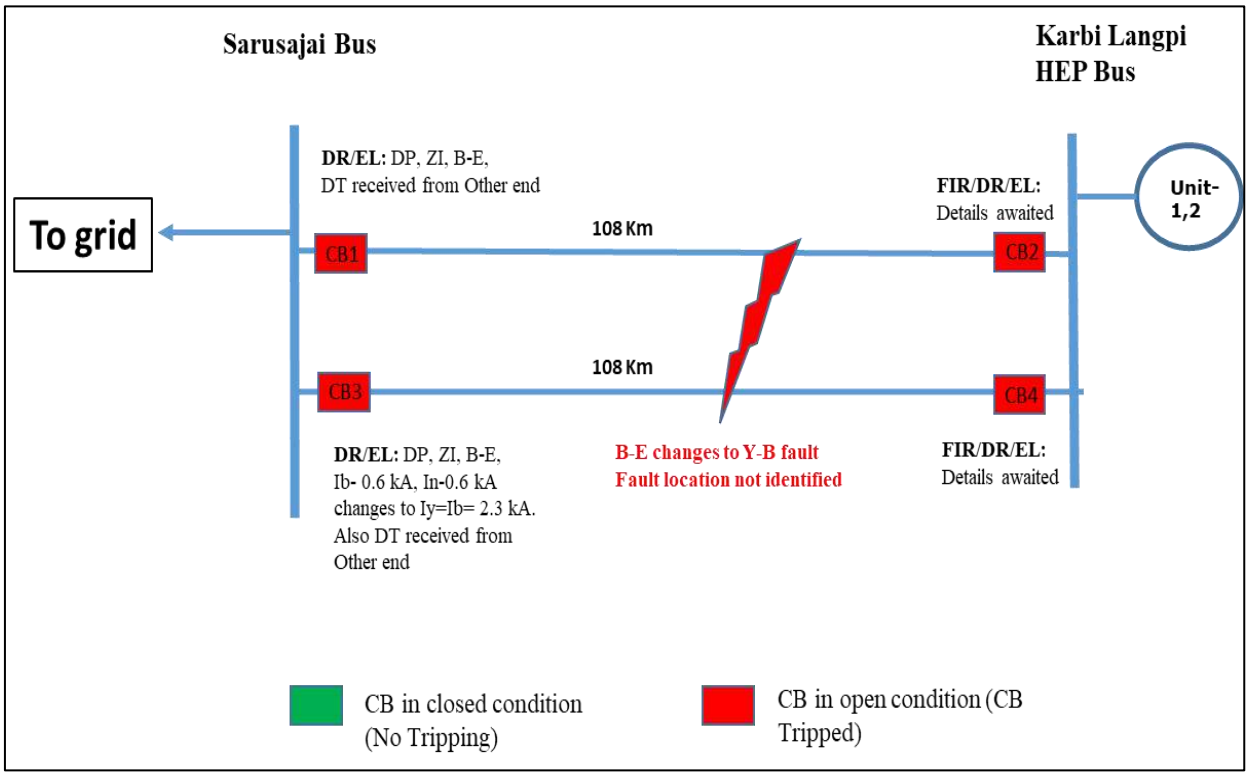


Figure 1: Network across the affected area

9. **Details of Equipment Failure (if any during the event) (उपकरण विफलता का विवरण): NIL**
10. **Major Elements Tripped (प्रमुख ट्रिपिंग):**

Sl no	Name	Trip time (hh:mm)	Restoration time (hh:mm)	Relay End 1	Relay End 2
1	132 kV Sarusajai - Karbi Langpi 1 line	16:10	16:21	DT Received	Details awaited
2	132 kV Sarusajai - Karbi Langpi 2 line	16:10	-	Z-1, Y-B Ph	Details awaited

11. Event Analysis (Based on PMU, SCADA & DR) (घटना का विश्लेषण):



As per the DR analysis of Sarusajai end, High resistive, B-E fault of neutral current 0.3 kA & 0.6 kA present in of 220 kV Karbi Langpi - Sarusajai 1&2 Line.

After 1 second B-E fault converted into Y-B with fault current Iy=Ib=2.3 kA resulted into the ZI operation at Sarusajai end of the 220 kV Karbi Langpi - Sarusajai 2 Line.

The complete analysis could not be performed due to the non-availability of DR & EL data for Karbi Langpi end.

12. Protection/Operational issues observed (सुरक्षा/परिचालन संबंधी समस्या): NIL

13. Action Taken/Remedial Measures (सुधारात्मक उपाय): NIL

14. Non-compliance observed (विनियमन का गैर-अनुपालन):

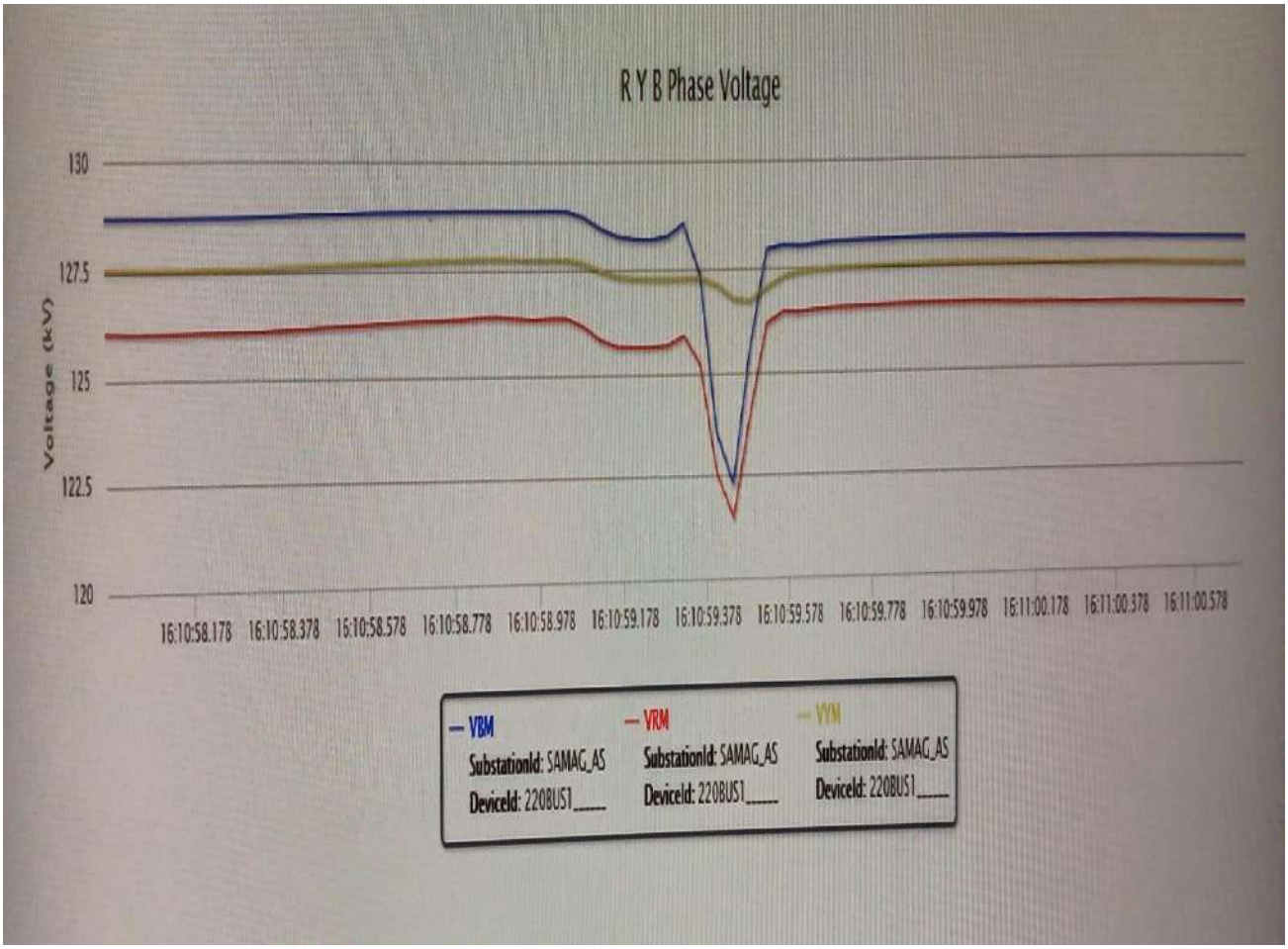
Sl. No.	Issues	Regulation Non-Compliance	Utilities
1.	**Flash Report received within 8hrs?**	IEGC section 37.2 (b)	***Not submitted by APGCL***
2.	**Whether DR/EL provided within 24 Hours?**	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	***Not submitted by APGCL***

3.	**Detailed Report received within 7 days?**	IEGC section 37.2 (e)	***Not submitted by APGCL***
4.	**DR Time Synchronization Issues**	IEGC section 17.3	***No violation***
5.	**Any other non-compliance**		**-**

15. Key Lessons Learnt (प्रमुख अधिगम बिंदु):

- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of protection system needs to be ensured at all times.

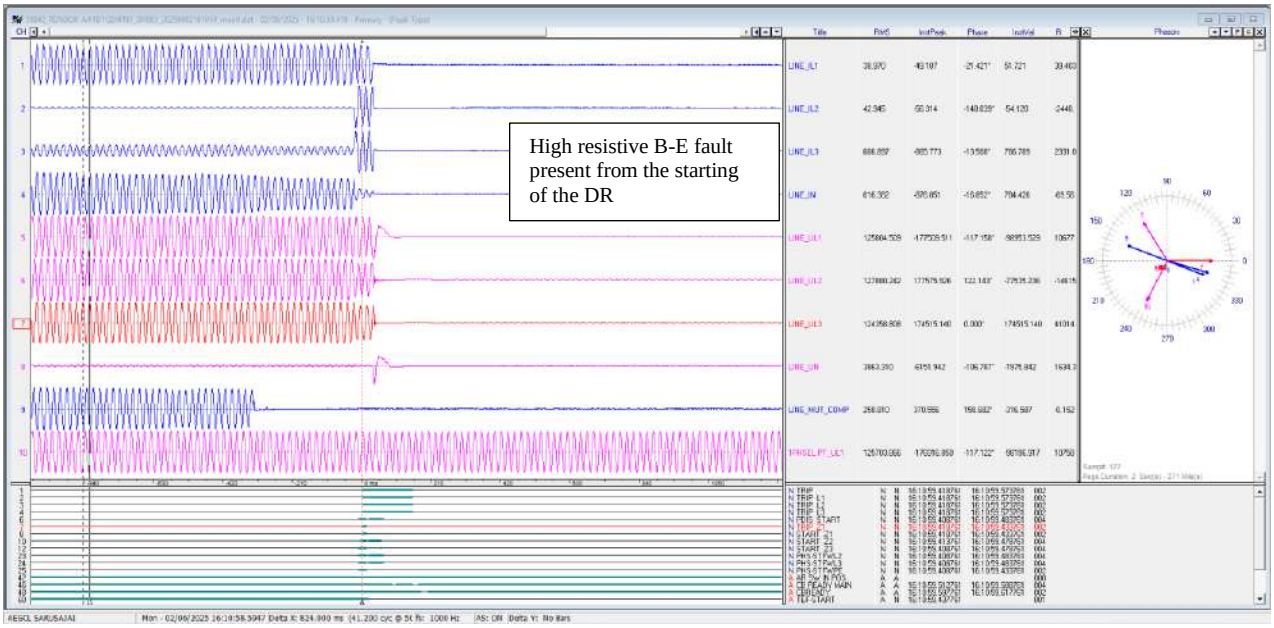
Annexure 1: PMU Snapshot



Annexure 2: Disturbance recorder snips showing faults and digital signals

2.1. DR Snapshot of Sarusajai for 220 kV Karbi Langpi - Sarusajai 1 Line

2.2. DR Snapshot of Sarusajai for 220 kV Karbi Langpi - Sarusajai 2 Line



ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

मिजोरम पावर सिस्टम के जुआंगतुई, सेरछिप, सैतुआल और वांकल क्षेत्र के ब्लैकआउट में ग्रिड गड़बड़ी की मसौदा रिपोर्ट /Draft Report of Grid Disturbance in Blackout of Zuangtui, Serchhip, Saitual and Vankal area of Mizoram Power System

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

Date (दिनांक):26-06-2025

1. **Event Summary (घटना का सारांश):**

Zuangtui, Serchhip, Saitual and Vankal area of Mizoram Power system is connected with rest of the NER grid via 132kV Serchhip-Zuantui-Melriat-Shimui and 132kV Vankal-Saitual-Melriat(PG)-Shimui. 132kV Melriat(PG)- Shimui D/C and 132kV Shimui-Zuangtui is under outage since 26-05-2025. Zunagtui, Serchhip, Saitual and Vankal area was connected only through 132kV Melriat(PG)-Zuangtui. 132kV Melriat-Zuangtui tripped at 05:54 hrs of 03-06-2025 leading to blackout of Zuangtui, Serchhip, Saitual and Vankal area of Mizoram Power system.

Power was extended to Zuangtui, Serchhip, Saitual and Vankal area of Mizoram Power System by charging 132kV Melriat(PG)-Zuangtui line at 07:07 hrs of 03-06-2025.

2. **Time and Date of the Event (घटना का स मय और दिनांक):** 05:54 Hrs of 03-06-2025
3. **Event Category (ग्रिड घटना का प्रकार):** GD-I
4. **Location/Control Area (स्थान/नियंत्रण क्षेत्र):** Zuangtui, Serchhip, Saitual and Vankal area of Mizoram Power System**.**
5. **Antecedent Conditions (पूर्ववर्ती स्थिति):**

	Frequency in Hz	Regional Generation (MW)	Regional Demand (MW)
Pre-Event (घटना पूर्व)	50.03	3401	1756
Post Event (घटना के बाद)	50.03	3407	1751

Pre and post data of 1 minute before and after the event

Important Transmission Line/Unit if under outage (before the event))महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है(	132kV Melriat(PG)-Shimui D/C and 132kV Shimui-Zuangtui
Weather Condition (मौसम स्थिति)	Rain in some areas

6. **Load and Generation loss (लोड और जेनरेशन हानि):** Load loss of 18 MW
7. **Duration of interruption (रुकावट की अवधि): 1 hr 13 min**
8. **Network across the affected area (प्रभावित क्षेत्र का नक्शा):**

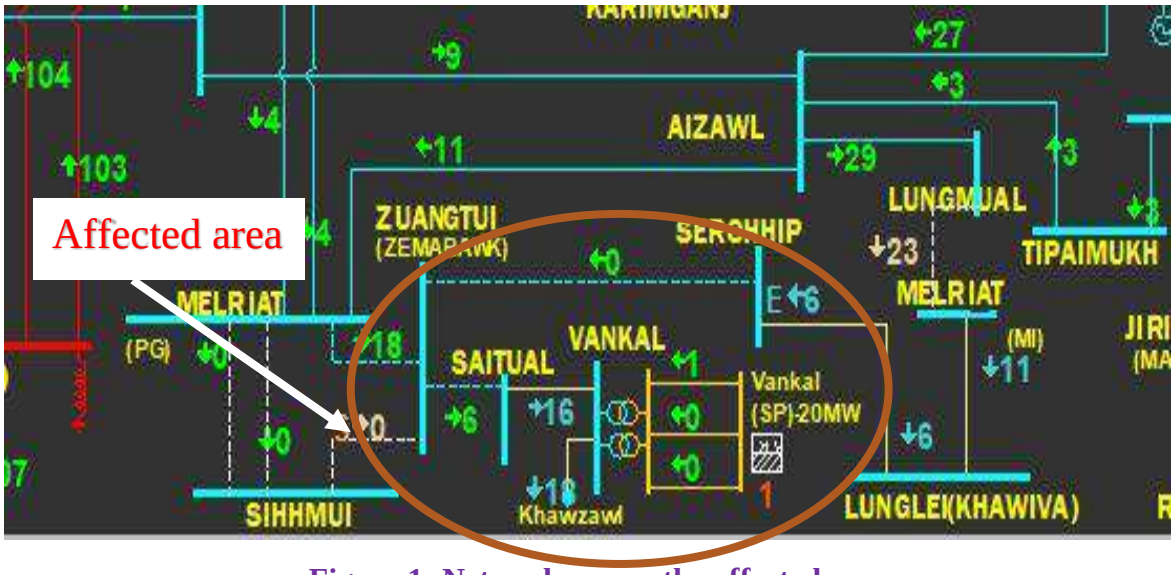


Figure 1: Network across the affected area

9. **Details of Equipment Failure (if any during the event) (उपकरण विफलता का विवरण): NIL**
10. **Major Elements Tripped (प्रमुख ट्रिपिंग):**

Sl no	Name	Trip time (hh:mm)	Restoration time (hh:mm)	Relay End 1	Relay End 2
1	132kV Melriat(PG)-Zuangtui	05:54	07:07	**ZII picked up but tripped on LDP, Y-E, FD: 7.2 km, ToR**	LDP operated

11. **Event Analysis (Based on PMU, SCADA & DR) (घटना का विश्लेषण):**

As per the DR analysis of Melriat end, metallic, Y-E fault of fault current Iy: 3.6 kA & In: 2.8 kA cleared from Melriat end on operation of LDP, Y-E in 65 msecs of 132kV Melriat(PG)-Zuangtui Line. Also, AR operated after 2.6 seconds however tripped on reclose (ToR).

At Zuangtui end, tripping observed in 53 msecs on operation of differential protection.

12. **Protection/Operational issues observed (सुरक्षा/परिचालन संबंधी समस्या):** NIL

13. **Action Taken/Remedial Measures (सुधारात्मक उपाय):** NIL

14. **Non-compliance observed (विनियमन का गैर-अनुपालन):**

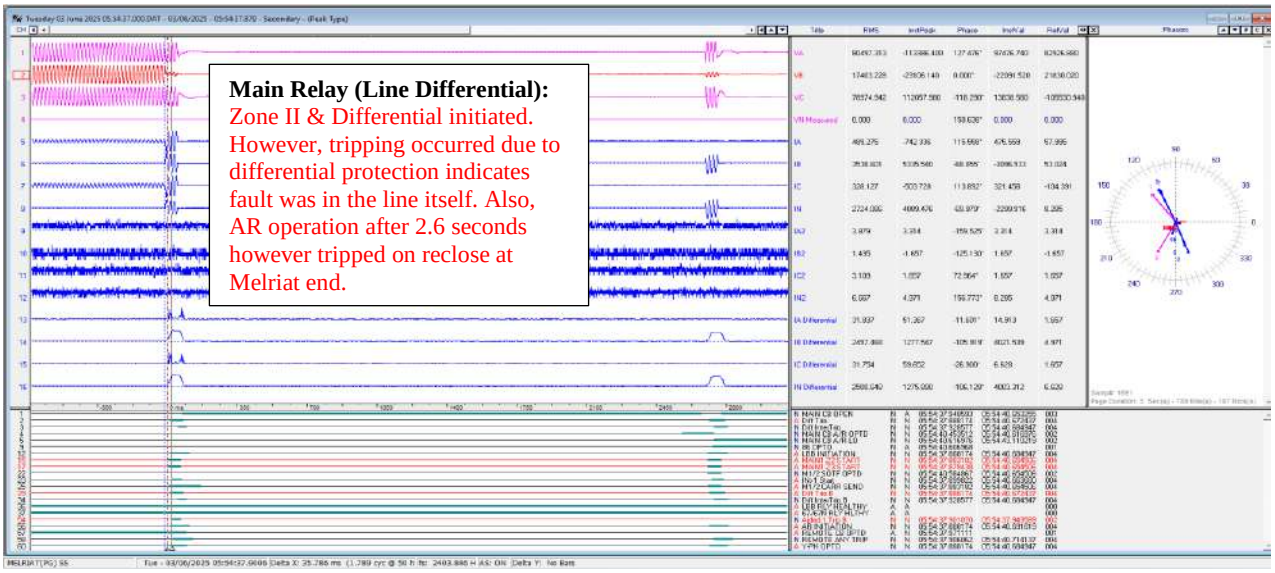
Sl. No.	Issues	Regulation Non-Compliance	Utilities
1.	**Flash Report received within 8hrs?**	IEGC section 37.2 (b)	***Not submitted by P&ED, Mizoram***
2.	**Whether DR/EL provided within 24 Hours?**	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	***No violation***
3.	**Detailed Report received within 7 days?**	IEGC section 37.2 (e)	***P&ED, Mizoram {Submitted on 25-06-25 i.e. more than 7 days}***
4.	**DR Time Synchronization Issues**	IEGC section 17.3	***No violation***
5.	**Any other non-compliance**		-

15. **Key Lessons Learnt (प्रमुख अधिगम बिंदु):**

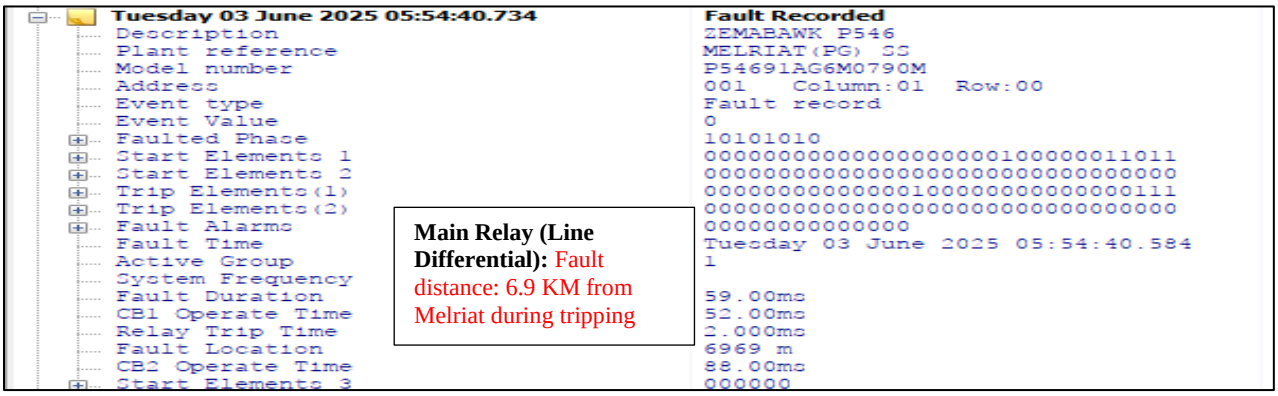
- Proper maintenance related activities as per CEA regulations needs to be carried out.

Annexure 1: Disturbance recorder snips showing faults and digital signals

1.1. DR Snapshot of Melriat for 132kV Melriat(PG)-Zuangtui Line:

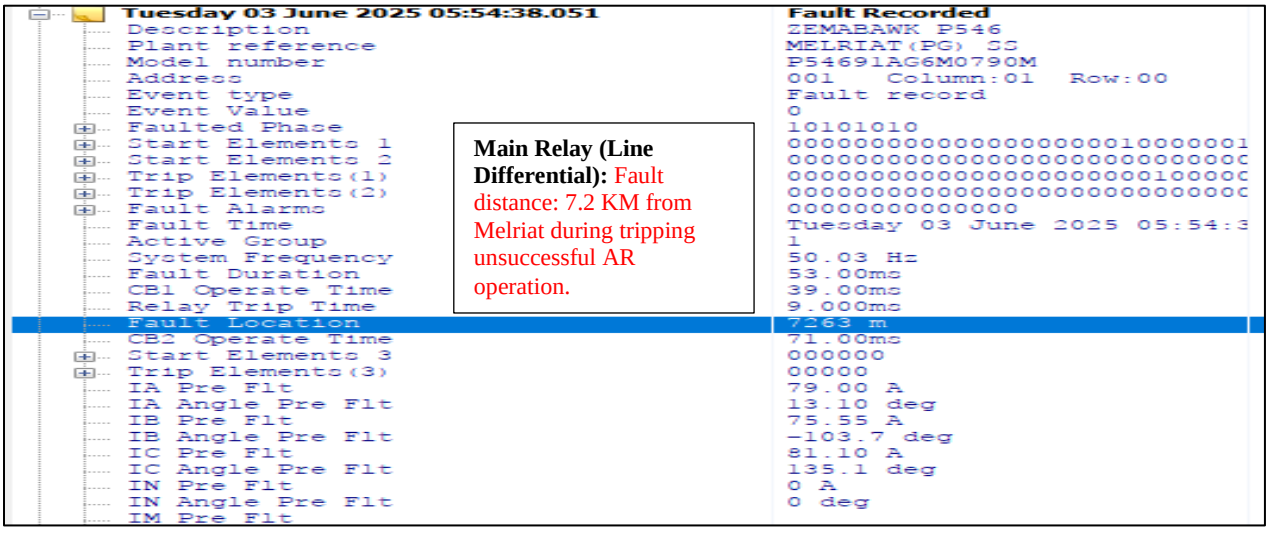


Main Relay (Line Differential): Zone II & Differential initiated. However, tripping occurred due to differential protection indicates fault was in the line itself. Also, AR operation after 2.6 seconds however tripped on reclose at Melriat end.



Tuesday 03 June 2025 05:54:40.734	**Fault Recorded**
Description	ZEMABAWK P546
Plant reference	MELRIAT(PG) SS
Model number	P54691AG6M0790M
Address	001 Column:01 Row:00
Event type	Fault record
Event Value	0
Faulted Phase	10101010
Start Elements 1	00000000000000000000100000011011
Start Elements 2	00000000000000000000000000000000
Trip Elements(1)	00000000000000100000000000000111
Trip Elements(2)	00000000000000000000000000000000
Fault Alarms	00000000000000
Fault Time	Tuesday 03 June 2025 05:54:40.584
Active Group	1
System Frequency	
Fault Duration	59.00ms
CB1 Operate Time	52.00ms
Relay Trip Time	2.000ms
Fault Location	6969 m
CB2 Operate Time	88.00ms
Start Elements 3	000000

Main Relay (Line Differential): Fault distance: 6.9 KM from Melriat during tripping



Tuesday 03 June 2025 05:54:38.051	**Fault Recorded**
Description	ZEMABAWK P546
Plant reference	MELRIAT(PG) SS
Model number	P54691AG6M0790M
Address	001 Column:01 Row:00
Event type	Fault record
Event Value	0
Faulted Phase	10101010
Start Elements 1	00000000000000000000010000000
Start Elements 2	00000000000000000000000000000
Trip Elements(1)	00000000000000000000000100000
Trip Elements(2)	00000000000000000000000000000
Fault Alarms	00000000000000
Fault Time	Tuesday 03 June 2025 05:54:3
Active Group	1
System Frequency	50.03 Hz
Fault Duration	53.00ms
CB1 Operate Time	39.00ms
Relay Trip Time	9.000ms
Fault Location	7263 m
CB2 Operate Time	71.00ms
Start Elements 3	000000
Trip Elements(3)	00000
IA Pre Flt	79.00 A
IA Angle Pre Flt	13.10 deg
IB Pre Flt	75.55 A
IB Angle Pre Flt	-103.7 deg
IC Pre Flt	81.10 A
IC Angle Pre Flt	135.1 deg
IN Pre Flt	0 A
IN Angle Pre Flt	0 deg
IM Pre Flt	

Main Relay (Line Differential): Fault distance: 7.2 KM from Melriat during tripping unsuccessful AR operation.

1.2. DR Snapshot of Zuangtui for 132kV Melriat(PG)-Zuangtui Line

Start Page | 2025-06-03 11.36.10

View Filters | Print | Copy

Parameter	Value
Tuesday 03 June 2025 05:52:51.342	**IM64 Ch1 Output4 OFF**
Tuesday 03 June 2025 05:52:51.332	**Fault Recorded**
Description	PG MELRIAT P546
Plant reference	132kV ZEMBAWK SS
Model number	P54691AG6M0790M
Address	001 Column:01 Row:00
Event type	Fault record
Event Value	0
Faulted Phase	10101010
Start Elements 1	00000000000000000000100000011011
Start Elements 2	00000000000000000000000000000000
Trip Elements(1)	00000000000000000000001000000111
Trip Elements(2)	00000000000000000000000000000000
Fault Alarms	00000000000100
Fault Time	Tuesday 03 June 2025 05:52:51.192
Active Group	1
System Frequency	50.00 Hz
Fault Duration	53.00ms
CB1 Operate Time	32.00ms
Relay Trip Time	16.00ms
Fault Location	-6668 m
CB2 Operate Time	65.00ms
Start Elements 3	000000
Trip Elements(3)	00000
IA Pre Flt	76.33 A
IA Angle Pre Flt	-168.2 deg
IB Pre Flt	76.80 A
IB Angle Pre Flt	74.48 deg
IC Pre Flt	82.04 A
IC Angle Pre Flt	-43.70 deg
IN Pre Flt	0 A
IN Angle Pre Flt	0 deg
IM Pre Flt	
IM Angle Pre Flt	
VA Pre Flt	76.97kV
VA Angle Pre Flt	0 deg
VB Pre Flt	77.66kV
VB Angle Pre Flt	-120.0 deg
VC Pre Flt	77.57kV
VC Angle Pre Flt	119.5 deg
VN Pre Flt	240.4 V
VN Angle Pre Flt	95.74 deg
IA Fault	496.3 A
IA Angle Fault	171.0 deg
IB Fault	441.8 A
IB Angle Fault	160.6 deg
IC Fault	336.7 A
IC Angle Fault	170.1 deg
IN Fault	1270 A
IN Angle Fault	167.2 deg
IM Fault	
IM Angle Fault	
VA Fault	81.09kV
VA Angle Fault	3.780 deg
VB Fault	2195 V
VB Angle Fault	-158.6 deg
VC Fault	79.67kV
VC Angle Fault	116.8 deg
VN Fault	86.98kV
VN Angle Fault	60.43 deg
IA local	484.2 A
IB local	456.0 A
IC local	336.5 A
IA remote 1	432.1 A

Tripping at Zuangtui in 53 msecs on Differential protection

IA Differential	54.98 A
IB Differential	3586 A
IC Differential	63.48 A
IA Bias	1809 A
IB Bias	1794 A
IC Bias	1734 A
Ch 1 Prop Delay	2.863ms
Ch 2 Prop	Delay
Ch 1 Rx Prop	Dly
Ch 1 Tx Prop	Dly
Ch 2 Rx Prop	Dly
Ch 2 Tx Prop	Dly
IN local	1275 A
IN remote 1	2422 A
IN remote	2
IN Differential	3696 A
Fault IA local	491.5 A
Fault IB local	445.8 A
Fault IC local	333.7 A
Fault IA rem 1	495.1 A
Fault IB rem 1	3548 A
Fault IC rem 1	332.5 A
Fault IA rem	2
Fault IB rem	2
Fault IC rem	2
Fault IA Diff	12.73 A
Fault IB Diff	3993 A
Fault IC Diff	13.55 A
Fault IA Bias	2021 A
Fault IB Bias	1997 A
Fault IC Bias	1941 A
Fault IN local	1268 A
Fault IN rem 1	2722 A

ग्रिड-इंडिया GRID-INDIA ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

Detailed Report of Grid Disturbance in Blackout of Rengpang area of Manipur Power System of NER

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

Date (दिनांक):12-06-2025

1. **Event Summary (घटना का सारांश):**

Rengpang area of Manipur Power System was connected with rest of NER Grid through 132kV Loktak-Rengpang line. 132kV Jiribam - Rengpang line was under long outage since 18:18 Hrs of 17.11.2023.

At 11:48 Hrs of 04-06-2025, 132kV Loktak - Rengpang line tripped. Due to tripping of this element, Rengpang area of Manipur Power System was isolated from NER Grid and collapsed due to no source available in this area.

Power supply is yet to be extended to Rengpang area of Manipur by charging 132kV Loktak-Rengpang Line after getting clearance from Loktak end.

2. **Time and Date of the Event (घटना का स मय और दिनांक):** 11:48 Hrs of 04-06-2025

3. **Event Category (ग्रिड घटना का प्रकार):** GD-I

4. **Location/Control Area (स्थान/नियंत्रण क्षेत्र):** Rengpang area of Manipur.

5. **Antecedent Conditions (पूर्ववर्ती स्थिति):**

	Frequency in Hz	Regional Generation (MW)	Regional Demand (MW)
Pre-Event (घटना पूर्व)	50.02	2453	2370
Post Event (घटना के बाद)	50.02	2529	2363

Pre and post data of 1 minute before and after the event

Important Transmission Line/Unit if under outage (before the event))महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है(	132kV Jiribam - Rengpang line was under long outage since 18:18 Hrs of 17.11.2023

Weather Condition (मौसम स्थिति)	Normal

6. **Load and Generation loss (लोड और जेनरेशन हानि):** Load loss of 1 MW
7. **Duration of interruption (रुकावट की अवधि): 87 min**
8. **Network across the affected area (प्रभावित क्षेत्र का नक्शा):**

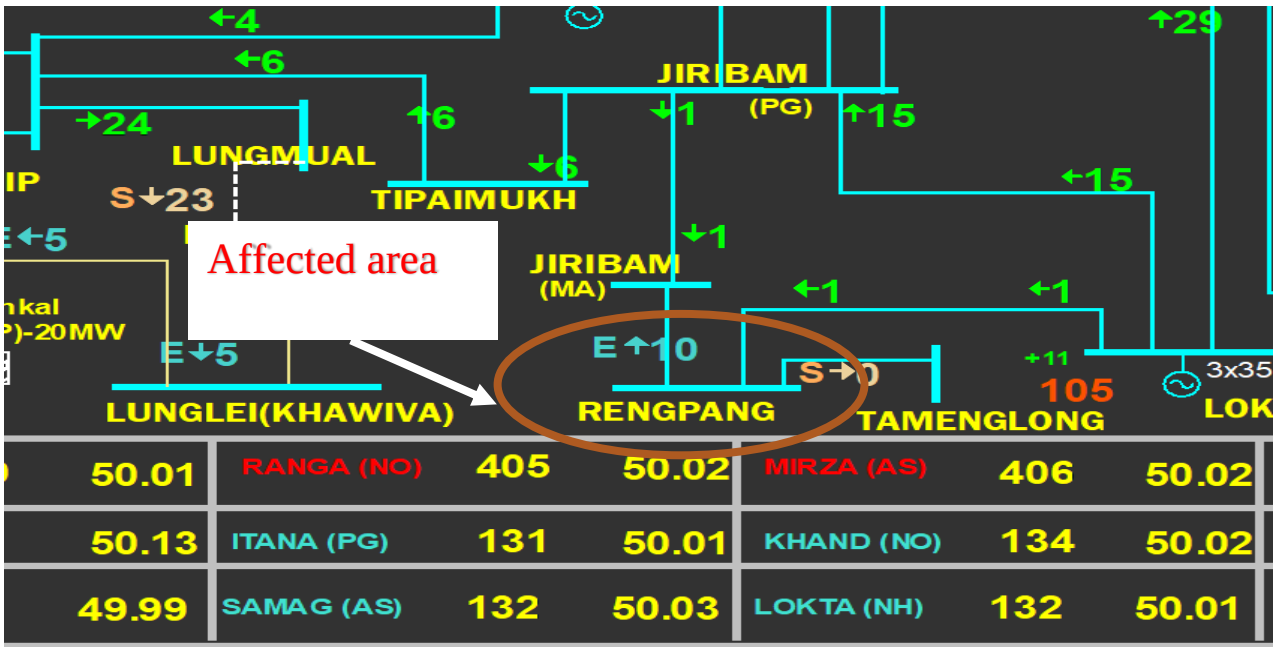


Figure 1: Network across the affected area

9. **Details of Equipment Failure (if any during the event) (उपकरण विफलता का विवरण): NIL**
10. **Major Elements Tripped (प्रमुख ट्रिपिंग):**

Sl no	Name	Trip time (hh:mm)	Restoration time (hh:mm)	Relay End 1	Relay End 2
1	132 kV Loktak-Rengpang Line	11:48	13:15	DP, ZI, B-E, FD: 18.72 KM	No tripping

11. **Event Analysis (Based on PMU, SCADA & DR) (घटना का विश्लेषण):**

As per the EL analysis of Loktak end, High resistive B-E fault of fault current Ib: 1.9 kA cleared from Loktak end on operation of DP, ZI, B-E in 58 msecs of 132 kV Loktak-Rengpang Line.

12. Protection/Operational issues observed (सुरक्षा/परिचालन संबंधी समस्या):

NIL

13. Action Taken/Remedial Measures (सुधारात्मक उपाय): NIL

14. Non-compliance observed (विनियमन का गैर-अनुपालन):

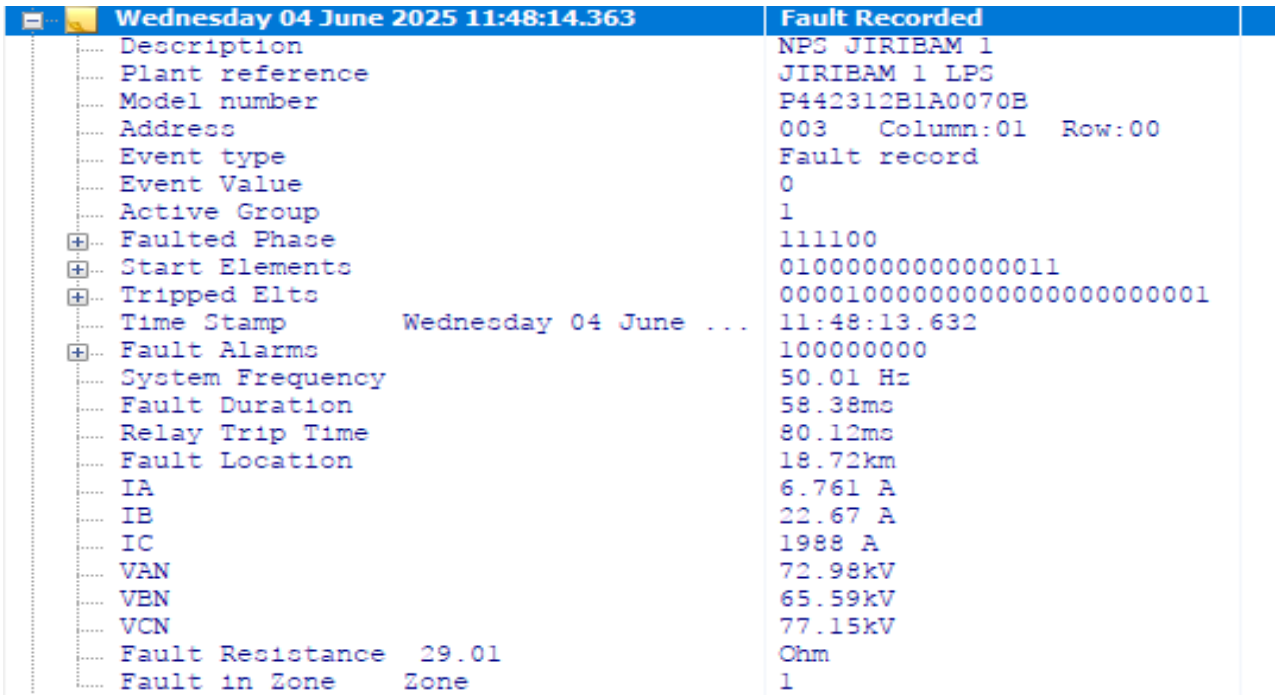
Sl. No.	Issues	Regulation Non-Compliance	Utilities
1.	**Flash Report received within 8hrs?**	IEGC section 37.2 (b)	***MSPCL***
2.	**Whether DR/EL provided within 24 Hours?**	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	***No violation***
3.	**Detailed Report received within 7 days?**	IEGC section 37.2 (e)	***Not submitted by MSPCL***
4.	**DR Time Synchronization Issues**	IEGC section 17.3	***No violation***
5.	**Any other non-compliance**		-

15. Key Lessons Learnt (प्रमुख अधिगम बिंदु):

- Proper maintenance related activities as per CEA regulations needs to be carried out.

Annexure 1: Disturbance recorder snips showing faults and digital signals

1.1. DR Snapshot of Loktak for 132kV Loktak-Rengpang Line



ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
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कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

Detailed Report of Grid Disturbance in Blackout of Meluri area of Nagaland Power System of NER

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

Date (दिनांक): 15-06-2025

1. Event Summary (घटना का सारांश):

Meluri area of Nagaland Power System was connected with rest of NER Grid through 132kV Kohima-Meluri line.

At 03:20 Hrs of 05-06-2025, 132kV 132 kV Kohima - Meluri line tripped. Due to tripping of this element, Meluri area of Nagaland Power System was isolated from NER Grid and collapsed due to no source available in this area.

Power supply is yet to be extended to Meluri area of Nagaland by charging 132kV Kohima-Meluri Line after getting clearance from Nagaland.

2. Time and Date of the Event (घटना का स मय और दिनांक): 03:20 Hrs of 05-06-2025

3. Event Category (ग्रिड घटना का प्रकार): GD-I

4. Location/Control Area (स्थान/नियंत्रण क्षेत्र): Meluri area of Nagaland Power System

5. Antecedent Conditions (पूर्ववर्ती स्थिति):

	Frequency in Hz	Regional Generation (MW)	Regional Demand (MW)
Pre-Event (घटना पूर्व)	49.94	2955	2001
Post Event (घटना के बाद)	49.94	2947	1981

Pre and post data of 1 minute before and after the event

Important Transmission Line/Unit if under outage (before the event))महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है(	NIL
Weather Condition (मौसम स्थिति)	Normal

6. **Load and Generation loss (लोड और जेनरेशन हानि):** Load loss of 4 MW

7. **Duration of interruption (रुकावट की अवधि):** 27 min

8. **Network across the affected area (प्रभावित क्षेत्र का नक्शा):**

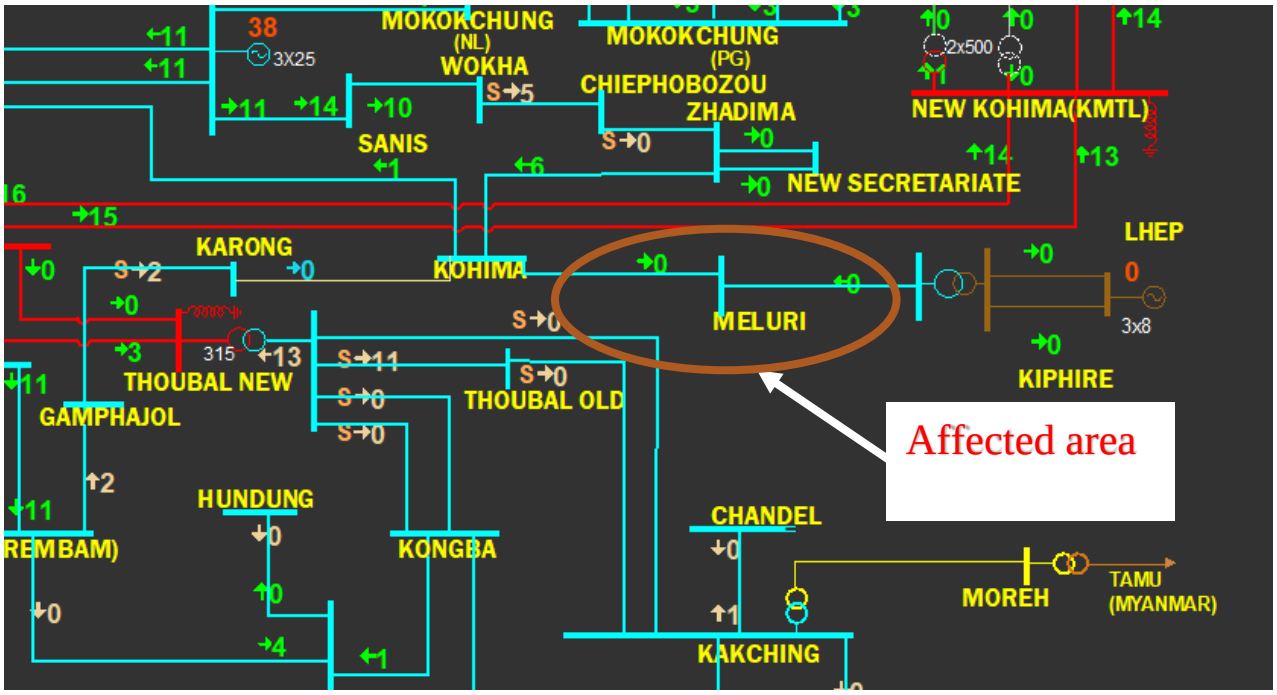


Figure 1: Network across the affected area

9. **Details of Equipment Failure (if any during the event) (उपकरण विफलता का विवरण):** **NIL**

10. **Major Elements Tripped (प्रमुख ट्रिपिंग):**

Sl no	Name	Trip time (hh:mm)	Restoration time (hh:mm)	Relay End 1	Relay End 2
1	132kV Kohima-Meluri Line	03:20	03:47	O/C, E/F, R-E Tripped & DP, Z II, 75.21 kM initiated	No tripping

11. **Event Analysis (Based on PMU, SCADA & DR) (घटना का विश्लेषण):**

As per the DR analysis of Kohima end High resistive, B-E fault of gradually increasing fault current (Ir: 0.46 kA & In: 0.41 kA) cleared from Kohima end on operation of backup OC & EF in 213 msecs. Also, ZII function picked up after 85 msecs from the initiation of the fault but tripped occurred on backup OC & EF.

12. Protection/Operational issues observed (सुरक्षा/परिचालन संबंधी समस्या):

NIL

13. Action Taken/Remedial Measures (सुधारात्मक उपाय): NIL

14. Non-compliance observed (विनियमन का गैर-अनुपालन):

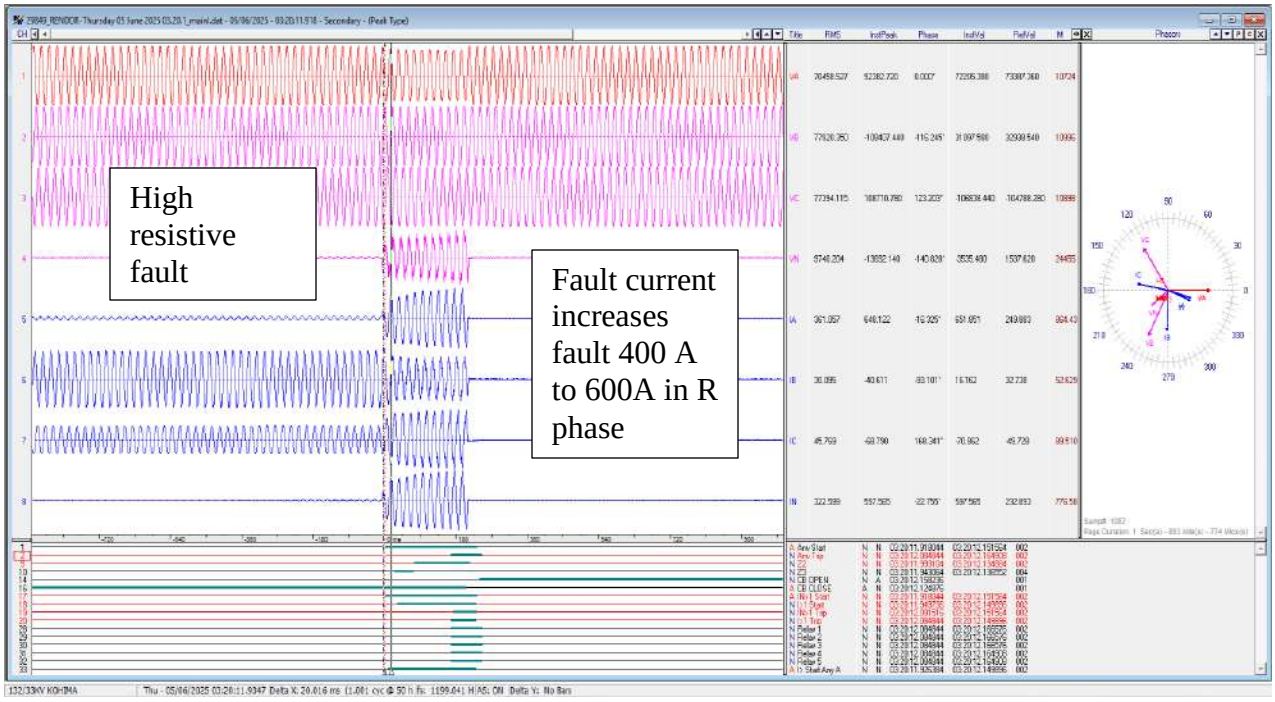
Sl. No.	Issues	Regulation Non-Compliance	Utilities
1.	**Flash Report submitted within 8hrs?**	IEGC section 37.2 (b)	***DoP, Nagaland***
2.	**Whether DR/EL provided within 24 Hours?**	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	-
3.	**Detailed Report submitted within 7 days?**	IEGC section 37.2 (e)	***Not submitted by DoP, Nagaland***
4.	**DR Time Synchronization Issues**	IEGC section 17.3	-
5.	**Any other non-compliance**		-

15. Key Lessons Learnt (प्रमुख अधिगम बिंदु):

- Proper maintenance related activities as per CEA regulations needs to be carried out.

Annexure 1: Disturbance recorder snips showing faults and digital signals

1.1. DR Snapshot of Kohima for 132kV Kohima-Meluri Line



ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

नागालैंड विद्युत प्रणाली के मेलुरी क्षेत्र में ब्लैकआउट की मसौदा रिपोर्ट/ Draft Report of Grid Disturbance in Blackout of Meluri area of Nagaland Power System of NER

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

Date (दिनांक): 15-06-2025

1. **घटना का सारांश/Event Summary:**

Meluri area of Nagaland Power System was connected with rest of NER Grid through 132kV Kohima-Meluri line.

At 04:07 Hrs of 05-06-2025, 132kV 132 kV Kohima - Meluri line tripped. Due to tripping of this element, Meluri area of Nagaland Power System was isolated from NER Grid and collapsed due to no source available in this area.

Power supply extended to Meluri area of Nagaland by charging 132kV Kohima-Meluri Line at 04:27 Hrs.

2. **घटना का स मय और दिनांक/Time and Date of the Event: 04:07 Hrs of 05-06-2025**

3. **ग्रिड व्यवधान का प्रकार/Event Category :** GD-I

4. **स्थान/नियंत्रण क्षेत्र/Location/Control Area:** Meluri area of Nagaland Power System

5. **पूर्ववर्ती स्थिति/Antecedent Conditions:**

	आवृत्ति (हर्ट्ज)/ Frequency in Hz	क्षेत्रीय पीढ़ी (मेगावाट)/Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट)/ Regional Demand (MW)
Pre-Event (घटना पूर्व)	49.94	3060	1946
Post Event (घटना के बाद)	49.94	3065	1930

Pre and post data of 1 minute before and after the event

महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है/ Important Transmission Line/Unit if under outage (before the event)	NIL

मौसम स्थिति/ Weather Condition	Normal

6. **लोड और जेनरेशन हानि /Load and Generation loss:** Load loss of 2 MW
7. **रुकावट की अवधि /Duration of interruption:** 20 min
8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

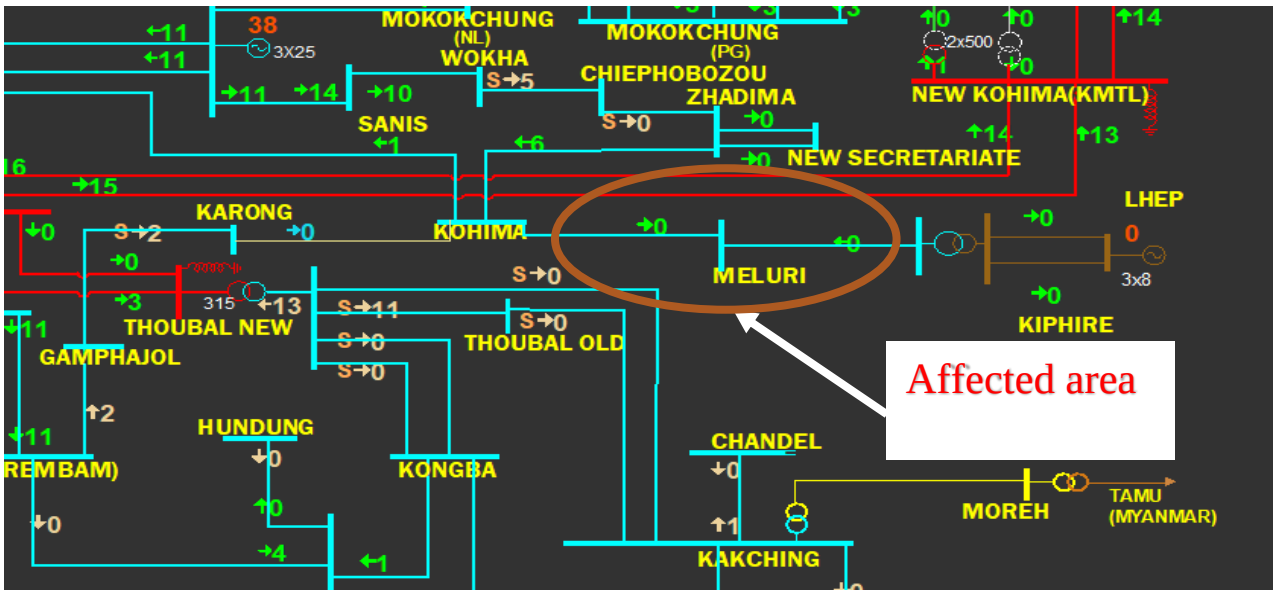


Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event):** NIL
10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्रम संख्या/ Sl no	नाम / Name	ट्रिपिंग का समय (एच एच: एम एम)/ Trip time (hh:mm)	पुनःस्थापना का समय (एच एच: एम एम)/ Restoration time (hh:mm)	रिले अंत 1/ Relay End 1	रिले अंत 2/ Relay End 2
1	132kV Kohima-Melluri Line	04:07	04:27	CB opened. Overcurrent picked up & no tripping command observed, Ir=In=0.1 kA	No tripping

11. घटना का विश्लेषण/ Event Analysis:

As per the DR analysis of Kohima end High resistive, B-E fault (Ir: 0.1 kA & In: 0.1 kA) cleared from Kohima end in 1340 msecs. The overcurrent protection initiated at 04:07:18.595 Hrs but no tripping command issued by the relay. CB opening observed after 1322 msecs.

12. सुरक्षा/परिचालन संबंधी समस्या /Protection/Operational issues observed:

Which protection issued the trip command is not clear from the DR.

13. की गई कार्रवाई/उपचारात्मक उपाय /Action Taken/Remedial Measures: NIL

14. विनियमन का गैर-अनुपालन /Non-compliance observed:

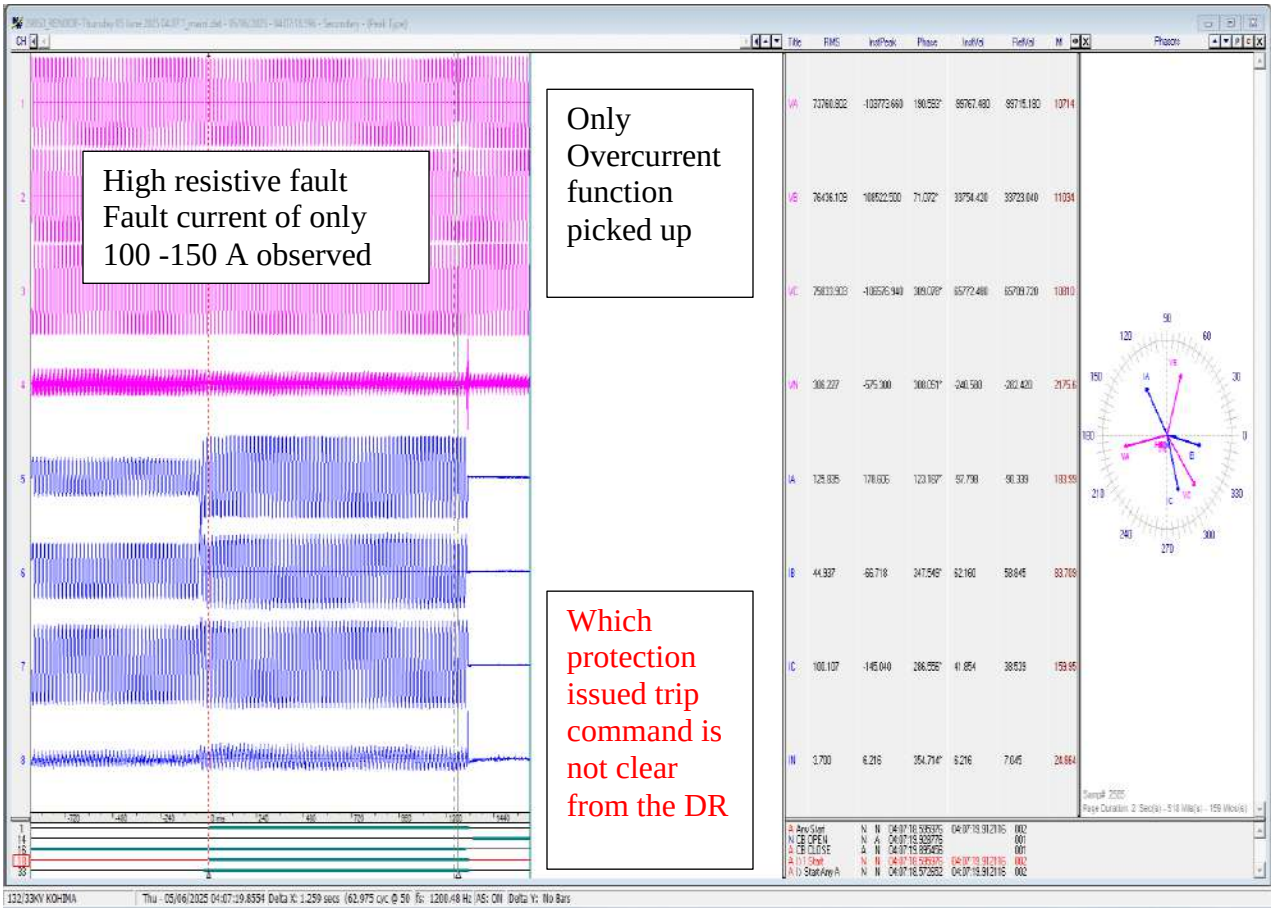
Sl. No.	Issues	Regulation Non-Compliance	Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	*DoP, Nagaland*
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	-
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	*Not submitted by DoP, Nagaland*
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	-
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. प्रमुख शिक्षाएँ /Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.

परिशिष्ट /Annexure 1: Disturbance recorder snips showing faults and digital signals

1.1. DR Snapshot of Kohima for 132kV Kohima-Meluri Line



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पूर्वोत्तर क्षेत्र की असम पावर सिस्टम के ढालिगांव, गोसाईगांव, बरपेटा, एपीएम तथा बारनगर क्षेत्रों का आंशिक लोड में ग्रिड व्यवधान की मसौदा रिपोर्ट/ Draft Report of Grid Disturbance in Dhaligaon, Gossaigaon, Barpeta, APM and part load of Barnagar areas of Assam Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 16-06-2025

1. **घटना का सारांश/Event Summary:**

Dhaligaon, Gossaigaon, Barpeta**,** APM and part load of Barnagar areas of Assam Power System were connected with rest of NER Grid via 132kV BTPS - Dhaligaon 1 & 2 lines. 132 kV Gauripur-Gossaigaon was open to avoid overloading of 132 kV Bilasipara-Gauripur line and 132 kV Barpeta-Nalbari line was kept open to avoid overloading of 132 kV BTPS - Dhaligaon D/C lines.

At 05:18 Hrs of 09-06-2025, 132kV BTPS - Dhaligaon 1 & 2 lines tripped. Due to tripping of these elements, Dhaligaon, Gossaigaon, Barpeta**,** APM and part load of Barnagar areas of Assam Power System were isolated due to no source available in these areas

2. **घटना का समय और दिनांक/Time and Date of the Event:** 05:18 Hrs of 09-06-2025
3. **ग्रिड व्यवधान का प्रकार/Event Category Category:** GD-I
4. **स्थान/नियंत्रण क्षेत्र/Location/Control Area:** Dhaligaon, Gossaigaon, Barpeta, APM and part load of Barnagar areas of Assam Power System
5. **पूर्ववर्ती स्थिति/Antecedent Conditions:**

	आवृत्ति (हर्ट्ज)/ Frequency in Hz	क्षेत्रीय पीढ़ी (मेगावाट)/ Regional Generation (MW)	क्षेत्रीय डिमांड (मेगावाट)/ Regional Demand (MW)
Pre-Event (घटना पूर्व)	50.01	2463	2546
Post Event (घटना के बाद)	50.01	2541	2418

Pre and post data of 1 minute before and after the event

महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है/ Important Transmission Line/Unit if under outage (before the event)	132 kV Gauripur-Gossaigaon was open to avoid overloading of 132 kV Bilasipara-Gauripur line and 132 kV Barpeta-Nalbari line was kept open to avoid overloading of 132 kV BTPS - Dhaligaon D/C lines
मौसम स्थिति/ Weather Condition	Normal

6. **<u>लोड और जेनरेशन नुकसान /Load and Generation loss:</u>** Load loss of 100 MW

7. **<u>व्यवधान की अवधि /Duration of interruption:</u>** 28 min

8. **<u>प्रभावित क्षेत्र का नक्शा /Network across the affected area across the affected area:</u>**

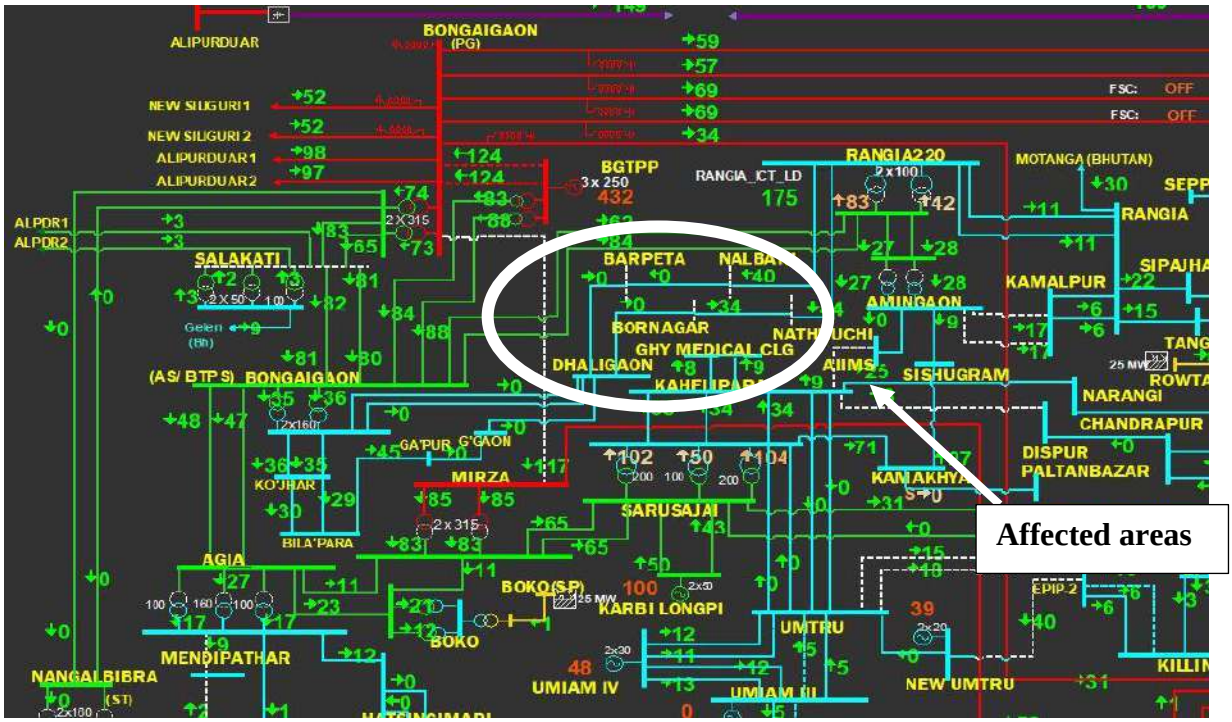


Figure 1: Network across the affected area

9. **<u>उपकरण विफलता का विवरण /Details of Equipment Failure (if any during the event)</u> : NIL**

10. प्रमुख ट्रिपिंग/ Major Elements Tripped:

क्रम संख्या/ Sl no	नाम / Name	ट्रिपिंग का समय (एच एच: एम एम)/ Trip time (hh:mm)	पुनःस्थापना का समय (एच एच: एम एम)/ Restoration time (hh:mm)	रिले संकेत एंड 1/ Relay End 1	रिले संकेत एंड 2/ Relay End 2
1	132kV BTPS - Dhaligaon 1 line	05:18 Hrs	05:48 Hrs	DP, ZIII, R-Y-B	No Tripping
2	132kV BTPS - Dhaligaon 2 line	05:18 Hrs	05:46 Hrs	DP, ZIII, R-Y-B	No Tripping

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):

As per PMU analysis of feeder 220 kV Salakati-BTPS 1 line, R-Y-B Ph fault observed at 05:18:13.320 Hrs and was cleared within 840 msec. As per relay indications received from Assam, 132kV BTPS - Dhaligaon DC lines tripped on ZIII, R-Y-B from BTPS end and No Tripping from Dhaligaon end.

Proper analysis could not be done due to non-submission of FIR/DR/EL by Assam in the tripping portal.

12. सुरक्षा/परिचालन संबंधी समस्या / Protection/Operational issues observed :NIL

13. सुधारात्मक उपाय /Action Taken/Remedial Measures:

Power supply was extended to Dhaligaon, Gossaigaon, Barpeta**,** APM and part load of Barnagar areas of Assam Power System by charging 132kV BTPS - Dhaligaon 1 line and 132kV BTPS - Dhaligaon 2 line at 05:46 Hrs and 05:48 Hrs of 09-06-2025 respectively

14. विनियमन का गैर-अनुपालन/ Non-compliance observed:

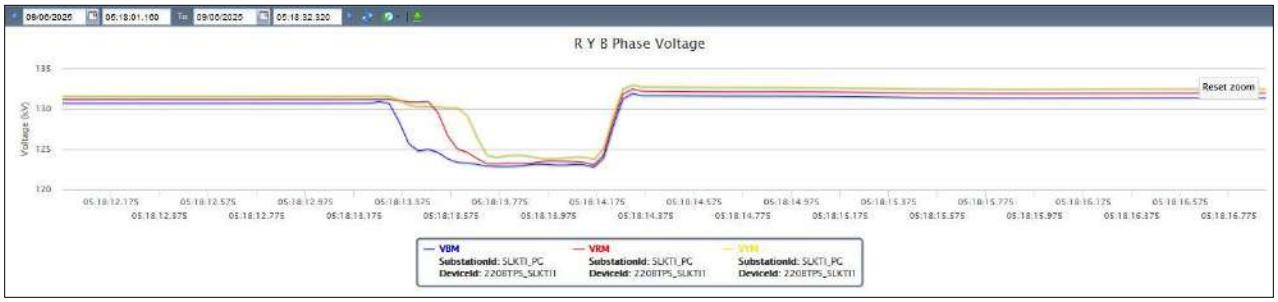
Sl. No.	Issues	Regulation Non-Compliance	Utilities
1.	**क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?**	IEGC section 37.2 (b)	***AEGCL***
2.	**क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?**	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	***AEGCL***

3.	**क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?**	IEGC section 37.2 (e)	***AEGCL***
4.	**डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues**	IEGC section 17.3	-
5.	**कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance**		

15. <u>प्रमुख शिक्षाएँ/ Key Lessons Learnt (प्रमुख अधिगम बिंदु):</u>

- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of protection system needs to be ensured at all times.

<u>परिशिष्ट 1: पीएमयू सिग्नल/ Annexure 1: PMU Signal:</u>



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पूर्वोत्तर क्षेत्र की असम विद्युत प्रणाली का टांगला क्षेत्र में ग्रिड व्यवधान की मसौदा रिपोर्ट/ Draft Report of Grid Disturbance in Tangla area of Assam Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

Date (दिनांक):16-06-2025

1. **घटना का सारांश/Event Summary:**

Tangla area of Assam Power System was connected with rest of NER Grid via 132 kV Rangia - Tangla Line. 132 kV Tangla-Rowta line was open to avoid over loading of 132 kV Rangia-Motonga line.

At 09:48 Hrs of 09-06-2025, 132 kV Rangia - Tangla line tripped. Due to tripping of this element, Tangla area of Assam Power System was isolated due to no source available in this area.

Power supply was extended to Tangla area of Assam Power System by charging 132kV Rangia-Tangla line at 09:55 Hrs of 09.06.2024.

2. **घटना का समय और दिनांक/Time and Date of the Event:** 09:48 Hrs of 09-06-2025

3. **ग्रिड व्यवधान का प्रकार/ Event Category:** GD-I

4. **स्थान/नियंत्रण क्षेत्र/Location/Control Area:** Tangla area of Assam Power System

5. **पूर्ववर्ती स्थिति/Antecedent Conditions:**

	आवृत्ति (हर्ट्ज)/ Frequency in Hz	क्षेत्रीय पीढ़ी (मेगावाट)/ Regional Generation (MW)	क्षेत्रीय डिमांड (मेगावाट)/ Regional Demand (MW)
घटना पूर्व/Pre-Event	49.97	2330	2702
घटना के बाद/ Post Event	49.97	2348	2749

Pre and post data of 1 minute before and after the event

महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है/ Important Transmission	132 kV Tangla-Rowta line was open to avoid over loading of 132 kV Rangia-Motonga line.

Line/Unit if under outage (before the event)	
मौसम स्थिति/ Weather Condition	Normal

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load loss of 13 MW

7. **व्यवधान की अवधि /Duration of interruption:** 7 min

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area across the affected area** :

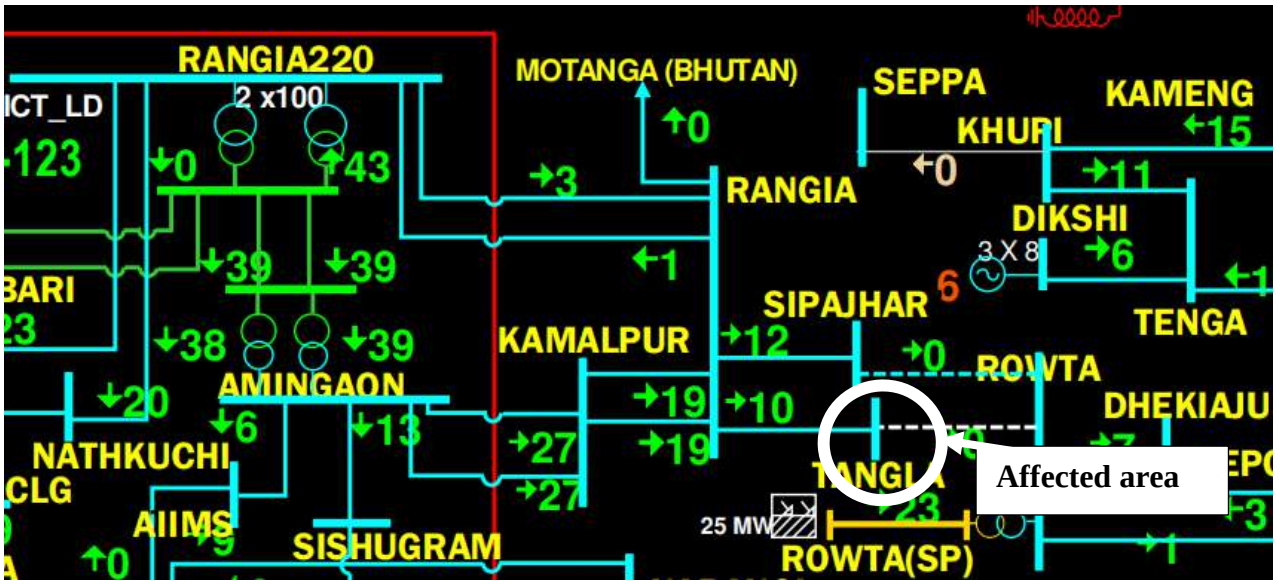


Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण /Details of Equipment Failure (if any during the event):** NIL

10. **प्रमुख ट्रिपिंग /Major Elements Tripped :**

क्रम संख्या/ Sl no	नाम / Name	ट्रिपिंग का समय (एच एच: एम एम)/ Trip time (hh:mm)	पुनःस्थापना का समय (एच एच: एम एम)/ Restoration time (hh:mm)	रिले संकेत एंड 1/ Relay End 1	रिले संकेत एंड 2/ Relay End 2
1	132 kV Rangia – Tangla	09:48 Hrs	09:55 Hrs	DP, ZI, B-E, FD: 10.4 kms	No Tripping (radial)

11. **घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):**

As per PMU analysis of feeder 220 kV Salakati-BTPS 1 line, B Ph -E fault observed at 09:48:05.800 Hrs and was cleared within 120 msec. As per relay indications received from

Assam, 132 kV Rangia – Tangla tripped on DP, ZI, B-E, FD: 10.4 kms from Rangia end and No Tripping from Tangla end.

Proper analysis could not be done due to non-submission of FIR/DR/EL by Assam in the tripping portal.

12. **सुरक्षा/परिचालन संबंधी समस्या / Protection/Operational issues observed:** NIL

13. **सुधारात्मक उपाय /Action Taken/Remedial Measures:**

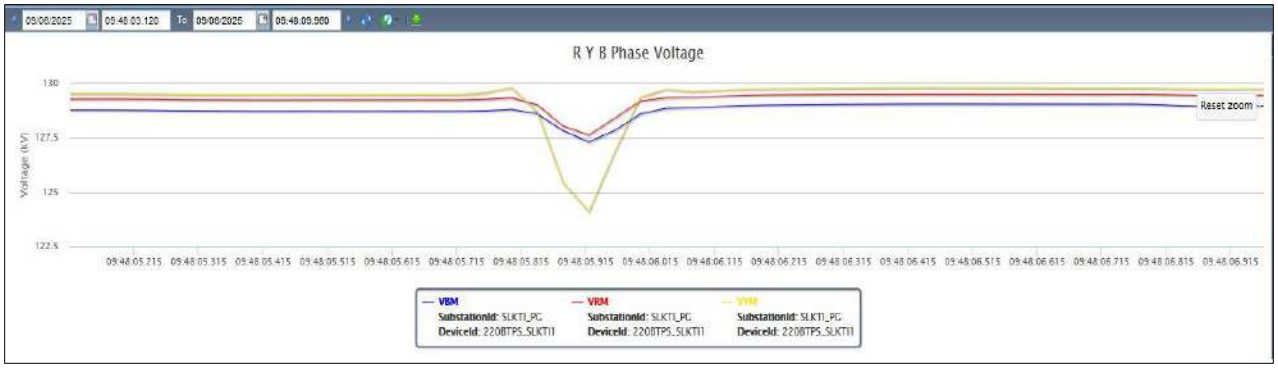
14. **विनियमन का गैर-अनुपालन/ Non-compliance observed:**

Sl. No.	Issues	Regulation Non-Compliance	Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	*AEGCL*
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	*AEGCL*
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	*AEGCL*
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	-
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		

15. **प्रमुख शिक्षाएँ/ Key Lessons Learnt:**

- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of protection system needs to be ensured at all times.

परिशिष्ट 1: पीएमयू सिग्नल/ Annexure 1: PMU Signal:



ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र की त्रिपुरा विद्युत प्रणाली का उदयपुर क्षेत्र में ग्रिड व्यवधान की मसौदा रिपोर्ट/ Draft Report of Grid Disturbance in Udaipur area of Tripura Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 16-06-2025

1. **घटना का सारांश/Event Summary:**

Udaipur area of Tripura Power System was connected with rest of NER Grid via 132 KV Palatana- Udaipur line. 132kV Monarchak - Udaipur Line was under planned shutdown from 09:25 Hrs of 09-06-2025.

At 12:23 Hrs of 09-06-2025, 132 kV Palatana-Udaipur line was hand tripped. Due to outage of this element, Udaipur area of Tripura Power System was isolated due to no source available in this area.

2. **घटना का समय और दिनांक/Time and Date of the Event: 12:23 Hrs of 09-06-2025**
3. **ग्रिड व्यवधान का प्रकार/Event Category: GD-I**
4. **स्थान/नियंत्रण क्षेत्र/Location/Control Area: Udaipur area of Tripura Power System**
5. **पूर्ववर्ती स्थिति/Antecedent Conditions:**

	आवृत्ति (हर्ट्ज)/ Frequency in Hz	क्षेत्रीय पीढ़ी (मेगावाट)/ Regional Generation (MW)	क्षेत्रीय डिमांड (मेगावाट)/ Regional Demand (MW)
घटना पूर्व/Pre-Event	50.06	2301	2834
घटना के बाद/ Post Event	50.07	2302	2836

Pre and post data of 1 minute before and after the event

महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है/ Important Transmission Line/Unit if under outage (before the event)	132kV Monarchak - Udaipur Line was under planned shutdown from 09:25 Hrs of 09-06-2025.

मौसम स्थिति/ Weather Condition	Normal

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load loss of 50 MW

7. **व्यवधान की अवधि /Duration of interruption:** 1 Hr 36 mins

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

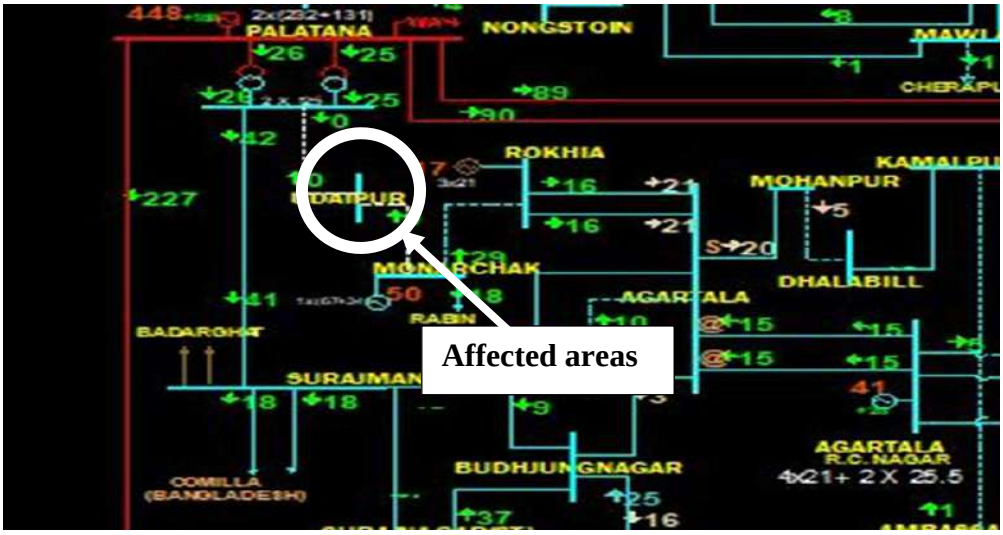


Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event):**NIL

10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्रम संख्या/ Sl no	नाम / Name	ट्रिपिंग का समय (एच एच: एम एम)/ Trip time (hh:mm)	पुनःस्थापना का समय (एच एच: एम एम)/ Restoration time (hh:mm)	रिले संकेत एंड 1/ Relay End 1	रिले संकेत एंड 2/ Relay End 2
1	132 kV Palatana-Udaipur line	12.23 Hrs	13:59 Hrs	Hand tripped by Tripura at Udaipur due to transformer flashing	

11. **घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):**

As per DR analysis of Udaipur end of 132 kV Palatana- Udaipur line, ZIV started at Udaipur end (Ir-5.4 kA, Ib-1.02 kA, In-3.7 kA).

Root cause as per Flash report submitted by TSECL: 132 kV Palatana-Udaipur line was manually tripped 12:22 Hrs due to 132/66 kV, 10 MVA Auto transformer flashing and firing at Udaipur S/S.

12. **सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues:** NIL

13. **सुधारात्मक उपाय /Action Taken/Remedial Measures:**

66kV bus at Udaipur was isolated from 132 KV Udaipur S/S and power supply was extended to Udaipur area of Tripura Power system by charging 132 kV Udaipur- Monarchak line at 14:00 Hrs of 09.06.2025.

14. **विनियमन का गैर-अनुपालन/Non-compliance observed:**

क्रम संख्या/ Sl. No..	अनुपालन संबंधी समस्याएँ/ Issues	अनुपालन उल्लंघन से संबंधित विनियमन/ Regulation Non-Compliance	बिजली उपयोगिता संस्थाएँ/ Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	-
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	-
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	***TSECL***
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	-
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		

15. **प्रमुख शिक्षाएँ/ Key Lessons Learnt:**

- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of protection system needs to be ensured at all times.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर स्नैपशॉट्स/ Annexure 1: DR Snapshot:

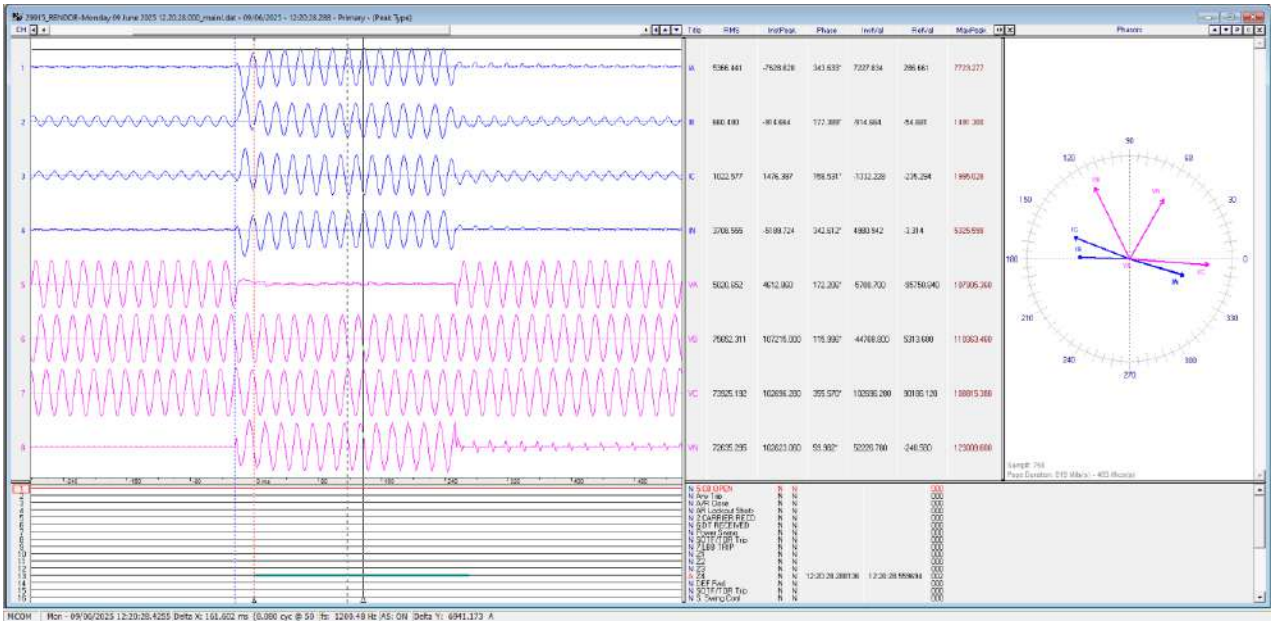


Fig: DR Snapshot of Udaipur end for 132 kV Palatana- Udaipur line

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
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Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र की मणिपुर विद्युत प्रणाली का निंगथौखोंग क्षेत्र में ग्रिड व्यवधान की मसौदा रिपोर्ट/ Draft Report of Grid Disturbance in Ningthoukhong area of Manipur Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date:16-06-2025

1. **घटना का सारांश /Event Summary:**

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.

Power was extended to Ningthoukhong area of Manipur Power System by charging 132 kV Imphal- Ningthoukhong 2 line at 15:11 Hrs of 09-06-2025.

2. **घटना का समय और दिनांक /Time and Date of the Event:** 13:34 Hrs of 09-06-2025
3. **ग्रिड व्यवधान का प्रकार/Event Category:** GD-I
4. **स्थान/नियंत्रण क्षेत्र/ Location/Control Area:**
5. **पूर्ववर्ती स्थिति/Antecedent Conditions:**

	आवृत्ति (हर्ट्ज)/ Frequency in Hz	क्षेत्रीय पीढ़ी (मेगावाट)/ Regional Generation (MW)	क्षेत्रीय डिमांड (मेगावाट)/ Regional Demand (MW)
घटना पूर्व/Pre-Event	50.30	2169	2942

घटना के बाद/ Post Event	50.30	2208	2931

Pre and post data of 1 minute before and after the event

महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है/ Important Transmission Line/Unit if under outage (before 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
मौसम स्थिति/ Weather Condition	Normal

6. **लोड और जेनरेशन नुकसान/Load and Generation loss**: Load loss of 9 MW

7. **व्यवधान की अवधि/Duration of interruption:** 1 Hr 37 mins

8. **प्रभावित क्षेत्र का नक्शा/ Network across the affected area:**

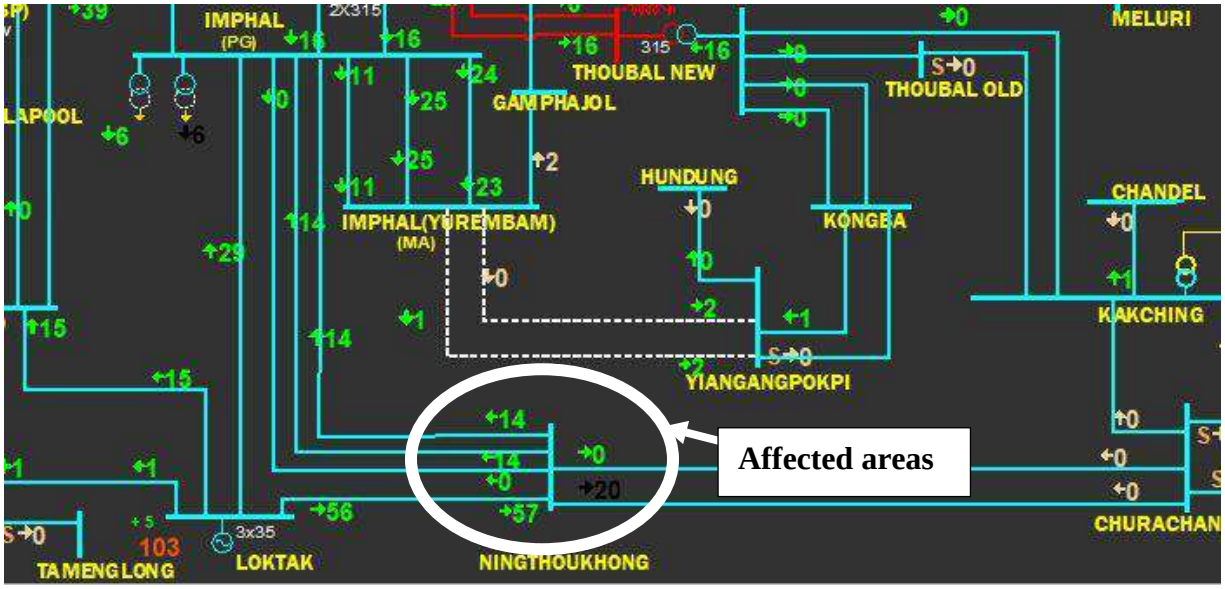


Figure 1: Network across the affected area

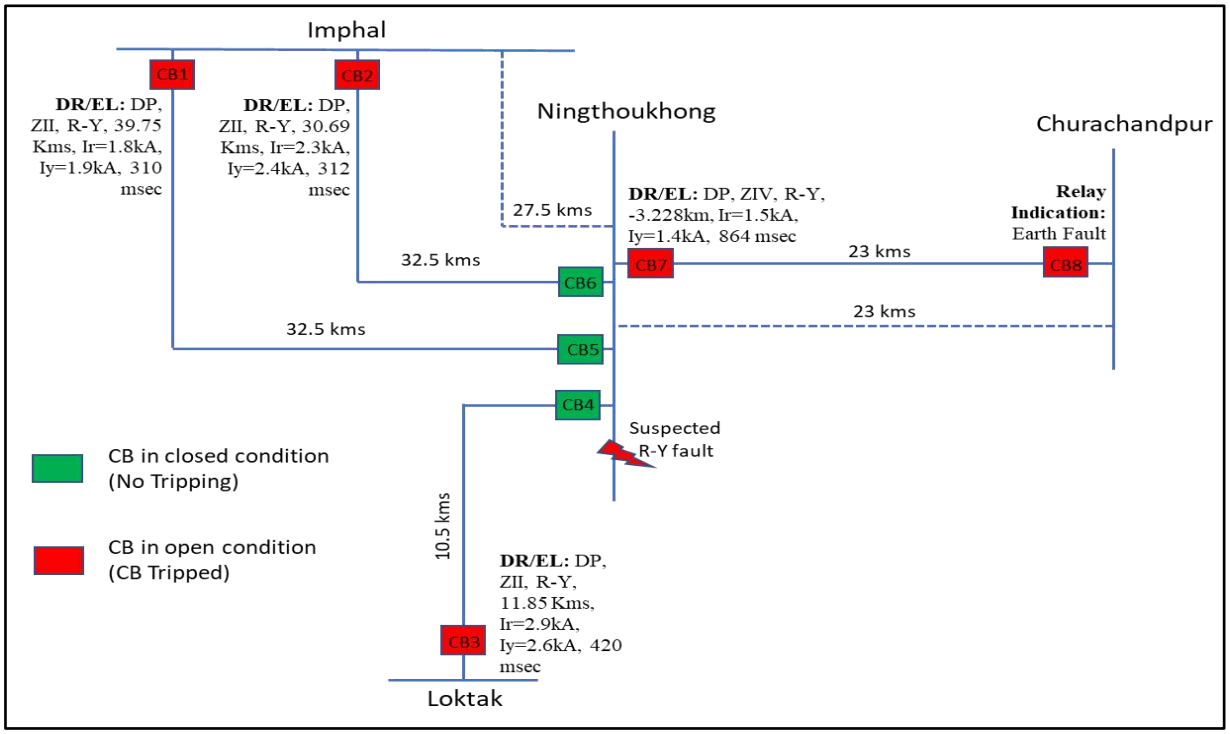
9. **उपकरण विफलता का विवरण /Details of Equipment Failure (if any during the event):** NIL

10. **प्रमुख ट्रिपिंग/Major Elements Tripped (प्रमुख ट्रिपिंग):**

क्रम संख्या/ Sl no	नाम / Name	ट्रिपिंग का समय (एच एच: एम एम)/ Trip time	पुनःस्थापना का समय (एच एच: एम एम)/ Restoration time (hh:mm)	रिले संकेत एंड 1/ Relay End 1	रिले संकेत एंड 2/ Relay End 2

		(hh:mm)			
1	132 kV Imphal-Ningthoukhong 2	13:34 Hrs	15:11 Hrs	DP, ZII, R-Y, 30.69 Kms	No Tripping
2	132 kV Imphal-Ningthoukhong 3	13:34 Hrs		DP, ZII, R-Y, 39.75 Kms	No Tripping
3	132 kV Loktak-Ningthoukhong	13:34 Hrs	15:20 Hrs	DP, ZII, R-Y, 11.85 Kms	No Tripping
4	132kV Ningthoukhong-Churachandpur 2	13:34 Hrs	15:26 Hrs	DP, ZIV, R-Y, -3.228km	Earth Fault

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):



As per DR analysis of 132 kV Imphal (PG) - Ningthoukong 2 line, R-Y Ph fault (Ir-2.3kA, Iy-2.4kA) observed at 13:34:11.792 Hrs and was cleared within 312 msec on DP, ZII, R-Y, 30.69 Kms. At 132 kV Imphal (PG) - Ningthoukong 3 line, R-Y Ph fault (Ir-1.8kA, Iy-1.9kA) observed at Imphal end and fault cleared in 310 msec on DP, ZII, R-Y, 39.75 Kms. No Tripping at Ninthoukong end for both lines.

As per EL analysis of Loktak end for Imphal line, R-Y fault (Ir-2.9kA, Iy-2.6kA) cleared from Loktak end on DP, ZII, R-Y, FD: 11.85 Kms. No tripping at Ninthoukong end. DR from Loktak end does not open due to invalid sampling issues.

For 132 kV Ningthoukhong – Churachandpur 2 line, as per DR analysis from Ninthoukong end, R-Y Ph (Ir-1.5kA, Iy-1.4kA) fault observed at 13:34:19.330 Hrs and ZIV pick up

observed after 398 msec and CB opened on DP, ZIV, R-Y, -3.228km after 462 msec. Total fault clearing time- 864 msec. No FIR/DR/EL submitted from Churachandpur. As per relay indications received, Earth Fault operated at Churachandpur.

Likely R-Y Ph fault is in the Ningthoukong substation or in the downstream.

12. <u>सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:</u>

13. <u>सुधारात्मक उपाय /Action Taken/Remedial Measures (सुधारात्मक उपाय):</u>

Power restored in Ningthoukhong area of Manipur Power System by charging 132kV Imphal-Ningthoukhong 2 line at 15:11 Hrs on 09-06-2025.

14. <u>विनियमन का गैर-अनुपालन / Non-compliance observed:</u>

Sl. No.	Issues	Regulation Non-Compliance	Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	***MSPCL***
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	***MSPCL***
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	***MSPCL***
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	-
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		

15. <u>प्रमुख शिक्षाएँ/ Key Lessons Learnt:</u>

- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of protection system needs to be ensured at all times.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

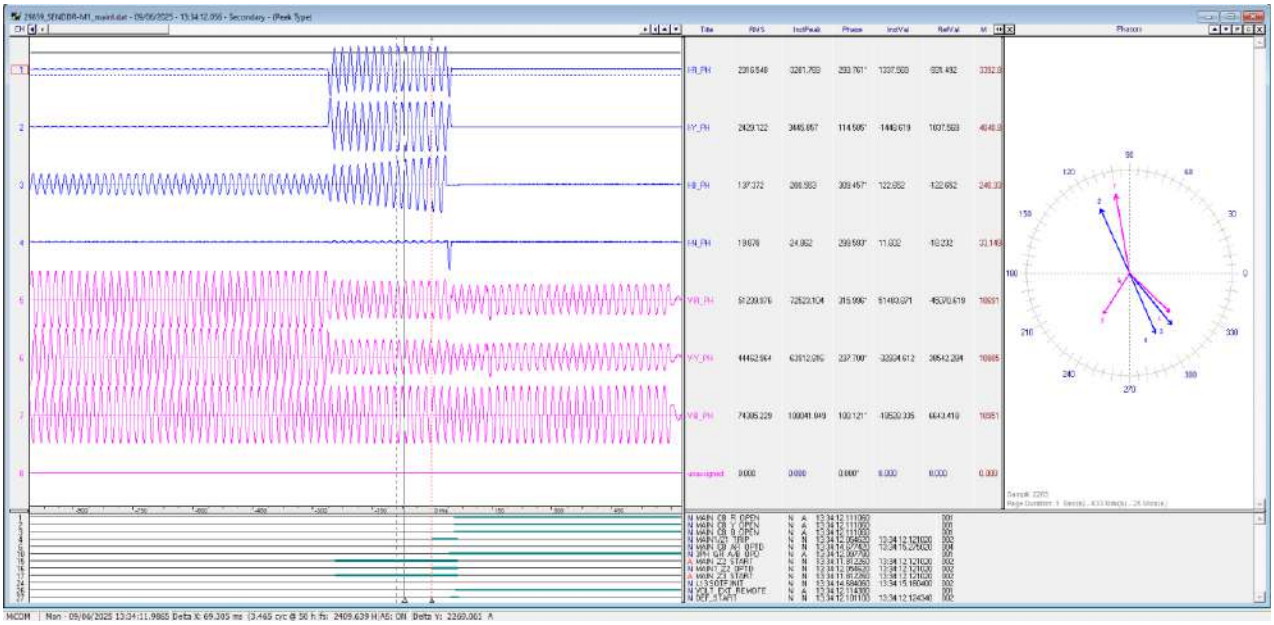


Fig 1: DR snapshot of Imphal(PG) for Ninthoukong 2 line

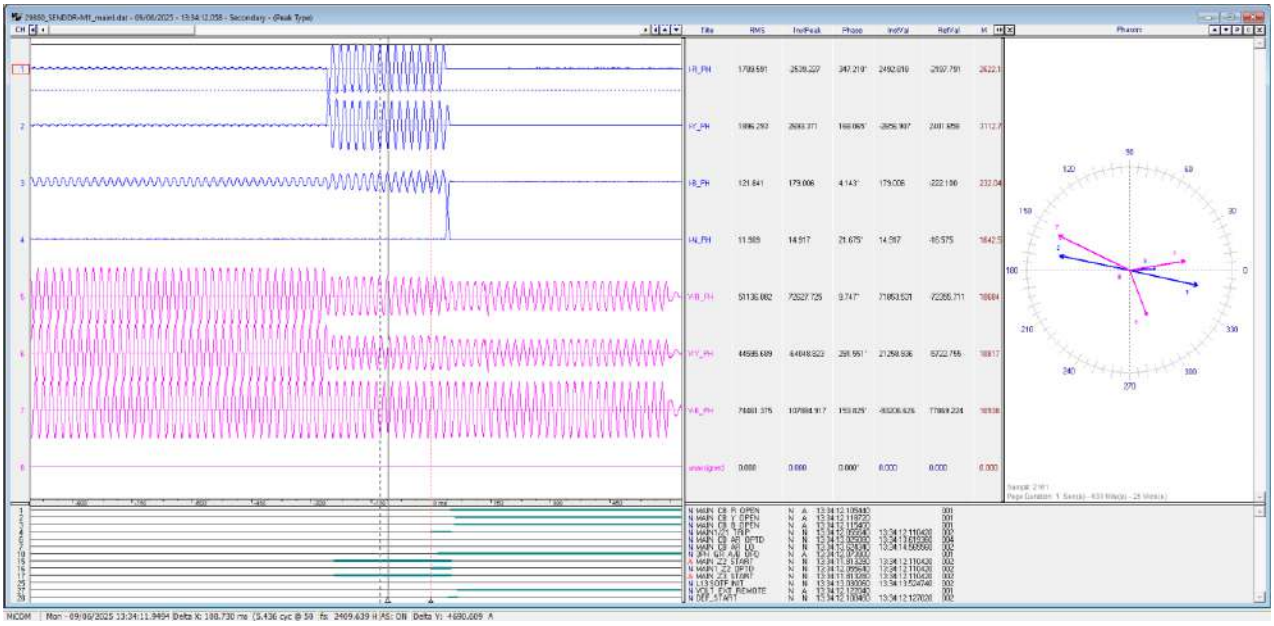


Fig 2: DR snapshot of Imphal(PG) for Ninthoukong 3 line

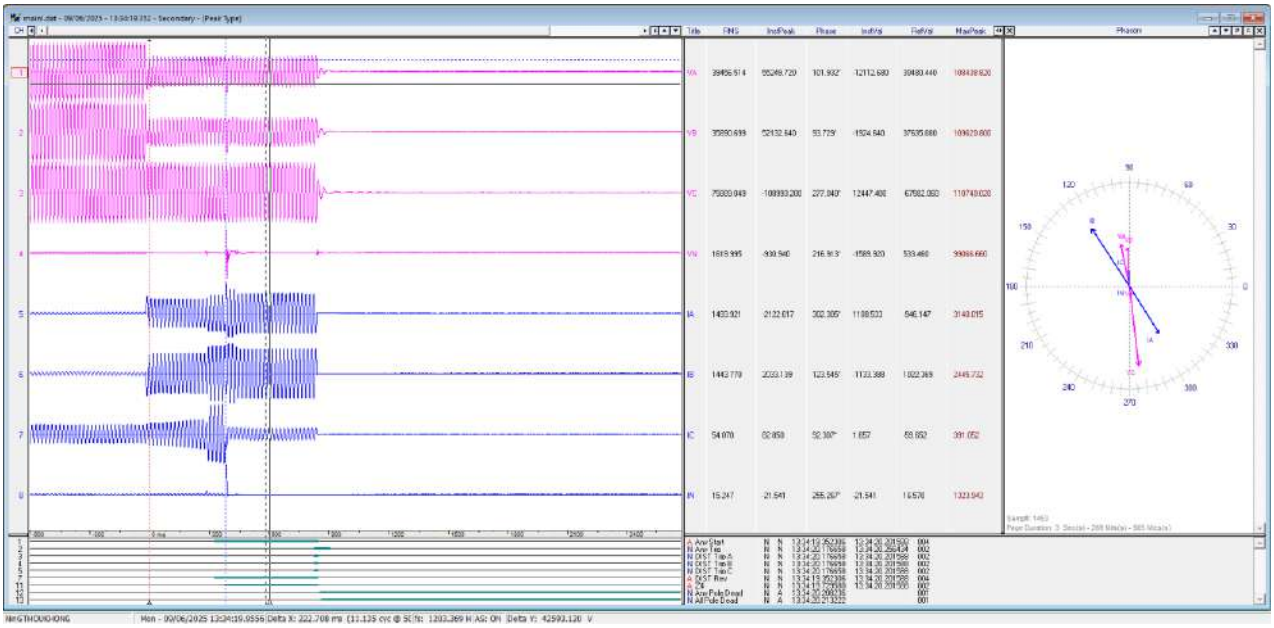
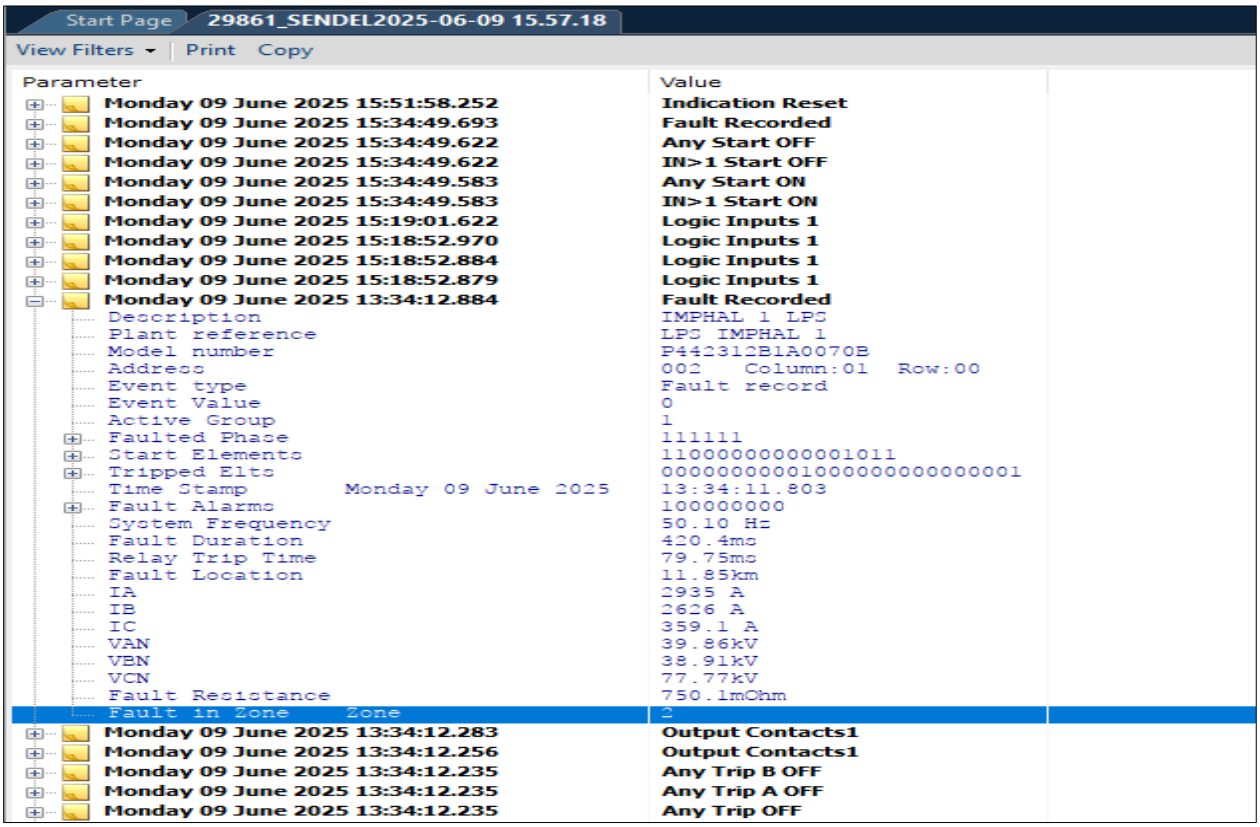


Fig 3: DR snapshot of Ninthoukong for Churachandpur 2 line



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View Filters | Print | Copy

Parameter	Value
Monday 09 June 2025 15:51:58.252	Indication Reset
Monday 09 June 2025 15:34:49.693	Fault Recorded
Monday 09 June 2025 15:34:49.622	Any Start OFF
Monday 09 June 2025 15:34:49.622	IN>1 Start OFF
Monday 09 June 2025 15:34:49.583	Any Start ON
Monday 09 June 2025 15:34:49.583	IN>1 Start ON
Monday 09 June 2025 15:19:01.622	Logic Inputs 1
Monday 09 June 2025 15:18:52.970	Logic Inputs 1
Monday 09 June 2025 15:18:52.884	Logic Inputs 1
Monday 09 June 2025 15:18:52.879	Logic Inputs 1
Monday 09 June 2025 13:34:12.884	Fault Recorded
Description	IMPHAL 1 LPS
Plant reference	LPS IMPHAL 1
Model number	P442312B1A0070B
Address	002 Column:01 Row:00
Event type	Fault record
Event Value	0
Active Group	1
Faulted Phase	111111
Start Elements	1100000000001011
Tripped Elts	0000000001000000000000001
Time Stamp Monday 09 June 2025	13:34:11.803
Fault Alarms	100000000
System Frequency	50.10 Hz
Fault Duration	420.4ms
Relay Trip Time	79.75ms
Fault Location	11.85km
IA	2935 A
IB	2626 A
IC	359.1 A
VAN	39.86kV
VBN	38.91kV
VCN	77.77kV
Fault Resistance	750.1mOhm
Fault in Zone Zone	2
Monday 09 June 2025 13:34:12.283	Output Contacts1
Monday 09 June 2025 13:34:12.256	Output Contacts1
Monday 09 June 2025 13:34:12.235	Any Trip B OFF
Monday 09 June 2025 13:34:12.235	Any Trip A OFF
Monday 09 June 2025 13:34:12.235	Any Trip OFF

Fig 4: EL snapshot of Loktak for Ninthoukong line

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र की त्रिपुरा विद्युत प्रणाली का धर्मनगर क्षेत्र और असम विद्युत प्रणाली का दुल्लावचेरा क्षेत्र में ग्रिड व्यवधान की मसौदा रिपोर्ट/ Draft Report of Grid Disturbance in Dharmanagar area of Tripura Power System and Dullavchera area of Assam Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 17-06-2025

1. **घटना का सारांश/Event Summary:**

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 & 132 kV Dullavchhera-Hailakandi lines.

At 18:45 Hrs of 10-06-2025, 132 kV Dharmanagar-PK Bari line & 132 kV Dullavchhera-Hailakandi line tripped. Due to tripping of this element, Dharmanagar area of Tripura Power System and Dullavchera area of Assam Power System were isolated due to no source available in these areas.

2. **घटना का समय और दिनांक/Time and Date of the Event**: 18:45 Hrs of 10-06-2025
3. **ग्रिड व्यवधान का प्रकार/Event Category**: GD-I
4. **स्थान/नियंत्रण क्षेत्र/Location/Control Area:** Dharmanagar area of Tripura Power System and Dullavchera area of Assam Power System
5. **पूर्ववर्ती स्थिति/Antecedent Conditions**:

	आवृत्ति (हर्ट्ज)/ Frequency in Hz	क्षेत्रीय पीढ़ी (मेगावाट)/ Regional Generation (MW)	क्षेत्रीय डिमांड (मेगावाट)/ Regional Demand (MW)
घटना पूर्व/Pre-Event	50.08	3086	3597
घटना के बाद/ Post Event	50.08	3128	3599

Pre and post data of 1 minute before and after the event

महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है/ Important Transmission Line/Unit if under outage (before the event)	NIL
मौसम स्थिति/ Weather Condition	Rainy

6. **<u>लोड और जेनरेशन नुकसान /Load and Generation loss</u>**: Load loss of 35 MW

7. **<u>व्यवधान की अवधि /Duration of interruption:</u>** 18 mins

8. **<u>प्रभावित क्षेत्र का नक्शा /Network across the affected area:</u>**

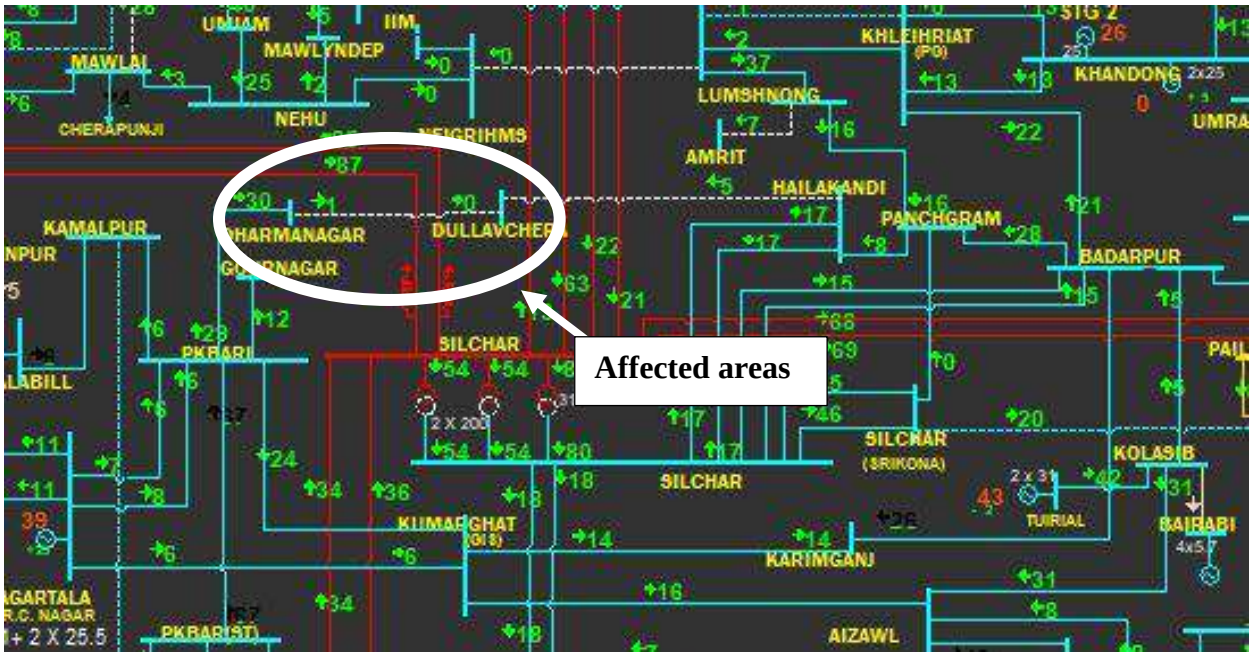


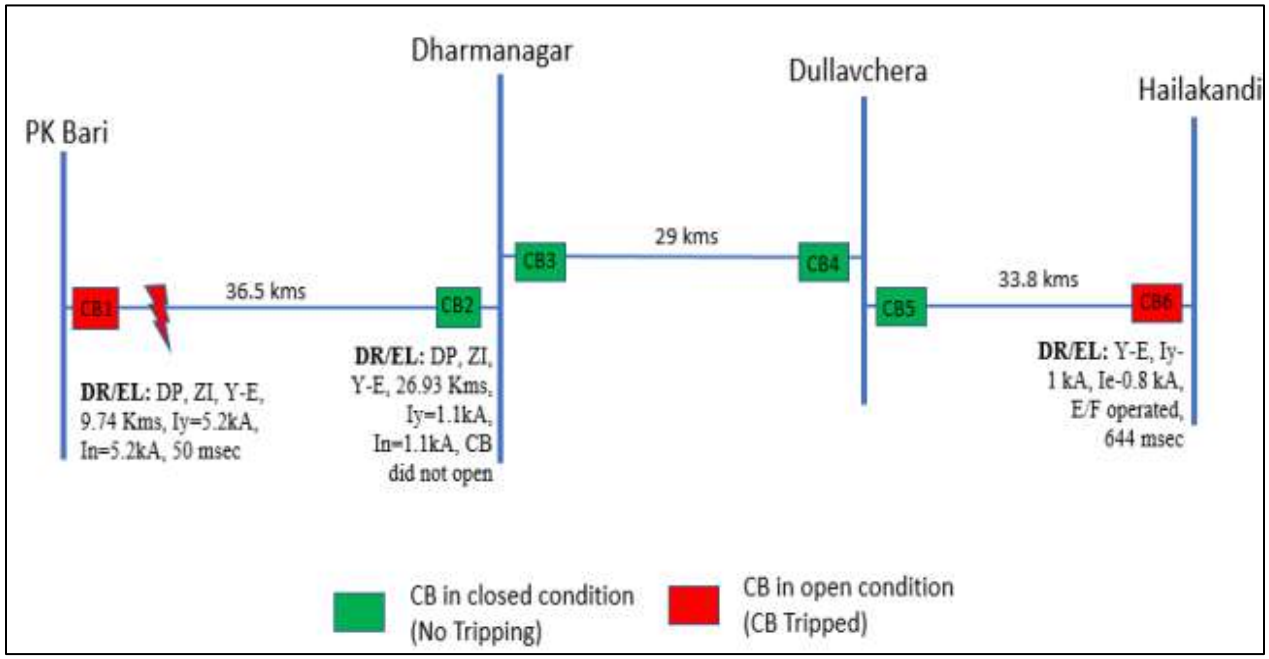
Figure 1: Network across the affected area

9. **<u>उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event):</u> NIL**

10. **<u>प्रमुख ट्रिपिंग /Major Elements Tripped:</u>**

क्रम संख्या/ Sl no	नाम / Name	ट्रिपिंग का समय (एच एच: एम एम)/ Trip time (hh:mm)	पुनःस्थापना का समय (एच एच: एम एम)/ Restoration time (hh:mm)	रिले संकेत एंड 1/ Relay End 1	रिले संकेत एंड 2/ Relay End 2
1	132kV PK Bari-Dharmanagar	18:45 Hrs	19:03 Hrs	DP, ZI, Y-E, 9.74 Kms	DP, ZI, Y-E, 26.93 Kms

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):



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 Dullavchhera & Hailakandi end. Fault cleared by tripping of healthy 132 kV Hailakandi-Dullavchhera line within 644 msec from Hailakandi end on operation of E/F (DT send).

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:

- 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.
- Dullavchhera CB (CB4) failed to clear the fault resulting in clearing of fault by tripping of 132 kV Hailakandi-Dullavchhera line.
- "CB status" not present in DR digital channel. DR digital channels need to be standardized as per recommendation in FOLD working group-3.
- 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 Dullavchhera Line which needs to be rectified.

13. **सुधारात्मक उपाय /Action Taken/Remedial Measures:** NIL

14. **विनियमन का गैर-अनुपालन/Non-compliance observed:**

क्रम संख्या/ Sl. No.	अनुपालन संबंधी समस्याएँ/ Issues	अनुपालन उल्लंघन से संबंधित विनियमन/ Regulation Non-Compliance	बिजली उपयोगिता संस्थाएँ/ Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	*TSECL, AEGCL*
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	-
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	*TSECL, AEGCL*
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	*TSECL*
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. **प्रमुख शिक्षाएँ/ Key Lessons Learnt:**

- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of protection system needs to be ensured at all times.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

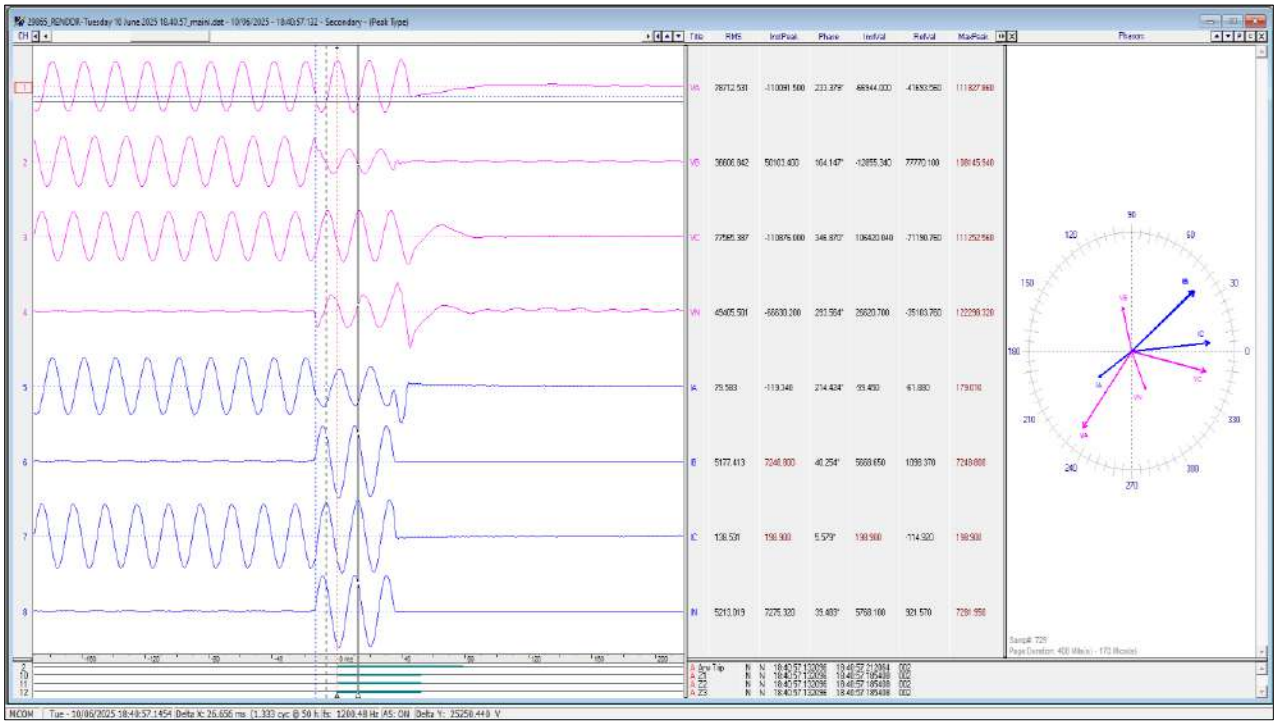


Fig 1: DR snapshot of PK Bari for 132kV Dharmanagar line

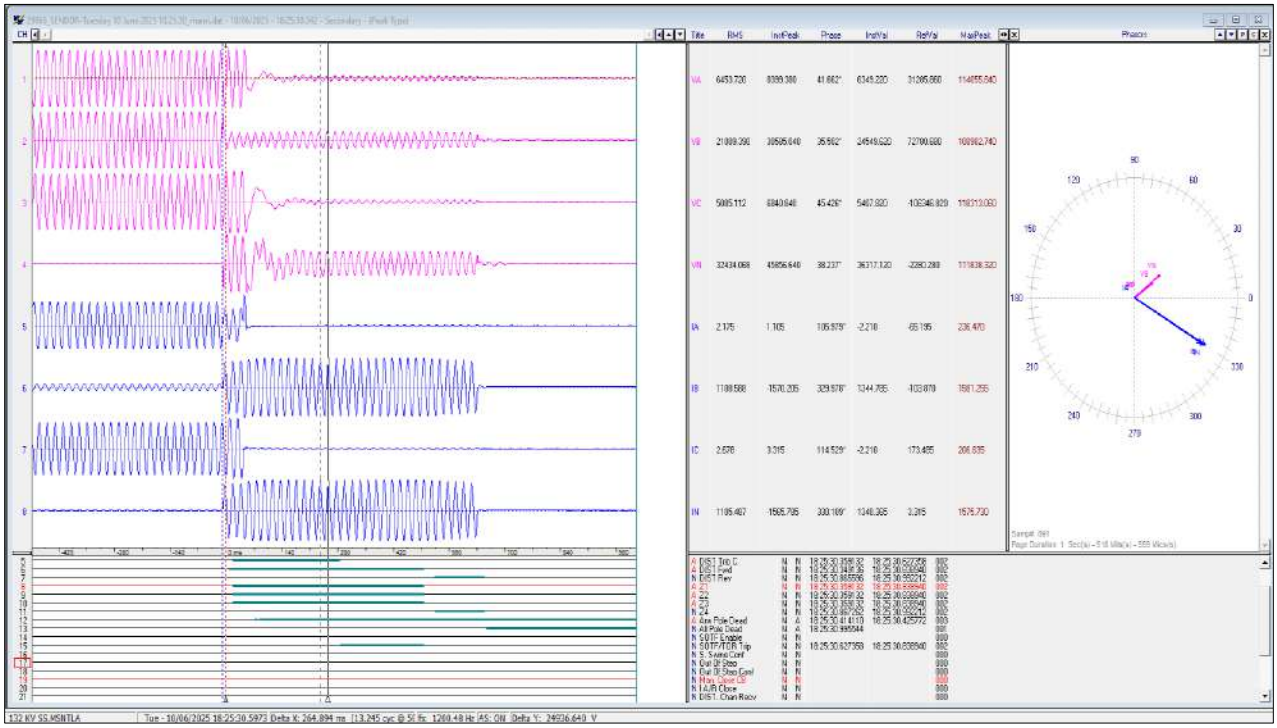
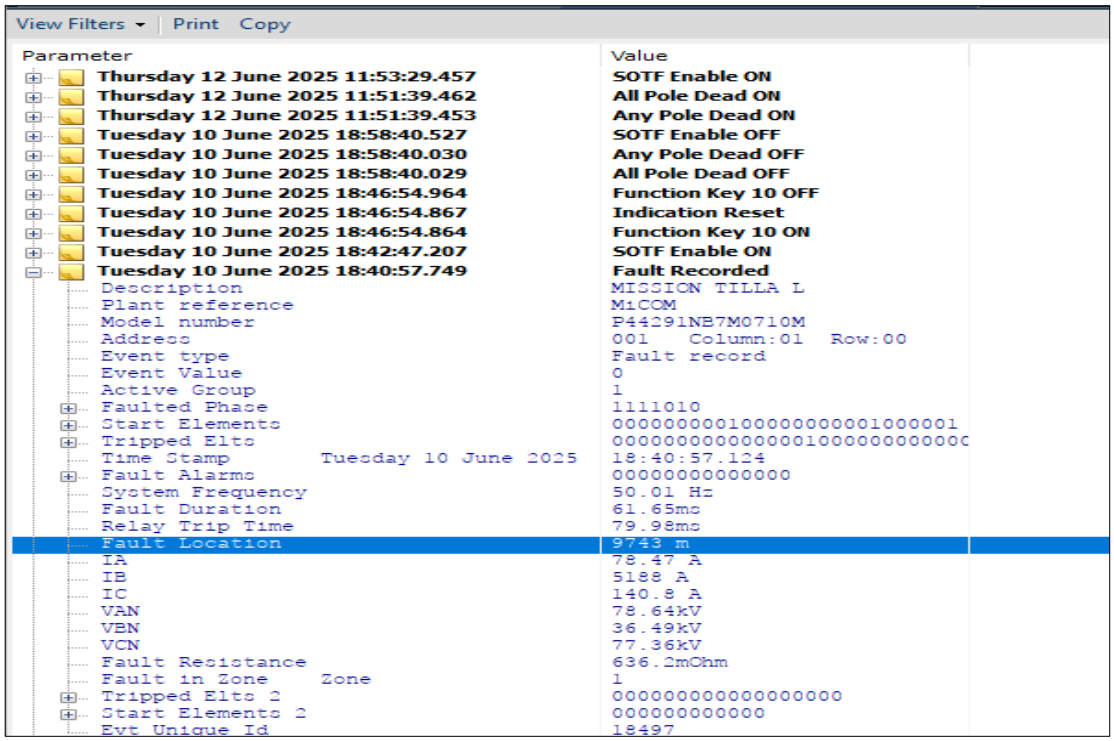


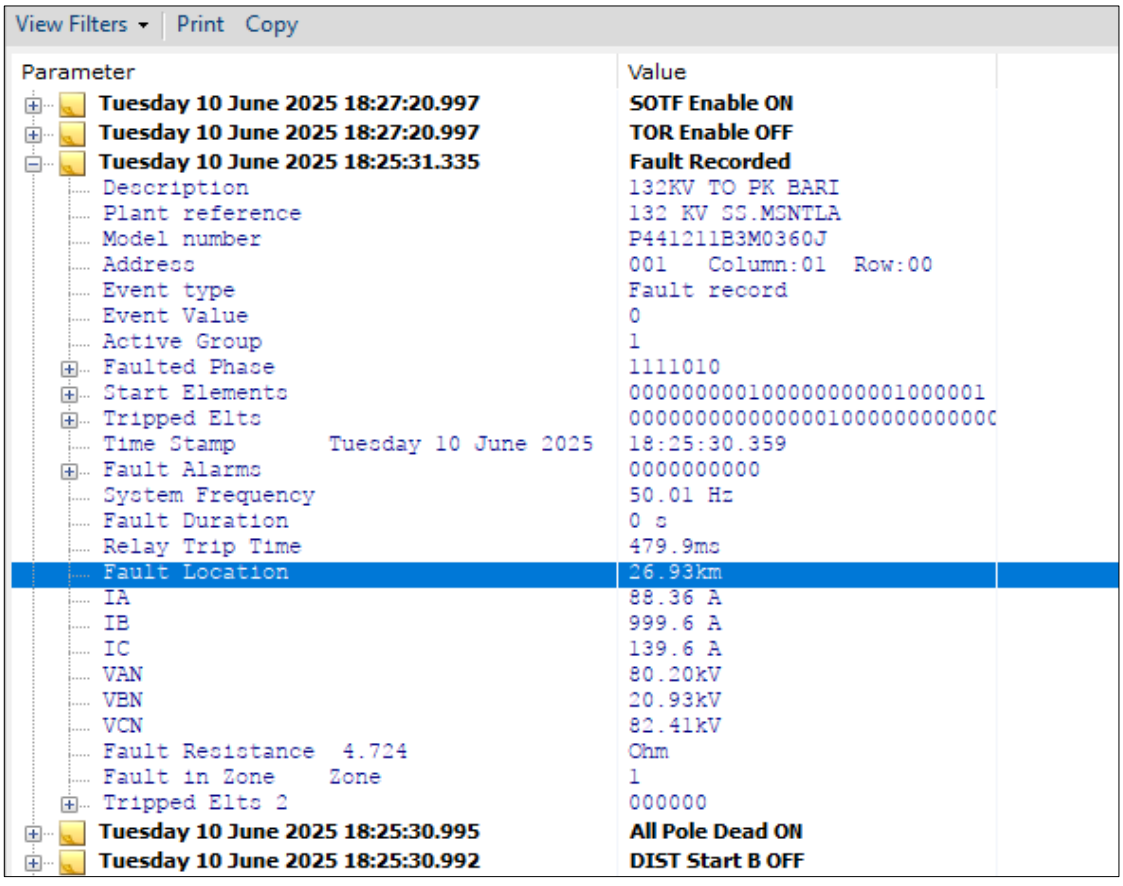
Fig 2: DR snapshot of Dharmanagar for PK Bari line



View Filters | Print Copy

Parameter		Value
Thursday 12 June 2025 11:53:29.457		**SOTF Enable ON**
Thursday 12 June 2025 11:51:39.462		**All Pole Dead ON**
Thursday 12 June 2025 11:51:39.453		**Any Pole Dead ON**
Tuesday 10 June 2025 18:58:40.527		**SOTF Enable OFF**
Tuesday 10 June 2025 18:58:40.030		**Any Pole Dead OFF**
Tuesday 10 June 2025 18:58:40.029		**All Pole Dead OFF**
Tuesday 10 June 2025 18:46:54.964		**Function Key 10 OFF**
Tuesday 10 June 2025 18:46:54.867		**Indication Reset**
Tuesday 10 June 2025 18:46:54.864		**Function Key 10 ON**
Tuesday 10 June 2025 18:42:47.207		**SOTF Enable ON**
Tuesday 10 June 2025 18:40:57.749		**Fault Recorded**
Description		MISSION TILLA L
Plant reference		MiCOM
Model number		P44291NB7M0710M
Address		001 Column:01 Row:00
Event type		Fault record
Event Value		0
Active Group		1
Faulted Phase		1111010
Start Elements		00000000010000000000010000001
Tripped Elts		00000000000000010000000000000
Time Stamp	Tuesday 10 June 2025	18:40:57.124
Fault Alarms		00000000000000
System Frequency		50.01 Hz
Fault Duration		61.65ms
Relay Trip Time		79.98ms
Fault Location		9743 m
IA		78.47 A
IB		5188 A
IC		140.8 A
VAN		78.64kV
VBN		36.49kV
VCN		77.36kV
Fault Resistance		636.2mOhm
Fault in Zone	Zone	1
Tripped Elts 2		00000000000000000
Start Elements 2		0000000000000
Evt Unique Id		18497

Fig 3: EL snapshot of PK Bari for 132kV Dharmanagar line



View Filters | Print Copy

Parameter		Value
Tuesday 10 June 2025 18:27:20.997		**SOTF Enable ON**
Tuesday 10 June 2025 18:27:20.997		**TOR Enable OFF**
Tuesday 10 June 2025 18:25:31.335		**Fault Recorded**
Description		132KV TO PK BARI
Plant reference		132 KV SS.MANTLA
Model number		P441211B3M0360J
Address		001 Column:01 Row:00
Event type		Fault record
Event Value		0
Active Group		1
Faulted Phase		1111010
Start Elements		00000000010000000000010000001
Tripped Elts		00000000000000010000000000000
Time Stamp	Tuesday 10 June 2025	18:25:30.359
Fault Alarms		0000000000
System Frequency		50.01 Hz
Fault Duration		0 s
Relay Trip Time		479.9ms
Fault Location		26.93km
IA		88.36 A
IB		999.6 A
IC		139.6 A
VAN		80.20kV
VBN		20.93kV
VCN		82.41kV
Fault Resistance	4.724	Ohm
Fault in Zone	Zone	1
Tripped Elts 2		000000
Tuesday 10 June 2025 18:25:30.995		**All Pole Dead ON**
Tuesday 10 June 2025 18:25:30.992		**DIST Start B OFF**

Fig 4: EL snapshot of Dharmanagar for PK Bari line

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
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GRID CONTROLLER OF INDIA LIMITED
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उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

अरुणाचल प्रदेश की उत्तर-पूर्वी क्षेत्रीय विद्युत प्रणाली के नापिट और निगलोक क्षेत्र में ग्रिड घटना के तहत ग्रिड गड़बड़ी की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in grid event in Napit and Niglok area of Arunachal Pradesh Power System of NER

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 03-07-2025

1. **घटना का सारांश/Event Summary:**

   Napit and Niglok areas of Arunachal Pradesh Power System were connected with rest of NER Grid through 132 kV Pasighat-Napit D/C lines.

   At 16:30 Hrs of 11-06-2025, 132 kV Pasighat - Napit D/C lines tripped. Due to tripping of these elements, Napit and Niglok areas of Arunachal Pradesh Power System got isolated from NER Grid and collapsed due to no source available in these areas.

   Power supply was extended to Napit area of Arunachal Pradesh Power system by charging the 132kV Pasighat - Napit line 1 at 19:46 Hrs of 11-06-2025.

2. **घटना का समय और दिनांक/Time and Date of the Event**: 16:30 Hrs of 11-06-2025

3. **ग्रिड व्यवधान का प्रकार/Event Category:** GD-I

4. **स्थान/नियंत्रण क्षेत्र/Location/Control Area:** Napit and Niglok area of Arunachal Pradesh

5. **पूर्ववर्ती स्थिति/Antecedent Conditions**:

	आवृत्ति (हर्ट्ज)/ Frequency in Hz	क्षेत्रीय पीढ़ी (मेगावाट)/ Regional Generation (MW)	क्षेत्रीय डिमांड (मेगावाट)/ Regional Demand (MW)
घटना पूर्व/Pre-Event	50.08	2489	3348
घटना के बाद/ Post Event	50.08	2499	3334

Pre and post data of 1 minute before and after the event

महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है/ Important Transmission Line/Unit if under outage (before the event)	NIL

मौसम स्थिति/ Weather Condition	Sunny Weather

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: 14 MW

7. **व्यवधान की अवधि /Duration of interruption:** 196 mins

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

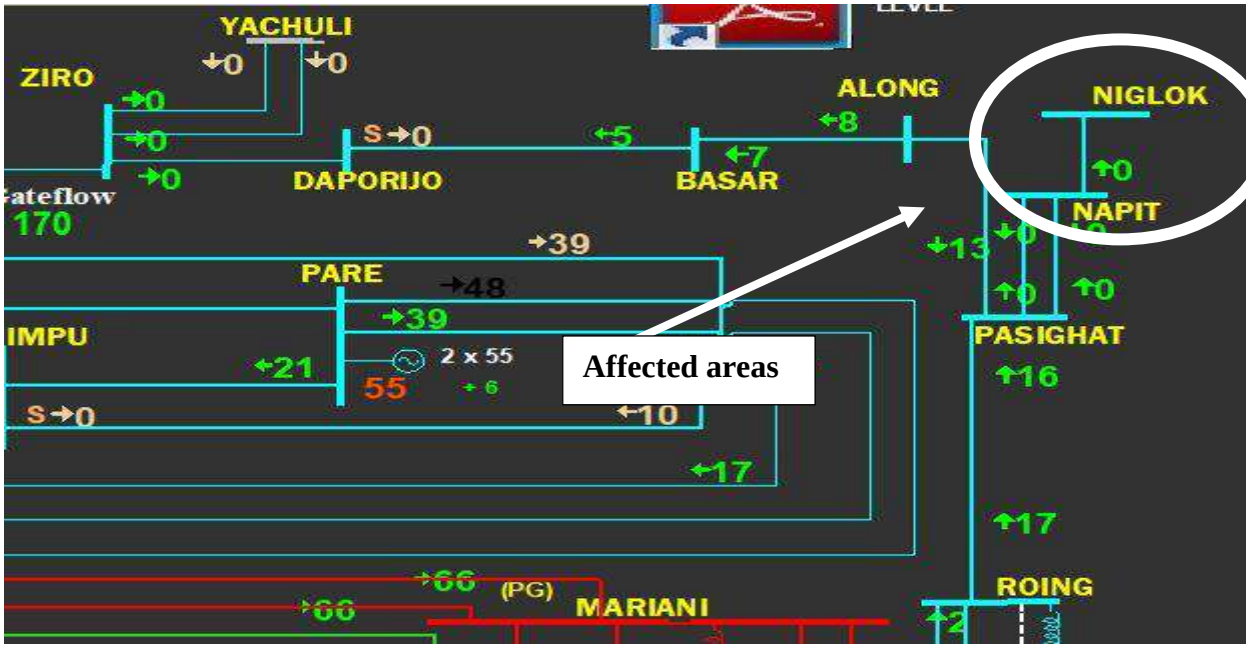

Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event): NIL**

10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्र.सं / Sl no	ट्रांसमिशन/जेनरेशन तत्व का नाम / Transmission/Generation element name	ट्रिपिंग का समय / Tripped Time (hh:mm)	पुनर्स्थापना का समय / Restoration time (hh:mm)	रिले इंडिकेशन एंड ए / Relay Indication End A	रिले इंडिकेशन एंड बी / Relay Indication End B
1	132 kV Pasighat-Napit line 1	16:30	19:46	SPS operated at Pasighat	No Tripping
2	132 kV Pasighat-Napit line 2	16:30	-	SPS operated at Pasighat	No Tripping
3	132 kV Napit-Niglok line	16:30	-	Loss of voltage	Loss of voltage

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):

132 kV Pasighat-Napit line 1&2 tripped on operation of SPS at Pasighat.

Description of the SPS:

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

This scheme is designed to enhance the reliability of the Arunachal Power System by efficiently managing line loading under specific contingencies.

Triggering of Criteria to be satisfied:

I. **Power Flow Direction Change:** The power flow in the 132 kV Pasighat-Along Line changes from import to export mode, with a current magnitude of 10 Amps (2 MW).

II. **Overloading of Pasighat-Napit Line:** The current on the 132 kV Pasighat-Napit Line exceeds 65A Ampere (15 MW with pf 0.95) with a time delay of 3.5 seconds.

Action taken: Trip signal generated to trip the Circuit breaker of the 132 kV Napit-I & II Lines at Pasighat Substation.

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed: NA

13. सुधारात्मक उपाय /Action Taken/Remedial Measures: NIL

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम संख्या/ Sl. No.	अनुपालन संबंधी समस्याएँ/ Issues	अनुपालन उल्लंघन से संबंधित विनियमन/ Regulation Non-Compliance	बिजली उपयोगिता संस्थाएँ/ Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	DoP, AP
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	-
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	DoP, AP

4.	**डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues**	IEGC section 17.3	***No Violation***
5.	**कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance**		**-**

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of SPS needs to be ensured at all times.
- Proper switching of SPS scheme is required based on the network condition.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

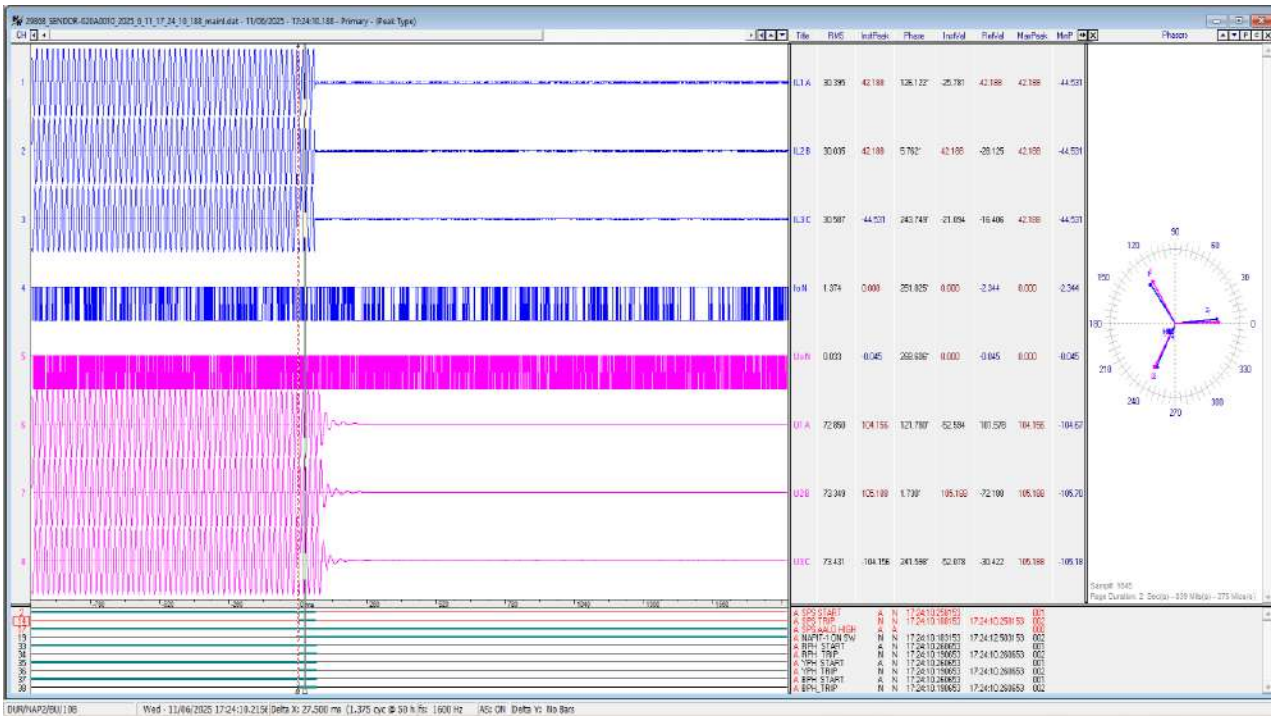

Fig 1.1: DR snapshot of Pasighat for 132 kV Pasighat-Napit line 1

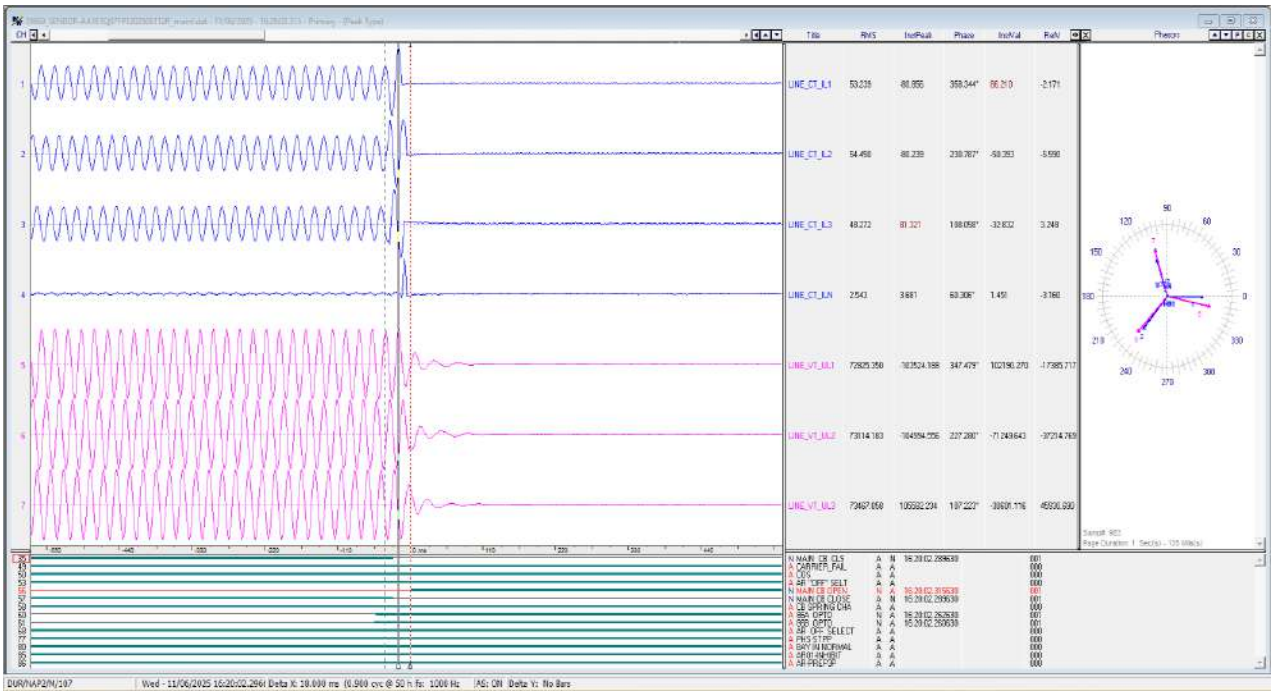

Fig 1.2: DR snapshot of Pasighat for 132 kV Pasighat-Napit line 2

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

उत्तर-पूर्वी क्षेत्रीय विद्युत प्रणाली के नगालैंड की सानिस क्षेत्र में ग्रिड घटना के तहत ग्रिड गड़बड़ी की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in grid event in Sanis area of Nagaland Power System of NER

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 03-07-2025

1. **घटना का सारांश/Event Summary:**

Sanis area of Nagaland Power System were connected with rest of NER Grid through 132kV Wokha - Sanis line. 132kV Doyang - Sanis line was under tripped condition since 20:19 Hrs of 10-06-2025.

At 16:53 Hrs of 13-06-2025, 132kV Wokha - Sanis line tripped. Due to tripping of the element, Sanis area of Nagaland Power System got isolated from NER Grid and collapsed due to no source available in these areas.

Power supply was extended to Sanis area of Nagaland Power system by charging the 132kV Wokha - Sanis line at 17:25 Hrs of 13-06-2025.

2. **घटना का समय और दिनांक/Time and Date of the Event**: 16:53 Hrs of 13-06-2025
3. **ग्रिड व्यवधान का प्रकार/Event Category:** GD-I
4. **स्थान/नियंत्रण क्षेत्र/Location/Control Area:** Sanis area of Nagaland Power System
5. **पूर्ववर्ती स्थिति/Antecedent Conditions**:

	आवृत्ति (हर्ट्ज)/ Frequency in Hz	क्षेत्रीय पीढ़ी (मेगावाट)/ Regional Generation (MW)	क्षेत्रीय डिमांड (मेगावाट)/ Regional Demand (MW)
घटना पूर्व/Pre-Event	50.03	2539	3302
घटना के बाद/ Post Event	50.03	2541	3279

Pre and post data of 1 minute before and after the event

महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है/ Important Transmission	132kV Doyang - Sanis line was under tripped condition since 20:19 Hrs of 10-

Line/Unit if under outage (before the event)	06-25
मौसम स्थिति/ Weather Condition	Normal

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: 1 MW
7. **व्यवधान की अवधि /Duration of interruption:** 32 mins
8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

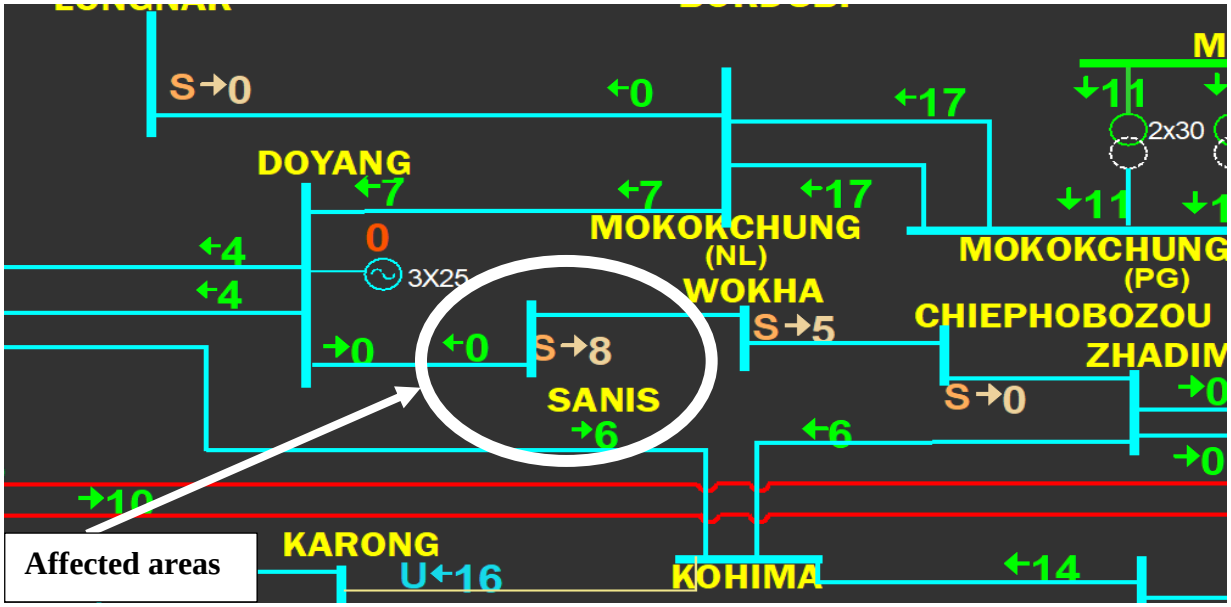

Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event): NIL**
10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्र.सं / Sl no	ट्रांसमिशन/जेनरेशन तत्व का नाम / Transmission/Generation element name	ट्रिपिंग का समय / Tripped Time (hh:mm)	पुनर्स्थापना का समय / Restoration time (hh:mm)	रिले इंडिकेशन एंड ए / Relay Indication End A	रिले इंडिकेशन एंड बी / Relay Indication End B
1	132kV Wokha - Sanis	16:53	17:25	No tripping	Overcurrent

11. **घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):**

Due to the outage of 132 kV Doyang – Sanis line, Wokha area was radially from Sanis SS.

Tripping at Sanis on Overcurrent protection seems unwanted.

DR &EL not submitted for the tripping. Also, detailed report does not contain root cause & event analysis.

12. **सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:**

13. **सुधारात्मक उपाय /Action Taken/Remedial Measures:** NIL

14. **विनियमन का गैर-अनुपालन/Non-compliance observed:**

क्रम संख्या/ Sl. No.	अनुपालन संबंधी समस्याएँ/ Issues	अनुपालन उल्लंघन से संबंधित विनियमन/ Regulation Non-Compliance	बिजली उपयोगिता संस्थाएँ/ Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	**Not submitted by DoP, Nagaland**
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	**No DR & EL received from DoP, Nagaland**
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	**DoP, Nagaland submitted on 20-06-25 (after 7 days)**
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	***No Violation***
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. **प्रमुख शिक्षाएँ/ Key Lessons Learnt:**

- Proper maintenance related activities as per CEA regulations needs to be carried out.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

No DR &EL received from DoP, Nagaland.

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पूर्वोत्तर क्षेत्र की अरुणाचल प्रदेश विद्युत प्रणाली के खुपी, टेंगा और दीक्षी एचईपी क्षेत्र में ग्रिड घटना में ग्रिड गड़बड़ी की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in grid event in Khupi, Tenga and Dikshi HEP area of Arunachal Pradesh Power System of NER

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 03-07-2025

1. **घटना का सारांश/Event Summary:**

Khupi & Tenga areas of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Kameng-Khupi and 132 kV Tenga-Balipara.

At 12:26 Hrs of 14-06-2025, 132 kV Tenga - Khupi, 132kV Balipara -Tenga and 400kV ICT at Kameng tripped. Due to tripping of these elements, Khupi & Tenga areas of Arunachal Pradesh Power System got isolated from NER Grid and collapsed due to no source available in this area.

Power supply was restored to Khupi & Tenga areas of Arunachal Pradesh Power System by charging 132kV Balipara - Tenga and 132kV Tenga - Khupi line at 13:02 Hrs and 13:22 Hrs of 14-06-2025 respectively.

2. **घटना का समय और दिनांक/Time and Date of the Event**: 12:26 Hrs of 14-06-2025
3. **ग्रिड व्यवधान का प्रकार/Event Category**: GD-I
4. **स्थान/नियंत्रण क्षेत्र/Location/Control Area:** Khupi & Tenga areas of Arunachal Pradesh
5. **पूर्ववर्ती स्थिति/Antecedent Conditions**:

	आवृत्ति (हर्ट्ज)/ Frequency in Hz	क्षेत्रीय पीढ़ी (मेगावाट)/ Regional Generation (MW)	क्षेत्रीय डिमांड (मेगावाट)/ Regional Demand (MW)
घटना पूर्व/Pre-Event	50.00	2137	2931
घटना के बाद/ Post Event	50.08	2138	2943

Pre and post data of 1 minute before and after the event

महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है/ Important Transmission Line/Unit if under outage (before the event)	NIL
मौसम स्थिति/ Weather Condition	Thunderstorm and heavy rain

6. **<u>लोड और जेनरेशन नुकसान /Load and Generation loss</u>**: Load Loss : 23 MW & Generation Loss: 7.2 MW
7. **<u>व्यवधान की अवधि /Duration of interruption:</u>** 42 mins
8. **<u>प्रभावित क्षेत्र का नक्शा /Network across the affected area:</u>**

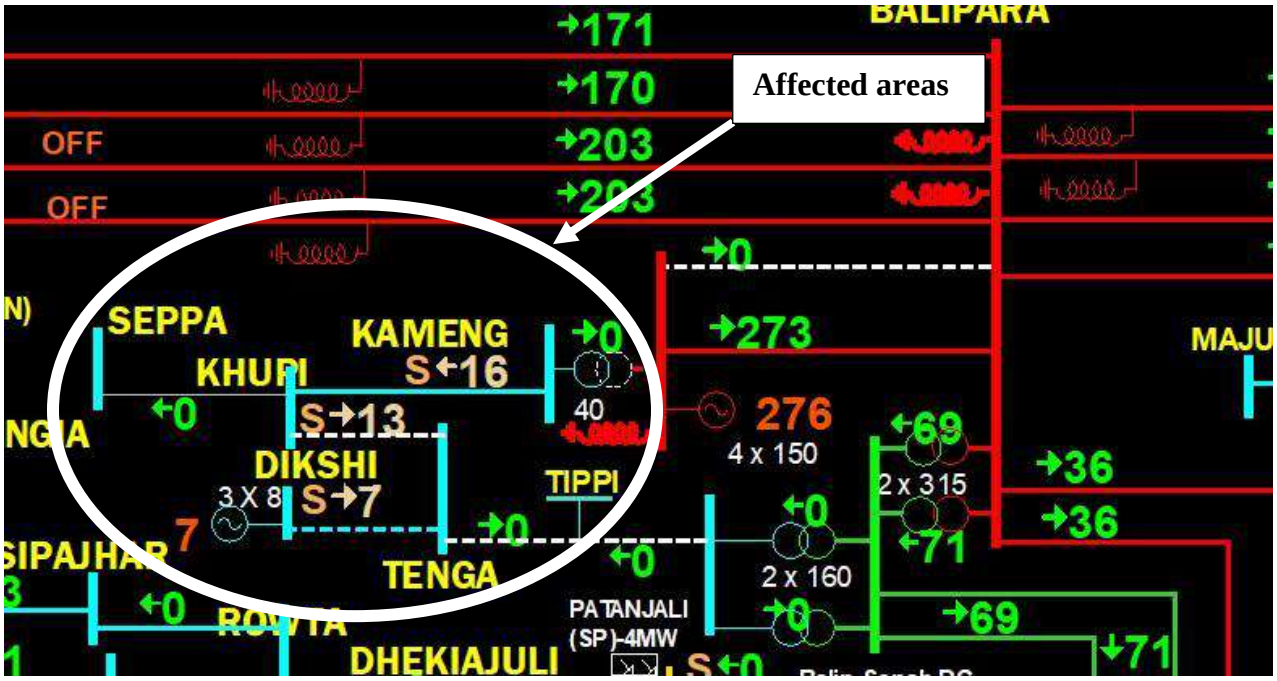


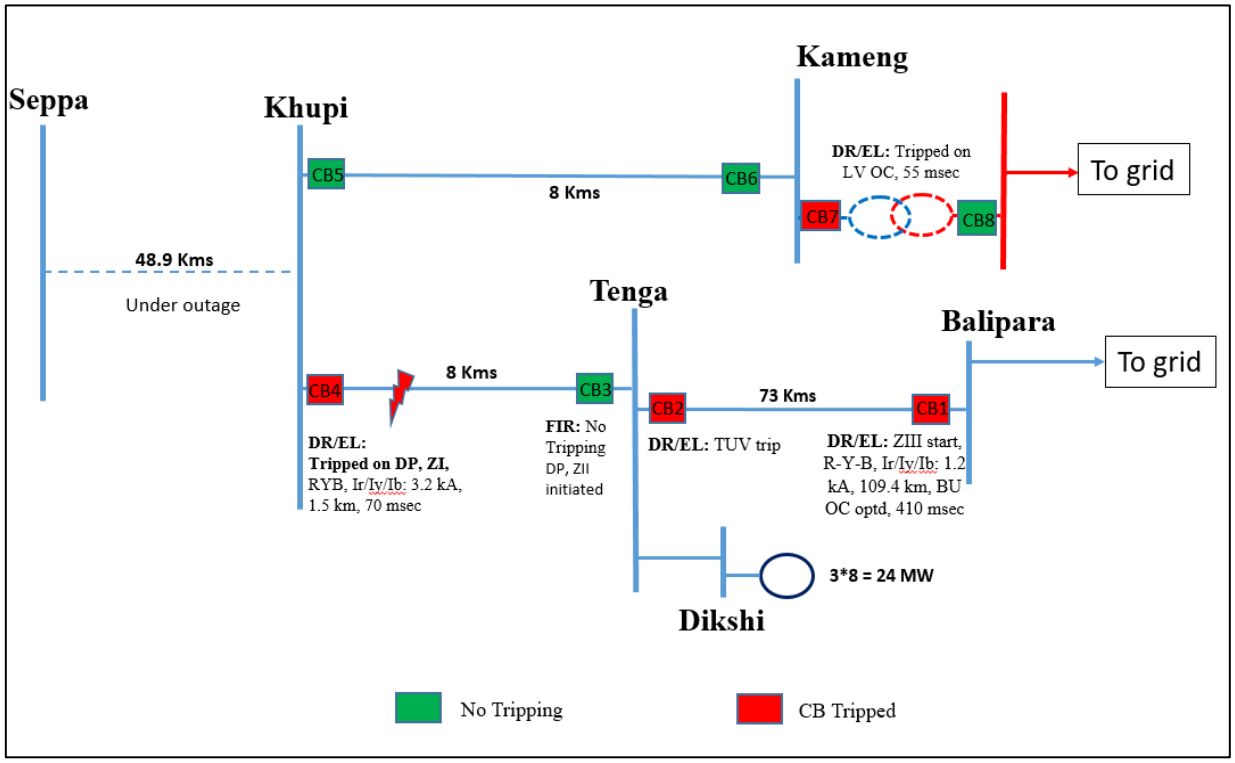
Figure 1: Network across the affected area

9. **<u>उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event):</u> NIL**
10. **<u>प्रमुख ट्रिपिंग /Major Elements Tripped:</u>**

क्र.सं / Sl no	ट्रांसमिशन/जेनरेशन तत्व का नाम / Transmission/Generation element name	ट्रिपिंग का समय / Tripped Time (hh:mm)	पुनर्स्थापना का समय / Restoration time (hh:mm)	रिले इंडिकेशन एंड ए / Relay Indication End A	रिले इंडिकेशन एंड बी / Relay Indication End B
1	400/132kV ICT at Kameng	12:26	12:55	LV-O/C, Stage-2	

2	132kV Balipara-Tenga	12:26	13:02	DP, ZIII, RYB, FD: 109 kM initiated but tripped on I>1 in	No Tripping
3	132 kV Tenga - Khupi	12:26		No Tripping DP, ZII initiated	Tripped on DP, ZI, RYB, Ir/Iy/Ib: 3.2 kA, 1.5 KM, 70 msec

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):



As per available DR & EL data, 3 phase metallic fault initiated in the 132 kV Khupi – Tenga line cleared from Khupi end in DP, ZI, RYB, Ir/Iy/Ib: 3.2 kA, 1.5 km in 70 msecs. Tenga end located the fault in ZII (as per FIR).

Tripping of ICT at Kameng on LV side on operation of Backup DT OC wiithin 55 msecs seems unwanted. However, LV side pickup for DT OC revised to 4620 A by Kameng.

Tripping of 132 kV Balipara – Tenga line on operation of OC within 410 msecs seems unwanted. Overcurrent TMS need to be coordinated with ZII timing. DPR detected the fault in ZIII. However, DPR not initiated the trip command as per the scheme seems correct.

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:

- Tripping of ICT at Kameng on LV side on operation of Backup DT OC wiithin 55 msecs seems unwanted.
- Tripping of 132 kV Balipara – Tenga line on operation of OC within 410 msecs. Overcurrent TMS need to be coordinated with ZII timing of CB3.

- Non-operation of protection system at Tenga for 132 kV Khupi line.

13. <u>सुधारात्मक उपाय /Action Taken/Remedial Measures:</u>

- LV side pickup for DT OC revised to 4620 A by Kameng (NEEPCO).

14. <u>विनियमन का गैर-अनुपालन/Non-compliance observed:</u>

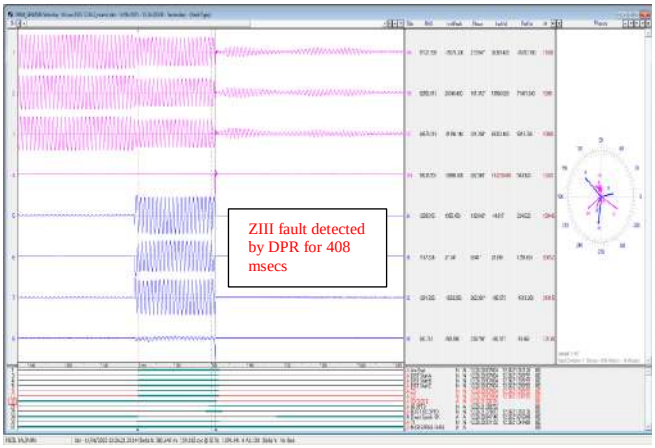
क्रम संख्या/ **Sl. No.**	अनुपालन संबंधी समस्याएँ/ **Issues**	अनुपालन उल्लंघन से संबंधित विनियमन/ **Regulation Non-Compliance**	बिजली उपयोगिता संस्थाएँ/ **Utilities**
1.	**क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?**	IEGC section 37.2 (b)	**Not submitted by DoP, AP**
2.	**क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?**	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	***No Violation (Wrong DR submitted for Tenga end of Khupi line)***
3.	**क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?**	IEGC section 37.2 (e)	**Not submitted by DoP, AP**
4.	**डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues**	IEGC section 17.3	***No Violation***
5.	**कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance**		-

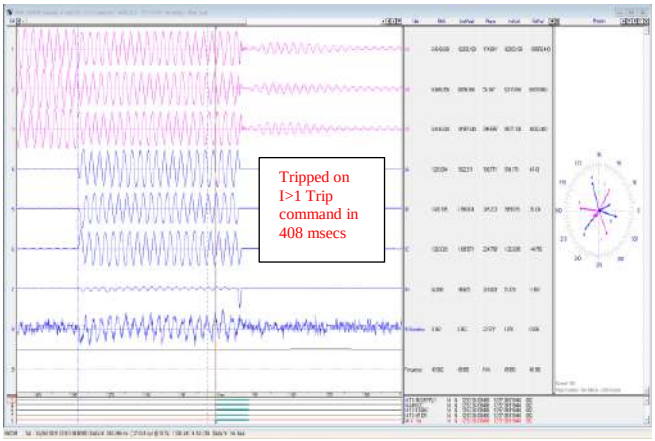
15. <u>प्रमुख शिक्षाएँ/ Key Lessons Learnt:</u>

- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of protection system needs to be ensured at all times.

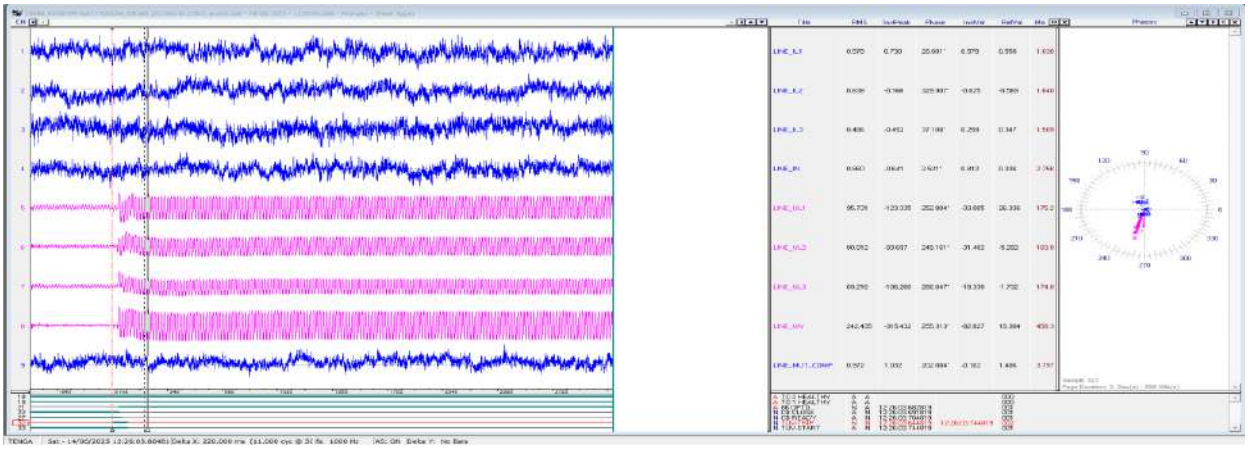
परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

1.1 DR snapshot of Balipara end of 132 kV Balipara-Tenga Line

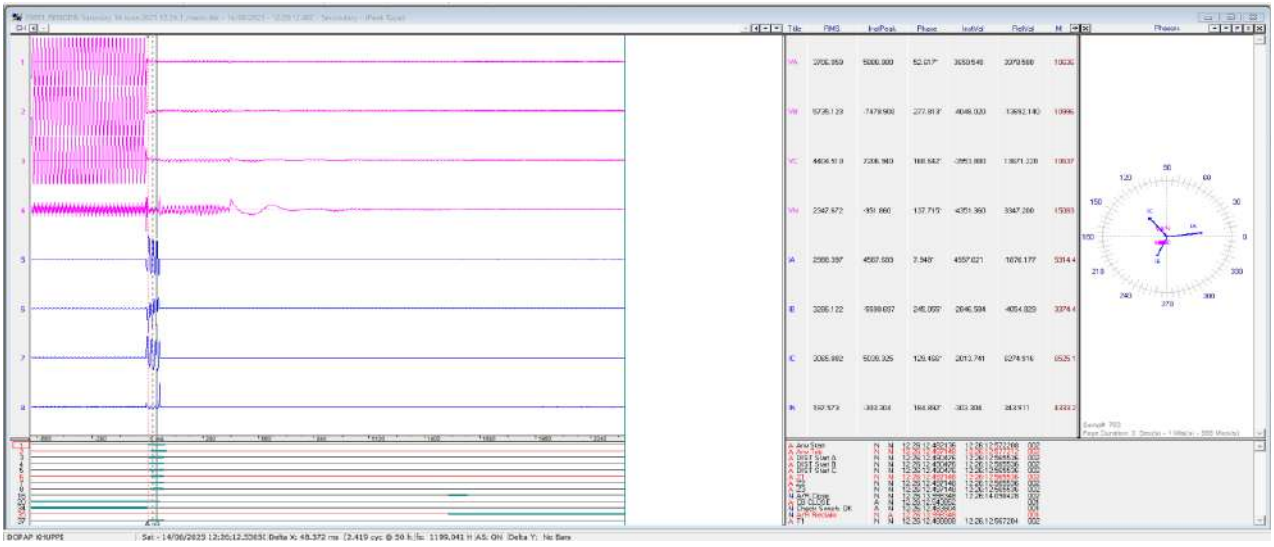




1.2 DR snapshot of Tenga end of 132 kV Balipara-Tenga Line



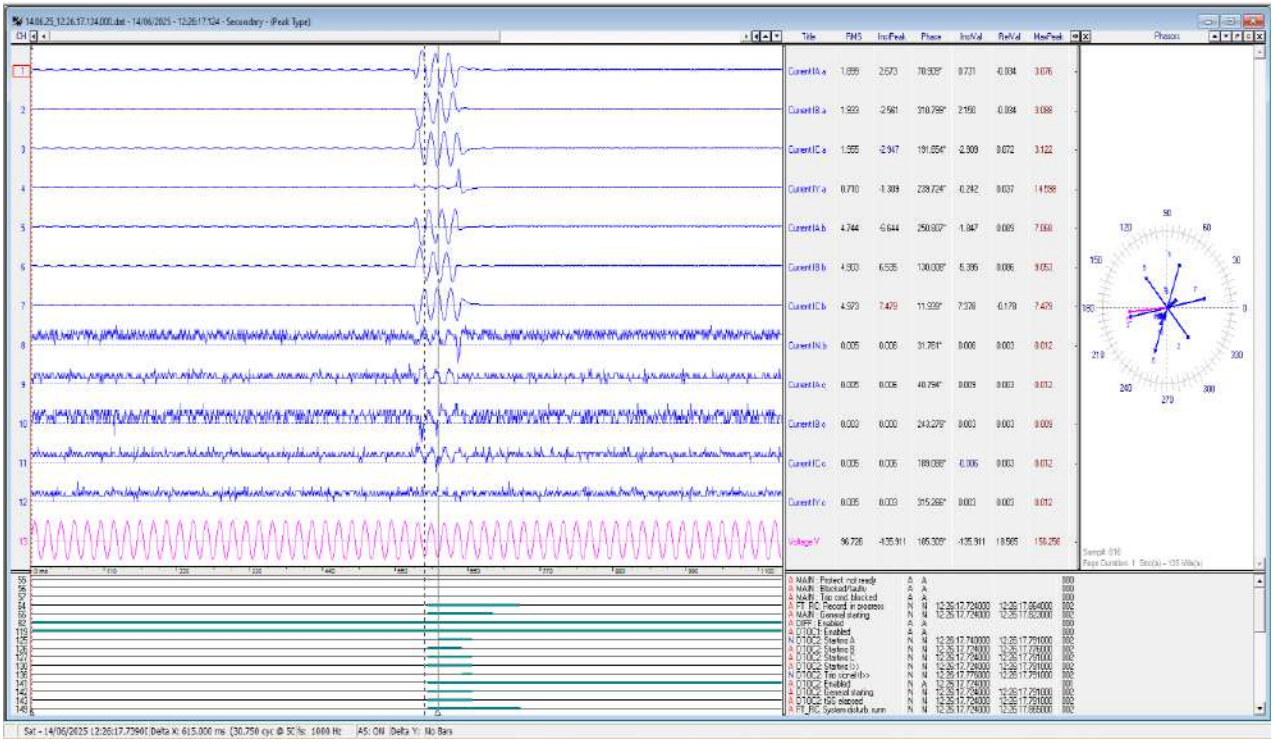
1.3 DR snapshot of Khupi end of 132 kV Khupi-Tenga Line



1.4 EL snapshot of Khupi end of 132 kV Khupi-Tenga Line

Saturday 14 June 2025 12:26:12.595	**Fault Recorded**
Description	TENGA LINE
Plant reference	DOPAP KHUPPI
Model number	P442916B6S0720M
Address	001 Column:01 Row:00
Event type	Fault record
Event Value	0
Active Group	1
Faulted Phase	1111111
Start Elements	00000000010000000000001000001
Tripped Elts	00000000000000001000000000000
Time Stamp Saturday 14 June 2025	12:26:12.482
Fault Alarms	00000000000000
System Frequency	49.98 Hz
Fault Duration	90.04ms
Relay Trip Time	80.03ms
Fault Location	1543 m
IA	3038 A
IB	3036 A
IC	2849 A
VAN	3049 V
VBN	2338 V
VCN	2898 V
Fault Resistance	541.3mOhm
Fault in Zone Zone	1

1.5 DR snapshot of 400/132 kV ICT at Kameng



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CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

एनईआर की नागालैंड पावर सिस्टम के झादिमा, चीफोबोजो, वोखा और सैनिस क्षेत्रों में ग्रिड इवेंट में ग्रिड गड़बड़ी की ड्राफ्ट रिपोर्ट / Draft Report of Grid Disturbance in grid event in Zhadima, Chiephobozou, Wokha and Sanis areas of Nagaland Power System of NER

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 03-07-2025

1. **घटना का सारांश/Event Summary:**

Zhadima, Chiephobozou, Wokha and Sanis areas of Nagaland Power System are connected with rest of NER Grid through 132kV Zhadima - Kohima line and 132 kV Doyang-Sanis line. 132 kV Doyang-Sanis line was out since 20:19 Hrs of 10-06-2025.

At 01:06 Hrs of 15-06-2025, 132 kV Zhadima – Kohima line tripped. Due to tripping of this line, Zhadima, Chiephobozou, Wokha and Sanis areas of Nagaland Power System were isolated from NER Grid and collapsed due to no source available in these areas.

Power supply restored to Zhadima, Chiephobozou, Wokha and Sanis areas of Nagaland Power System at 02:47 Hrs of 15-06-2025 by charging 132kV Zhadima - Kohima line.

2. **घटना का समय और दिनांक/Time and Date of the Event**: 01:06 Hrs of 15-06-2025
3. **ग्रिड व्यवधान का प्रकार/Event Category:** GD-I
4. **स्थान/नियंत्रण क्षेत्र/Location/Control Area:** Zhadima, Chiephobozou, Wokha and Sanis areas of Nagaland Power System
5. **पूर्ववर्ती स्थिति/Antecedent Conditions**:

	आवृत्ति (हर्ट्ज)/ Frequency in Hz	क्षेत्रीय पीढ़ी (मेगावाट)/ Regional Generation (MW)	क्षेत्रीय डिमांड (मेगावाट)/ Regional Demand (MW)
घटना पूर्व/Pre-Event	49.89	2770	3236
घटना के बाद/ Post Event	49.89	2764	3201

Pre and post data of 1 minute before and after the event

महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है/ Important Transmission Line/Unit if under outage (before the event)	132 kV Doyang-Sanis line was out since 20:19 Hrs of 10-06-2025
मौसम स्थिति/ Weather Condition	Thunderstorm and heavy rain

6. **<u>लोड और जेनरेशन नुकसान /Load and Generation loss</u>**: Load Loss : 5 MW

7. **<u>व्यवधान की अवधि /Duration of interruption:</u>** 100 mins

8. **<u>प्रभावित क्षेत्र का नक्शा /Network across the affected area:</u>**

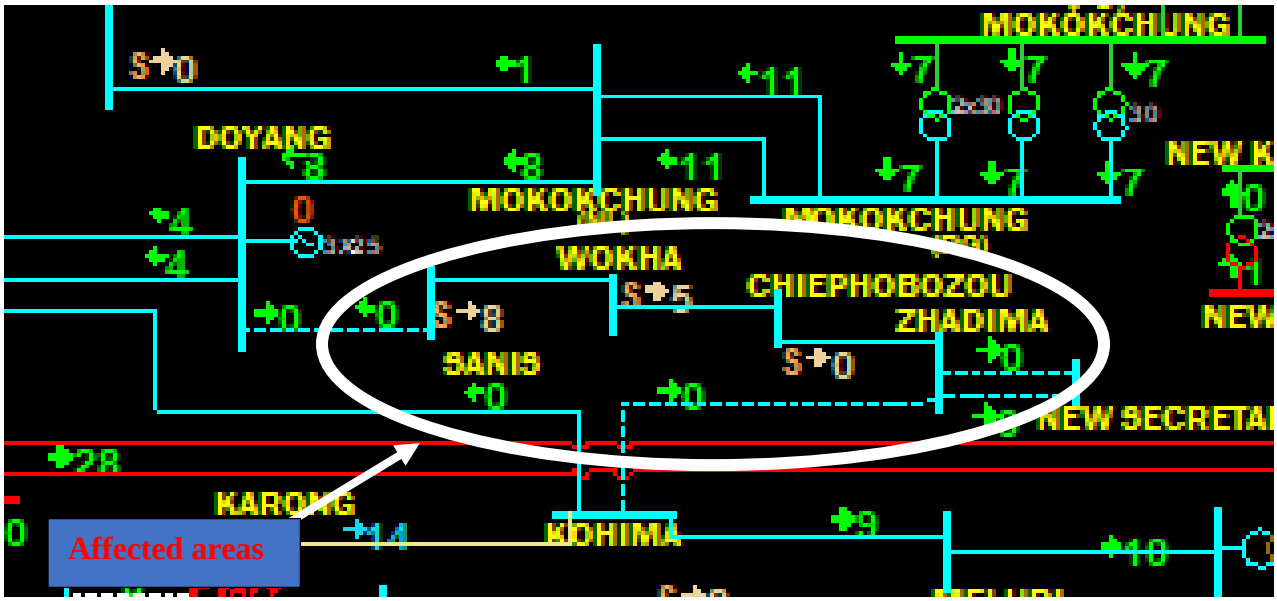


Figure 1: Network across the affected area

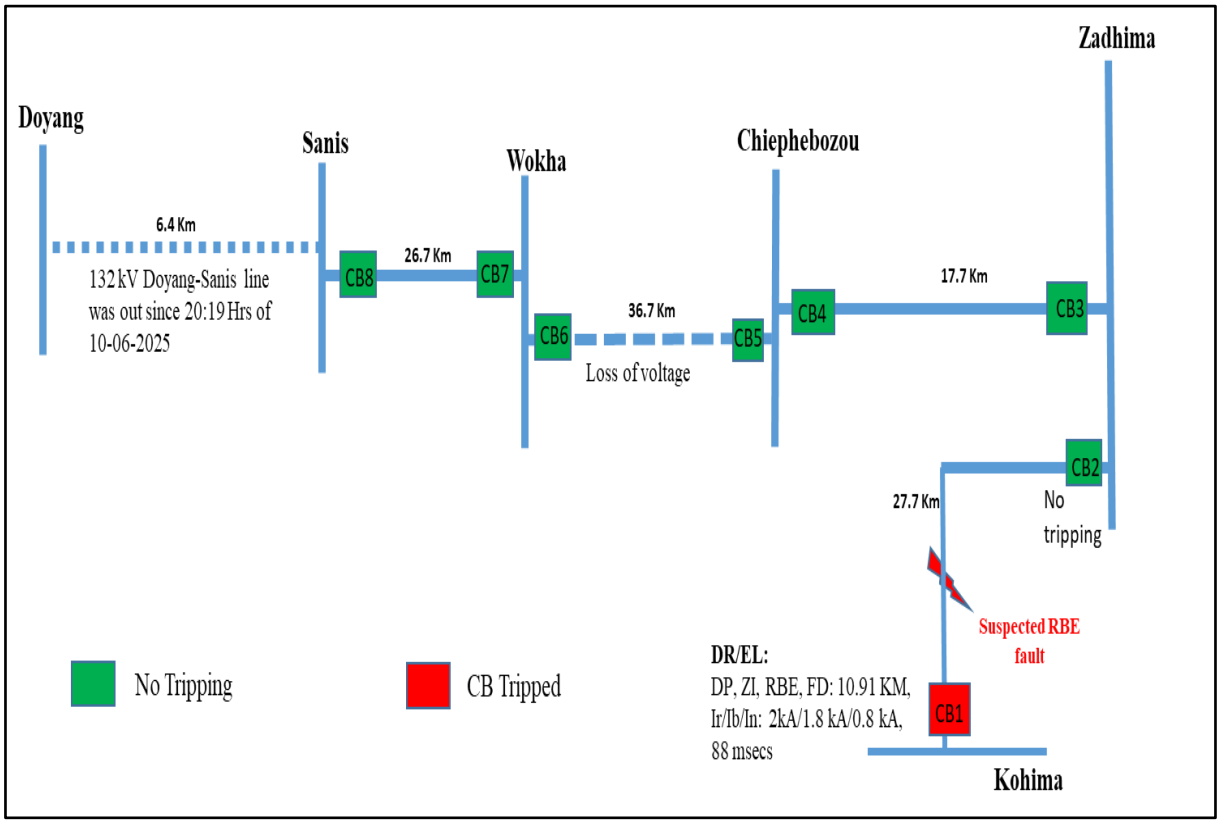
9. **<u>उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event):</u> NIL**

10. **<u>प्रमुख ट्रिपिंग /Major Elements Tripped:</u>**

क्र.सं / Sl no	ट्रांसमिशन/जेनरेशन तत्व का नाम / Transmission/Generation element name	ट्रिपिंग का समय / Tripped Time (hh:mm)	पुनर्स्थापना का समय / Restoration time (hh:mm)	रिले इंडिकेशन एंड ए / Relay Indication End A	रिले इंडिकेशन एंड बी / Relay Indication End B
1	132kV Zhadima - Kohima	01:06	02:47	No Tripping	DP, ZI, RBE, FD: 10.91 KM
2	132kV Zhadima - Chiephobozou	01:06	02:47	loss of power	loss of power
3	132 kV Chiephobozou Wokha	01:06	02:47	loss of power	loss of power

4	132 kV Sanis Wokha	01:06	02:47	loss of power	loss of power

11. <u>घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):</u>



Due to the outage of 132 kV Doyang-Sanis line, 132 kV Kohima – Zadima line radially feeding the radial network from Kohima to Sanis SS.

At 01:06:17.078 Hrs metallic fault observed in R-B-E phase cleared by the main protection at Kohima on operation of DP, ZI, RBE, FD: 10.91 KM in 88 msecs from Kohima end.

12. <u>सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:</u> NIL

13. <u>सुधारात्मक उपाय /Action Taken/Remedial Measures:</u> NA

14. <u>विनियमन का गैर-अनुपालन/Non-compliance observed:</u>

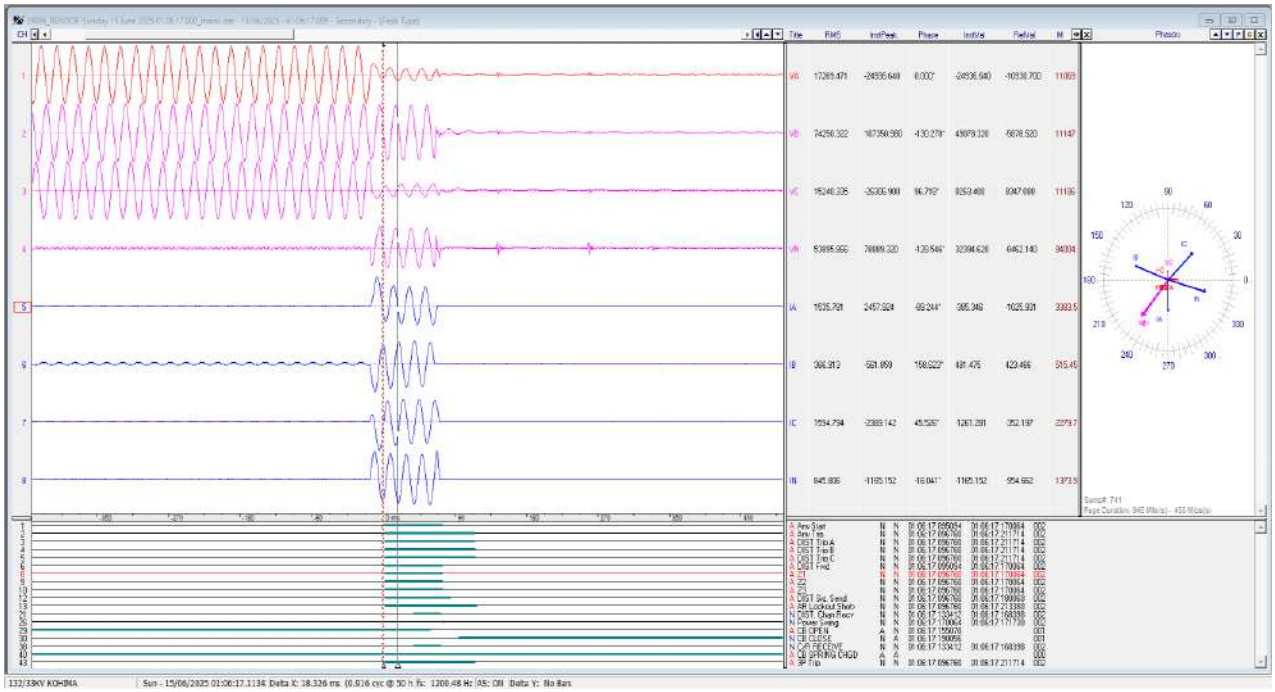
क्रम संख्या/ Sl. No.	अनुपालन संबंधी समस्याएँ/ Issues	अनुपालन उल्लंघन से संबंधित विनियमन/ Regulation Non-Compliance	बिजली उपयोगिता संस्थाएँ/ Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	**Not submitted by DoP, Nagaland**
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	-
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	**Not submitted by DoP, Nagaland**
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	-
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. <u>प्रमुख शिक्षाएँ/ Key Lessons Learnt:</u>

- Proper maintenance related activities as per CEA regulations needs to be carried out.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

1.1 DR snapshot of Kohima end of 132 kV Kohima-Zadhima Line



1.2 EL snapshot of Kohima end of 132 kV Kohima - Zadima Line

Sunday 15 June 2025 01:06:17.908	**Fault Recorded**
Description	132KV Zhadima
Plant reference	132/33KV KOHIMA
Model number	P44291AB6M0710M
Address	001 Column:01 Row:00
Event type	Fault record
Event Value	0
Active Group	1
Faulted Phase	1111101
Start Elements	00000000010000000000000000001
Tripped Elts	00000000000000010000000000000
Time Stamp Sunday 15 June 2025	01:06:17.095
Fault Alarms	00000000001000
System Frequency	50.02 Hz
Fault Duration	74.97ms
Relay Trip Time	115.0ms
Fault Location	10.91km
IA	1642 A
IB	375.7 A
IC	1625 A
VAN	18.18kV
VBN	73.98kV
VCN	17.70kV
Fault Resistance	516.4mOhm
Fault in Zone Zone	1

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र की असम विद्युत प्रणाली के मारघेरिटा क्षेत्र में ग्रिड घटना में ग्रिड गड़बड़ी की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in grid event in Margherita area of Assam Power System of NER

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 03-07-2025

1. **घटना का सारांश/Event Summary:**

Margherita area of Assam Power System was connected with rest of NER Grid through 132 kV Tinsukia – Margherita & 132 kV Rupai- Margherita line.

At 10:53 Hrs of 17-06-2025, 132 kV Tinsukia – Margherita & 132 kV Rupai- Margherita line tripped. Due to tripping of these elements, Margherita area of Assam Power System was isolated from NER Grid and collapsed due to no source available in this area.

Power was restored to Margherita by charging 132 kV Rupai- Margherita line at 11:25 Hrs.

2. **घटना का समय और दिनांक/Time and Date of the Event**: 10:53 Hrs of 17-06-2025
3. **ग्रिड व्यवधान का प्रकार/Event Category**: GD-I
4. **स्थान/नियंत्रण क्षेत्र/Location/Control Area:** Margherita area of Assam
5. **पूर्ववर्ती स्थिति/Antecedent Conditions**:

	आवृत्ति (हर्ट्ज)/ Frequency in Hz	क्षेत्रीय पीढ़ी (मेगावाट)/ Regional Generation (MW)	क्षेत्रीय डिमांड (मेगावाट)/ Regional Demand (MW)
घटना पूर्व/Pre-Event	50.26	2426	2709
घटना के बाद/ Post Event	50.26	2443	2697

Pre and post data of 1 minute before and after the event

महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है/ Important Transmission Line/Unit if under outage (before the event)	-
मौसम स्थिति/ Weather Condition	Normal

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load Loss : 21 MW

7. **व्यवधान की अवधि /Duration of interruption:** 31 mins

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

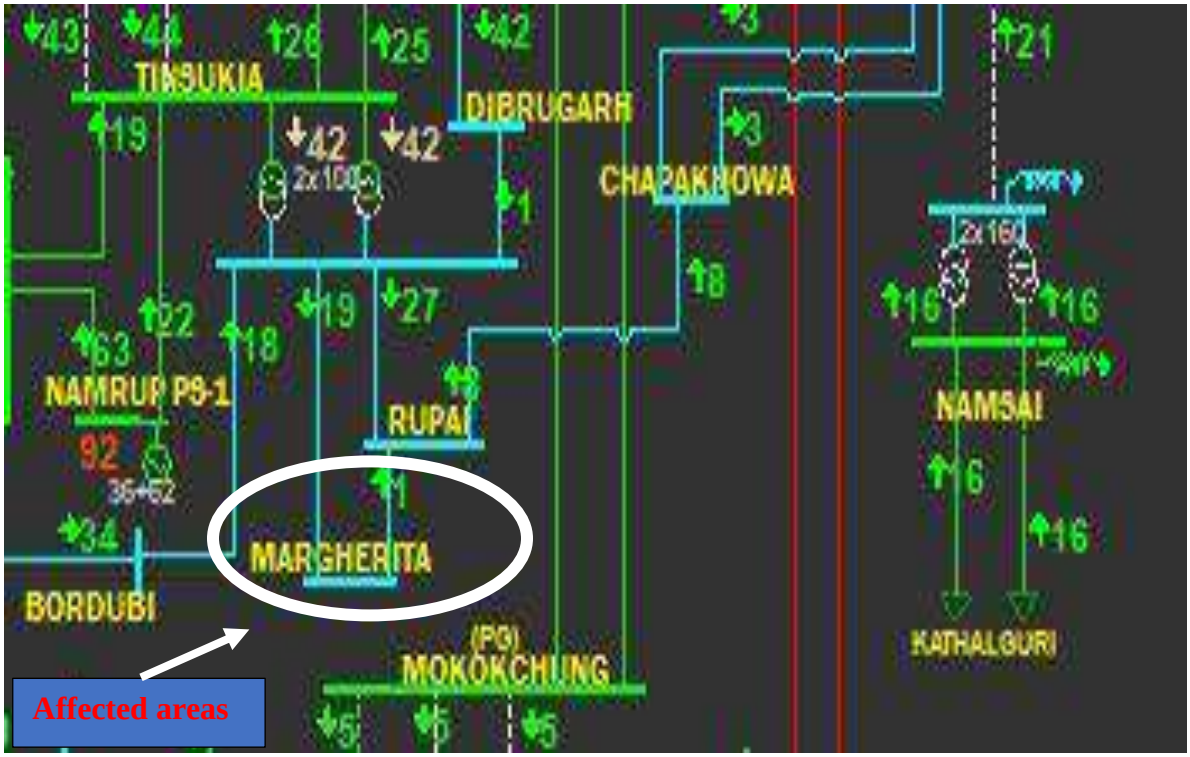


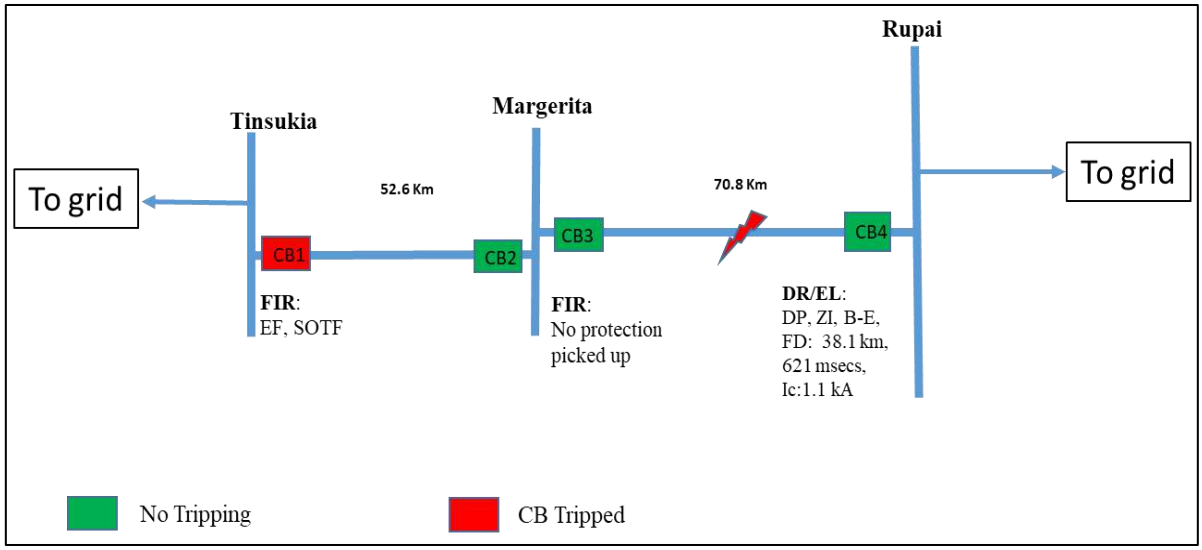
Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event): NIL**

10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्र.सं / Sl no	ट्रांसमिशन/जेनरेशन तत्व का नाम / Transmission/Generation element name	ट्रिपिंग का समय / Tripped Time (hh:mm)	पुनर्स्थापना का समय / Restoration time (hh:mm)	रिले इंडिकेशन एंड ए / Relay Indication End A	रिले इंडिकेशन एंड बी / Relay Indication End B
1	132 kV Tinsukia – Margherita	10:53	11:35	DP, ZI, B-E, FD: 38.1 km	No Tripping
2	132 kV Rupai-Margherita	10:53	11:25	SOTF, Earth Fault	No Tripping

11. **घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):**



At 10:50:26.946 Hrs of 17-06-2025, high resistive B-E fault appears in 132 kV Rupai-Margherita line which cleared from Rupai end on DP, ZI, B-E, FD: 38.1 km in 621 msecs. No tripping observed at Margerita end.

Likely fault cleared at Tinsukia end of 132 kV Tinsukia – Margerita line on EF.

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:

- Non operation of the protection system at Margerita end for 132 kV Rupai-Margherita line.

13. सुधारात्मक उपाय /Action Taken/Remedial Measures: NIL

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम संख्या/ **Sl. No.**	अनुपालन संबंधी समस्याएँ/ **Issues**	अनुपालन उल्लंघन से संबंधित विनियमन/ **Regulation Non-Compliance**	बिजली उपयोगिता संस्थाएँ/ **Utilities**
1.	**क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?**	IEGC section 37.2 (b)	**Received after 8 hours**
2.	**क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?**	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	**Not submitted by *AEGCL. DR & EL not received for CB1 , CB2 & CB3***

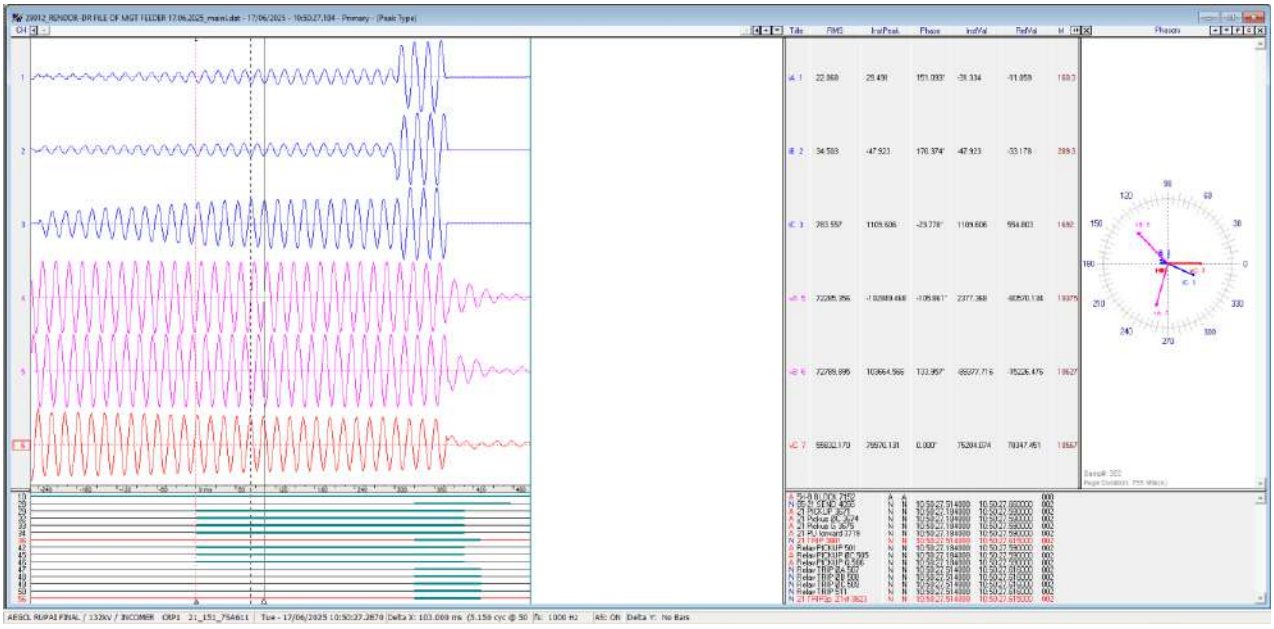
3.	**क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?**	IEGC section 37.2 (e)	**Not submitted by *AEGCL***
4.	**डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues**	IEGC section 17.3	-
5.	**कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance**		-

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

1.1 DR snapshot of Rupai end of 132 kV Tinsukia - Rupai Line



ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
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कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र के मेघालय विद्युत प्रणाली के लेश्का, मिनक्रे, मस्टेम और आईआईएम क्षेत्रों में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Leshka, Mynkre, Mustem and IIM areas of Meghalaya Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 01-07-2025

1. घटना का सारांश/Event Summary:

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.

Power Suppy was restored at all the affected areas of Meghalaya by 14:21 Hrs of 19-06-2025.

2. घटना का समय और दिनांक/Time and Date of the Event: 14:00 Hrs of 19-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Leshka, Mynkre, Khleihriat, Mustem and IIM areas of Meghalaya Power System

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	49.94	2440	2812
घटना के बाद/ Post Event	49.94	2314	2755

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से पहले) Important Transmission Line/Unit if under outage (before the event)	NIL
मौसम स्थिति / Weather Condition	Inclement weather

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Generation loss of 126 MW & Load loss of 58 MW
7. **व्यवधान की अवधि /Duration of interruption:** 21 mins
8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

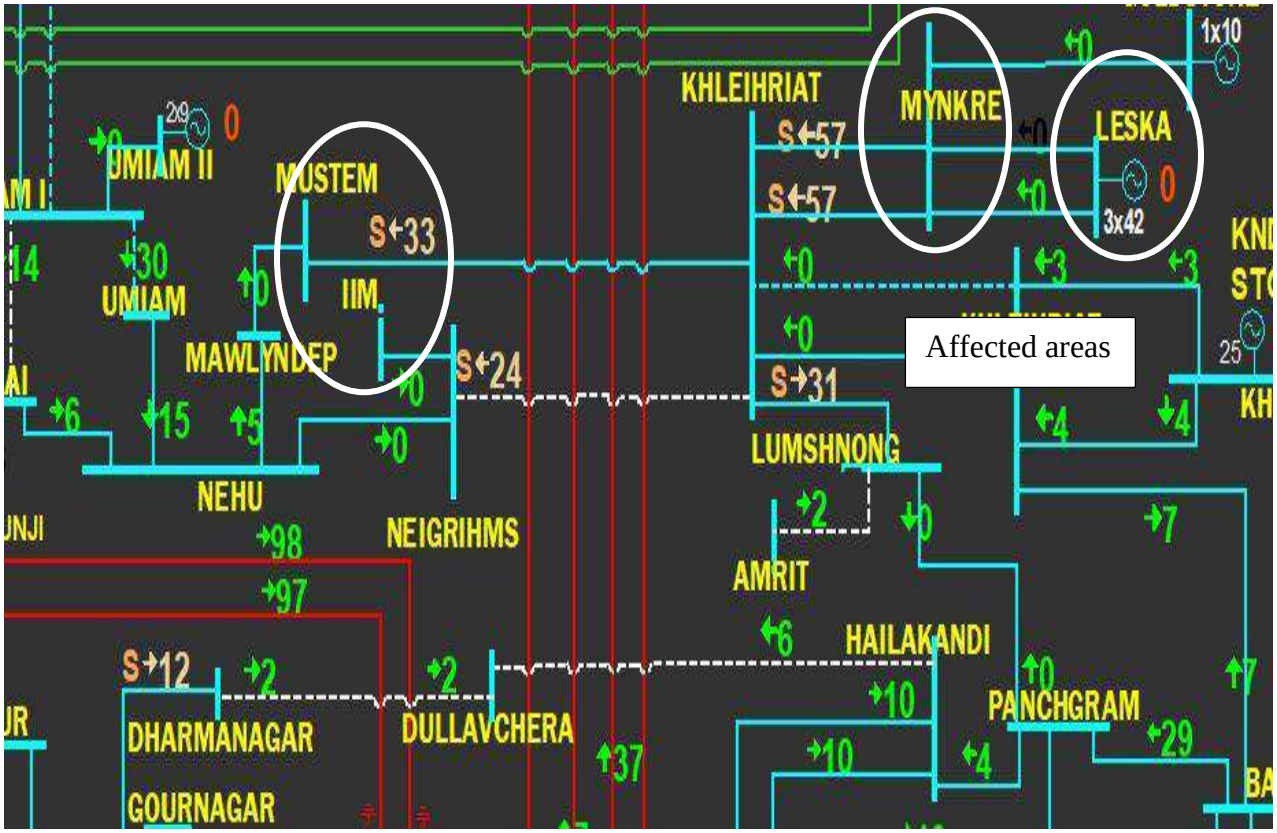


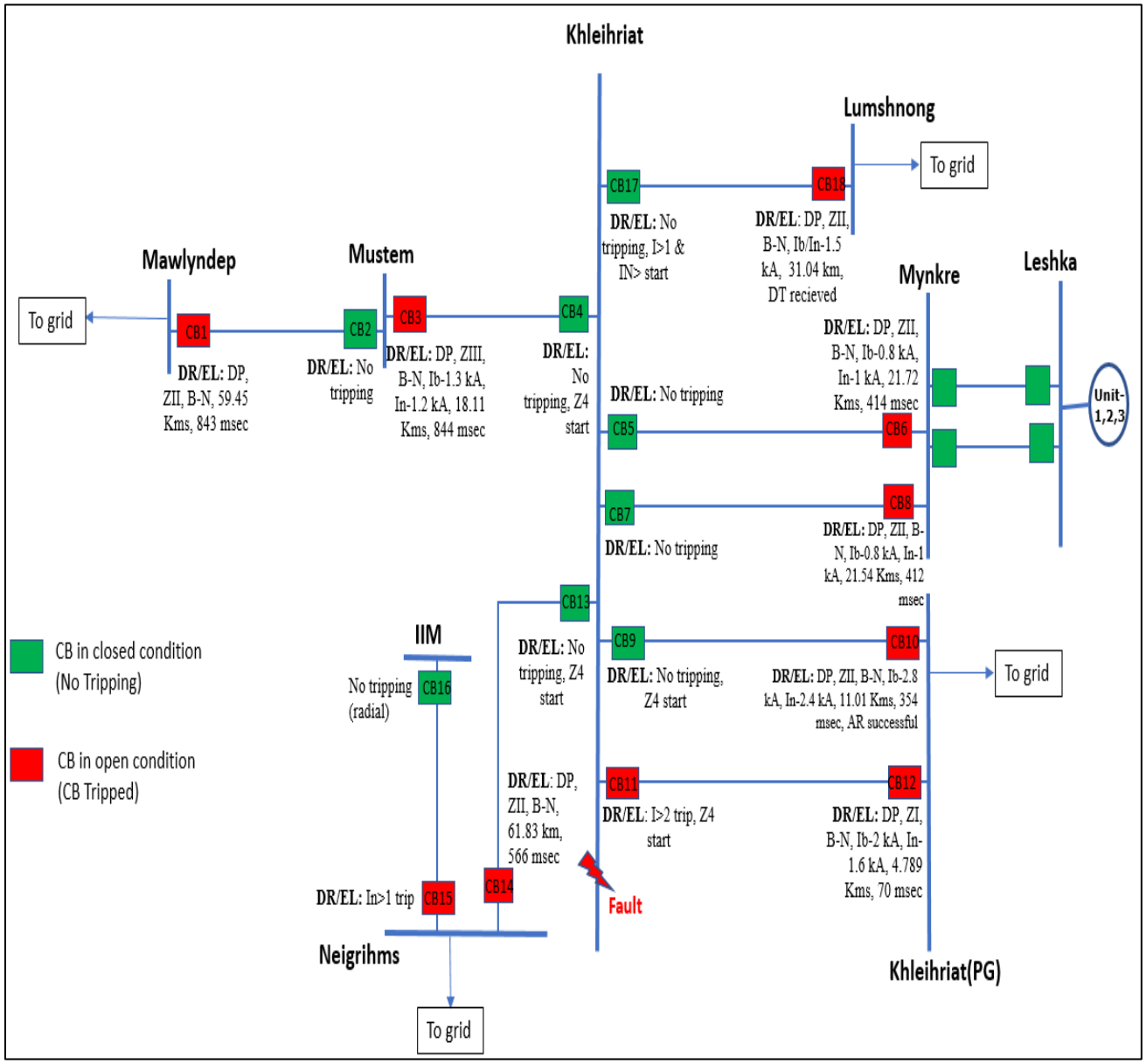
Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event): NIL**

10. <u>प्रमुख ट्रिपिंग /Major Elements Tripped:</u>

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	132 kV Khliehriat–Khleihriat(PG) I Line	14:00	14:00	No tripping	DP, ZII, B-N, 11.01 km, AR successful
2	132 kV Khliehriat–Khleihriat(PG) II Line	14:00	14:51	I>2 trip (Z4 start)	DP, ZI, B-N, 4.789 Km
3	132 kV Khleihriat-Neigrihms Line	14:00	14:22	No tripping, Z4 start	DP, ZII, B-N, 61.83 Km
4	132 kV Khleihriat-Mustem line	14:00	14:17	No tripping, Z4 start	DP, ZIII, B-N, 18.11 Km
5	132 kV Mustem-Mawlynep Line	14:00	14:18	No tripping	DP, ZIII, B-N, 59.45 Km
6	132 kV Khleihriat-Lumshnong Line	14:00	14:25	No tripping (I>1 start, IN>1 start)	DP, ZII, B-N(initially ZIII start), DT received, 31.04 km
7	132 kV Mynkre-Khleihriat I Line	14:00	14:11	DP, ZII, B-N, 21.72 Km	No tripping
8	132 kV Mynkre-Khleihriat II Line	14:00	14:12	DP, ZII, B-N, 21.54 Km	No tripping
9	132 kV Neigrihms-IIM Line	14:00	14:21	IN>1 trip	No tripping(radial)
10	Leshka Unit-1	14:00	14:56	Loss of evacuation path	
11	Leshka Unit-2	14:00	14:40	Loss of evacuation path	
12	Leshka Unit-3	14:00	14:31	Loss of evacuation path	
13	Umiam Stage-II Unit 2	14:00	14:24	Over-current of Generator transformer operated	

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):



a) 132 kV Khleihriat-Khleihriat(PG) II Line:
End A: B-N fault (Ib-2 kA, In-1.6 kA) initiated at 13:59:43.817 Hrs and cleared within 65 msec on operation of I>2 trip (Highset O/C). Also, Z4 started.
End B: B-N fault cleared within 70 msec on operation of DP, ZI.

b) 132 kV Khleihriat-Khleihriat(PG) I Line:
End A: No tripping
End B: B-N fault initiated at 13:59:51.986 hrs and cleared within 354 msec on operation of DP, ZII. After 3 sec, Auto recloser was successful.

c) 132 kV Khleihriat-Neigrihms Line:
End A: no tripping, Z4 started. Ib-1 kA, In-0.9 kA

End B (as per EL, DR file not opening): B-N fault cleared within 566 msec on operation of DP, ZII. Dist-61.83 Km

d) 132 kV Khleihriat-Mustem line:
End A: No tripping, Z4 started
End B: B-N fault (Ib-1.3 kA, In-1.2 kA) initiated at 13:59:27.714 hrs and cleared within 844 msec on operation of DP, ZIII.

e) 132 kV Mustem-Mawlynep Line:
End A: No tripping
End B: B-N fault cleared within 843 msec on operation of DP, ZIII.

f) 132 kV Khleihriat-Lumshnong Line:
End A: No tripping, I>1 & IN>1 started.
End B: B-N fault (Ib-1.5 kA, In-1.5 kA) cleared within 843 msec on operation of DP, ZII. Initially, Z3 pickup. However, after 400 msec, Z2 pickup. At 13:58:17.814 Hrs, DT received which is inferred unwanted. "CB status" showing CB closed. However, DR parameter confirms CB opening.

g) 132 kV Mynkre-Khleihriat I Line:
End A: B-N fault initiated at 13:51:11.108 hrs and cleared within 414 msec on operation of DP, ZII.
End B: No tripping

h) 132 kV Mynkre-Khleihriat II Line:
End A: B-N fault initiated at 13:51:11.519 hrs and cleared within 412 msec on operation of DP, ZII.
End B: No tripping

i) 132 kV Neigrihms-IIM Line:
End A: IN>1 trip at 13:55:38.049 Hrs after 761 msec of inception of fault, fault clearing time-803 msec
End B: No tripping (radial)

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.

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:

- 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 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 to be kept at 200 msec till bus bar protection is implemented.

13. सुधारात्मक उपाय /Action Taken/Remedial Measures:

- Fault data of 132 kV Mustem-Khleihriat Line was studied and tested and was found to be OK. LFL of the feeder was carried out to ascertain the exact line length. The LFL test was carried out on 25th June'25 and the 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.

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	No violation
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	No violation

3.	**क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?**	IEGC section 37.2 (e)	**No violation**
4.	**डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues**	IEGC section 17.3	**Time drift of 9 min at Mynkre end for Khleihriat line -1&2**
5.	**कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance**		**-**

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of protection system needs to be ensured at all times.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

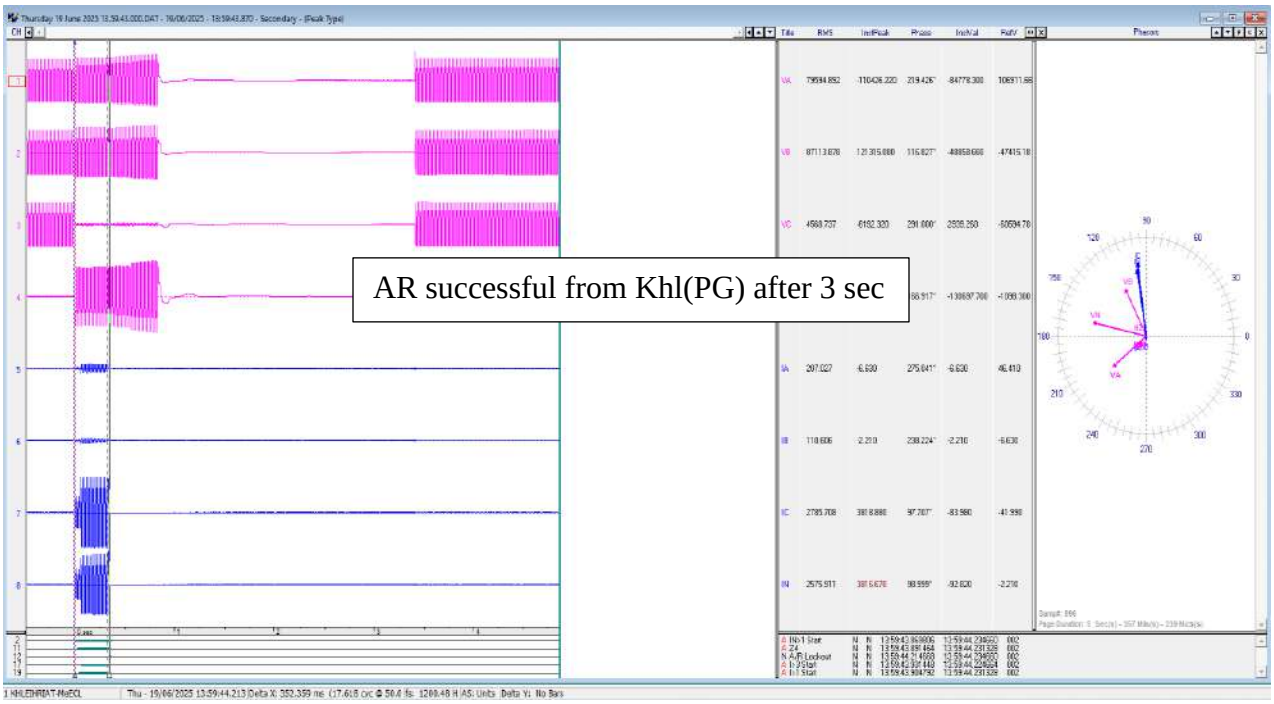


Fig 1: DR snapshot of Khleihriat(PG) for 132 kV Khleihriat I line

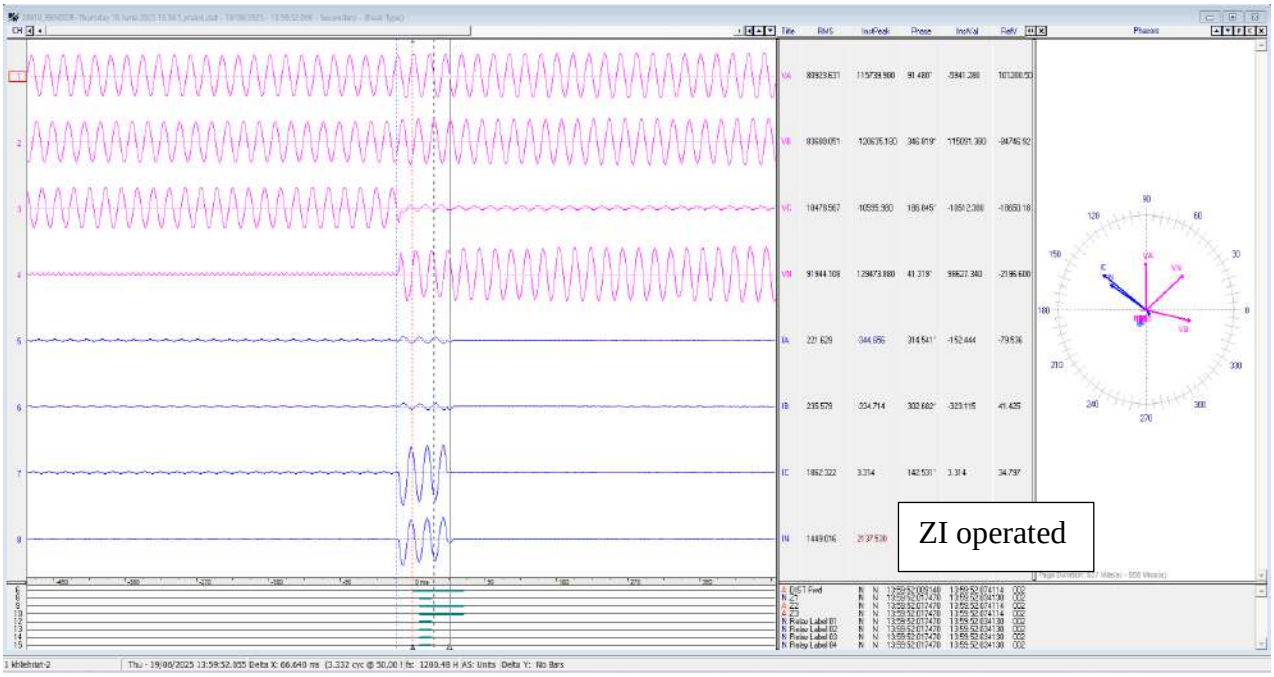


Fig 2: DR snapshot of Khleihriat(PG) for 132 kV Khleihriat II line

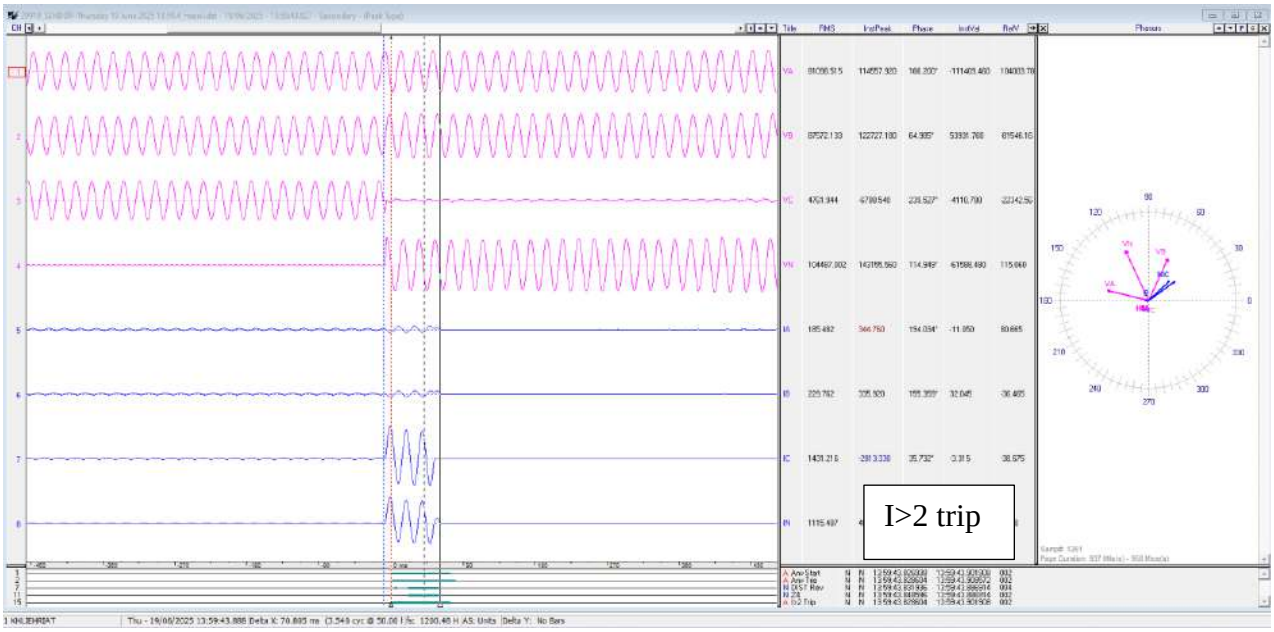


Fig 3: DR snapshot of Khleihriat for 132 kV Khleihriat(PG) II line

Thursday 19 June 2025 13:59:47.384	Fault Recorded
Description	M1COM
Plant reference	KHLIEHRIAT_FDR
Model number	P442312B1A0070B
Address	001 Column:01 Row:00
Event type	Fault record
Event Value	0
Active Group	1
Faulted Phase	111100
Start Elements	0100000000010000011
Tripped Elts	00000000001000000000000001
Time Stamp Thursday 19 June 2025	13:59:46.745
Fault Alarms	000000000
System Frequency	50.00 Hz
Fault Duration	566.7ms
Relay Trip Time	80.00ms
Fault Location	61.83km
IA	130.3 A
IB	45.51 A
IC	951.3 A
VAN	74.56kV
VBN	76.32kV
VCN	45.40kV
Fault Resistance 10.15	Ohm
Fault in Zone Zone	2

Fig 4: EL snapshot of Neigrihms for 132 kV Khleihriat line

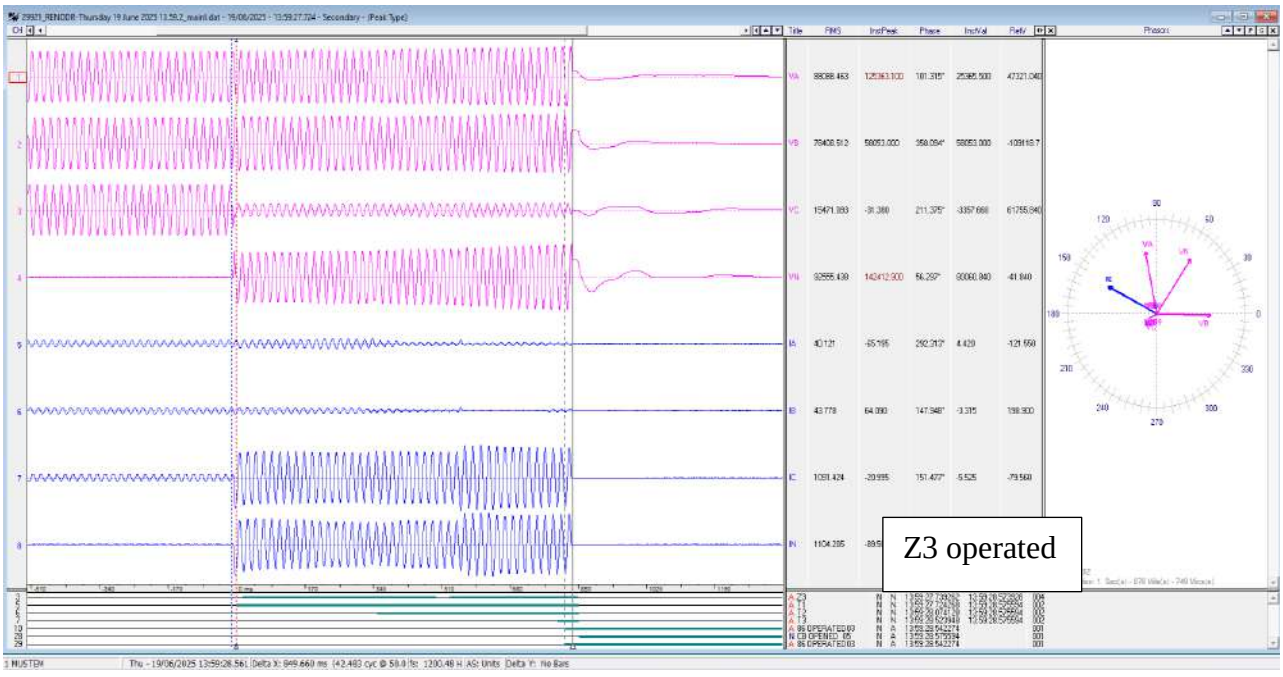


Fig 5: DR snapshot of Mustem for 132 kV Khleihriat line

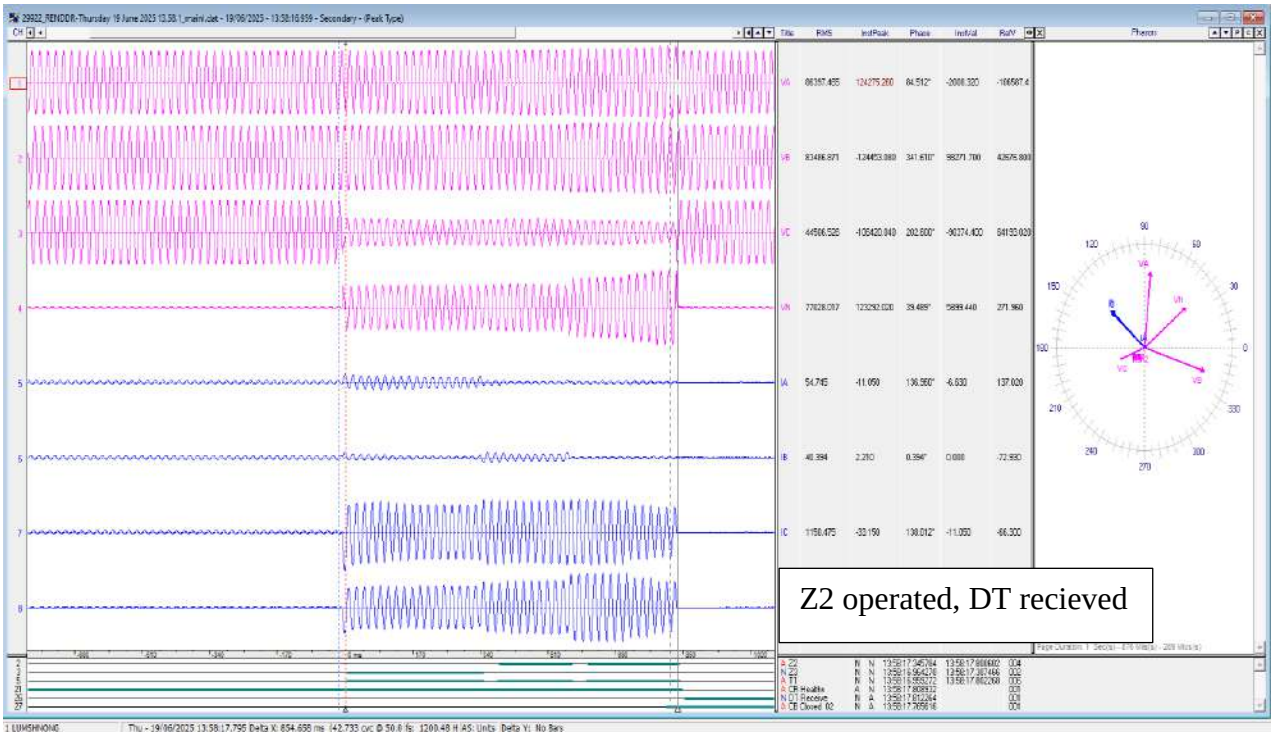


Fig 6: DR snapshot of Lumshnong for 132 kV Khleihriat line

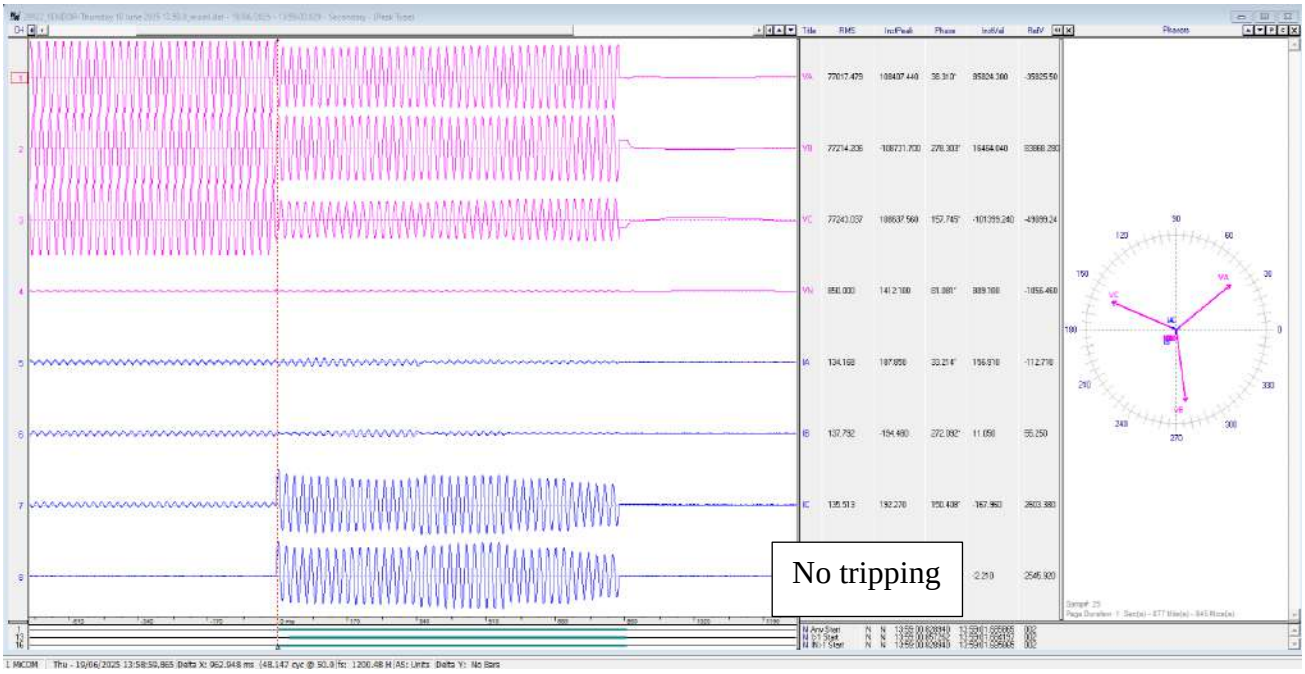


Fig 7: DR snapshot of Khleihriat for 132 kV Lumshnong line

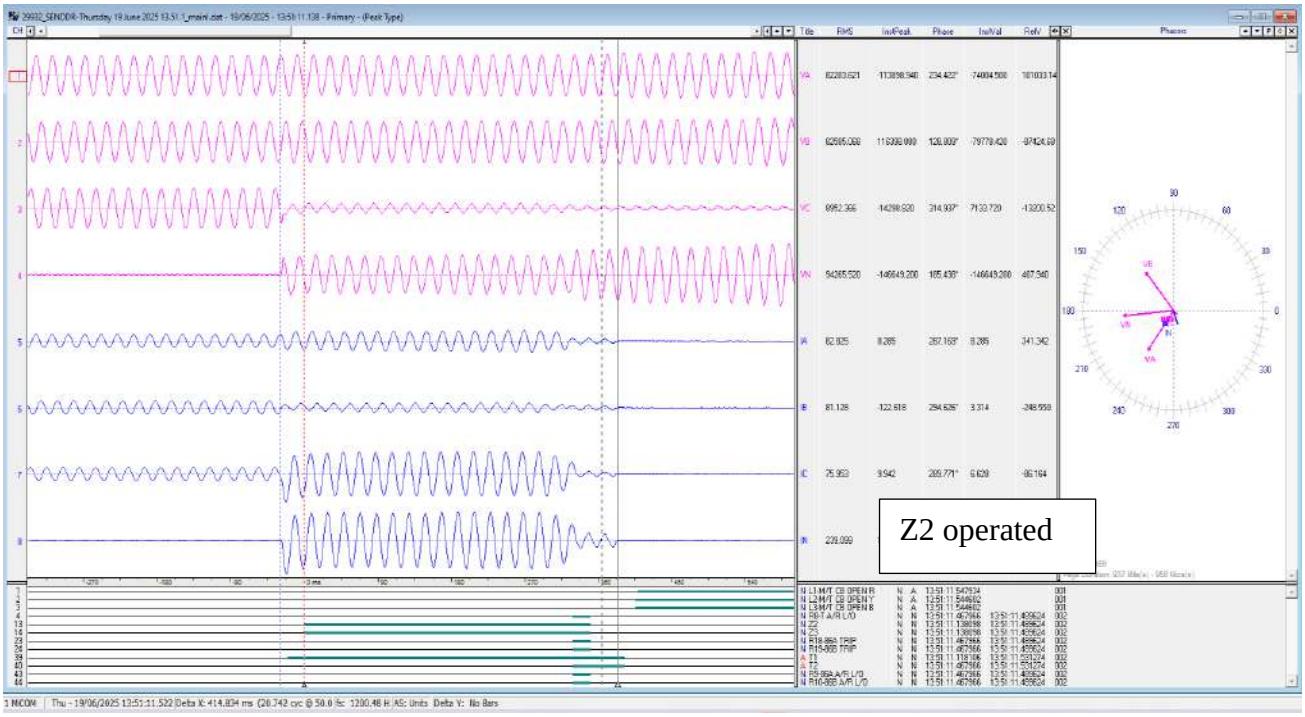


Fig 8: DR snapshot of Mynkre for 132 kV Khleihriat I line

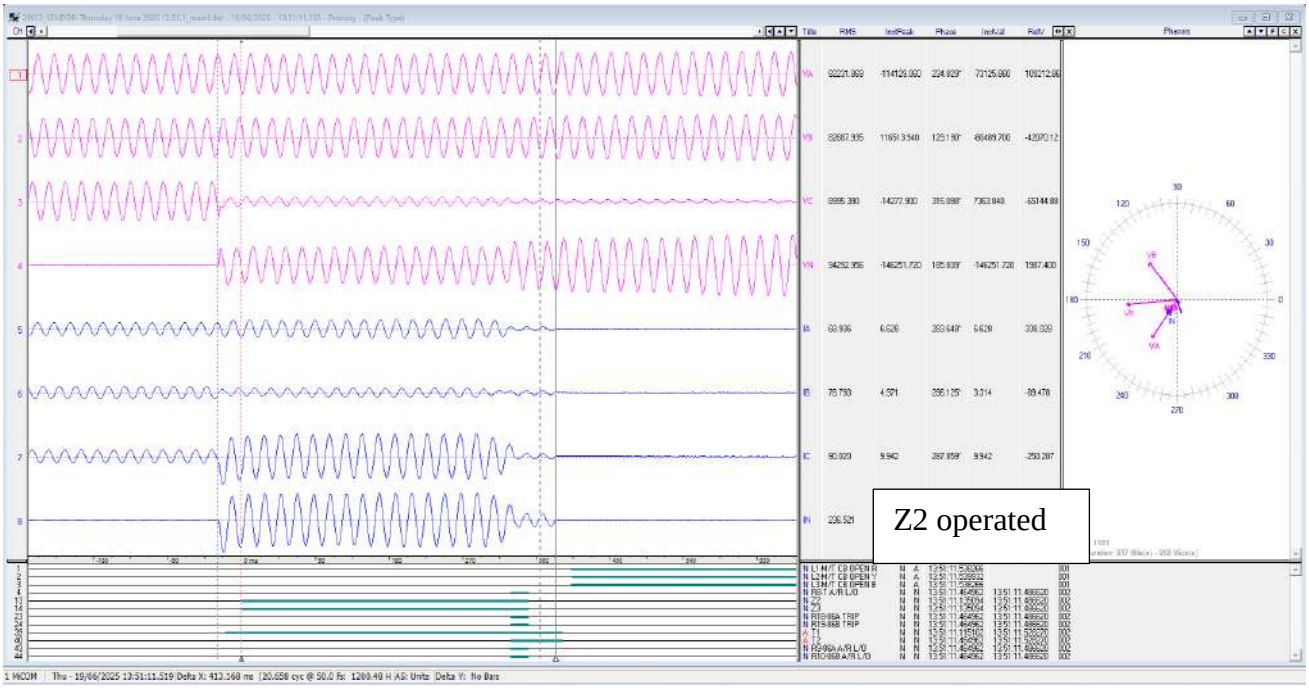


Fig 9: DR snapshot of Mynkre for 132 kV Khleihriat II line

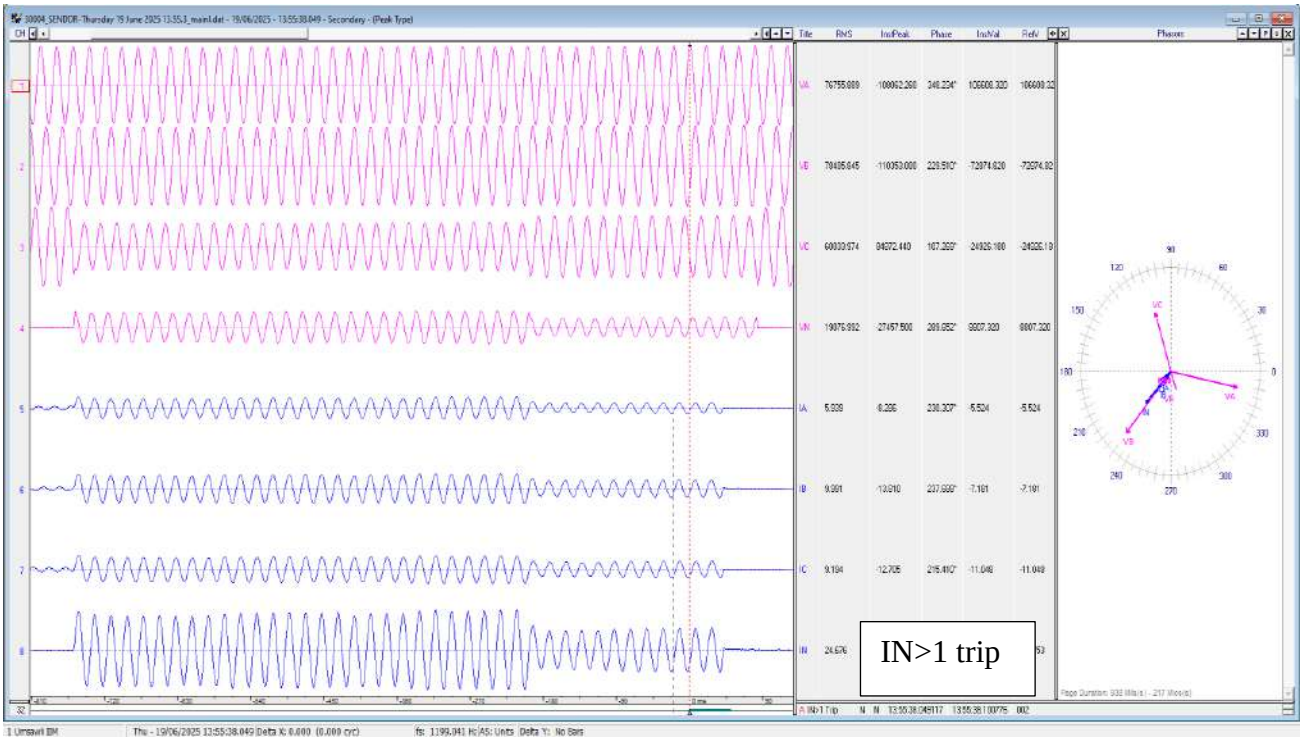


Fig 10: DR snapshot of Neigrihms for 132 kV IIM line

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र के अरुणाचल प्रदेश विद्युत प्रणाली के आलॉन्ग क्षेत्र में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Along area of Arunachal Pradesh Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 10-07-2025

1. घटना का सारांश/Event Summary:

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

At 05:15 Hrs of 21-06-2025, 132 kV Basar-Along and 132 kV Along-Pasighat lines tripped. Due to tripping of these elements, Along area of Arunachal Pradesh Power System was isolated from NER Grid and collapsed due to no source available in this area.

Power was extended to Along area of Arunachal Pradesh Power System by charging 132 kV Along –Pasighat Line at 06:19 Hrs of 21-06-2025.

2. घटना का समय और दिनांक/Time and Date of the Event: 05:15 Hrs of 21-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Along of Arunachal Pradesh Power System

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	50.03	2645	2544
घटना के बाद/ Post Event	50.03	2643	2523

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से	NIL

पहले) Important Transmission Line/Unit if under outage (before the event)	
मौसम स्थिति / Weather Condition	Normal

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load loss of 3.2 MW

7. **व्यवधान की अवधि /Duration of interruption:** 1 Hr 4 mins

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

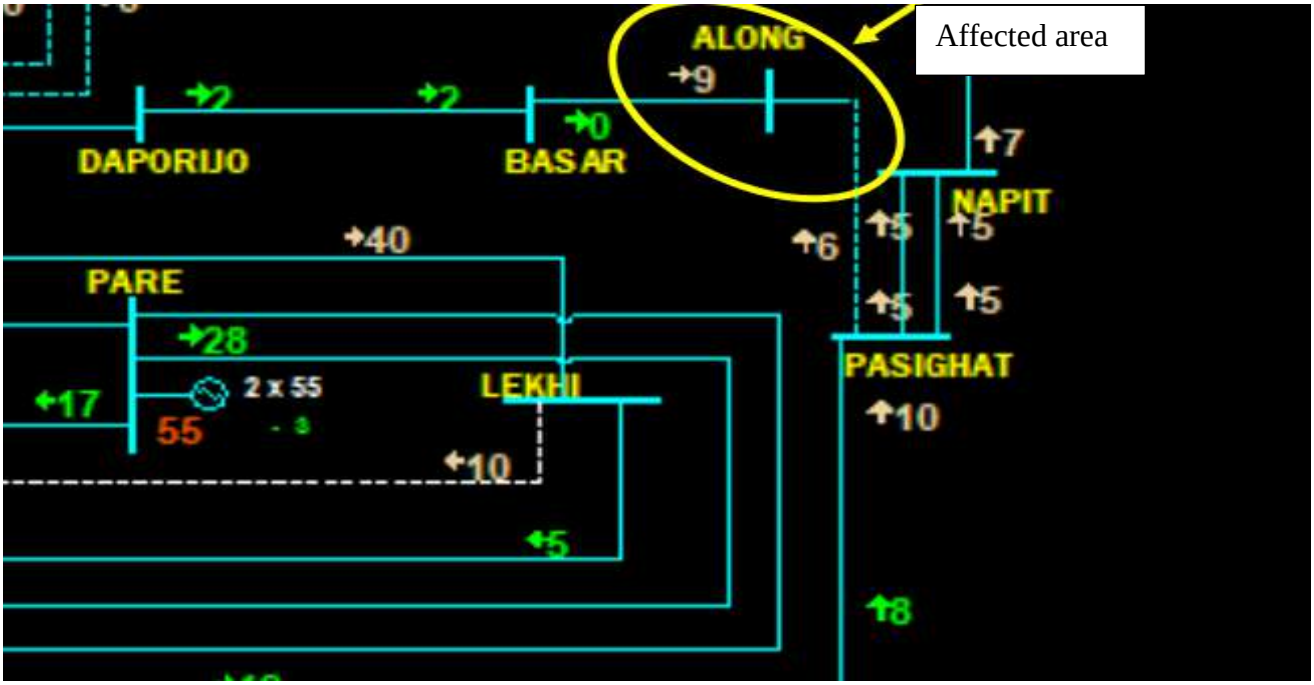


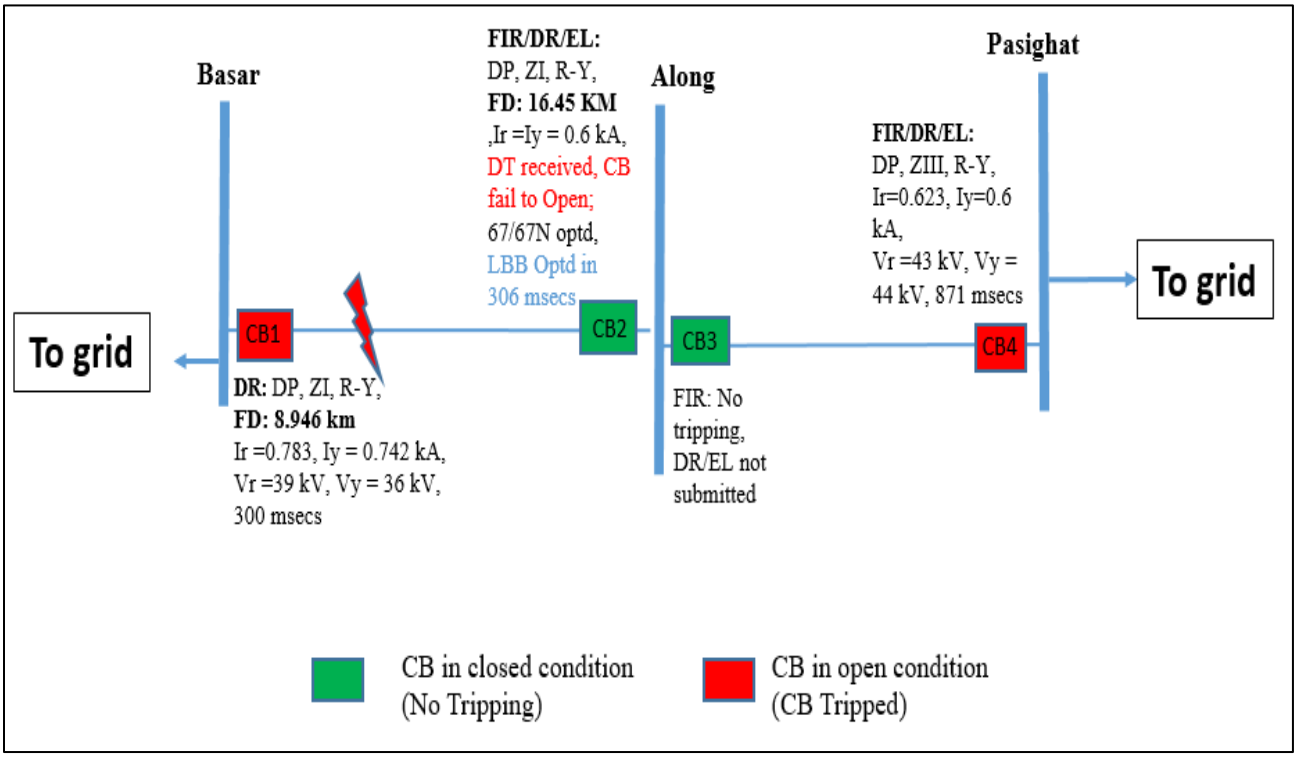
Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event): NIL**

10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	132 kV Basar-Along Line	05:15	11:55 Hrs of 22-06-2025	DP, ZI, R-Y, 8.946 km	DP,ZI, R-Y, 16.45 km trip issued, LBB optd, 67/67N optd (CB did not open)
2	132 kV Along-Pasighat Line	05:15	06:19	No tripping	DP, ZIII, R-Y

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):



As per DR analysis, resistive R-Y fault (Ir-0.783 kA, Iy-0.742 kA) initiated at 05:14:17.444 Hrs in 132 kV Basar-Along line which was cleared within 300 msec from Basar end on operation of DP, ZI (delayed CB opening). However, CB fails to opens from Along end despite issuance of trip command by distance protection relay in ZI and the fault continued to feed from Roing side till 871 msecs. The fault was cleared from Roing end of 132 kV Pasighat - Roing line after 871 msecs on operation of DP, ZIII.

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:

- **Delayed operation of CB (CB1) at Basar:** At Basar end, fault initiated at 05:14:17.444 Hrs and ZI trip command issued at 05:14:17.467 Hrs. However, CB opened after 276 msec which is undesirable.

- **Non operation of CB (CB2) at Along**: The distance protection at Along end issued the trip command. However, CB fails to open which is undesirable.

- **LBB protection at Along SS**: DR of 132 kV Basar - Along line at Along showing LBB Operation after 306 msecs. However, CB did not open at Along S/S. LBB time delay needs to be reviewed and set as per NERPC protection philosophy.

- **DT received at CB (CB2) at Along**: At 05:10:33.574 Hrs, DT received at Along end. However, no DT sent from the Basar end.

- **DR time drift at Along (CB2):** DR for main relay at Along showing fault initiation time of 05:10:33.523 Hrs which indicates DR time drift of 5 minutes.

13. सुधारात्मक उपाय /Action Taken/Remedial Measures: NIL

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	No violation
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	DoP Arunachal Pradesh
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	DoP Arunachal Pradesh
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	Time drift of 5 min at Along end for Basar Line
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of protection system needs to be ensured at all times.
- Periodic checking and testing of protection system to ensure its healthiness.

परिशिष्ट 2: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 2: DR and EL snapshots:

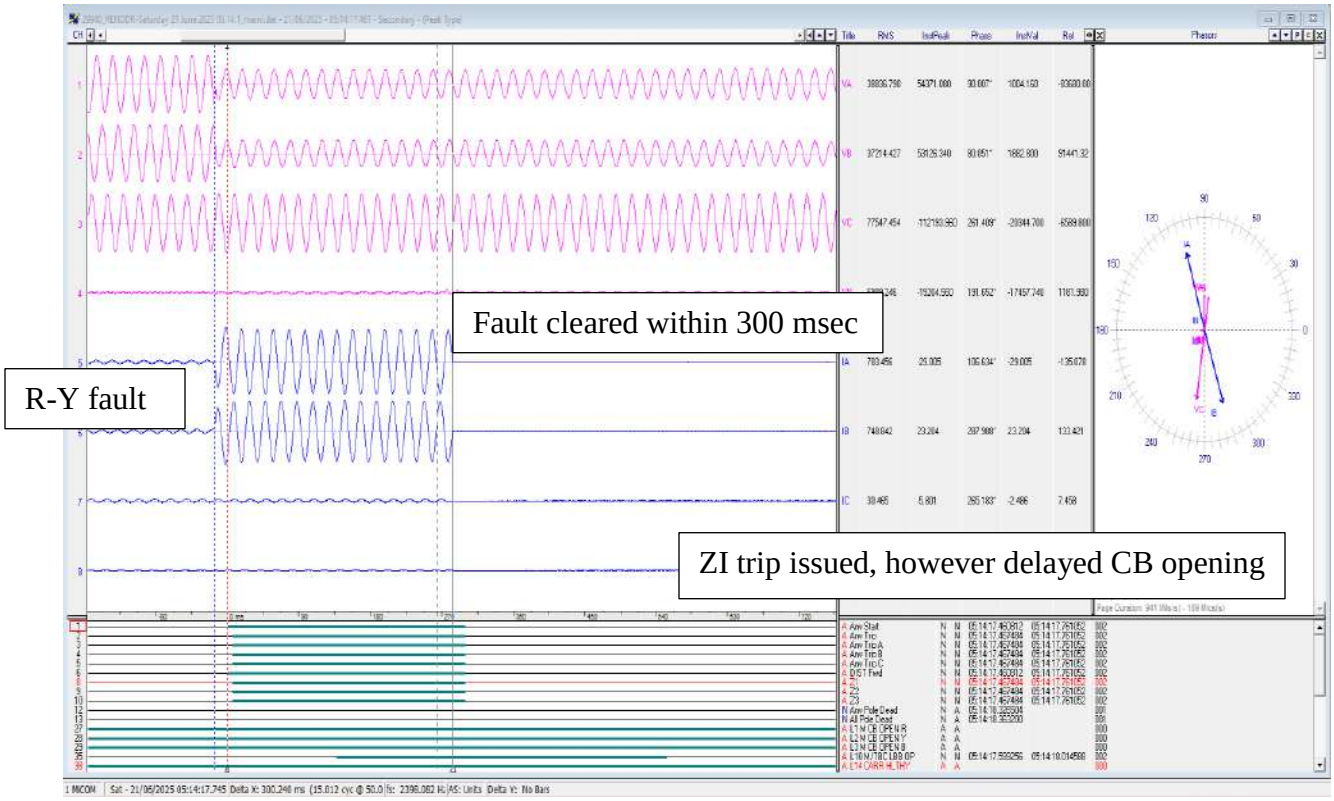


Fig 1: DR snapshot of Basar for 132 kV Along line

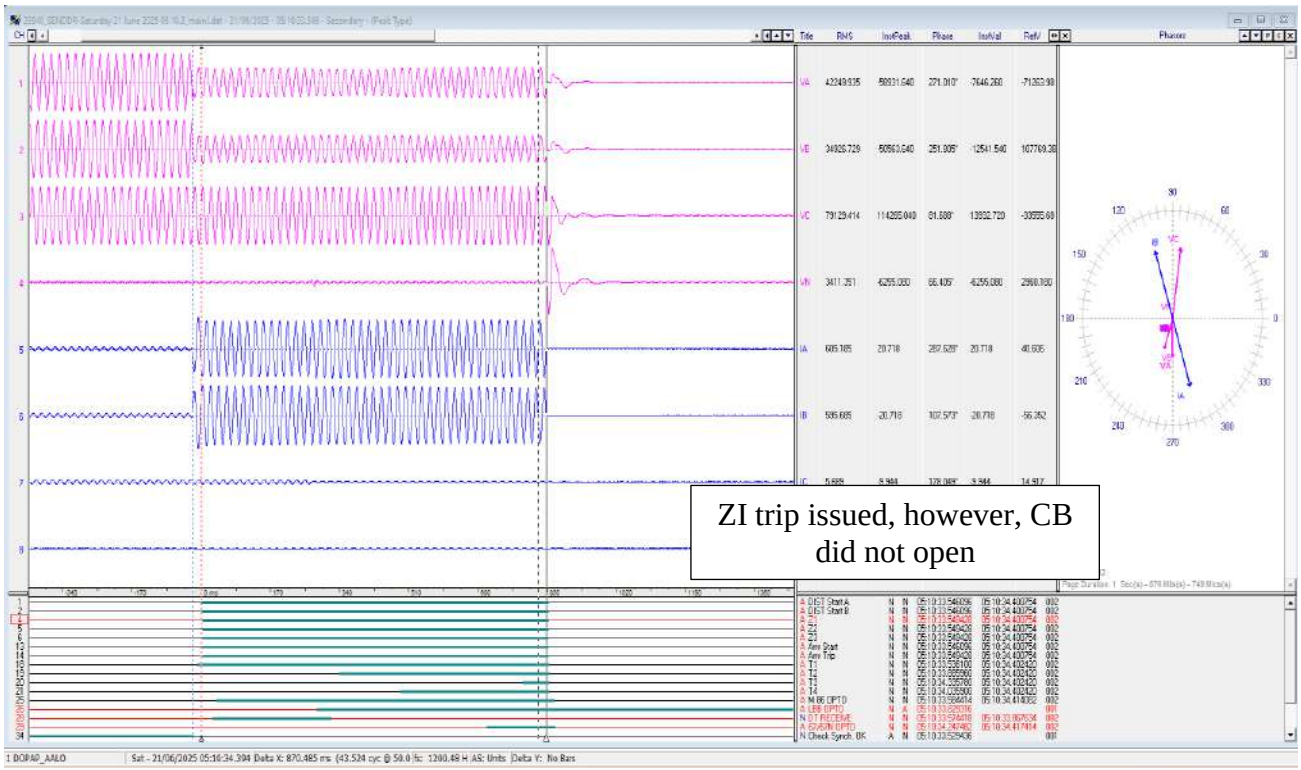


Fig 2: DR snapshot of Along for 132 kV Basar line

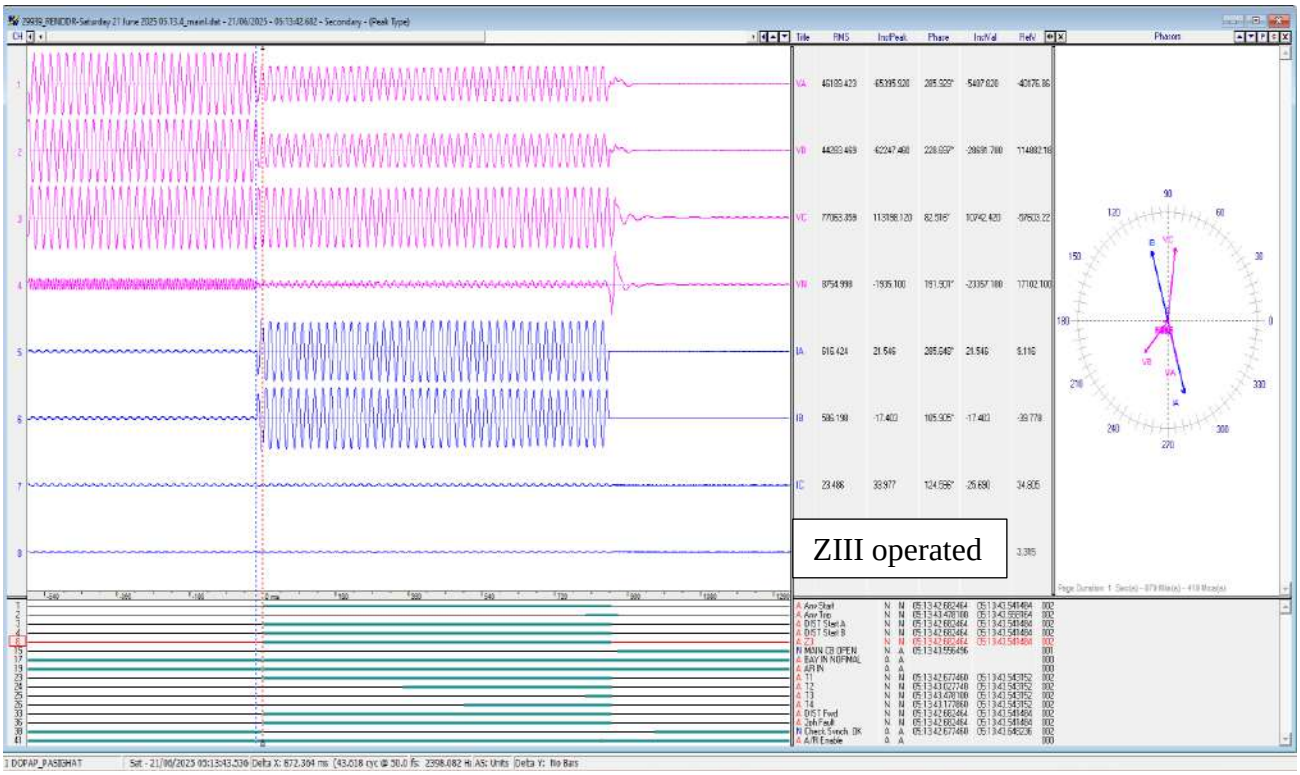


Fig 3: DR snapshot of Pasighat for 132 kV Along line

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र के असम विद्युत प्रणाली के रंगिया, अमीनगांव, कमालपुर, सिपाझार, तंगला, नलबाड़ी और नाथकुची क्षेत्रों में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Rangia, Amingaon, Kamalpur, Sipajhar, Tangla, Nalbari & Nathkuchi areas of Assam Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 10-07-2025

1. घटना का सारांश/Event Summary:

Rangia, Amingaon, Kamalpur, Sipajhar, Tangla, Nalbari and Nathkuchi areas of Assam Power System were connected with rest of NER Grid through 220kV BTPS – Rangia D/C lines. Prior to the event, 132 kV Rowta – Sipajhar, 132 kV Rowta – Tangla, 132 kV Barpeta – Nalbari and 132 kV Bornagar – Nathkuchi lines were under outage condition due to system requirement.

At 19:14 Hrs of 21-06-2025, 220kV BTPS – Rangia D/C lines tripped. Due to tripping of these elements, SPS operated at 220 kV Rangia S/S which leads to black out at Rangia, Amingaon, Kamalpur, Sipajhar, Tangla, Nalbari and Nathkuchi areas of Assam Power System.

Power supply was extended to Rangia area by charging 220kV BTPS – Rangia GSS line at 19:38 Hrs of 21-06-2025. Subsequently, Power was extended to Amingaon, Kamalpur, Sipajhar, Tangla, Nalbari and Nathkuchi at 20:08 hrs of 21-06-2025.

2. घटना का समय और दिनांक/Time and Date of the Event: 19:14 Hrs of 21-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Rangia, Amingaon, Kamalpur, Sipajhar, Tangla, Nalbari and Nathkuchi areas of Assam Power System

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	50.02	3025	3737

घटना के बाद/ Post Event	50.05	3084	3512

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से पहले) Important Transmission Line/Unit if under outage (before the event)	132kV Rowta – Sipajhar, 132kV Rowta – Tangla, 132kV Barpeta – Nalbari and 132kV Bornagar – Nathkuchi lines were under outage condition due to system requirement
मौसम स्थिति / Weather Condition	Normal

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load loss of 200 MW
7. **व्यवधान की अवधि /Duration of interruption:** 54 mins
8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

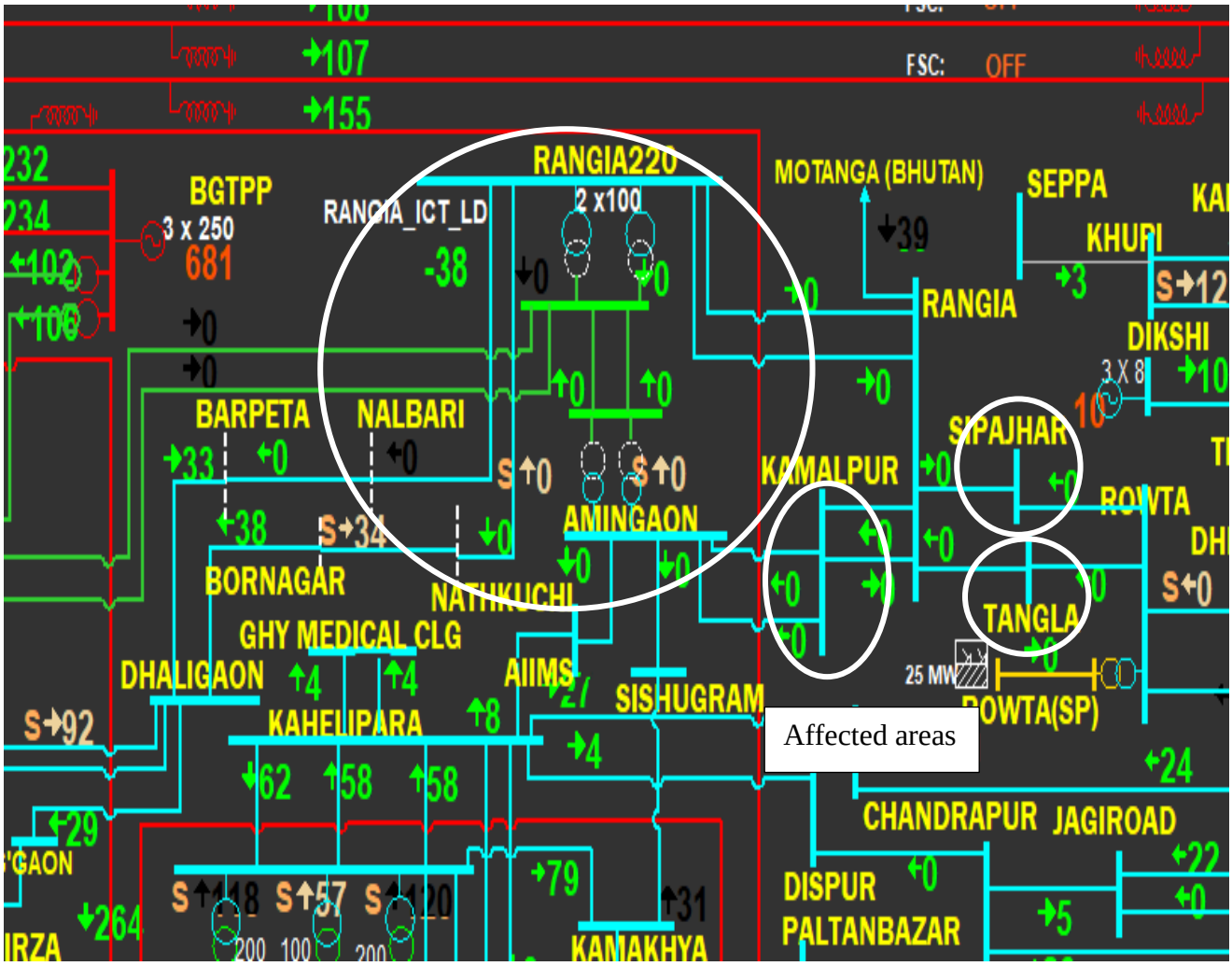


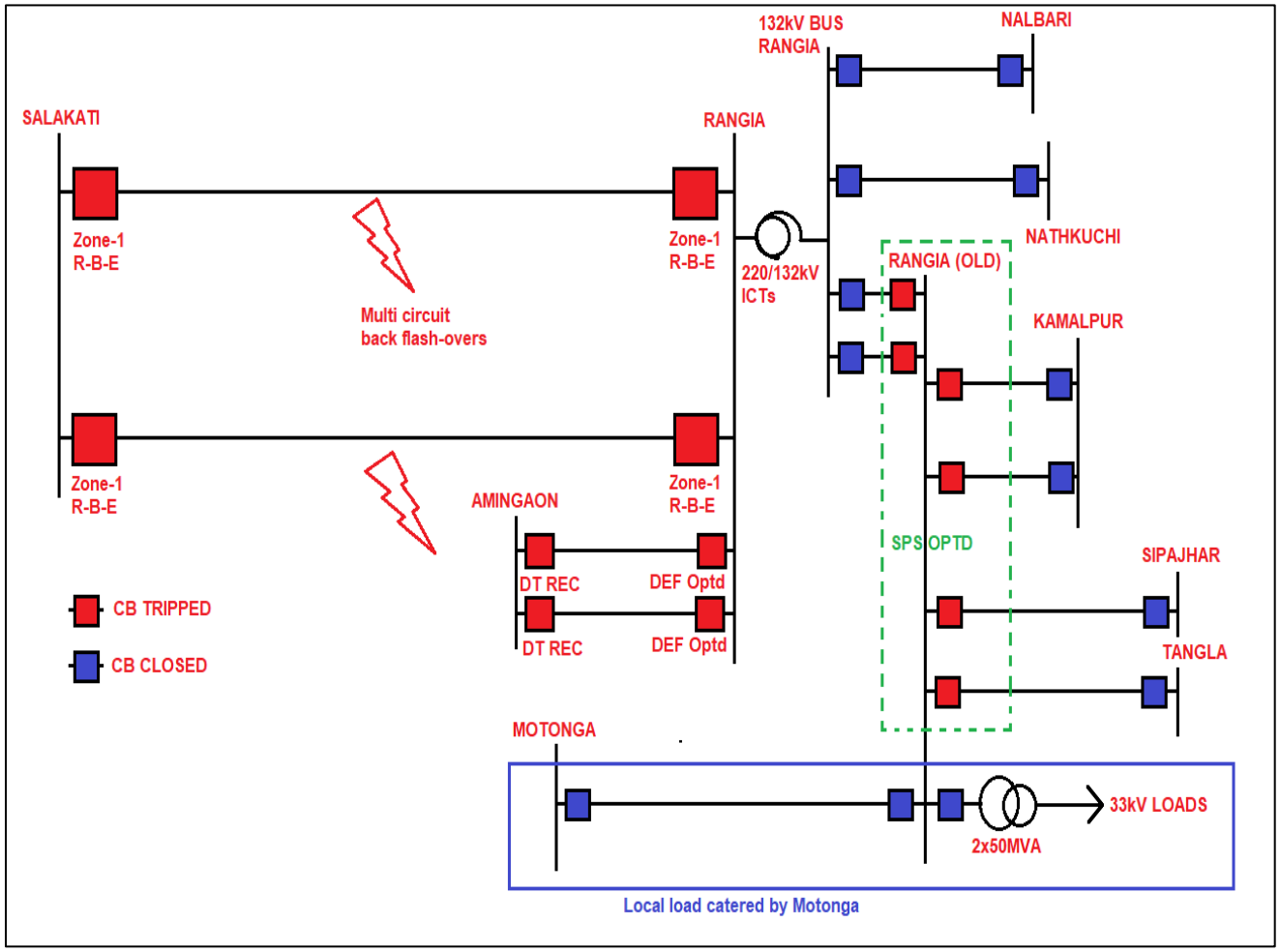
Figure 1: Network across the affected area

9. <u>उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event):</u> NIL

10. <u>प्रमुख ट्रिपिंग /Major Elements Tripped:</u>

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	220 kV BTPS-Rangia I Line	19:14	19:42	DP, ZI, R-B-N	DP, ZI, R-B-N
2	220 kV BTPS-Rangia II Line	19:14	19:56	DP, ZI, R-B-N	DP, ZI, R-B-N
3	220 kV Rangia-Amingaon I Line	19:14	20:08	DEF optd	DT recieved
4	220 kV Rangia-Amingaon II Line	19:14	20:08	DEF optd	DT recieved
5	132 kV Rangia-Rangia I Line	19:14	19:52	SPS operated	
6	132 kV Rangia-Rangia II Line	19:14	19:46	SPS operated	
7	132 kV Rangia-Sipajhar Line	19:14	19:54	SPS operated	
8	132 kV Rangia-Tangla Line	19:14	19:54	SPS operated	
9	132 kV Rangia-Kamalpur I Line	19:14	19:57	SPS operated	
10	132 kV Rangia-Kamalpur I Line	19:14	19:57	SPS operated	

11. <u>घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):</u>



As per DR analysis, R-B-N fault (Ir-2.1 kA, Ib-2.5 kA, In-0.9 kA) initiated at 19:14:48.663 Hrs in 220 kV BTPS-Rangia I & II lines which was cleared within 63 msec from both ends on operation of DP, ZI.

Multi-circuit back flashover due to lightning observed at both the 220 kV BTPS– Rangia Line I & II (Rph-Bph-E fault). Both ends tripped on Zone-1 Protection.

As per the active SPS logic, SPS was operated and the 33kV load and 132 kV Rangia – Motonga trans-national link was saved during the event. Generation at Motonga continued to cater the 33 kV load at Rangia without any interruption during the trip event.

Rangia being radially fed via 220 kV circuits, there was no fault feeding source at Rangia during the multi-circuit fault except the generation at Motonga at 132 kV level. Due to voltage dip recorded and imbalance in current, the DEF protection operated at Rangia for 220 kV Amingaon lines. The imbalance resulted in the zero-sequence voltage and current within operating zones.

12. <u>सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:</u> NIL

13. <u>सुधारात्मक उपाय /Action Taken/Remedial Measures:</u> NIL

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	No violation
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	AEGCL
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	No violation
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	No violation
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.

परिशिष्ट 1: स्काडा के अनुसार घटनाओं का क्रम / Sequence of events as per SCADA

AREA	CATEGORY	LOCATION	TEXT	SYSTEM_TIME	FIELD_TIME	MS
MEECL	1C	KILLI_ME	KILLING CB 132Kv LINE-1 TO EPIP1 OPEN	21 Jun 2025 19:06:16:000	21 Jun 2025 19:06:11:000	2.29E+08
AEGCL	1C	BONGA_AS	BONGAIGAON CB 220Kv LINE-1 TO RNG22 OPEN	21 Jun 2025 19:14:52:000	21 Jun 2025 19:14:48:000	7.25E+08
AEGCL	1C	BONGA_AS	BONGAIGAON CB 220Kv LINE-2 TO RNG22 OPEN	21 Jun 2025 19:14:52:000	21 Jun 2025 19:14:48:000	7.28E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE-1 TO KAMAL OPEN	21 Jun 2025 19:14:52:000	21 Jun 2025 19:14:48:000	9.72E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE TO SIPAJ OPEN	21 Jun 2025 19:14:52:000	21 Jun 2025 19:14:48:000	9.88E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE TO TNGLA OPEN	21 Jun 2025 19:14:52:000	21 Jun 2025 19:14:48:000	9.77E+08
AEGCL	1C	RNG22_AS	RANGIA220 CB 220Kv LINE-1 TO BONGA OPEN	21 Jun 2025 19:15:02:000	21 Jun 2025 19:14:48:000	7.75E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE-2 TO KAMAL OPEN	21 Jun 2025 19:58:24:000	21 Jun 2025 19:14:49:000	0
AEGCL	1C	AMNGN_AS	AMINGAON CB 220Kv LINE-1 TO RNG22 OPEN	21 Jun 2025 19:14:52:000	21 Jun 2025 19:14:49:000	4.17E+08
AEGCL	1C	AMNGN_AS	AMINGAON CB 220Kv LINE-2 TO RNG22 OPEN	21 Jun 2025 19:14:52:000	21 Jun 2025 19:14:49:000	4.17E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE-2 TO KAMAL OPEN	21 Jun 2025 19:14:52:000	21 Jun 2025 19:14:49:000	0
AEGCL	1C	RNG22_AS	RANGIA220 CB 220Kv LINE-1 TO BONGA CLOSED	21 Jun 2025 19:38:40:000	21 Jun 2025 19:38:27:000	5.74E+08
AEGCL	1C	BONGA_AS	BONGAIGAON CB 220Kv LINE-1 TO RNG22 CLOSED	21 Jun 2025 19:42:26:000	21 Jun 2025 19:38:40:000	3.53E+08
AEGCL	1C	RNG22_AS	RANGIA220 CB 220Kv LINE-2 TO BONGA CLOSED	21 Jun 2025 19:40:49:000	21 Jun 2025 19:40:35:000	3.83E+08
AEGCL	1C	AMNGN_AS	AMINGAON CB 220Kv LINE-1 TO RNG22 CLOSED	21 Jun 2025 20:08:22:000	21 Jun 2025 19:45:28:000	8.27E+08
AEGCL	1C	AMNGN_AS	AMINGAON CB 220Kv LINE-2 TO RNG22 CLOSED	21 Jun 2025 20:08:22:000	21 Jun 2025 19:45:44:000	9000000
AEGCL	1C	RNG22_AS	RANGIA220 CB 132Kv LINE-2 TO RANGI CLOSED	21 Jun 2025 19:45:57:000	21 Jun 2025 19:45:45:000	7.37E+08
AEGCL	1C	BONGA_AS	BONGAIGAON CB 220Kv LINE-2 TO RNG22 CLOSED	21 Jun 2025 19:56:14:000	21 Jun 2025 19:56:11:000	53000000
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE-1 TO KAMAL CLOSED	21 Jun 2025 19:57:25:000	21 Jun 2025 19:57:17:000	6.15E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE-1 TO KAMAL CLOSED	21 Jun 2025 19:58:30:000	21 Jun 2025 19:57:17:000	6.15E+08
AEGCL	1C	SISHU_AS	SISHUGRAM CB 132/33 T3 (SEC) BETWEEN	21 Jun 2025 20:02:23:000	21 Jun 2025 19:57:19:000	2.74E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE-2 TO KAMAL CLOSED	21 Jun 2025 19:58:30:000	21 Jun 2025 19:57:36:000	9.21E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE-2 TO KAMAL CLOSED	21 Jun 2025 19:57:41:000	21 Jun 2025 19:57:38:000	83000000
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE TO SIPAJ CLOSED	21 Jun 2025 19:57:47:000	21 Jun 2025 19:57:44:000	1.98E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE TO TNGLA CLOSED	21 Jun 2025 19:57:48:000	21 Jun 2025 19:57:45:000	6.23E+08

परिशिष्ट 2: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 2: DR and EL snapshots:

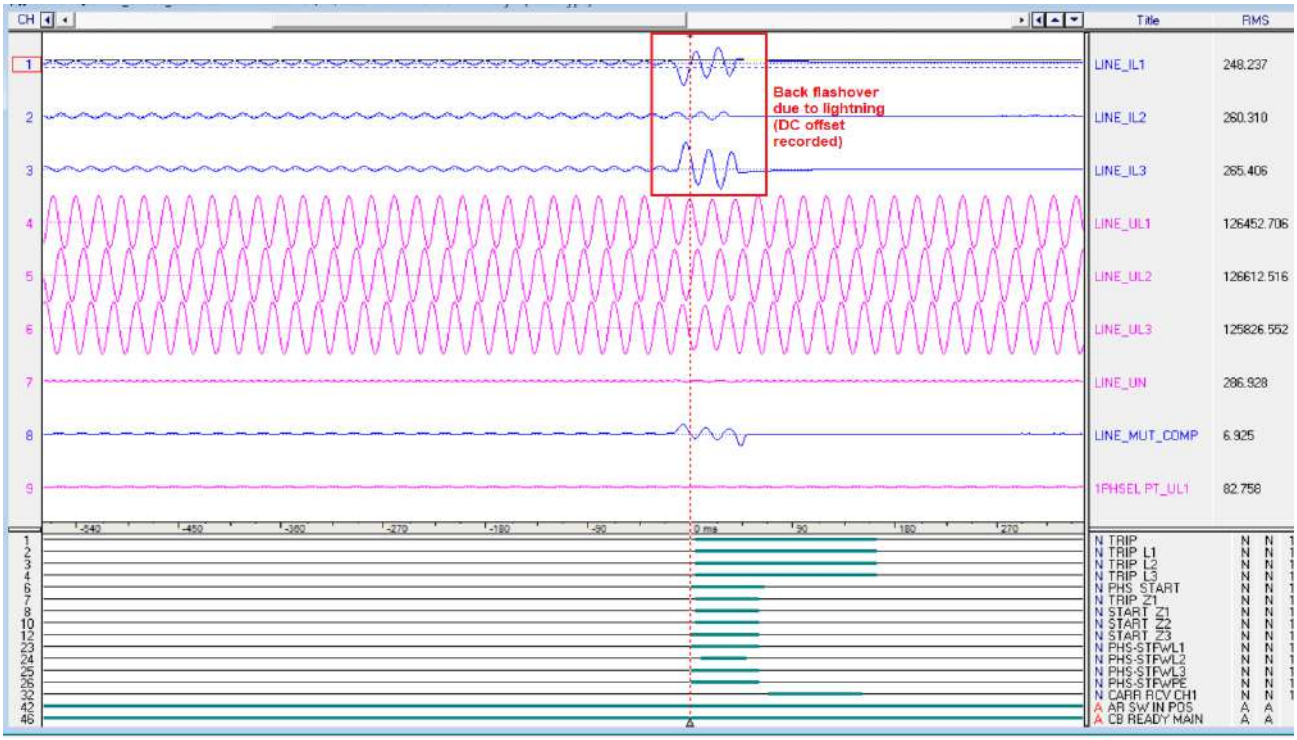


Fig 1: DR snapshot of BTPS for 220 kV Rangia I line

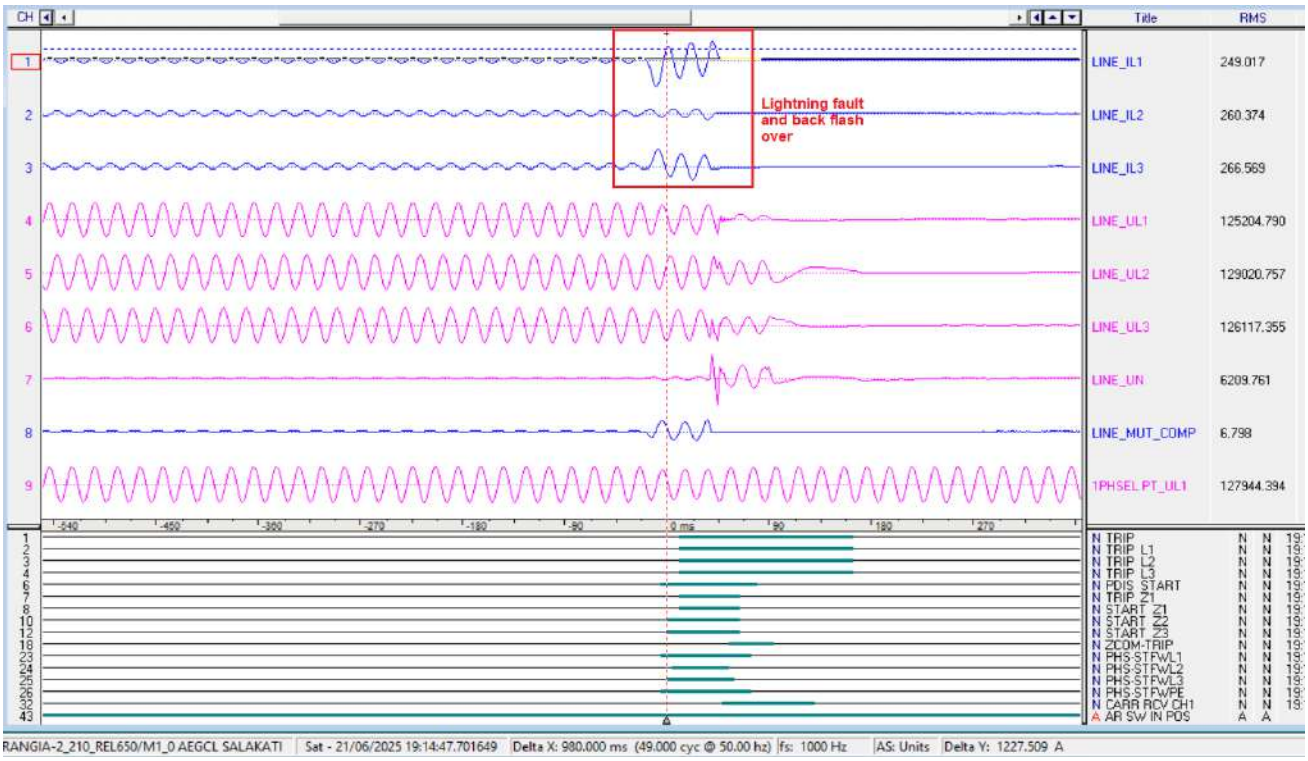


Fig 2: DR snapshot of BTPS for 220 kV Rangia II line

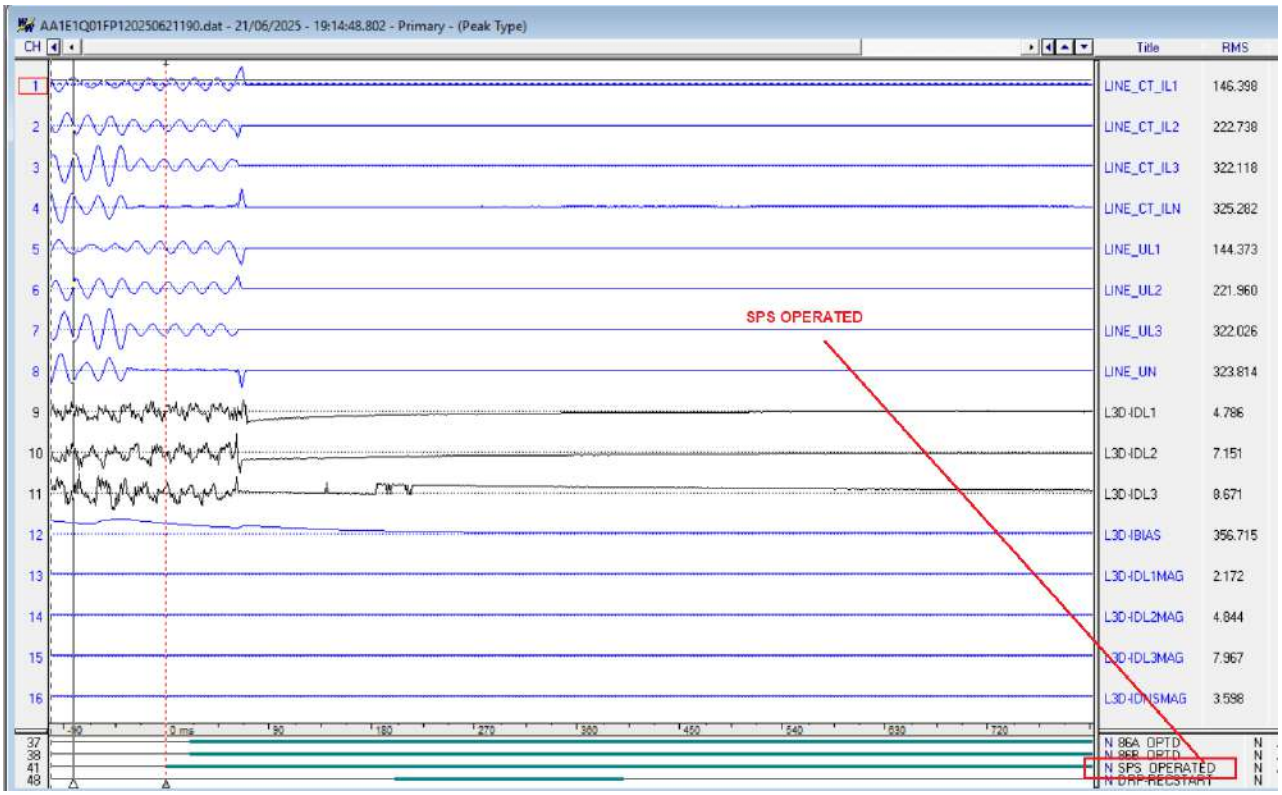


Fig 3: DR snapshot of Rangia for 220 kV BTPS lines

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र की असम विद्युत प्रणाली के मारघेरिटा क्षेत्र में ग्रिड घटना में ग्रिड गड़बड़ी की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in grid event in Margherita area of Assam Power System of NER

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 04-07-2025

1. घटना का सारांश/Event Summary:

Margherita area of Assam Power System was connected with rest of NER Grid through 132 kV Tinsukia – Margherita & 132 kV Rupai- Margherita line.

At 22:59 Hrs of 22-06-2025, 132 kV Tinsukia – Margherita & 132 kV Rupai- Margherita line tripped. Due to tripping of these elements, Margherita area of Assam Power System was isolated from NER Grid and collapsed due to no source available in this area.

Power was restored to Margherita by charging 132 kV Rupai- Margherita line at 23:14 Hrs.

2. घटना का समय और दिनांक/Time and Date of the Event: 22:59 Hrs of 22-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Margherita area of Assam

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति (हर्ट्ज)/ Frequency in Hz	क्षेत्रीय पीढ़ी (मेगावाट)/ Regional Generation (MW)	क्षेत्रीय डिमांड (मेगावाट)/ Regional Demand (MW)	राज्य की मांग (मेगावाट)/ State Demand (MW)
घटना पूर्व/Pre-Event	50.01	3292	3346	2282
घटना के बाद/ Post Event	50.01	3183	3303	2262

Pre and post data of 1 minute before and after the event

महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है/ Important Transmission Line/Unit if under outage (before the event)	-

मौसम स्थिति/ Weather Condition	Rainy Weather

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load Loss : 04 MW

7. **व्यवधान की अवधि /Duration of interruption:** 15 mins

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

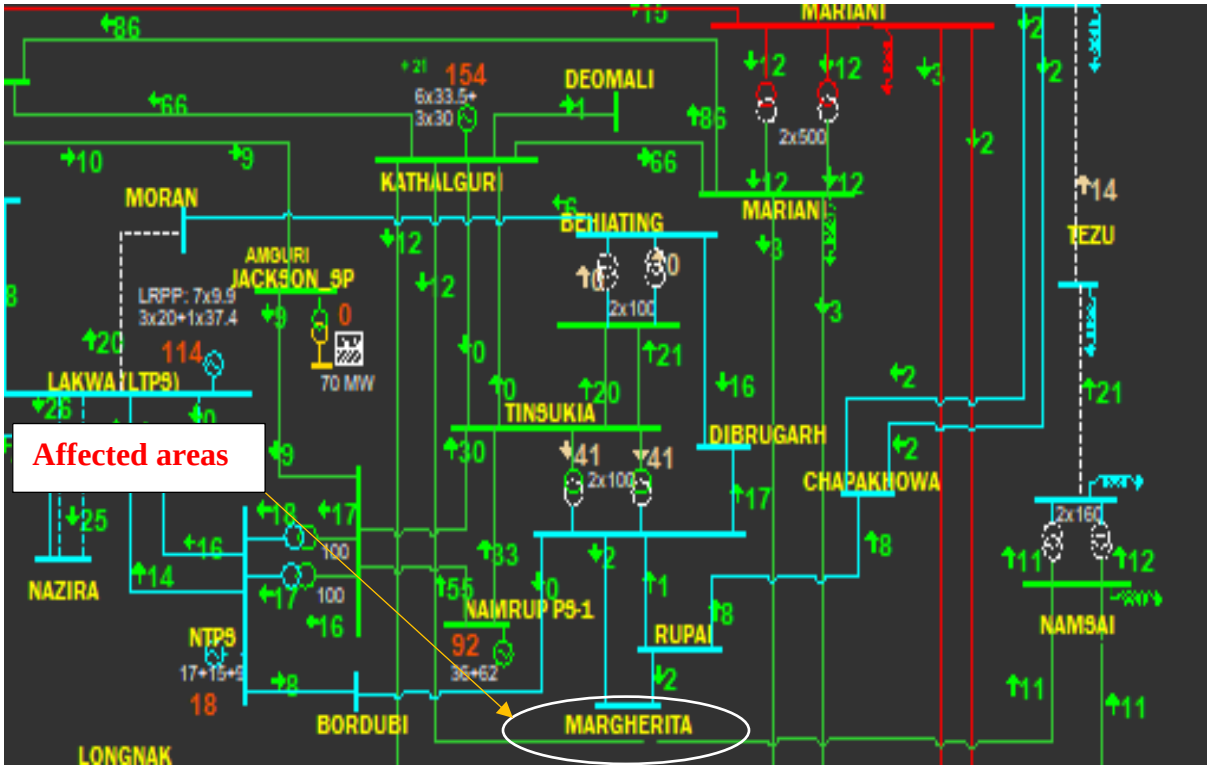


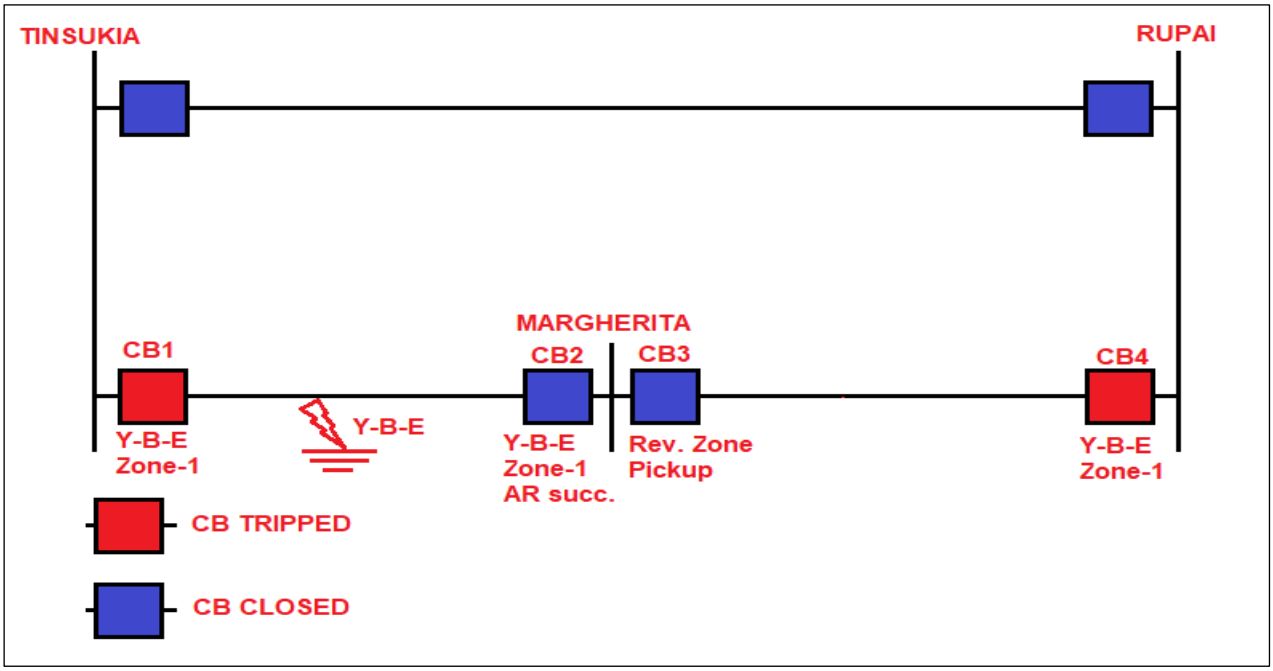
Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event): NIL**

10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्र.सं / Sl no	ट्रांसमिशन/जेनरेशन तत्व का नाम / Transmission/Generation element name	ट्रिपिंग का समय / Tripped Time (hh:mm)	पुनर्स्थापना का समय / Restoration time (hh:mm)	रिले इंडिकेशन एंड ए / Relay Indication End A	रिले इंडिकेशन एंड बी / Relay Indication End B
1	132 kV Tinsukia – Margherita	22:59	23:15	DP, ZI, YBE	DP, ZI, YBE, AR successful
2	132 kV Rupai-Margherita	22:59	23:14	DP, ZI, YBE, FD: 51.3 kms	Zone-4 pickup, No tripping

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):



As per DR analysis, at Y-B-E fault in 132kV 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 lead to the tripping within 66 msecs leading to the blackout of Margherita GSS. Zone-4 picked up at (*CB3)* confirming the fault was in 132kV Tinsukia – Margherita Line.

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:

- Zone-1 setting at Rupai end for 132kV Rupai – Margherita line will be reviewed.
- Non-operation of Auto-reclosure at Tinsukia end for 132kV Tinsukia – Margherita line will be reviewed.

13. सुधारात्मक उपाय /Action Taken/Remedial Measures:

The above issues and remedial measures taken will be updated in due course of time

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम संख्या/ **Sl. No.**	अनुपालन संबंधी समस्याएँ/ **Issues**	अनुपालन उल्लंघन से संबंधित विनियमन/ **Regulation Non-Compliance**	बिजली उपयोगिता संस्थाएँ/ **Utilities**

1.	**क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?**	IEGC section 37.2 (b)	**Received after 8 hours**
2.	**क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?**	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	**Not submitted by *AEGCL. DR & EL not received for CB1 , CB2 & CB3***
3.	**क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?**	IEGC section 37.2 (e)	**02-07-2025 ((Submitted by *AEGCL)***
4.	**डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues**	IEGC section 17.3	***Margherita (23:03 Hr) Tinsukia (11:35 Hrs 08/12/2017)***
5.	**कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance**	DR standardization	To be done by AEGCL at Tinsukia, Margherita & Rupai

15. <u>प्रमुख शिक्षाएँ/ Key Lessons Learnt:</u>

- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of the protective devices need to be ensured all the time.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

Fig1 : *DR screenshot for Rupai - Margherita Line at Rupai end*

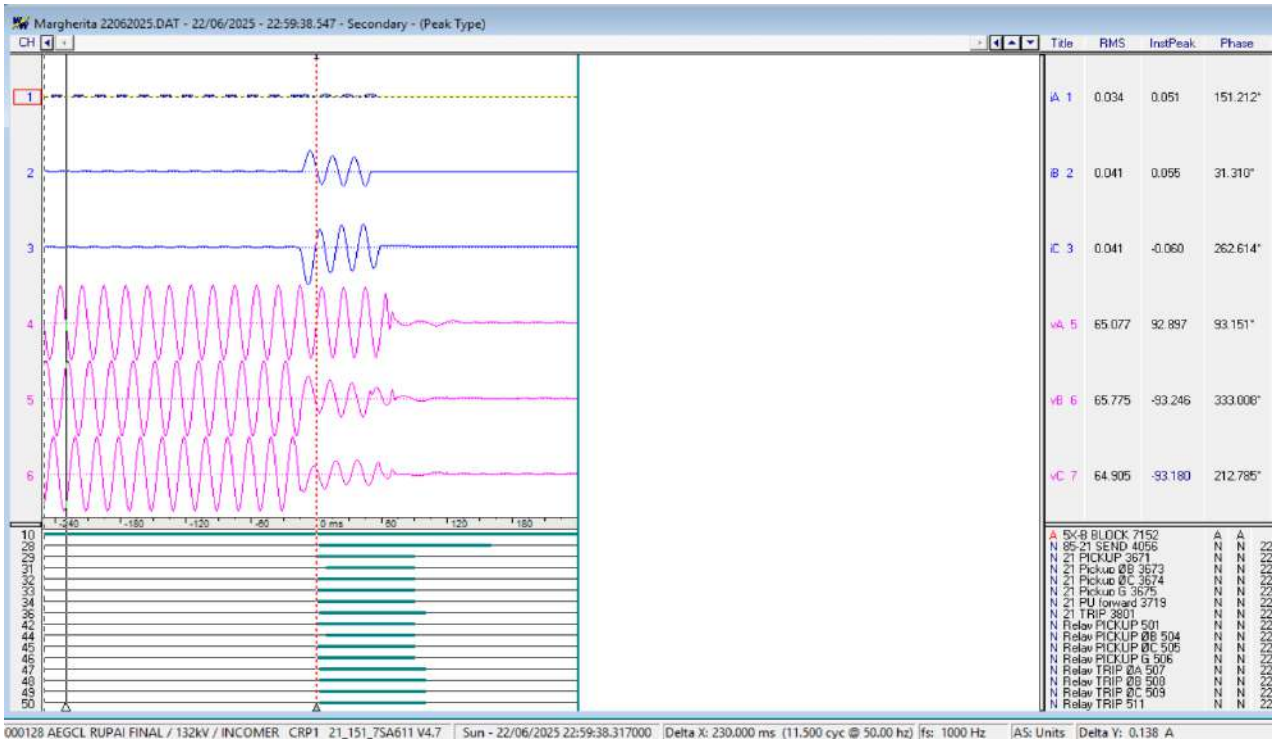


Fig 2: *DR screenshot for Rupai – Margherita line at Margherita end*

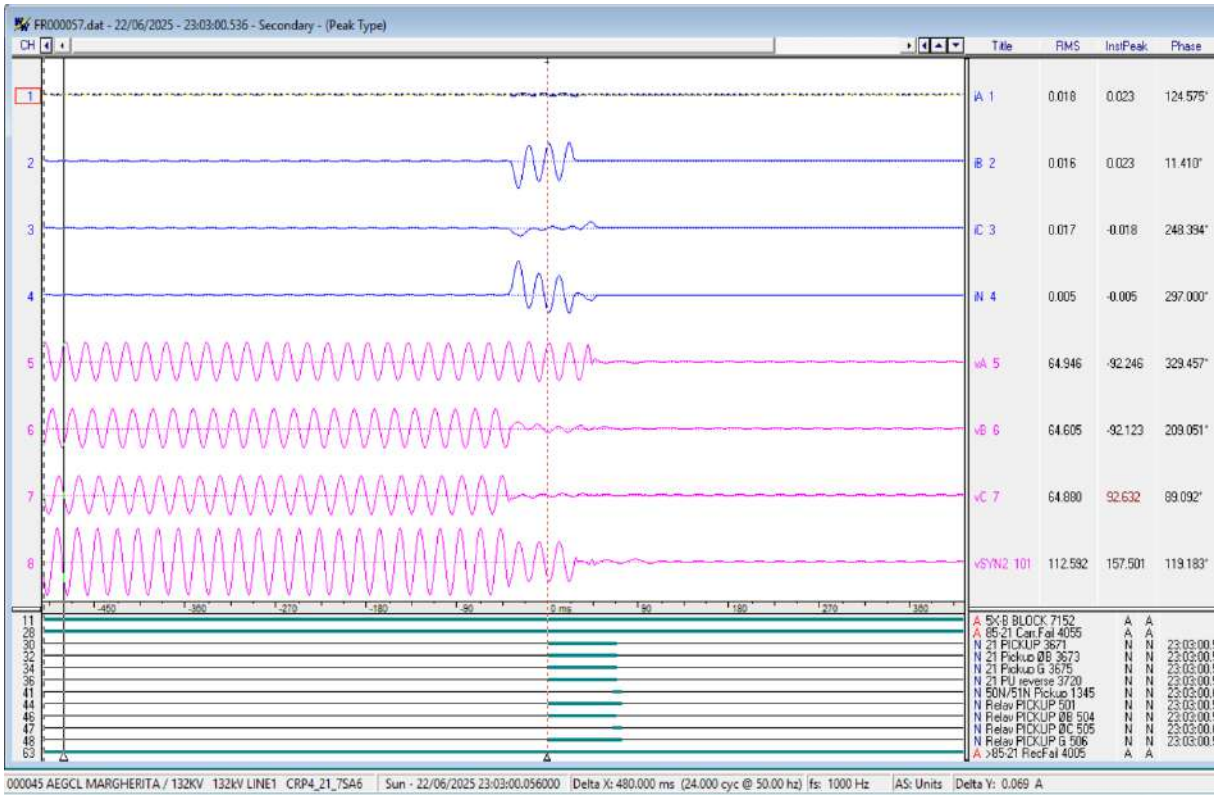


Fig 3: *DR screenshot for Margherita line at Margherita end*

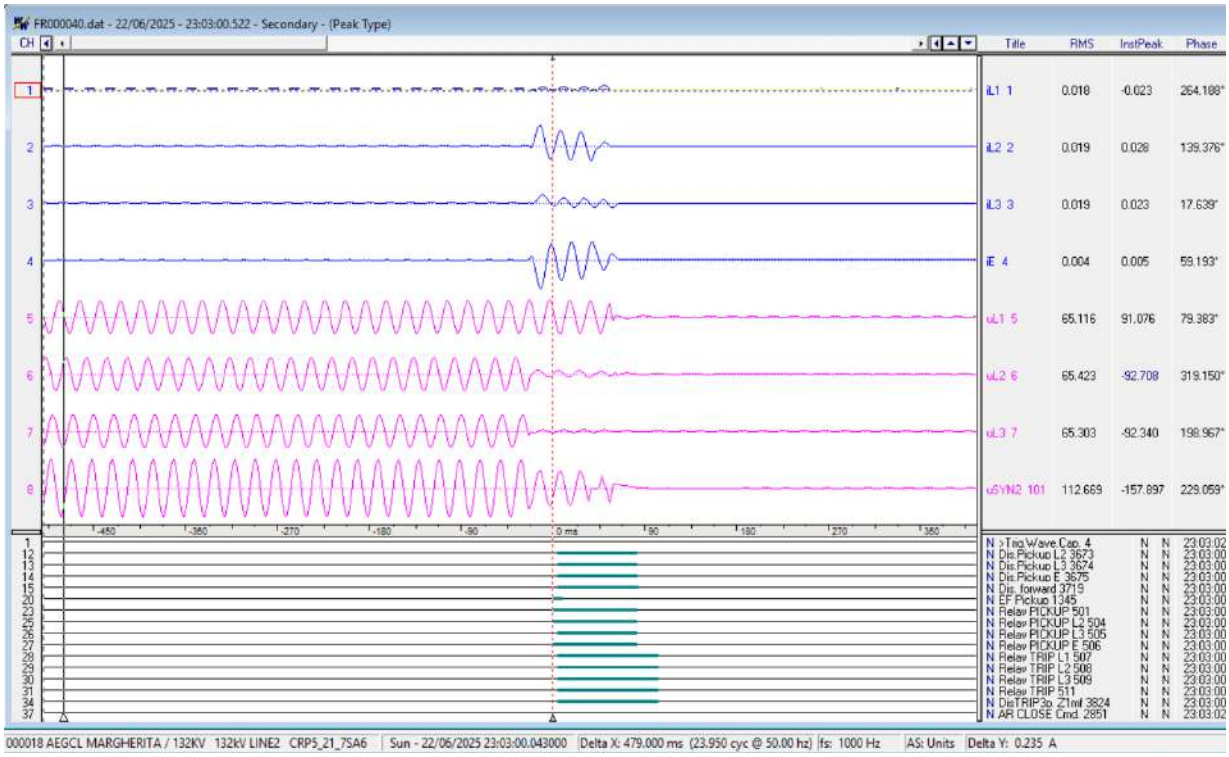
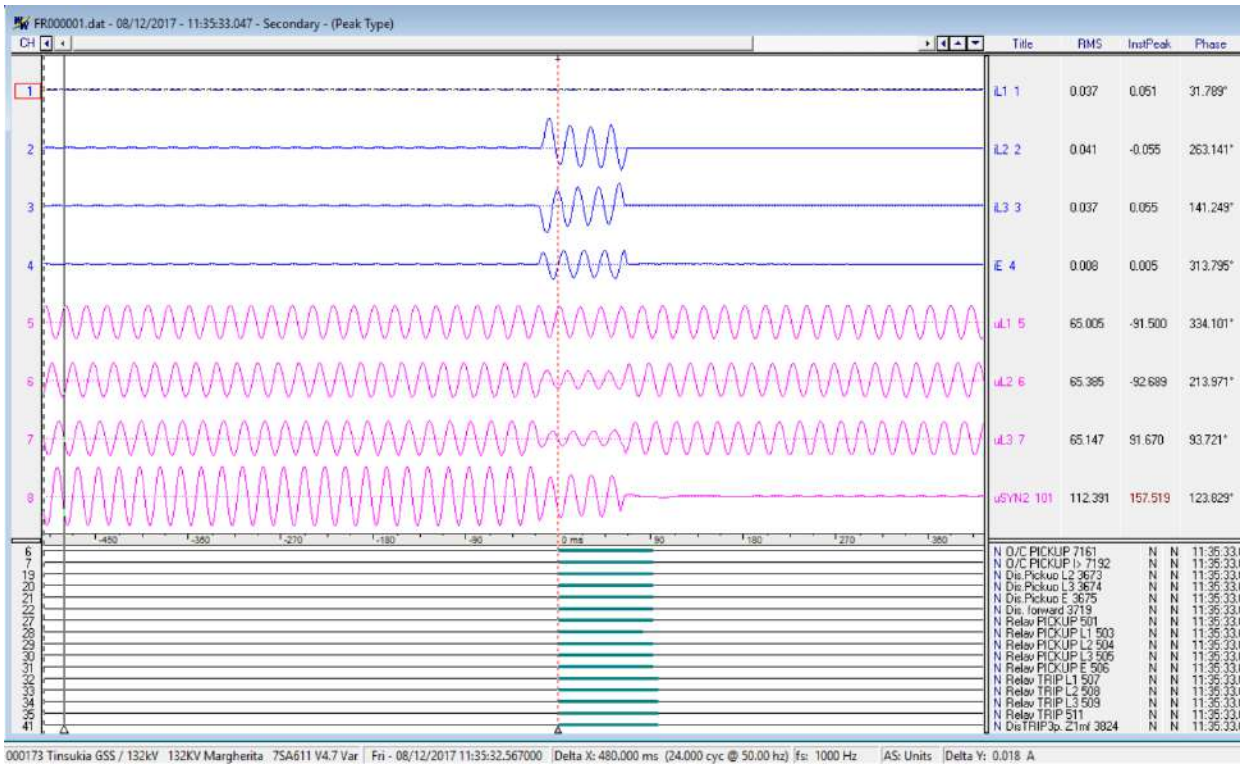


Fig 4: *DR screenshot for Margherita line at Tinsukia end*



ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
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उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र के अरुणाचल प्रदेश विद्युत प्रणाली के टेंगा, खुपी, सेप्पा और दिक्षी क्षेत्रों में ग्रिड विघ्न और नीपको का 132 केवी कामेंग सबस्टेशन में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Tenga, Khupi, Seppa & Dikshi areas of Arunachal Pradesh Power System & 132 kV Kameng S/S of NEEPCO of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 10-07-2025

1. घटना का सारांश/Event Summary:

Tenga, Khupi & Seppa area of Arunachal Pradesh Power System & 132 kV Kameng S/S of NEEPCO were connected with rest of NER Grid through 132 kV Balipara-Tenga, 132 kV Tenga-Khupi lines & 400/132 kV Kameng ICT.

At 10:28 Hrs of 23-06-2025, 132 kV Balipara-Tenga, 132 kV Tenga-Khupi, 132 kV Kameng-Khupi lines & 400/132 kV Kameng ICT tripped. Due to tripping of these elements, Tenga, Khupi, Seppa & Dikshi areas of Arunachal Pradesh Power System & 132 kV Kameng S/S of NEEPCO got isolated from NER Grid and collapsed due to no source available in these areas.

Power was restored at all the affected at 12:42 hrs of 23-06-2025.

2. घटना का समय और दिनांक/Time and Date of the Event: 10:28 Hrs of 23-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Tenga, Khupi, Seppa & Dikshi areas of Arunachal Pradesh Power System & 132 kV Kameng S/S of NEEPCO

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	49.99	2427	2502
घटना के बाद/ Post Event	49.99	2432	2513

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से पहले) Important Transmission Line/Unit if under outage (before the event)	NIL
मौसम स्थिति / Weather Condition	Normal

6. **<u>लोड और जेनरेशन नुकसान /Load and Generation loss</u>**: Load loss of 34 MW & generation loss of 10 MW
7. **<u>व्यवधान की अवधि /Duration of interruption:</u>** 2 Hr 14 mins
8. **<u>प्रभावित क्षेत्र का नक्शा /Network across the affected area:</u>**

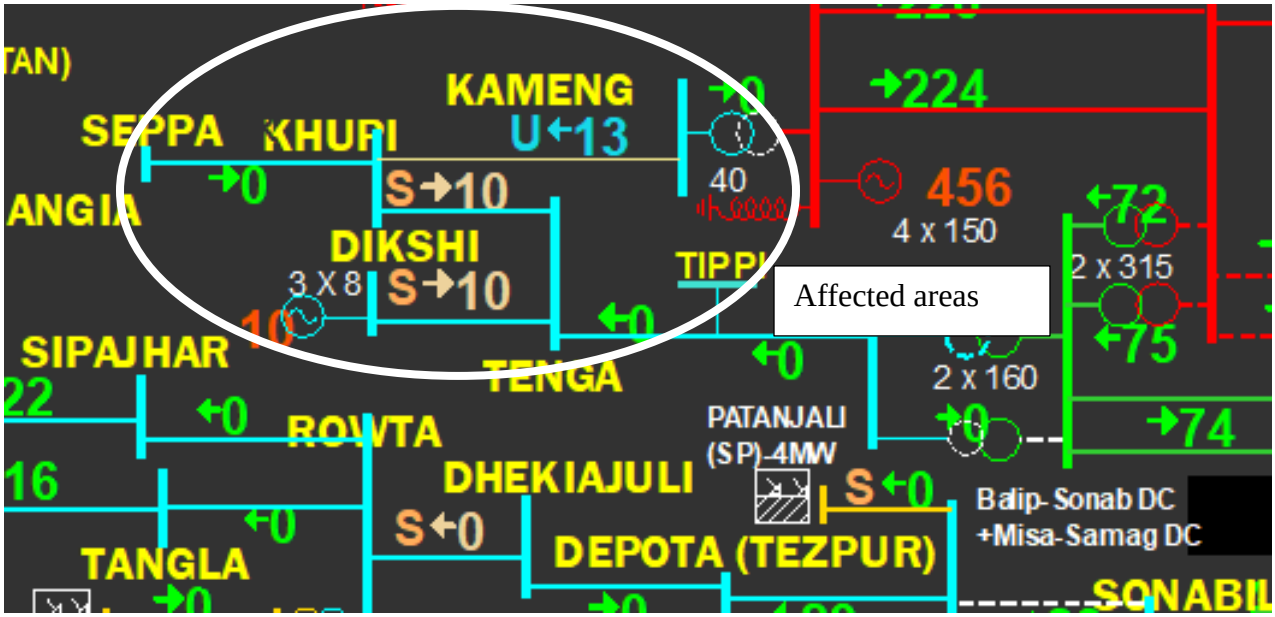


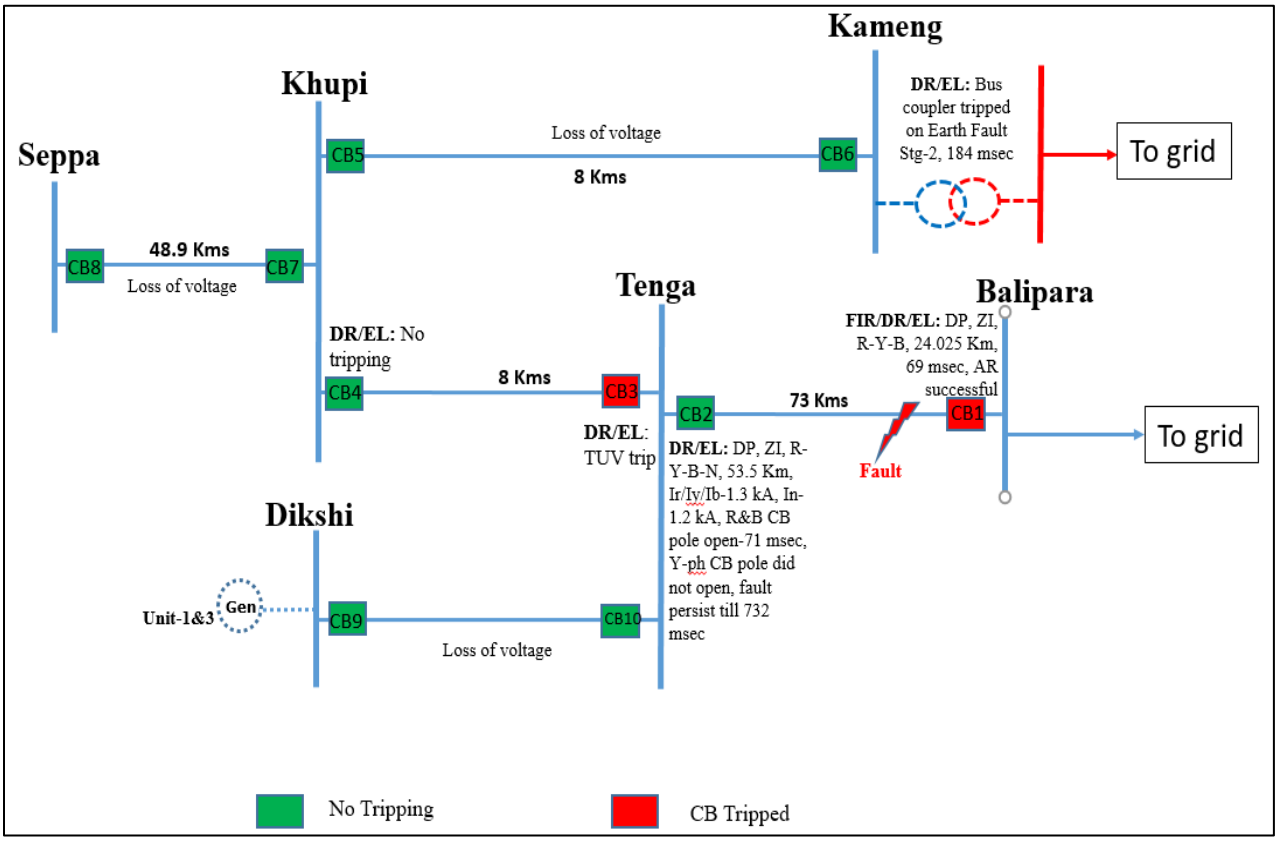
Figure 1: Network across the affected area

9. **<u>उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event):</u> NIL**
10. **<u>प्रमुख ट्रिपिंग /Major Elements Tripped:</u>**

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	132 kV Balipara-Tenga Line	10:28	12:59	DP, ZI, R-Y-B, 24.025 Km	DP, ZI, R-Y-B-N, 53.5 Km (Y-ph CB pole did not open)

2	132 kV Tenga-Khupi Line	10:28	12:03	TUV trip, 86 optd	No tripping
3	132 kV Kameng-Khupi Line	10:28	12:42	Loss of voltage	
4	132 kV Tenga-Dikshi Line	10:28	12:59	Loss of voltage	
5	132 kV Bus coupler at Kameng	10:28	11:32	Tripped on E/F stage-2 (High set)	
6	Dikshi Unit-1&3	10:28	-	Tripped on Overfrequency	

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):



132 kV Balipara-Tenga:

Balipara: DP, ZI, R-Y-B (Ir-4.9 kA, Iy-3.9 kA, Ib-4.2 kA) at a distance of 24.025 Km cleared within 69 msec on ZI. AR operated successfully.

Tenga: R-Y-B-N fault (Ir-1.3 kA, Iy-1.3 kA, Ib-1.3 kA, In-1.2 kA) initiated at 10:27:41.981 Hrs. ZI trip command issued and R & B-phase CB pole opened after 71 msec. However, Y-ph CB pole did not open and fault current persisted till 732 msec.

132 kV Tenga-Khupi Line:

Tenga: TUV trip, 86 operated

Khupi: No tripping

132 kV Kameng Bus coupler: Fault cleared within 184 msec on operation of E/F (tIe>> operated as per DR). As per FIR, 132 kV Bus coupler tripped on operation of E/F stage-2 (High set). NCR P127 relay operated.

As per DR analysis, solid R-Y-B-N fault occurred in 132 kV Balipara-Tenga Line at distance of 53.5 Km from Tenga end which was cleared within 69 msec from Balipara end on operation of DP, ZI (AR successful). ZI trip command issued from Tenga end and R & B-phase CB pole opened after 71 msec. However, Y-ph CB pole did not open and fault current persisted till 732 msec.

At 10:27:56.138 Hrs, 132 kV Bus coupler at Kameng tripped on operation of E/F stg-2 within 184 msec from inception of fault.

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:

- **Non-opening of Y-ph CB pole at Tenga end for 132 kV Balipara Line:** At Tenga end, fault initiated at 10:27:41.981 Hrs. ZI trip command issued and R & B-phase CB pole opened after 71 msec. However, Y-ph CB pole did not open and fault current persisted till 732 msec.
- **Unwanted tripping of 132 kV Bus Coupler at Kameng:** At 10:27:56.138 Hrs, 132 kV Bus coupler at Kameng tripped on operation of E/F stg-2 which is inferred unwanted.

13. सुधारात्मक उपाय /Action Taken/Remedial Measures: NIL

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	No violation

2.	**क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?**	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	**DoP Arunachal Pradesh**
3.	**क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?**	IEGC section 37.2 (e)	**DoP Arunachal Pradesh**
4.	**डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues**	IEGC section 17.3	**No violation**
5.	**कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance**		**-**

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of protection system needs to be ensured at all times.
- Periodic checking and testing of protection system to ensure its healthiness.

परिशिष्ट 1: स्काडा के अनुसार घटनाओं का क्रम / Sequence of events as per SCADA:

AREA	CATEGORY	LOCATION	TEXT	SYSTEM_TIME	FIELD_TIME	MS
ARUNCH	1C	SEPPA_AR	SEPPA CB 132/33 T1 (PRIM) CLOSED	23 Jun 2025 15:54:13:000	23 Jun 2025 10:24:10:000	1.67E+08
ARUNCH	1C	ALONG_AR	ALONG CB 132Kv LOAD YINGK OPEN	23 Jun 2025 10:25:20:000	23 Jun 2025 10:25:13:000	8.72E+08
AEGCL	1C	BALIP_PG	BALIPARA CB 132Kv LINE TO TENGA OPEN	23 Jun 2025 10:28:09:000	23 Jun 2025 10:28:08:000	1.89E+08
ARUNCH	1C	TENGA_AR	TENGA CB 132Kv LINE TO BALIP OPEN	23 Jun 2025 10:28:15:000	23 Jun 2025 10:28:08:000	8.92E+08
ARUNCH	1C	TENGA_AR	TENGA CB 132Kv LINE TO DIKSH OPEN	23 Jun 2025 10:28:17:000	23 Jun 2025 10:28:10:000	4.09E+08
ARUNCH	1C	TENGA_AR	TENGA CB 132Kv LINE TO KHUPI OPEN	23 Jun 2025 10:28:17:000	23 Jun 2025 10:28:10:000	4.18E+08
ARUNCH	1C	KMENG_NO	KAMENG CB 132 KV COUPLER (07) OPEN	23 Jun 2025 10:28:21:000	23 Jun 2025 10:28:10:000	40000000
AEGCL	1C	BALIP_PG	BALIPARA CB 132Kv LINE TO TENGA CLOSED	23 Jun 2025 10:28:11:000	23 Jun 2025 10:28:10:000	8.92E+08
MEECL	1C	UMIA3_ME	UMIAM III CB 132Kv LINE-1 TO UMIA4 CLOSED	23 Jun 2025 10:39:00:000	23 Jun 2025 10:38:52:000	9.53E+08
ARUNCH	1C	SEPPA_AR	SEPPA CB 132Kv LINE TO KHUPI OPEN	23 Jun 2025 11:28:31:000	23 Jun 2025 11:28:27:000	7.78E+08
ARUNCH	1C	KMENG_NO	KAMENG CB 132 KV COUPLER (07) CLOSED	23 Jun 2025 11:32:19:000	23 Jun 2025 11:32:07:000	9.15E+08
ARUNCH	1C	SEPPA_AR	SEPPA CB 132/33 T1 (PRIM) OPEN	23 Jun 2025 11:32:31:000	23 Jun 2025 11:32:24:000	7.51E+08
MEECL	1C	GANOL_ME	GANOL SHEP CB 132 KV UNIT (H02) OPEN	23 Jun 2025 12:03:28:000	23 Jun 2025 12:03:23:000	6.72E+08
ARUNCH	1C	TENGA_AR	TENGA CB 132Kv LINE TO KHUPI CLOSED	23 Jun 2025 12:03:31:000	23 Jun 2025 12:03:24:000	7.12E+08
AEGCL	1C	GOHPU_AS	GOHPUR CB 132/33 T1 (SEC) CLOSED	23 Jun 2025 12:08:12:000	23 Jun 2025 12:06:32:000	6.68E+08
AEGCL	1C	GOHPU_AS	GOHPUR CB 132Kv LINE-1 TO BNC__ CLOSED	23 Jun 2025 12:51:56:000	23 Jun 2025 12:51:50:000	2.89E+08
ARUNCH	1C	TENGA_AR	TENGA CB 132Kv LINE TO BALIP CLOSED	23 Jun 2025 12:59:35:000	23 Jun 2025 12:59:30:000	2.33E+08
ARUNCH	1C	TENGA_AR	TENGA CB 132Kv LINE TO DIKSH CLOSED	23 Jun 2025 12:59:35:000	23 Jun 2025 12:59:30:000	2.33E+08
ARUNCH	1C	TENGA_AR	TENGA CB 132Kv LINE TO KHUPI CLOSED	23 Jun 2025 12:59:35:000	23 Jun 2025 12:59:30:000	2.33E+08
ARUNCH	1C	SEPPA_AR	SEPPA CB 132Kv LINE TO KHUPI BETWEEN	23 Jun 2025 13:05:40:000	23 Jun 2025 13:05:34:000	2.4E+08

परिशिष्ट 2: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

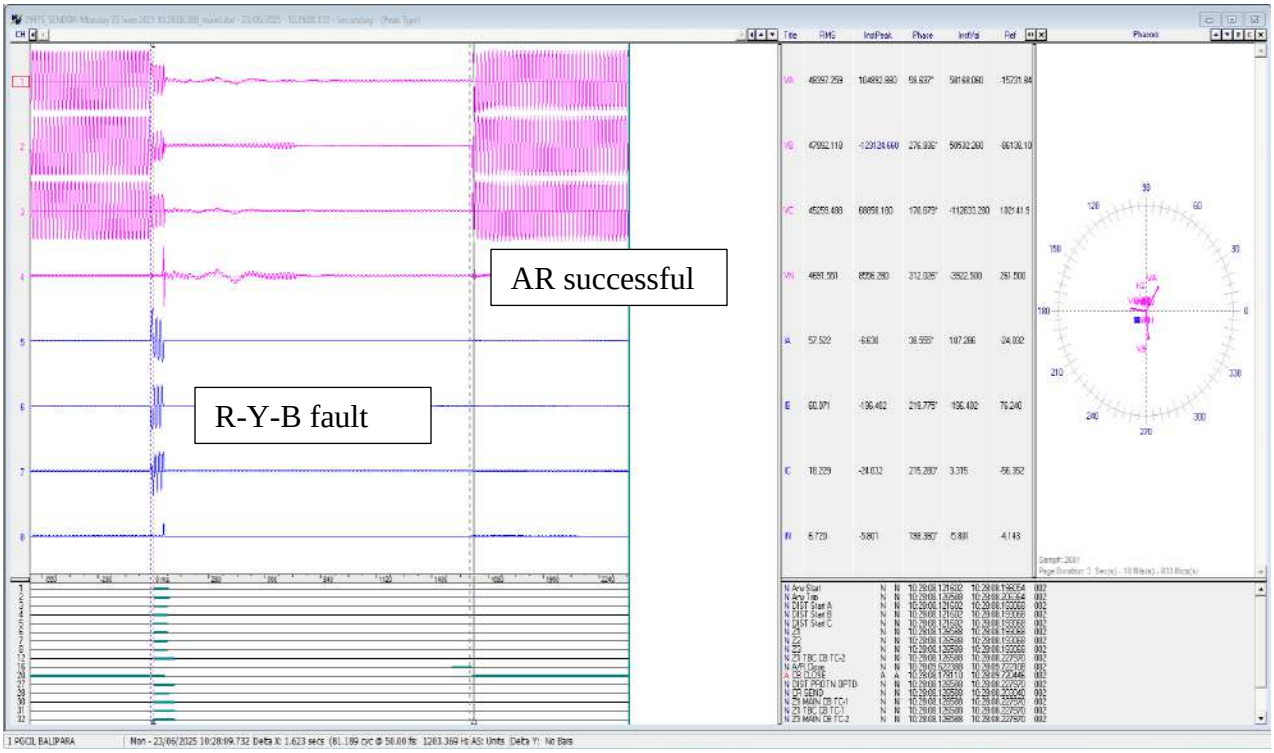


Fig 1: DR snapshot of Balipara for 132 kV Tenga line

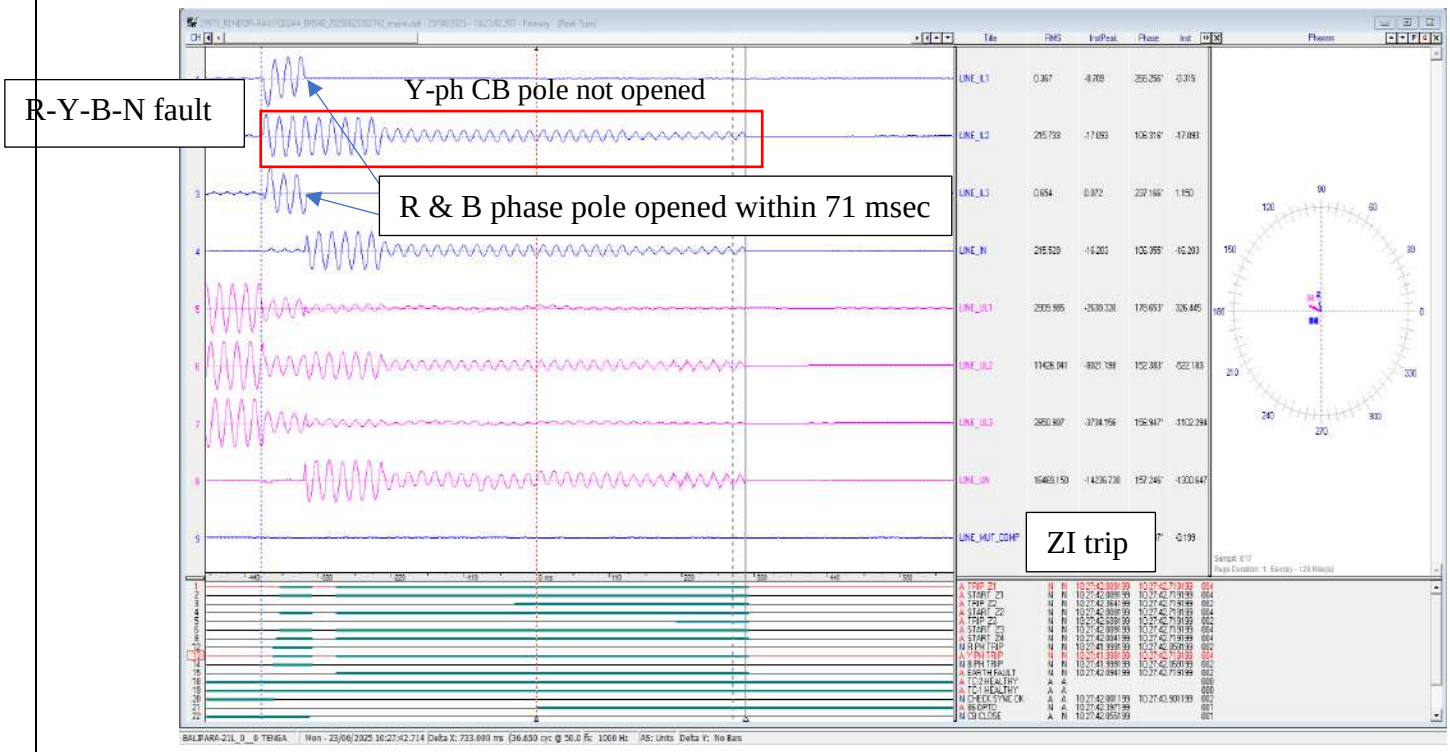


Fig 2: DR snapshot of Tenga for 132 kV Balipara line

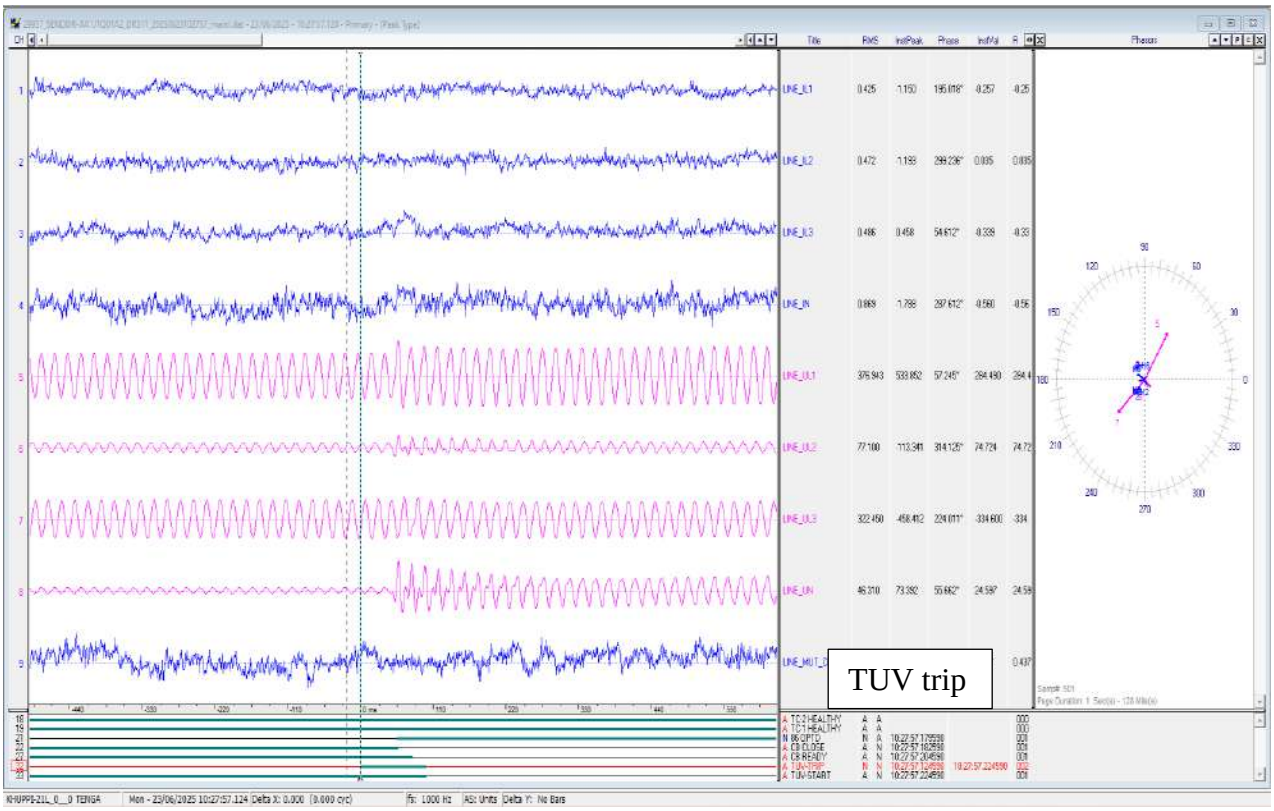


Fig 3: DR snapshot of Tenga for 132 kV Khupi line

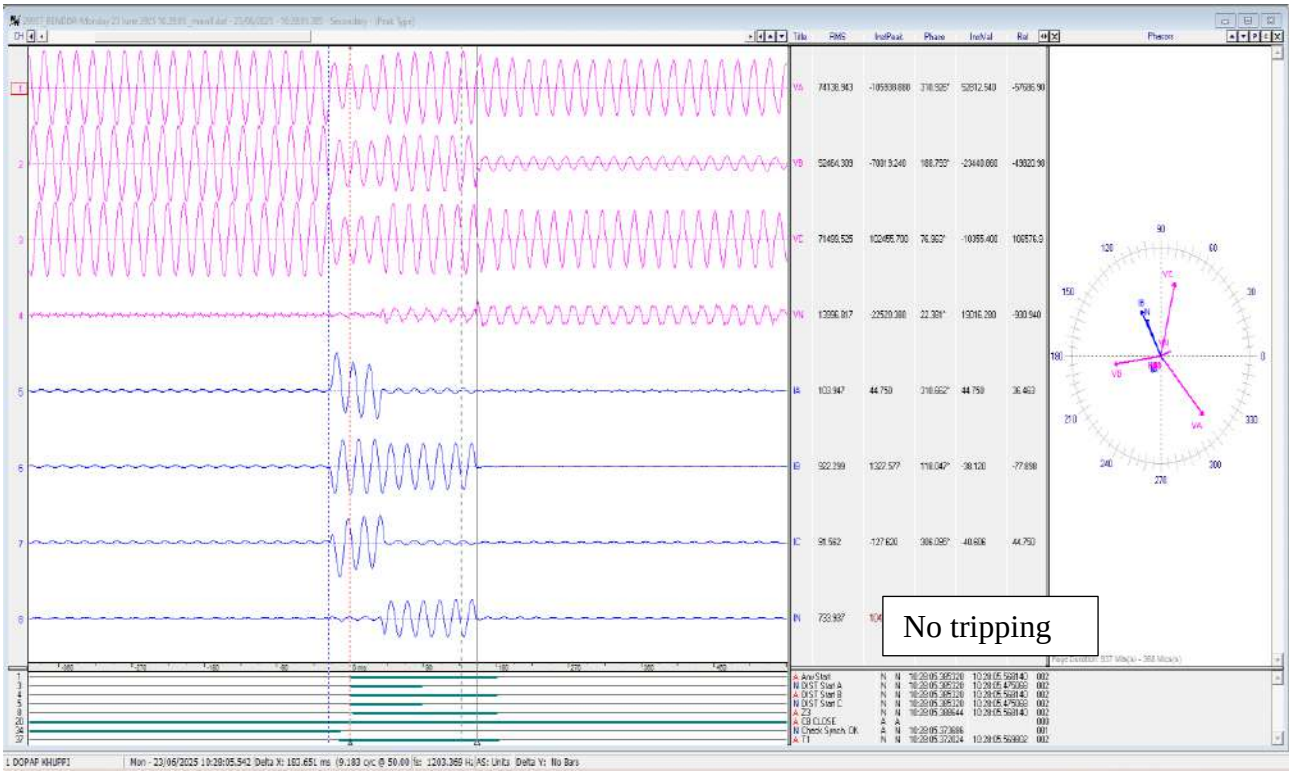


Fig 4: DR snapshot of Khupi for 132 kV Tenga line

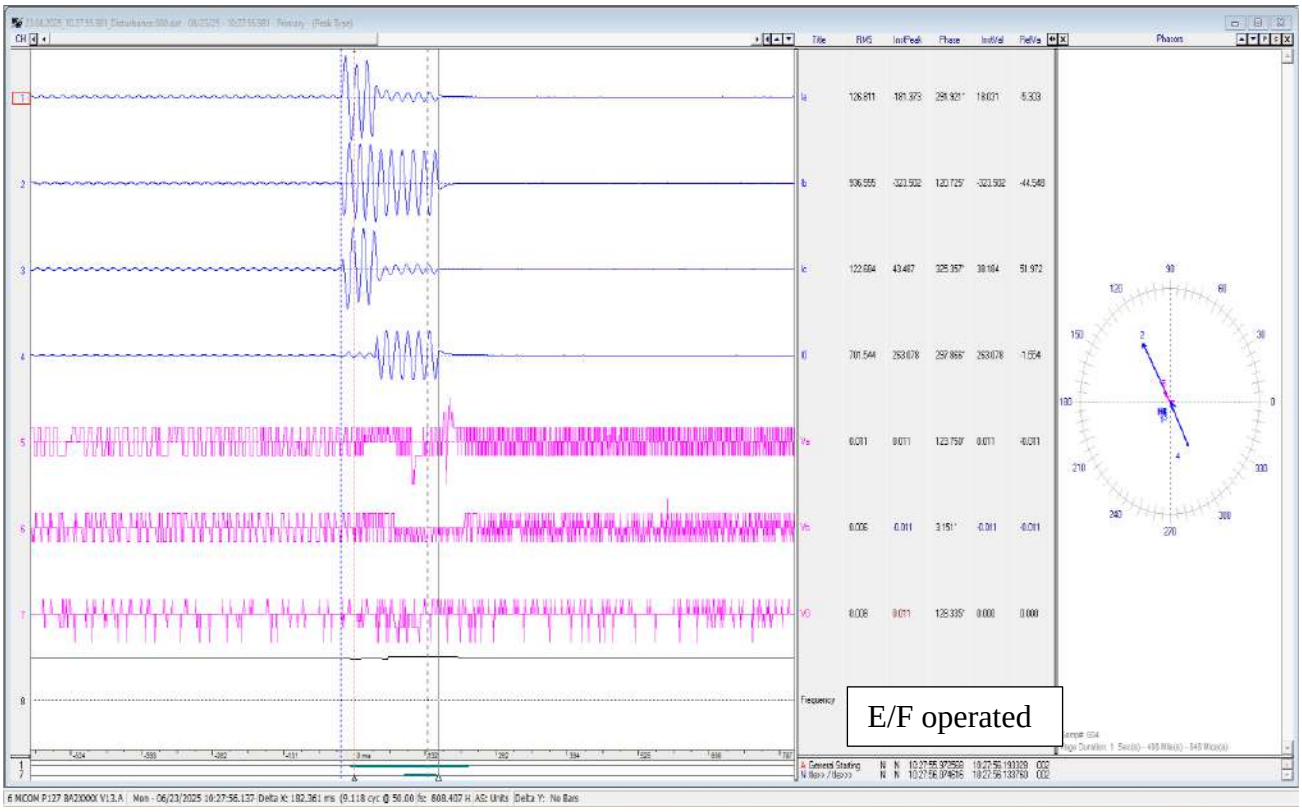


Fig 5: DR snapshot of 132 kV Bus coupler at Kameng

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र के मिजोरम विद्युत प्रणाली के सिहमुई क्षेत्र में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Sihhmui area of Mizoram Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 10-07-2025

1. घटना का सारांश/Event Summary:

Sihhmui area of Mizoram Power System was connected with rest of NER Grid through 132 kV Sihhmui-Melriat (PG) D/C lines. Prior to the event, 132 kV Zuangtui-Sihhmui line was under outage.

At 14:56 Hrs of 23-06-2025, 132 kV Melriat(PG)-Sihhmui I & II lines tripped. Due to tripping of this element, Sihhmui area of Mizoram Power System was isolated from NER Grid and collapsed due to no source available in this area.

Power supply was extended to Sihhmui area of power system by charging 132 kV Melriat(PG)-Sihhmui 2 line at 12:56 Hrs of 25-06-2025.

2. घटना का समय और दिनांक/Time and Date of the Event: 14:56 Hrs of 23-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Sihhmui area of Mizoram Power System

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	50.01	2445	2749
घटना के बाद/ Post Event	50.01	2447	2745

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से पहले) Important Transmission Line/Unit if under outage (before the event)	132 kV Zuangtui-Sihhmui line was under outage
मौसम स्थिति / Weather Condition	Normal

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load loss of 3.48 MW

7. **व्यवधान की अवधि /Duration of interruption:** 1 Day 22 Hr

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

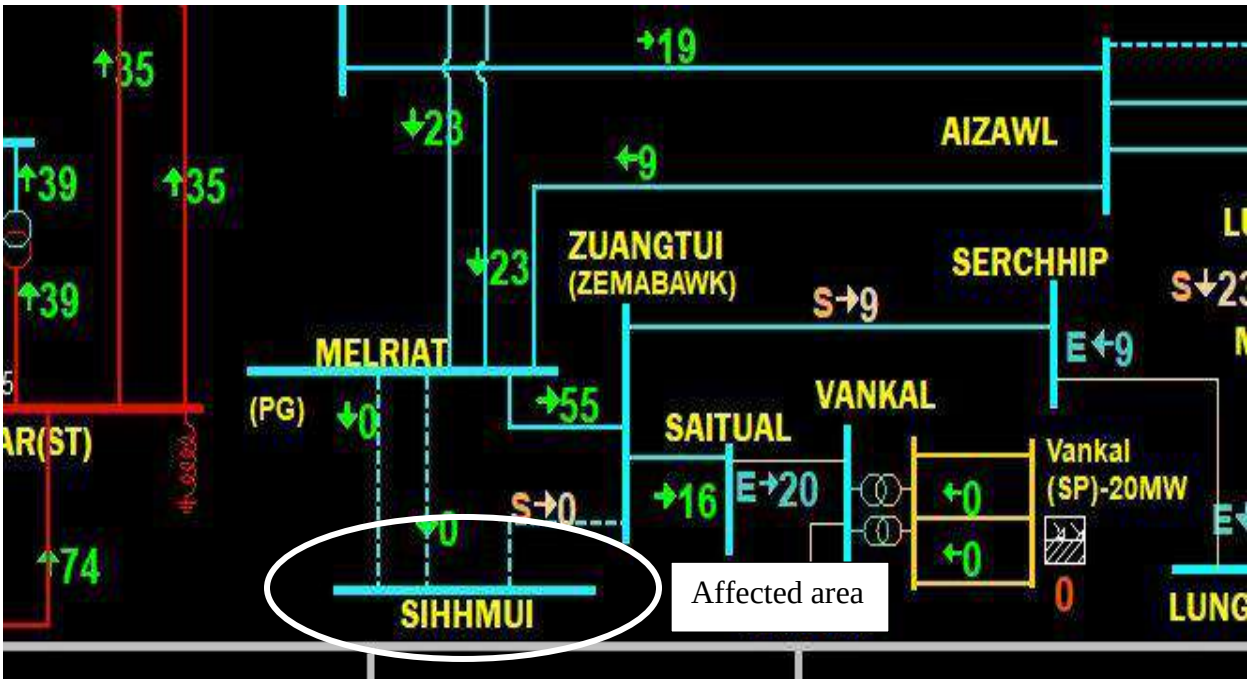


Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event): NIL**

10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	132 kV Melriat(PG)-Sihhmui I Line	14:56	12:56 Hrs of 25-06-2025	DP, ZII, B-N, 4.9 Km	radial

2	132 kV Melriat(PG)-Sihhmui II Line	14:56	12:56 Hrs of 25-06-2025	DP, ZII, B-N, 4.94 Km	radial
3	132/33 kV, 25 MVA Transformer at Sihhmui	14:56	12:52 Hrs of 25-06-2025	LA of 25 MVA Transformer exploded at 132 kV side (Ib - 3.9 kA In- 1.5 kA)	

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):

As per DR analysis, solid B-N fault (Ib-2 kA, In-1.9 kA) initiated at 14:56:28.303 Hrs which was cleared from Melriat(PG) end within 420 msec on operation of DP, ZII for both the lines.

As per information from P&ED Mizoram, B-phase LA blast of 132/33 kV 25 MVA ICT HV side.

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed: NIL

13. सुधारात्मक उपाय /Action Taken/Remedial Measures:

- LA at Sihhmui has been replaced by P&ED Mizoram.

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	No violation
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	POWEGRID
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	P&ED Mizoram (submitted on 08-07-2025)
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

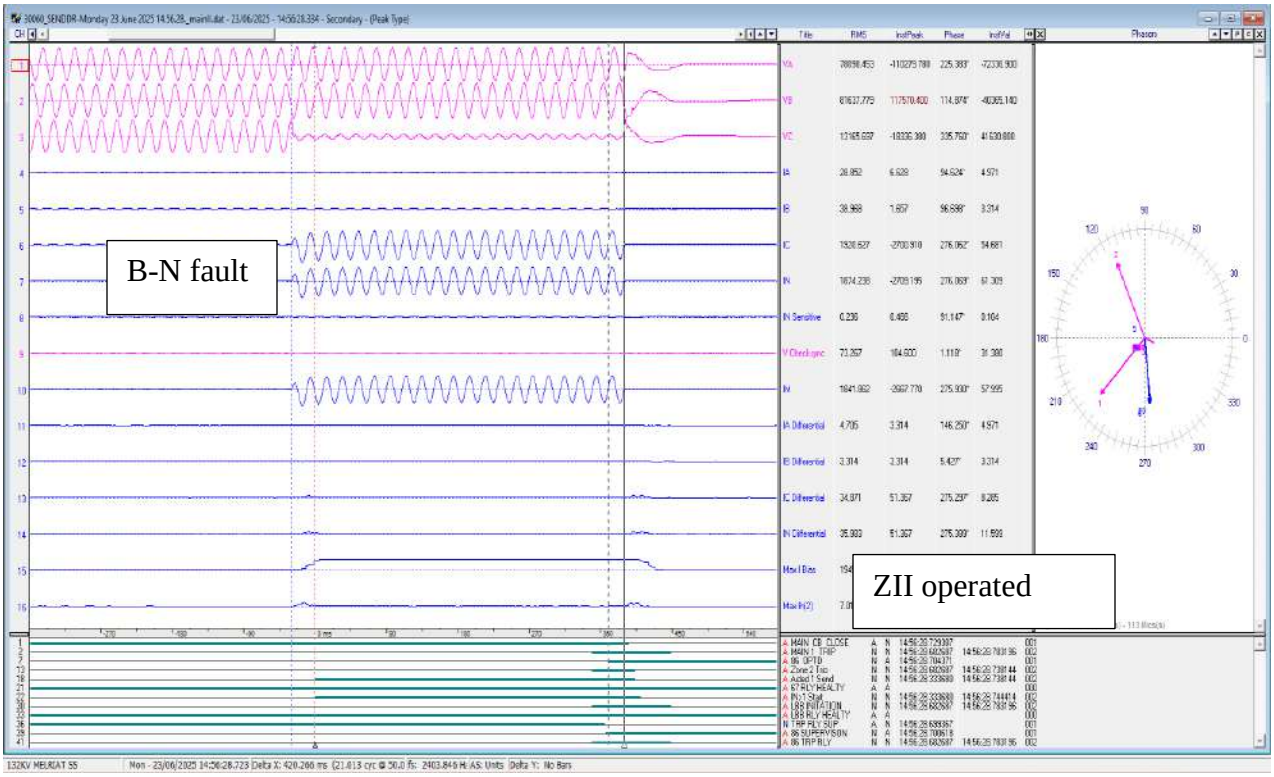


Fig 1: DR snapshot of Melriat(PG) for 132 kV Sihhmui-I line

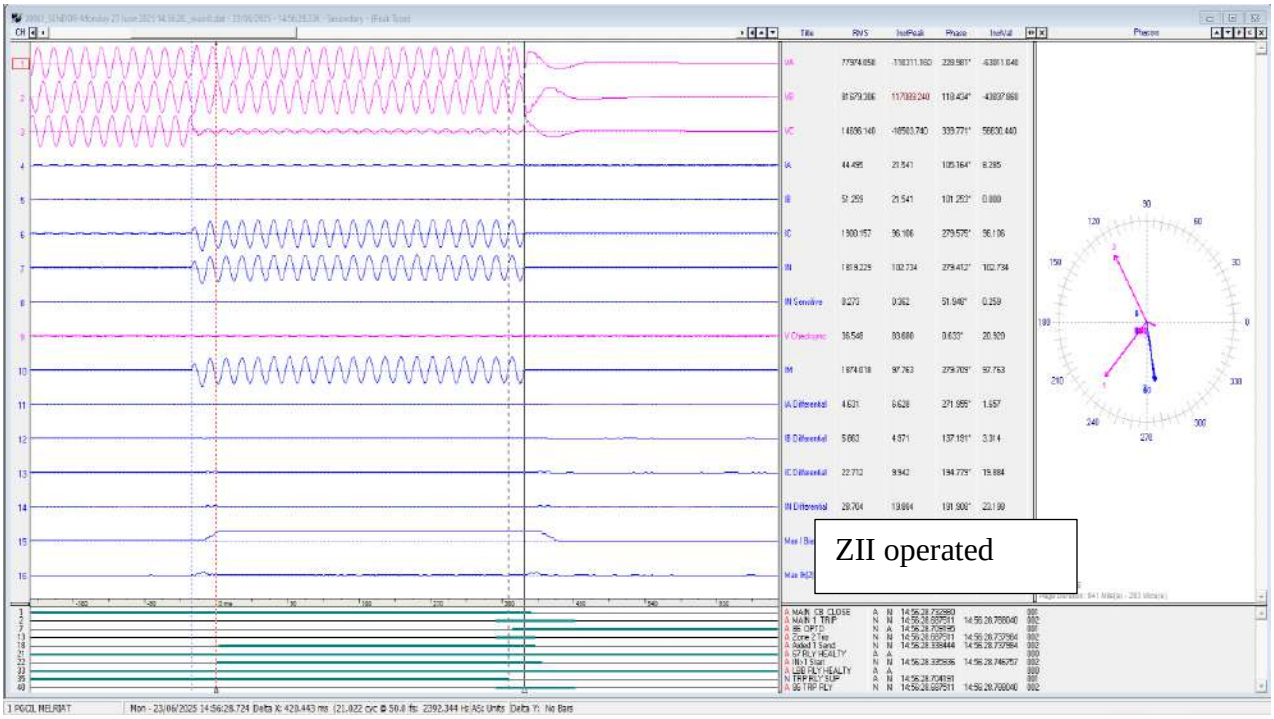


Fig 2: DR snapshot of Melriat(PG) for 132 kV Sihhmui-II line

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

Detailed Report of Grid Disturbance in Along, Pasighat, Napit & Niglok areas of Arunachal Pradesh of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

Date (दिनांक):10-07-2025

1. Event Summary (घटना का सारांश):

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

At 16:52 Hrs of 23-06-2025, 132 kV Basar – Along, 132 kV Along-Pasighat and 132 kV Pasighat - Roing lines tripped. Due to tripping of these elements, Along, Pasighat, Napit & Niglok areas of Arunachal Pradesh Power System were isolated from NER Grid.

Power supply was extended to Pasighat area by charging 132 kV Roing –Pasighat line at 17:58 Hrs of 23-06-2025.

2. Time and Date of the Event (घटना का स मय और दिनांक): 16:52 Hrs of 23-06-2025

3. Event Category (ग्रिड घटना का प्रकार): GD-I

4. Location/Control Area (स्थान/नियंत्रण क्षेत्र): Along, Pasighat, Napit and Niglok areas of Arunachal Pradesh Power System

5. Antecedent Conditions (पूर्ववर्ती स्थिति):

	Frequency in Hz	Regional Generation (MW)	Regional Demand (MW)
Pre-Event (घटना पूर्व)	49.88	2655	2892
Post Event (घटना के बाद)	50.00	2656	2862

Pre and post data of 1 minute before and after the event

Important Transmission Line/Unit if under outage (before the event))महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है(	NIL
Weather Condition (मौसम स्थिति)	Normal

6. Load and Generation loss (लोड और जेनरेशन हानि): Load loss of 21 MW

7. Duration of interruption (रुकावट की अवधि): 66 mins

8. Network across the affected area (प्रभावित क्षेत्र का नक्शा):

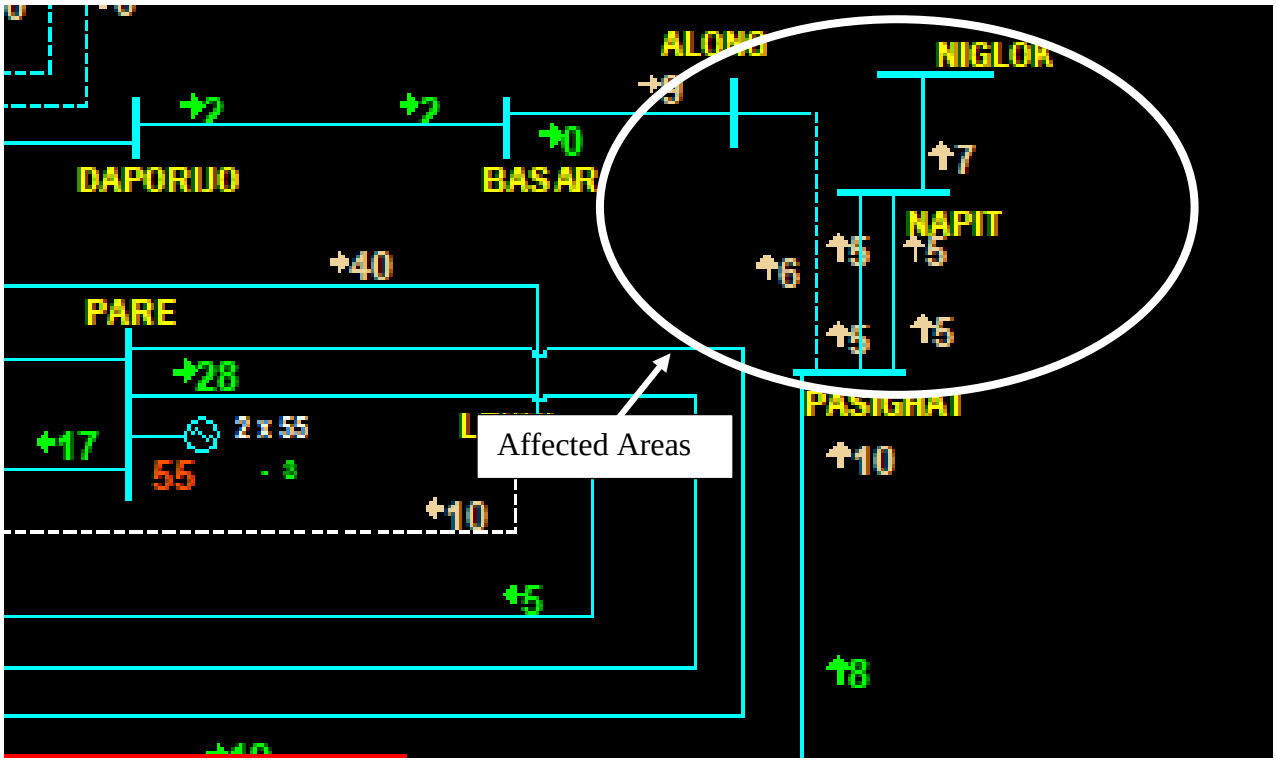


Figure 1: Network across the affected area

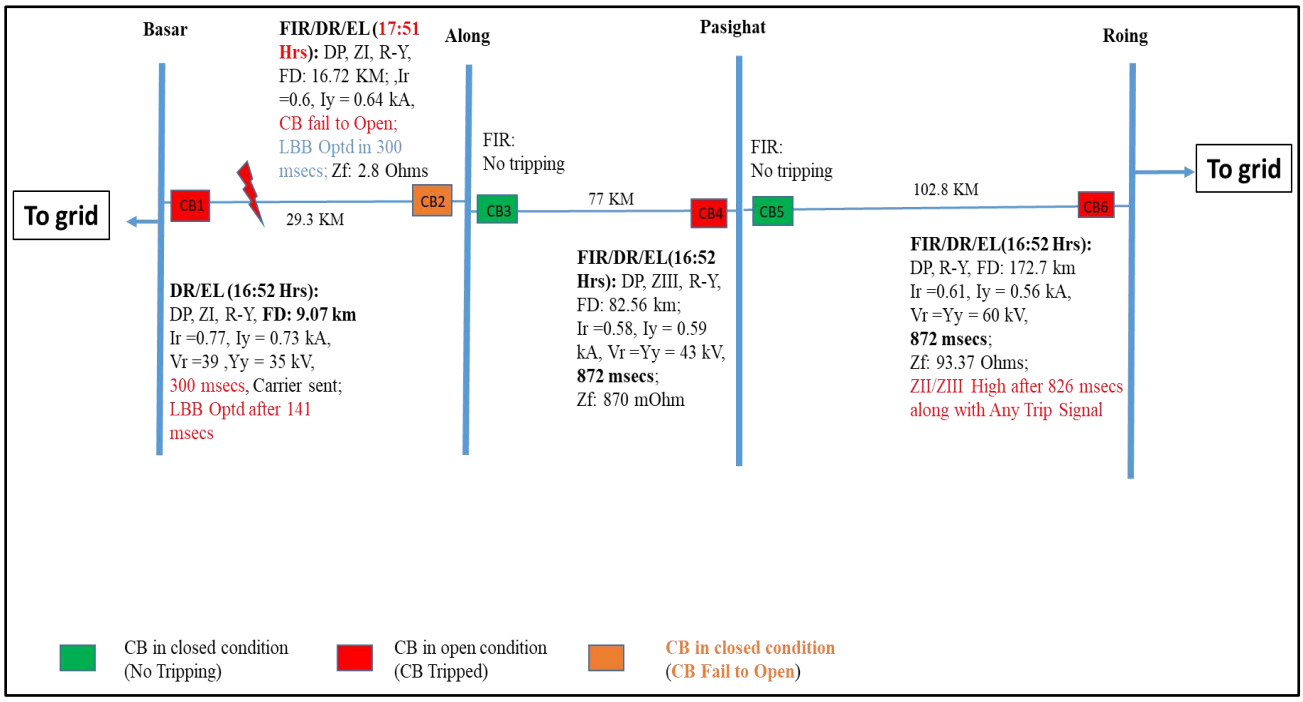
9. Details of Equipment Failure (if any during the event) (उपकरण विफलता का विवरण): NIL

10. Major Elements Tripped (प्रमुख ट्रिपिंग):

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	132 kV Basar-Along Line	16:52	-	DP, ZI, R-Y, FD: 9.07 km ; Ir =0.77, Iy = 0.73 kA, Vr =39 ,Yy = 35 kV, 300 msecs, Carrier sent;LBB Optd after 141 msecs	DP, ZI, R-Y, **FD: 16.72 KM;** ,Ir =0.6, Iy = 0.64 kA, CB fail to Open; LBB Optd in 300 msecs; Zf: 2.8 Ohms

2	132 kV Pasighat – Along Line	16:52	17:58	DP, ZIII, R-Y, **FD: 82.56 km;** Ir =0.58, Iy = 0.59 kA, Vr =Yy = 43 kV, 872 msecs; Zf: 870 mOhm	No tripping
3	132 kV Pasighat-Roing Line	16:52	-	No tripping	DP, R-Y, **FD: 172.7 km ;** Ir =0.61, Iy = 0.56 kA, Vr =Yy = 60 kV, 872 msecs; Zf: 93.37 Ohms; ZII/ZIII High after 826 msecs along with Any Trip Signal

11. Event Analysis (Based on PMU, SCADA & DR) (घटना का विश्लेषण):



R-Y phase of the 132 kV Basar-Along line resulted into operation of DP, ZI, R-Y, FD: 9.07 KM at Basar end within 300 msecs. However, CB fails to opens at Along end after issuance of trip

command by distance protection relay in ZI and the fault continued to feed from Pasighat & Roing side till 872 msecs. The fault cleared from Pasighat end of 132 kV Along - Pasighat line in 872 msecs on operation of DP, ZIII, R-Y, FD: 82.56 KM. The fault cleared from Roing end of 132 kV Pasighat - Roing line in 872 msecs on operation of DP, R-Y, FD: 172.7 KM.

12. Protection/Operational issues observed (सुरक्षा/परिचालन संबंधी समस्या):

- **Delayed operation of CB (CB1) at Basar:** The relay associated with CB1 at Basar detected an R-Y fault in Zone-1 and issued an immediate trip command. However, the fault persisted for approximately 300 milliseconds, indicating a delay in CB1 operation, which is unwanted. DoP, Arunachal/NERTS is requested to identify the root cause & ensure the healthiness of CB & LBB at Basar SS of Arunachal Pradesh.
- **Non operation of CB (CB2) at Along:** The distance protection at Along end issued a trip command for the fault. However, CB2 failed to open, which is undesirable and undermines the reliability of the protection system. DoP, Arunachal Pradesh is requested to take corrective action to avoid reoccurrence in future.
- **LBB protection at Along SS:** The Disturbance Recorder of the 132 kV Basar–Along line at Along shows that the LBB operated only after 300 milliseconds, despite a breaker failure (CB2 stuck) condition. DoP, Arunachal is requested to confirm the reason for non-operation LBB at Along SS during the CB stuck condition. Also, make necessary modification/corrective on immediately basis.
- **Time drift of relay (CB2) at Along:** Time drift of 1 hr present present at Along end. Immediate time synchronization is required at Along end.
- **Tripping of (CB6) at Roing:** NERTS is requested to investigate the protection function responsible for tripping at Roing SS.
- **Relay Coordination Issue with CB4 & CB6 at Pasighat & Roing:** The 132 kV Along-Pasighat Line & 132 kV Roing - Pasighat Line at Pasighat & Roing tripped after 872 msecs from the initiation of the R-Y fault.

13. Action Taken/Remedial Measures (सुधारात्मक उपाय): NIL

14. Non-compliance observed (विनियमन का गैर-अनुपालन):

Sl. No.	Issues	Regulation Non-Compliance	Utilities

1.	**Flash Report received within 8hrs?**	IEGC section 37.2 (b)	**DoP AP**
2.	**Whether DR/EL provided within 24 Hours?**	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	**No violation**
3.	**Detailed Report received within 7 days?**	IEGC section 37.2 (e)	**DoP AP**
4.	**DR Time Synchronization Issues**	IEGC section 17.3	**1 Hr time drift observed at Along end for Basar line**
5.	**Any other non-compliance**		**-**

15. Key Lessons Learnt (प्रमुख अधिगम बिंदु)

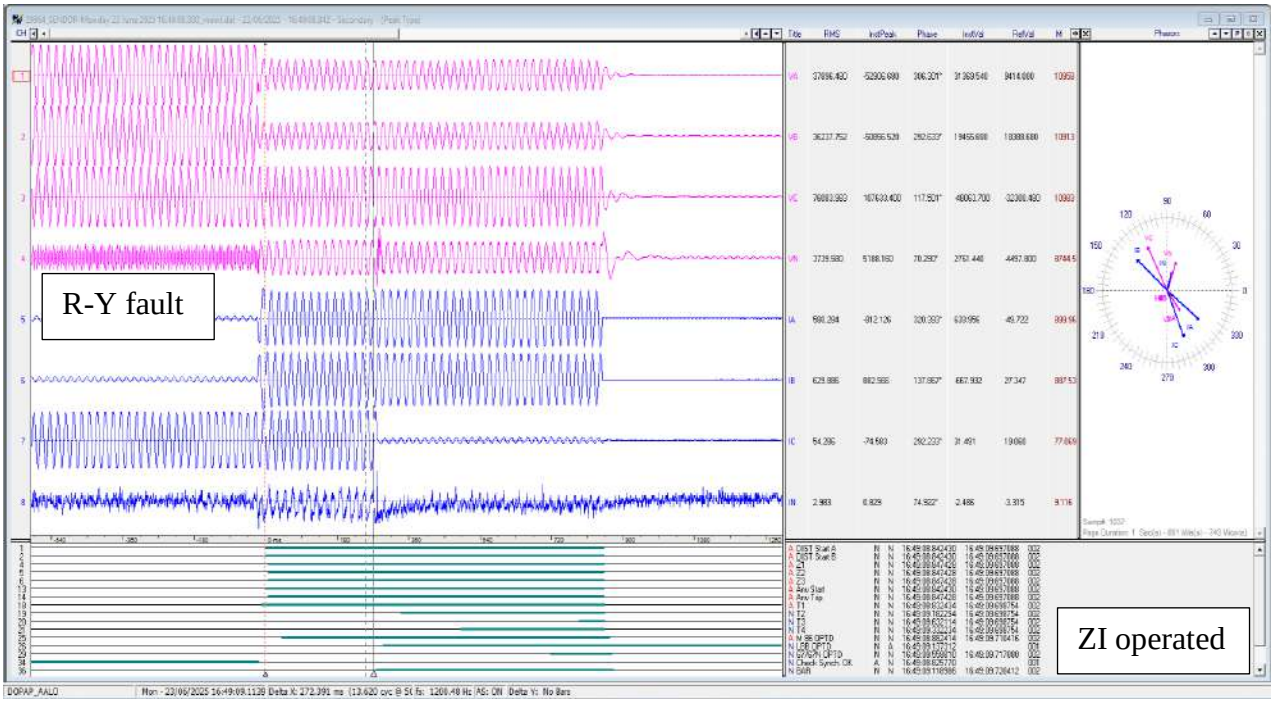
- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of protection system of downstream needs to be ensured at all times.
- Periodic checking and testing of protection system to ensure its healthiness.

Annexure 1: Sequence of Events as per SCADA-

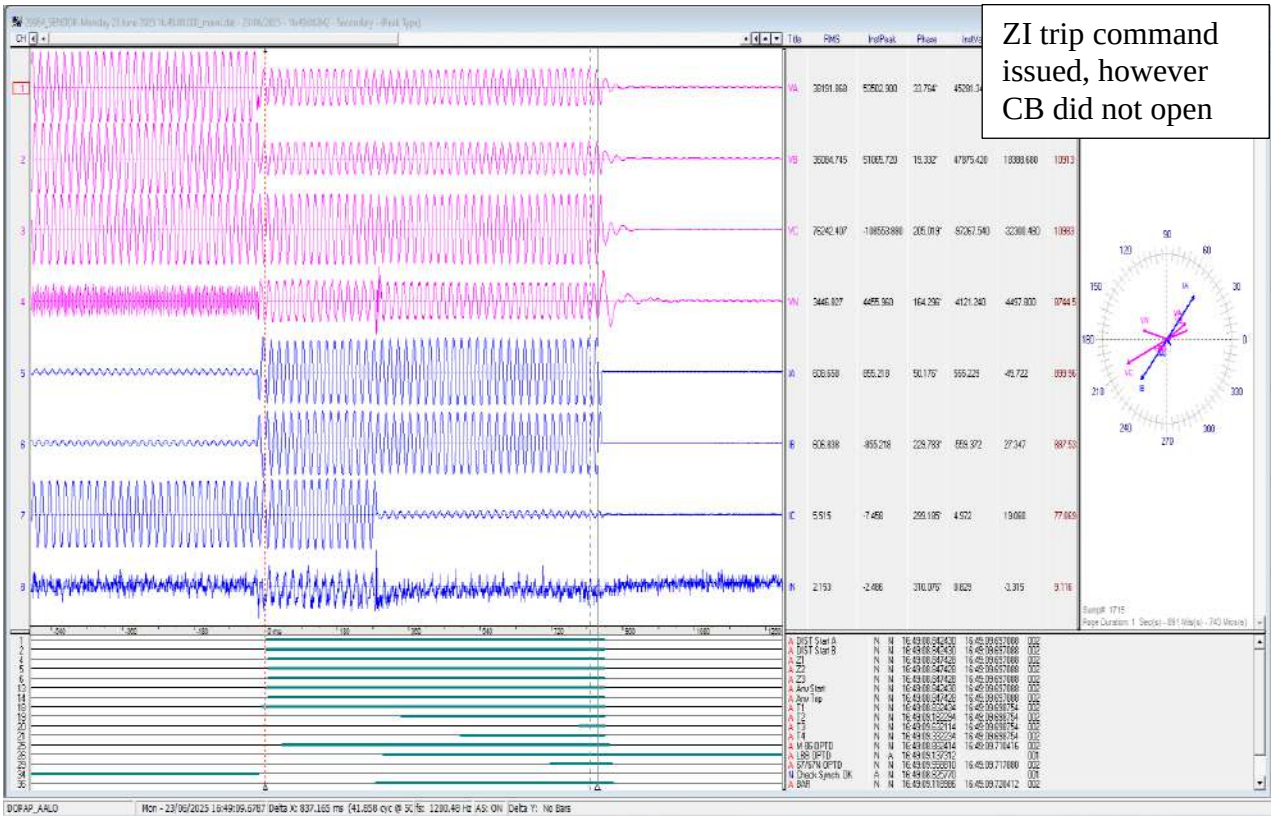
SOE not generated

Annexure 2: Disturbance recorder snips showing faults and digital signals

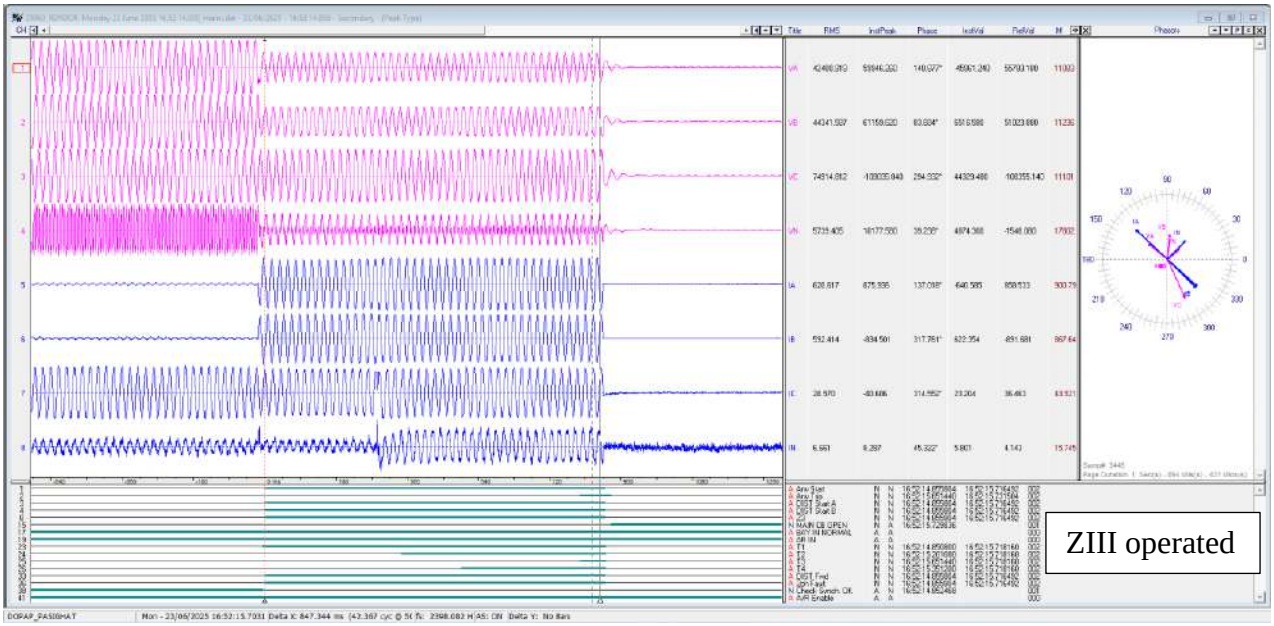
2.1. DR Snapshot of Basar for 132 kV Along-Basar Line



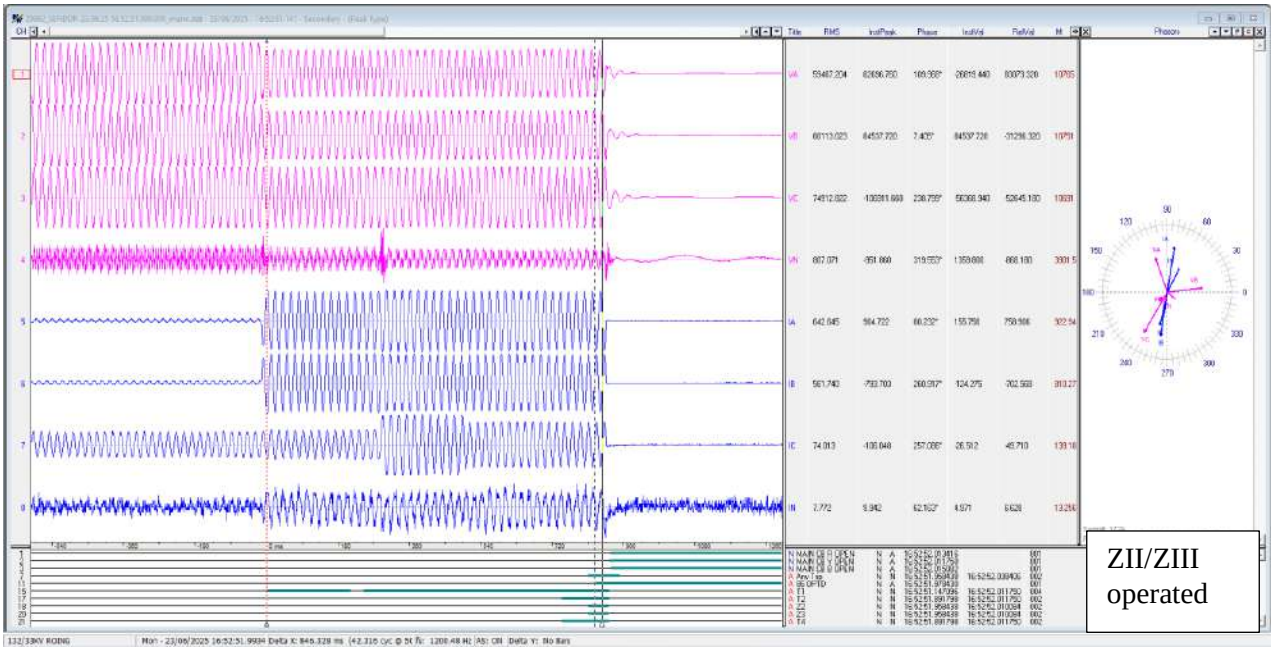
2.2. DR Snapshot of Along for 132 kV Along-Basar Line



2.3. DR Snapshot of Pasighat for 132 kV Along-Pasighat Line



2.5. DR Snapshot of Roing for 132 kV Roing - Pasighat Line



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CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र के अरुणाचल प्रदेश विद्युत प्रणाली के आलॉन्ग क्षेत्र में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Along area of Arunachal Pradesh Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 10-07-2025

1. घटना का सारांश/Event Summary:

Along area of Arunachal Pradesh Power System was connected with rest of NER Grid through 132 kV Basar-Along and 132 kV Along-Pasighat lines. Prior to the event, 132 kV Basar-Along line tripped at 16:52 Hrs of 23-06-2025.

At 10:59 Hrs on 24-06-2025, 132 kV Along-Pasighat line tripped. Due to tripping of this element, Along area of Arunachal Pradesh Power System was isolated from NER Grid and collapsed due to no source available in this area.

Power supply was extended to Along area by charging 132 kV Along –Pasighat line at 12:21 Hrs of 24-06-2025.

2. घटना का समय और दिनांक/Time and Date of the Event: 10:59 Hrs of 24-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Along of Arunachal Pradesh Power System

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	49.99	2590	2745
घटना के बाद/ Post Event	49.99	2583	2723

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से पहले) Important Transmission Line/Unit if under outage (before the event)	132 kV Basar-Along line tripped at 16:52 Hrs of 23-06-2025
मौसम स्थिति / Weather Condition	Normal

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load loss of 6 MW

7. **व्यवधान की अवधि /Duration of interruption:** 1 Hr 22 mins

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

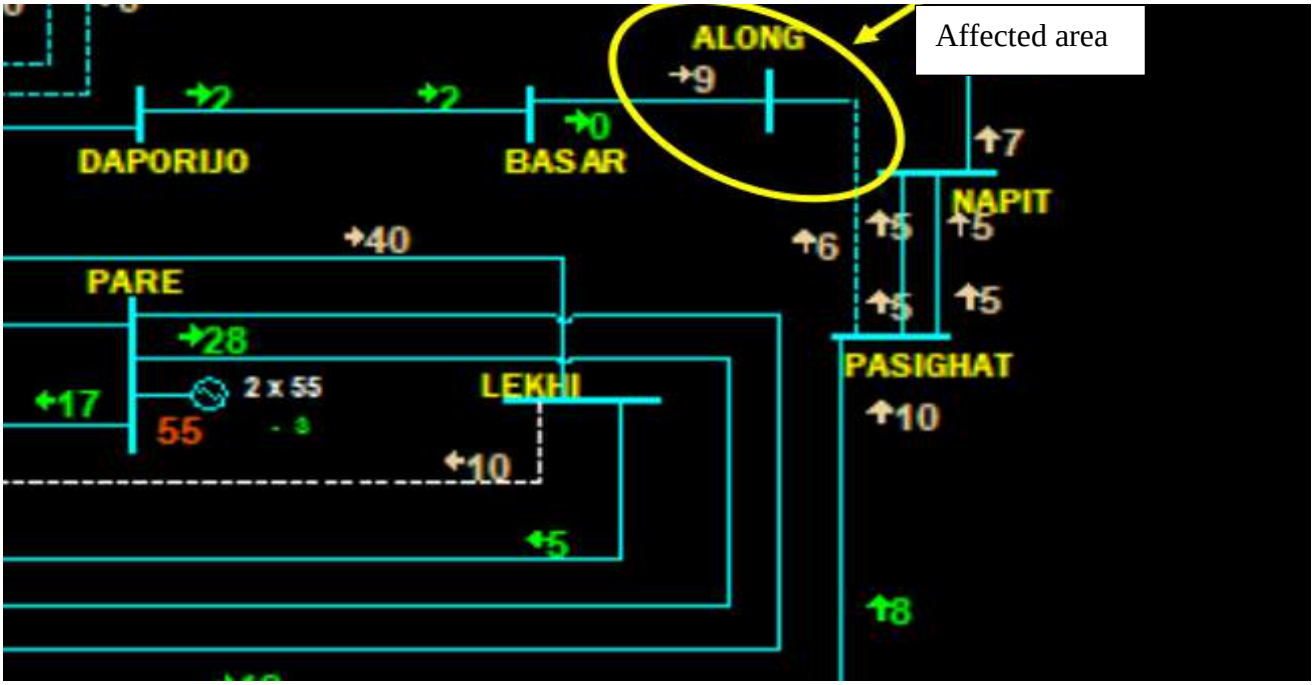

Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event): NIL**

10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	132 kV Along-Pasighat Line	10:59	12:21	Loss of voltage (radial)	B-N, 67/67N optd

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):

As per DR analysis, resistive B-N fault (Ib-0.181 kA, In-0.171 kA, Vbn-68 kV) initiated at 11:01:54.762 Hrs which was cleared from Pasighat end within 1.58 sec on operation of OC/EF protection (67/67N optd).

At 11:01:56.275 Hrs, IN>2 trip observed which seems unwanted.

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:

- At 11:01:56.275 Hrs, IN>2 trip was observed which is inferred unwanted.

13. सुधारात्मक उपाय /Action Taken/Remedial Measures: NIL

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	No violation
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	No violation
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	DoP Arunachal Pradesh
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	Time drift of 2 min at Pasighat end for Along Line
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.

परिशिष्ट 2: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 2: DR and EL snapshots:

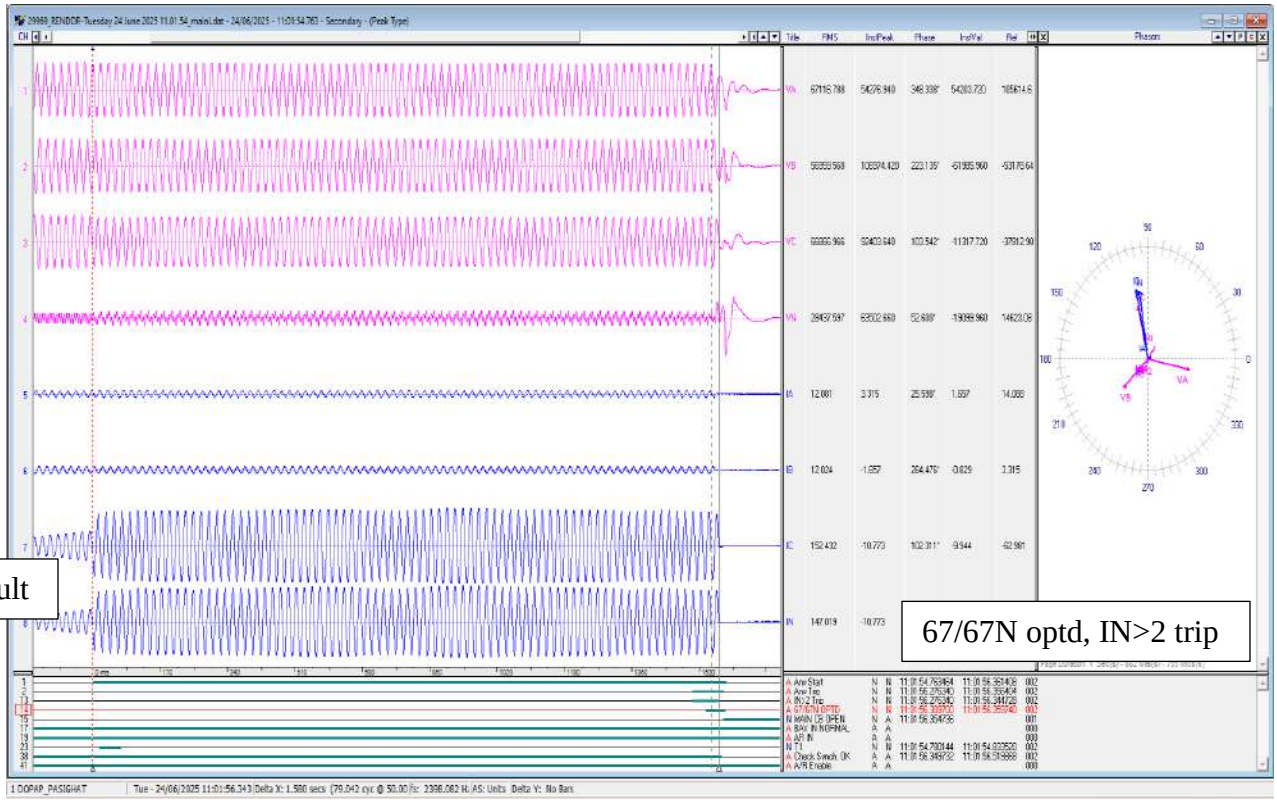

Fig 1: DR snapshot of Pasighat for 132 kV Along line

ग्रिड-इंडिया GRID-INDIA
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CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र के मेघालय विद्युत प्रणाली के लुमशनोंग क्षेत्र में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Lumshnong area of Meghalaya Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 30-06-2025

1. घटना का सारांश/Event Summary:

Lumshnong area of Meghalaya Power System is connected with rest of NER Grid via 132 kV Lumshnong–Panchgram line and the 132 kV Khliehriat–Lumshnong line. Prior to the event, 132 kV Lumshnong – Panchagram line tripped at 02:44 Hrs of 25-06-2025.

At 03:13 Hrs of 25-06-2025, 132 kV Khliehriat–Lumshnong line tripped. Due to the tripping, Lumshnong area of Meghalaya Power System got isolated from NER Grid and collapsed due to no source available in this area.

Power Suppy was extended to Lumshnong area of Meghalaya Power system by charging 132 kV Khliehriat–Lumshnong line at 04:07 Hrs of 25-06-2025. Subsequently, 132 kV Lumshnong–Panchgram line was charged at 04:22 Hrs of 25-06-2025.

2. घटना का समय और दिनांक/Time and Date of the Event: 03:13 Hrs of 25-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Lumshnong area of Meghalaya Power System

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	49.99	2921	2359
घटना के बाद/ Post Event	49.99	2922	2352

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से पहले) Important Transmission Line/Unit if under outage (before the event)	132 kV Lumshnong – Panchagram tripped at 02:44 Hrs of 25-06-2025
मौसम स्थिति / Weather Condition	Inclement weather

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load loss of 8 MW

7. **व्यवधान की अवधि /Duration of interruption:** 54 mins

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

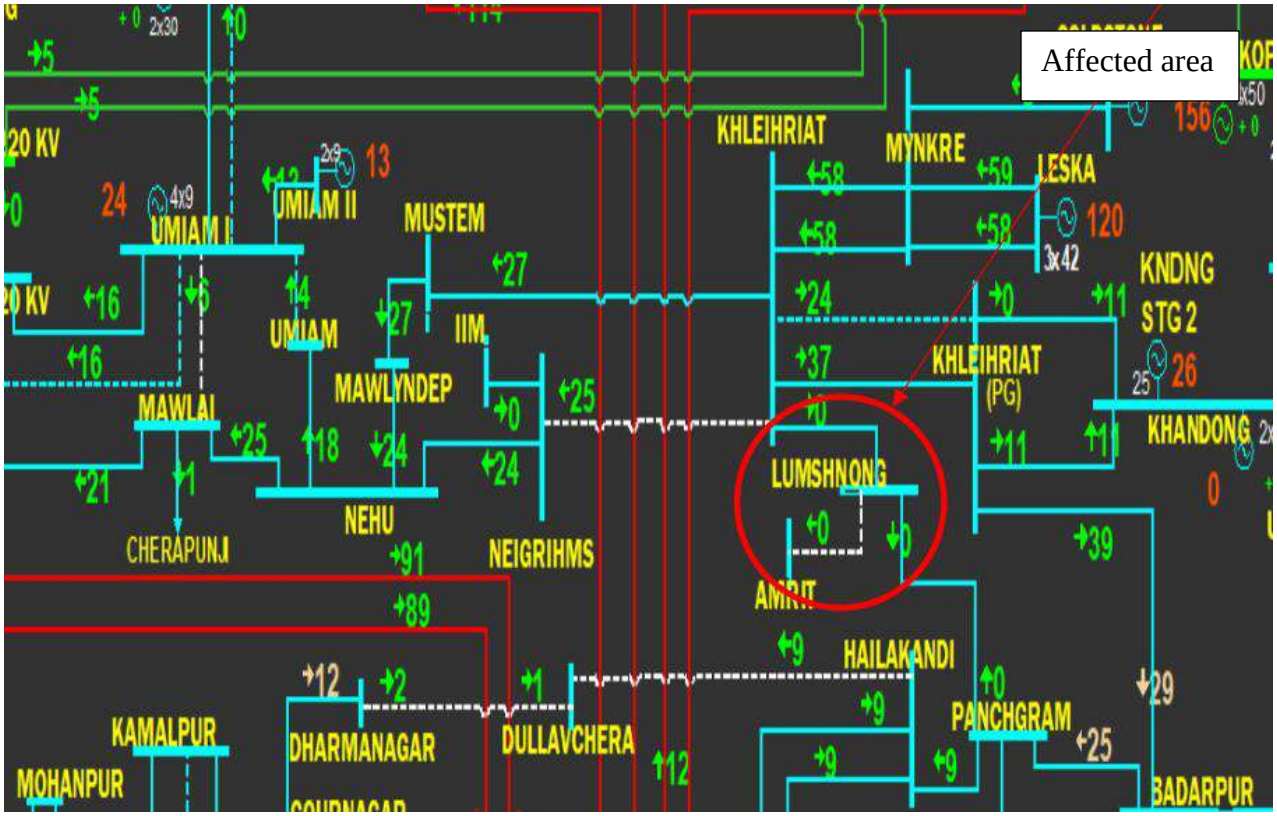


Figure 1: Network across the affected area

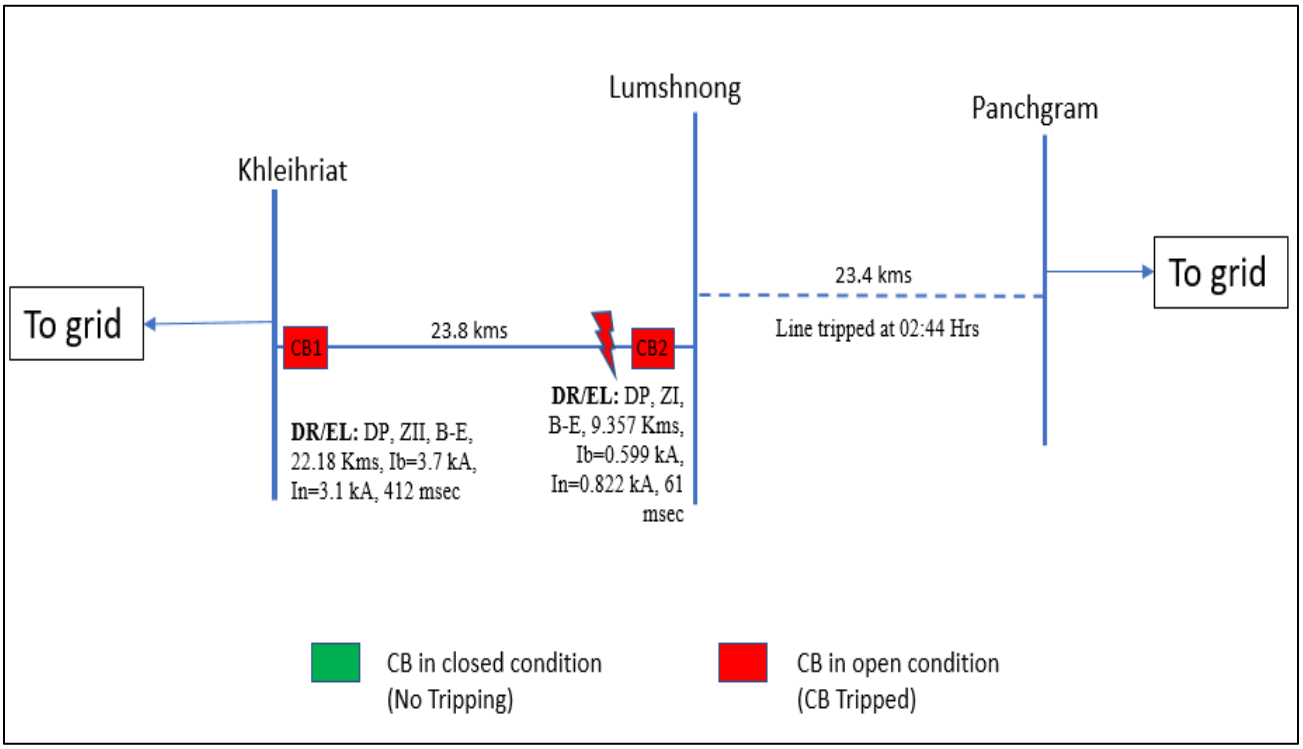
9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event): NIL**

10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2

1	132 kV Khliehriat–Lumshnong Line	03:13	04:07	DP, ZII, B-N, 22.18 km	DP, ZI, B-N, 9.357 Km

11. <u>घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):</u>



As per DR analysis, B-N fault (Ib- 0.599 kA, In-0.822 kA) initiated at 03:11:46.840 Hrs which was cleared within 61 msec from Lumshnong end on operation of DP, ZI. From Khleihriat end, B-N fault (Ib-3.7 kA, In-3.1 kA) was cleared within 412 msec from Khleihriat end on operation of DP, ZII.

Lumshnong area was radially fed from Khleihriat end due to prior tripping of 132 kV Lumshnong-Panchgram line on ZI (Cause of tripping was likely due to lightning) as a result of which Lumshnong area got isolated due to tripping of 132 kV Khleihriat-Lumshnong line.

12. <u>सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:</u>

- Non-availability of autorecloser needs to be looked into by MePTCL.
- At 03:11:46.914 hrs, DT received at Lumshnong end. The reason of DT receipt needs to be investigated by MePTCL.

13. <u>सुधारात्मक उपाय /Action Taken/Remedial Measures:</u> NIL

14. <u>विनियमन का गैर-अनुपालन/Non-compliance observed:</u>

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	No violation
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	No violation
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	No violation
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	No violation
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. <u>प्रमुख शिक्षाएँ/ Key Lessons Learnt:</u>

- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Availability of autorecloser needs to be ensured to avoid outage of lines due to transient faults.
- Periodic measurement of Tower footing resistance needs to be conducted and TFR value to be within permissible limits.
- TLSA installation in lightning prone areas.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

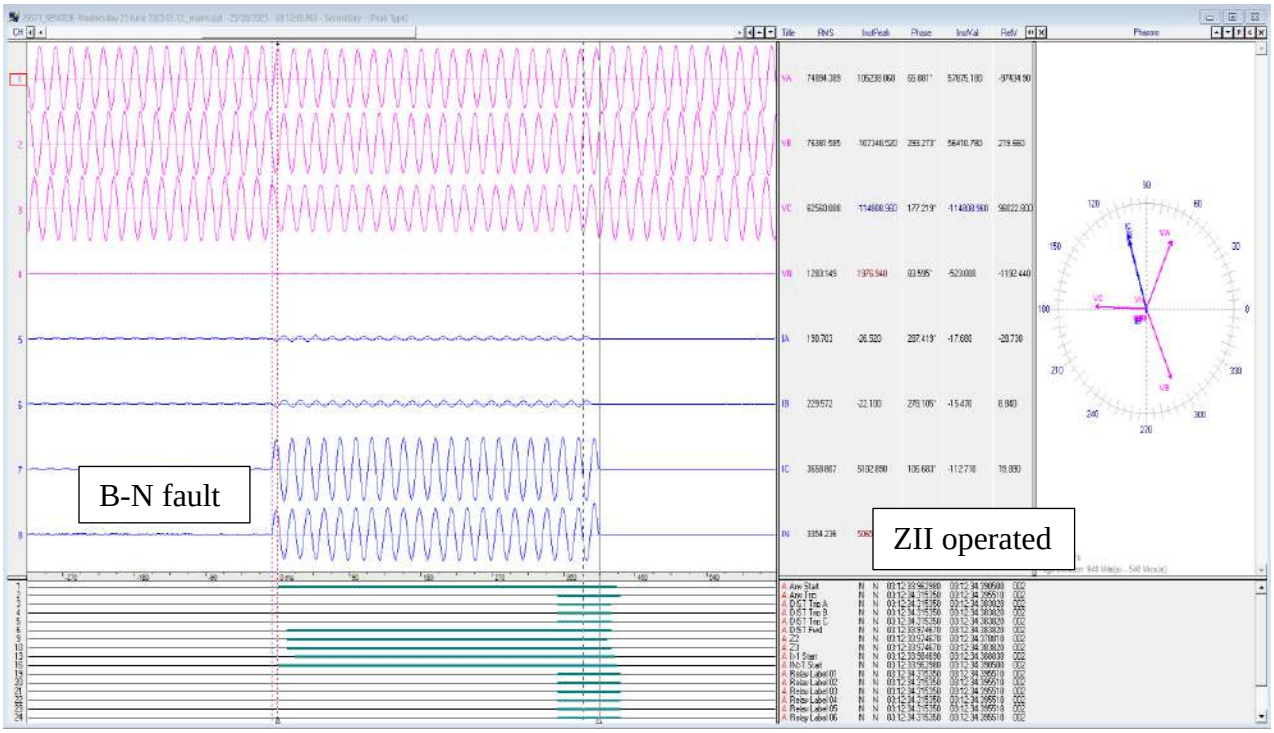


Fig 1: DR snapshot of Khleihriat for 132 kV Lumshnong line

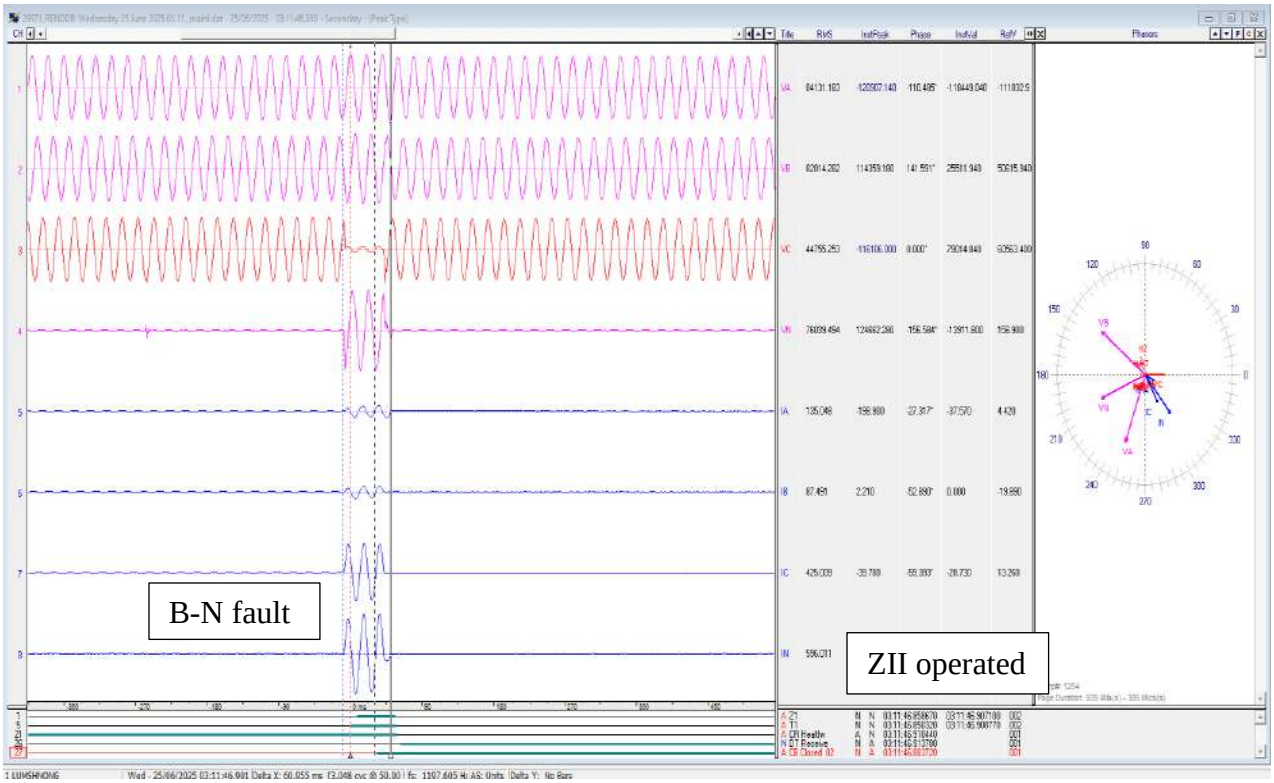


Fig 2: DR snapshot of Lumshnong for Khleihriat line

ग्रिड-इंडिया GRID-INDIA ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र के मेघालय विद्युत प्रणाली के लुमशनोंग और अमृत क्षेत्रों में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Lumshnong & Amrit areas of Meghalaya Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 10-07-2025

1. घटना का सारांश/Event Summary:

Lumshnong & Amrit areas of Meghalaya Power System is connected to the rest of NER Power System via the 132 kV Lumshnong–Panchgram line and 132 kV Khliehriat–Lumshnong line.

At 23:25 Hrs of 25.06.2025, 132 kV Khliehriat–Lumshnong and 132 kV Lumshnong–Panchgram lines tripped. Due to tripping of these elements, Lumshnong area of Meghalaya Power System was isolated from the NER Grid and collapsed due to no source available in this area.

Power supply was restored at Lumshnong area of Meghalaya Power System by charging 132 kV Khliehriat–Lumshnong line at 23:57 Hrs of 25.06.2025.

2. घटना का समय और दिनांक/Time and Date of the Event: 23:25 Hrs of 25-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Lumshnong area of Meghalaya Power System

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	50.04	3313	3318
घटना के बाद/ Post Event	50.04	3268	3302

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से	NIL

पहले) Important Transmission Line/Unit if under outage (before the event)	
मौसम स्थिति / Weather Condition	Inclement weather

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load loss of 18 MW
7. **व्यवधान की अवधि /Duration of interruption:** 34 mins
8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

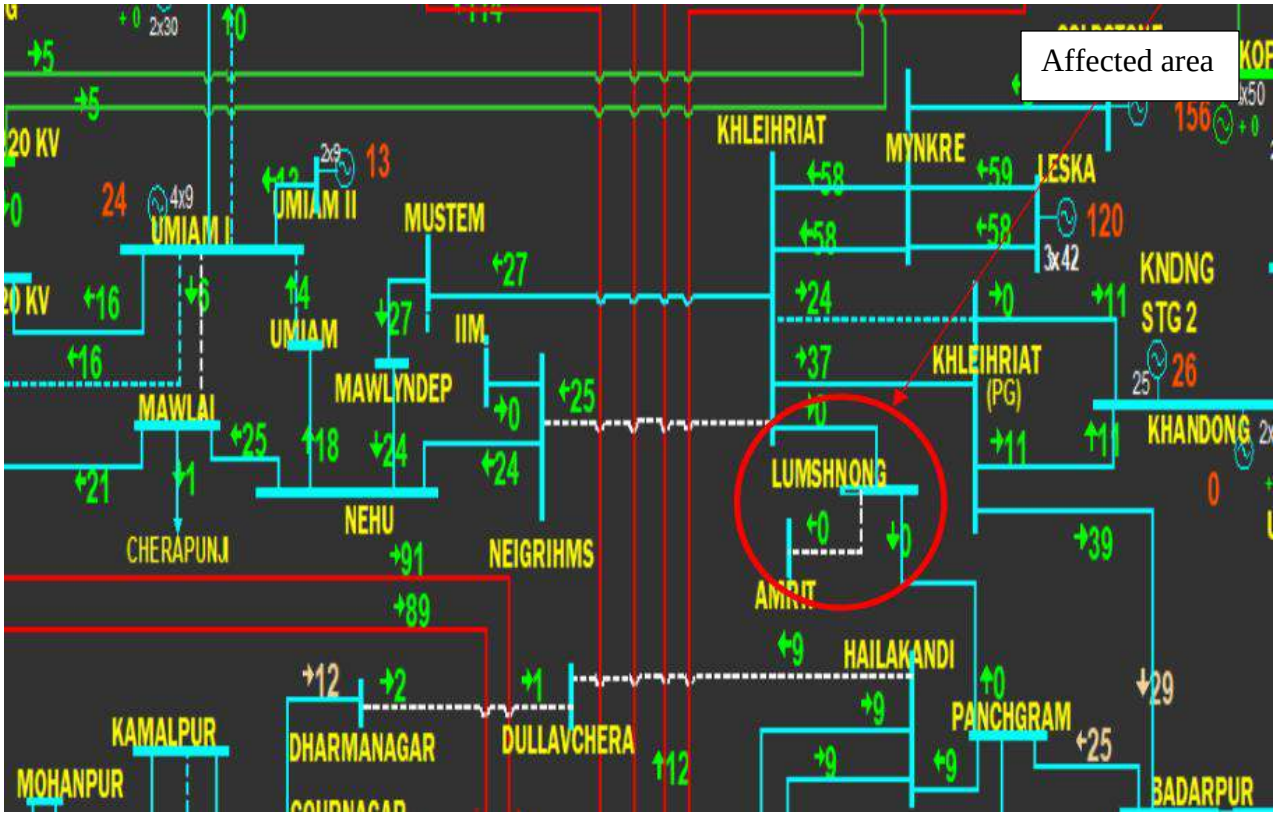


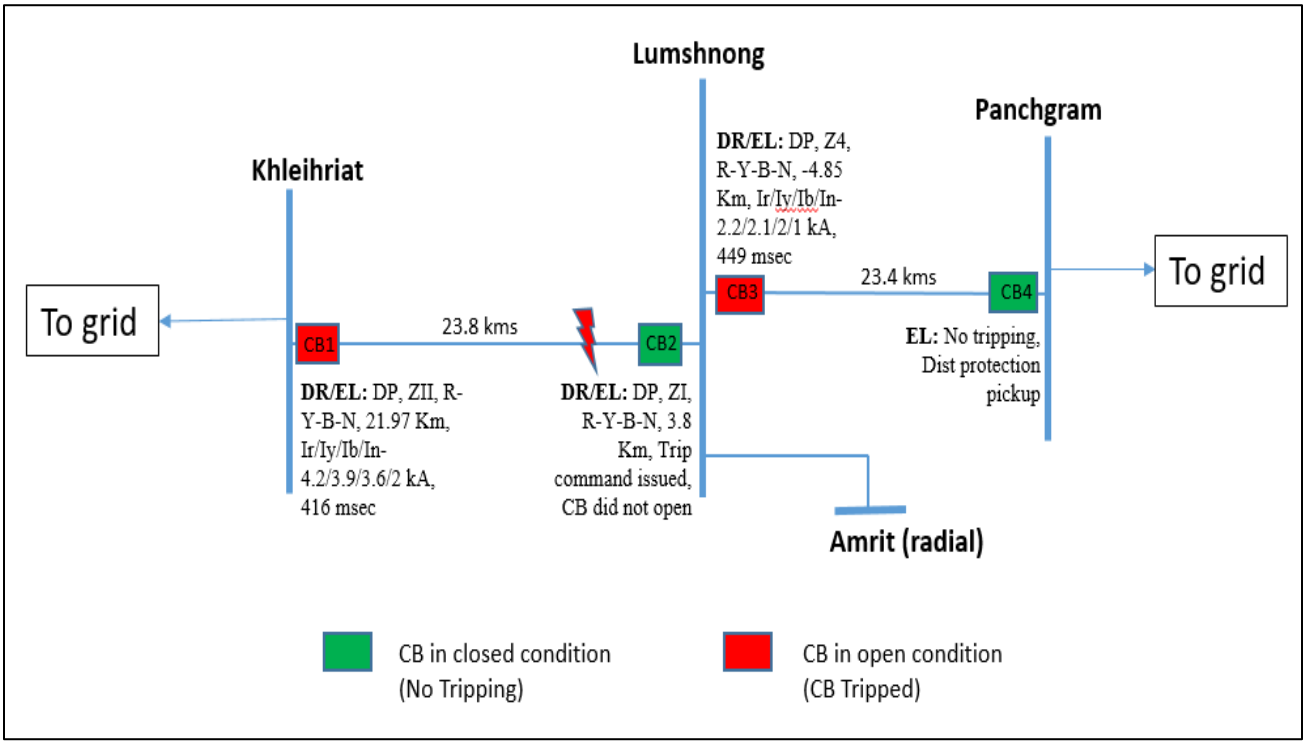
Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event): NIL**
10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	132 kV Khliehriat–Lumshnong Line	23:25	23:57	DP, ZII, R-Y-B-N, 21.79 km	DP, ZI trip issued, 3.8 km (CB did not open)

2	132 kV Lumshnong-Panchgram Line	23:25	00:19 of 26-06-2025	DP, Z4, R-Y-B-N, 4.85 km (reverse)	No tripping (DP pickup)

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):



As per DR analysis, R-Y-B-N fault (Ir-4.2 kA, Iy-3.9 kA, Ib-3.66 kA, In-2 kA) initiated at 23:24:29.571 Hrs in 132 kV Khleihriat-Lumshnong line which was cleared within 416 msec from Khleihriat end on operation of DP, ZII.

From Lumshnong end, ZI trip command issued 23:23:42.094 Hrs. However, CB did not open. As a result of which fault was continuously feeding from Panchgram end. Fault cleared by tripping of healthy 132 kV Lumshnong-Panchgram line on Z4 from Lumshnong end within 449 msec. (no tripping from Panchgram end, Dist. Protection pickup)

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:

- Non-opening of CB at Lumshnong for 132 kV Khleihriat Line despite issuance of ZI trip command.
- Non-tripping of 132 kV Panchgram-Lumshnong line from Panchgram end on ZII. ZII setting needs to be reviewed and set as per NERPC protection philosophy.

- ZIV time delay at Lumshnong end (CB3) for 132 kV Panchgram line needs to be reviewed and set as per protection philosophy.

13. <u>सुधारात्मक उपाय /Action Taken/Remedial Measures:</u>

- CB at Lumshnong for 132 kV Khleihriat Line did not open due to low SF6 gas which has been refilled. On 27-06-2025, Lumshnong S/S visit was done by MePTCL and the CB was thoroughly tested and found to be in order.

14. <u>विनियमन का गैर-अनुपालन/Non-compliance observed:</u>

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	No violation
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	AEGCL
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	MePTCL (submitted on 08-07-2025)
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	No violation
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. <u>प्रमुख शिक्षाएँ/ Key Lessons Learnt:</u>

- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of protection system needs to be ensured at all times.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

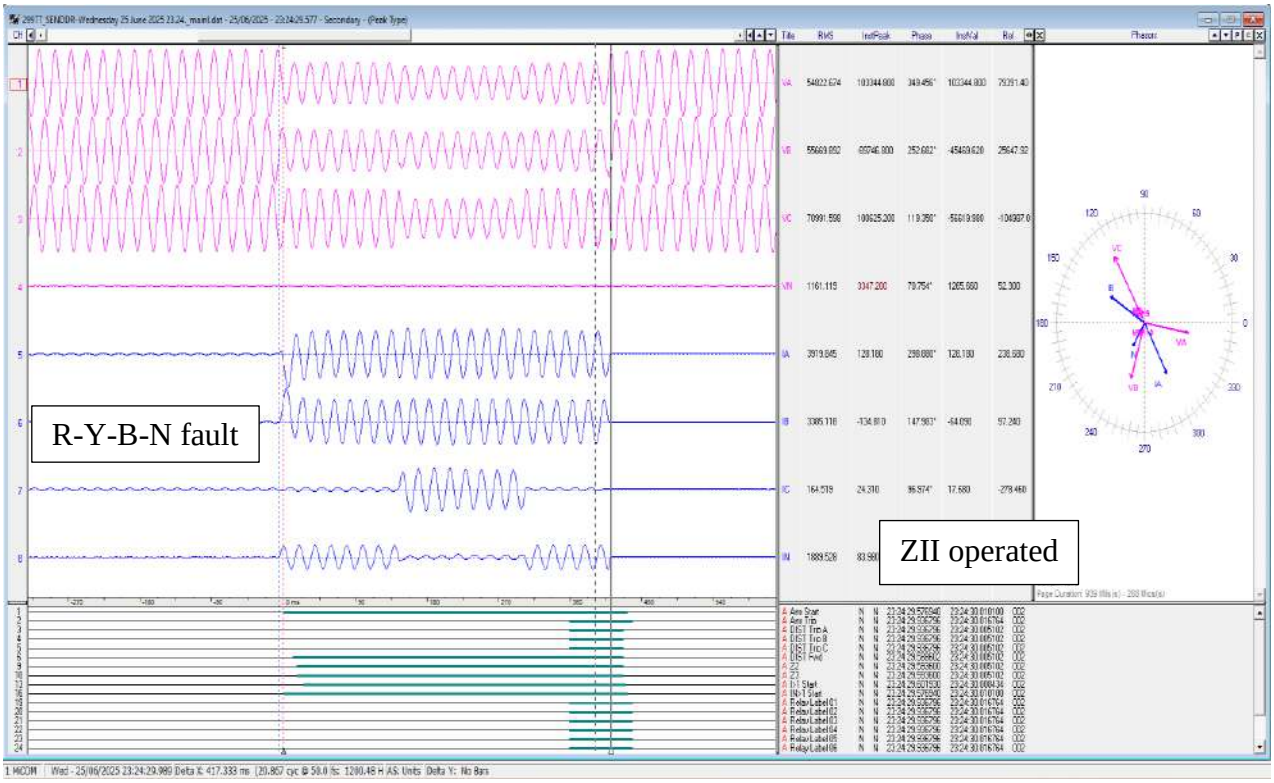


Fig 1: DR snapshot of Khleihriat for 132 kV Lumshnong line

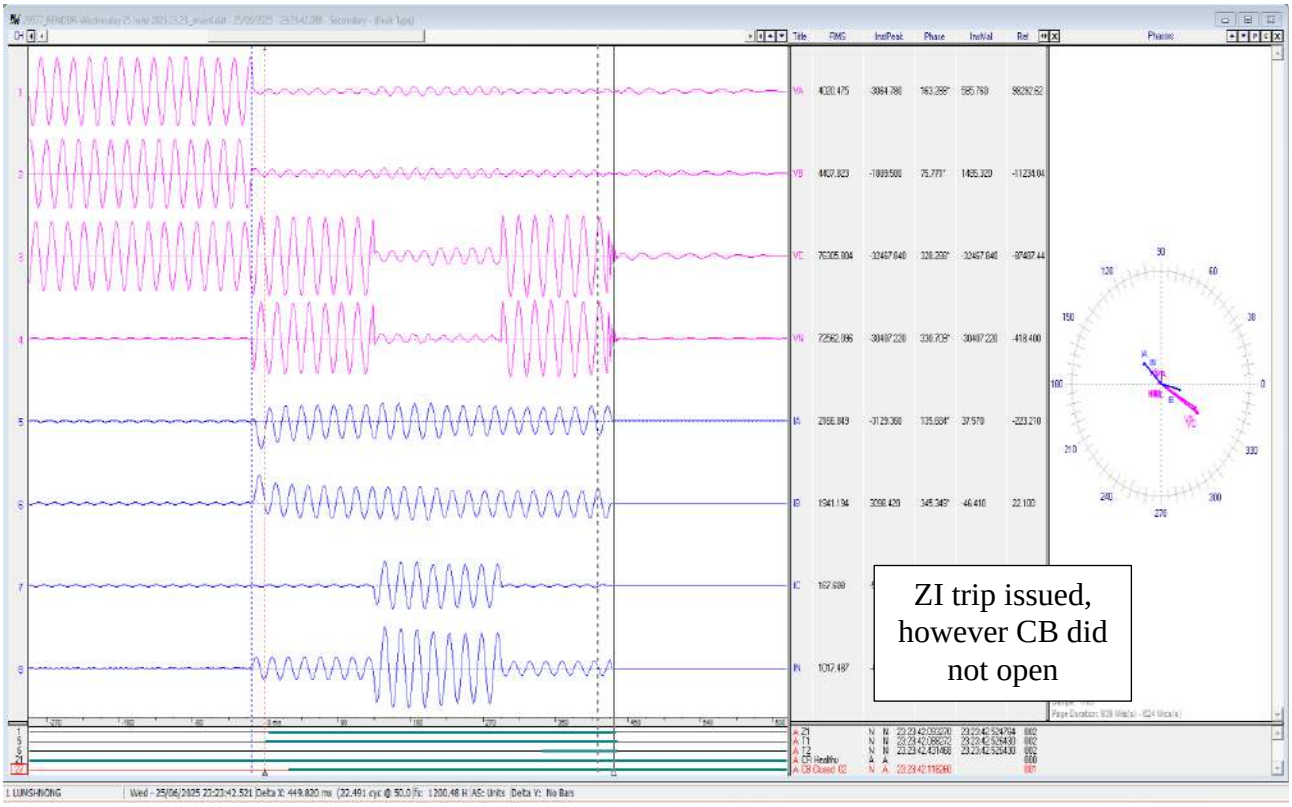


Fig 2: DR snapshot of Lumshnong for Khleihriat line

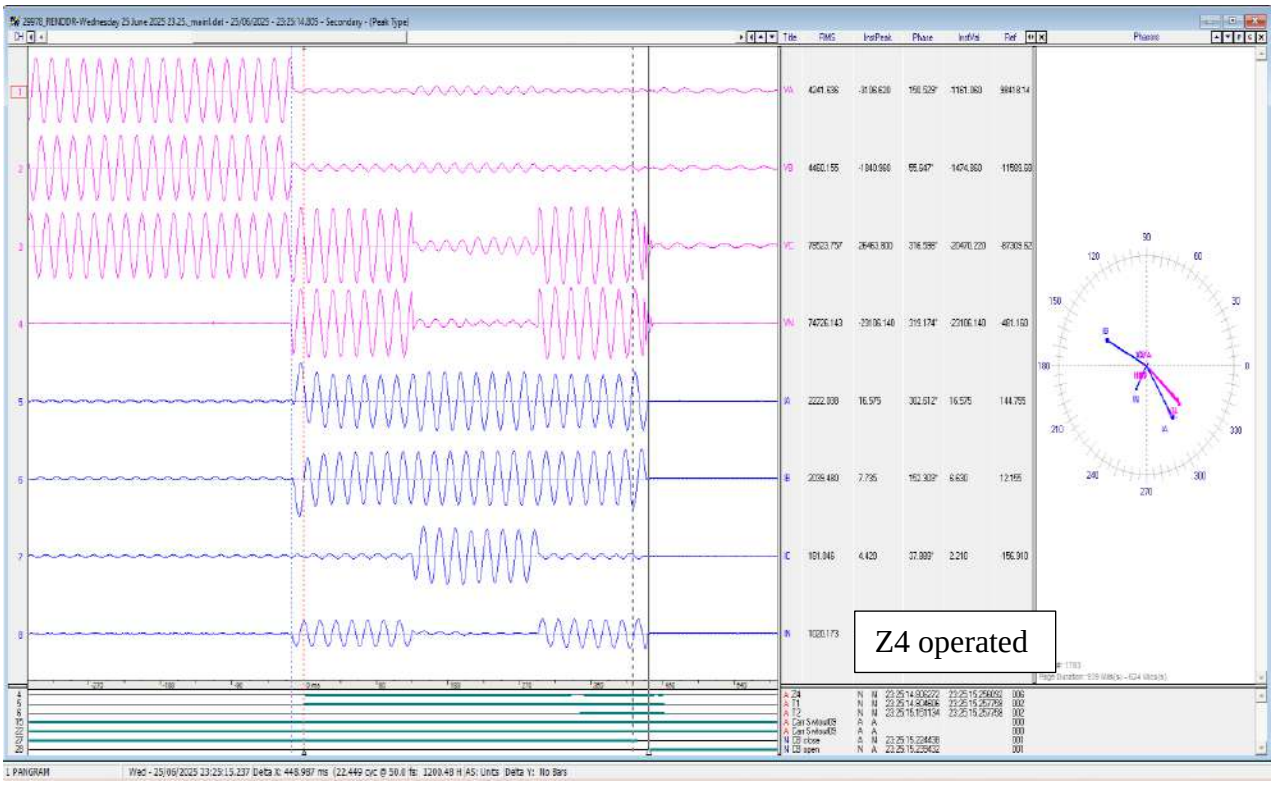


Fig 3: DR snapshot of Lumshnong for Panchgram line

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र के असम विद्युत प्रणाली के रंगिया, अमीनगांव, कमालपुर, सिपाझार, तंगला, नलबाड़ी, एम्स और नाथकुची क्षेत्रों में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Rangia, Amingaon, Kamalpur, Sipajhar, Tangla, Nalbari, AIIMS & Nathkuchi areas of Assam Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 10-07-2025

1. घटना का सारांश/Event Summary:

Rangia, Amingaon, Kamalpur, Sipajhar, Tangla, Nalbari, AIIMS and Nathkuchi areas of Assam Power System were connected with rest of NER Grid through 220kV BTPS – Rangia D/C lines. Prior to the event, 132 kV Rowta – Sipajhar, 132 kV Rowta – Tangla, 132 kV Barpeta – Nalbari and 132kV Bornagar – Nathkuchi lines were under outage condition due to system requirement. Also, 220 kV BTPS-Rangia II line was under planned shutdown.

At 09:42 Hrs of 26-06-2025, 220 kV BTPS – Rangia 1 Line tripped. Due to tripping of this element, SPS operated successfully at 220 kV Rangia S/S which led to black out at Rangia, Amingaon, Kamalpur, Sipajhar, Tangla, Nalbari, AIIMS and Nathkuchi areas of Assam Power System.

Power supply was extended to Rangia area by charging 220 kV BTPS – Rangia line at 09:57 Hrs of 26-06-2025. AIIMS power shifted to Kahilipara side at 09:46 hrs of 26-06-2025, Sipajhar & Tangla power shifted to Rowta side at 09:48 hrs & 10:09 hrs of 26-06-2025 respectively.

2. घटना का समय और दिनांक/Time and Date of the Event: 09:42 Hrs of 26-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Rangia, Amingaon, Kamalpur, Sipajhar, Tangla, Nalbari, AIIMS and Nathkuchi areas of Assam Power System

5. **पूर्ववर्ती स्थिति/Antecedent Conditions**:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	50.03	2609	2956
घटना के बाद/ Post Event	50.03	2606	2735

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से पहले) Important Transmission Line/Unit if under outage (before the event)	132kV Rowta – Sipajhar, 132kV Rowta – Tangla, 132kV Barpeta – Nalbari and 132kV Bornagar – Nathkuchi lines were under outage condition due to system requirement. 220 kV BTPS-Rangia-2 was under planned shutdown
मौसम स्थिति / Weather Condition	Normal

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load loss of 190 MW

7. **व्यवधान की अवधि /Duration of interruption:** 15 mins

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

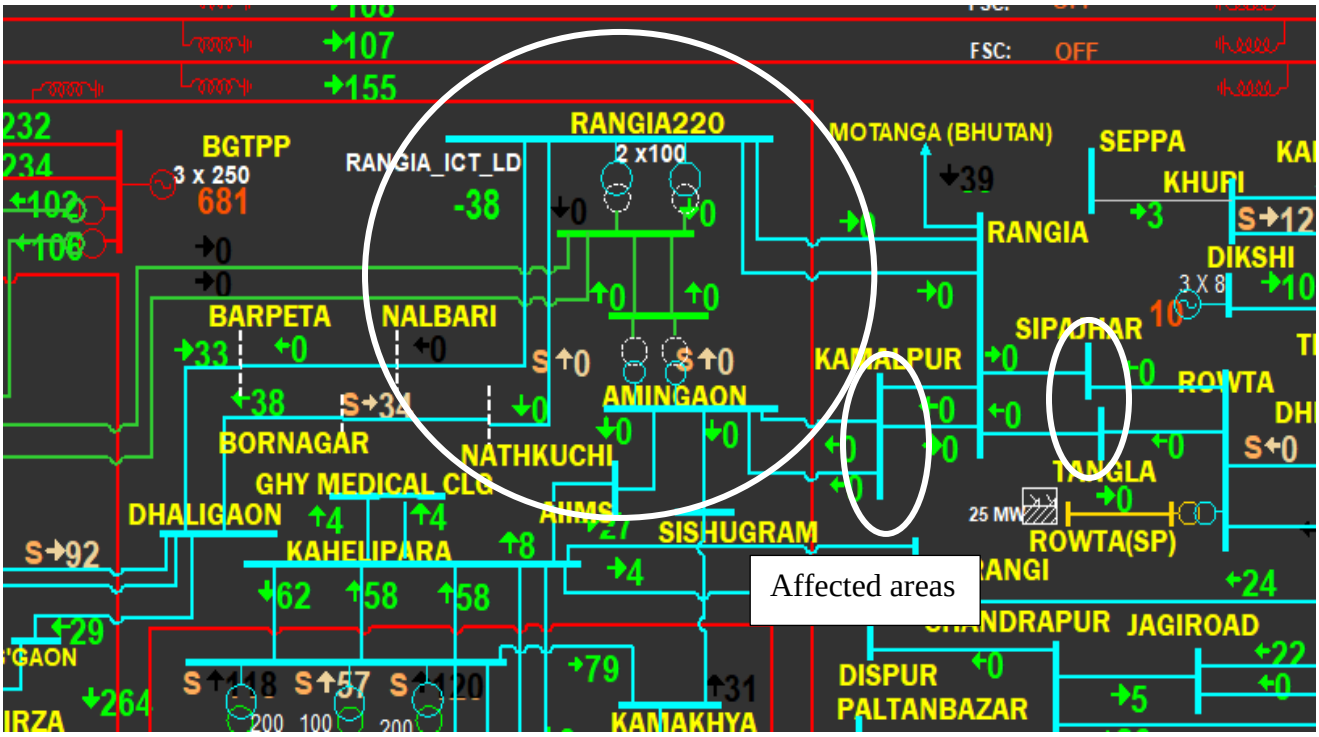


Figure 1: Network across the affected area

9. उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event): NIL

10. प्रमुख ट्रिपिंग /Major Elements Tripped:

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	220 kV BTPS-Rangia I Line	09:42	09:57	DP, ZI, Y-B	Carrier received, DT received (ZI trip)
2	132 kV Rangia-Rangia I Line	09:42	10:11	SPS operated	
3	132 kV Rangia-Rangia II Line	09:42	10:11	SPS operated	
7	132 kV Rangia-Sipajhar Line	09:42	10:04	SPS operated	
8	132 kV Rangia-Tangla Line	09:42	10:15	SPS operated	
9	132 kV Rangia-Kamalpur I Line	09:42	10:46	SPS operated	
10	132 kV Rangia-Kamalpur I Line	09:42	10:25	SPS operated	

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):

As per DR analysis, Y-B fault (Iy-6 kA, Ib-5.6 kA) initiated at 09:42:19.544 hrs which was cleared within 53 msec from BTPS end on operation of DP, ZI. Carrier received at Rangia end.

However, at 09:42:19.609 Hrs, DT received at Rangia end.

As per the active SPS logic, SPS was operated and the 33kV load and 132 kV Rangia – Motonga trans-national link was saved during the event. Generation at Motonga continued to cater the 33 kV load at Rangia without any interruption during the trip event.

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:

- At 09:42:19.609 Hrs, DT received at Rangia end which seems to be unwanted.

13. सुधारात्मक उपाय /Action Taken/Remedial Measures: NIL

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	No violation
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	AEGCL
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	AEGCL
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	No violation
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.

परिशिष्ट 1: स्काडा के अनुसार घटनाओं का क्रम / Sequence of events as per SCADA

AREA	CATEGOR	LOCATION	TEXT	SYSTEM_TIME	FIELD_TIME	MS
AEGCL	1C	BONGA_AS	BONGAIGAON CB 220Kv LINE-2 TO RNG22 OPEN	26 Jun 2025 08:04:50:000	26 Jun 2025 08:04:45:000	5.69E+08
AEGCL	1C	BONGA_AS	BONGAIGAON CB 220Kv LINE-1 TO RNG22 OPEN	26 Jun 2025 09:42:25:000	26 Jun 2025 09:42:19:000	6.03E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE-1 TO KAMAL OPEN	26 Jun 2025 09:42:25:000	26 Jun 2025 09:42:19:000	8.49E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE-2 TO KAMAL OPEN	26 Jun 2025 09:42:25:000	26 Jun 2025 09:42:19:000	8.7E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE TO SIPAJ OPEN	26 Jun 2025 09:42:25:000	26 Jun 2025 09:42:19:000	8.59E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE TO TNGLA BETWEEN	26 Jun 2025 09:42:25:000	26 Jun 2025 09:42:19:000	8.08E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE TO TNGLA OPEN	26 Jun 2025 09:42:38:000	26 Jun 2025 09:42:33:000	7.88E+08
AEGCL	1C	BONGA_AS	BONGAIGAON CB 220Kv LINE-1 TO RNG22 CLOSED	26 Jun 2025 09:57:47:000	26 Jun 2025 09:57:43:000	9.92E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE-1 TO KAMAL CLOSED	26 Jun 2025 10:14:50:000	26 Jun 2025 10:14:46:000	6.41E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE-2 TO KAMAL CLOSED	26 Jun 2025 10:15:08:000	26 Jun 2025 10:15:04:000	9.8E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE TO TNGLA CLOSED	26 Jun 2025 10:25:57:000	26 Jun 2025 10:25:52:000	8.04E+08
AEGCL	1C	RANGI_AS	RANGIA CB 132Kv LINE TO SIPAJ CLOSED	26 Jun 2025 10:46:46:000	26 Jun 2025 10:46:40:000	6.02E+08
AEGCL	1C	BONGA_AS	BONGAIGAON CB 220 KV COUPLER (04) CLOSED	26 Jun 2025 12:58:13:000	26 Jun 2025 12:57:25:000	4.64E+08
AEGCL	1C	BONGA_AS	BONGAIGAON CB 220Kv LINE-2 TO RNG22 CLOSED	26 Jun 2025 12:58:13:000	26 Jun 2025 12:57:25:000	4.64E+08

परिशिष्ट 2: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 2: DR and EL snapshots:

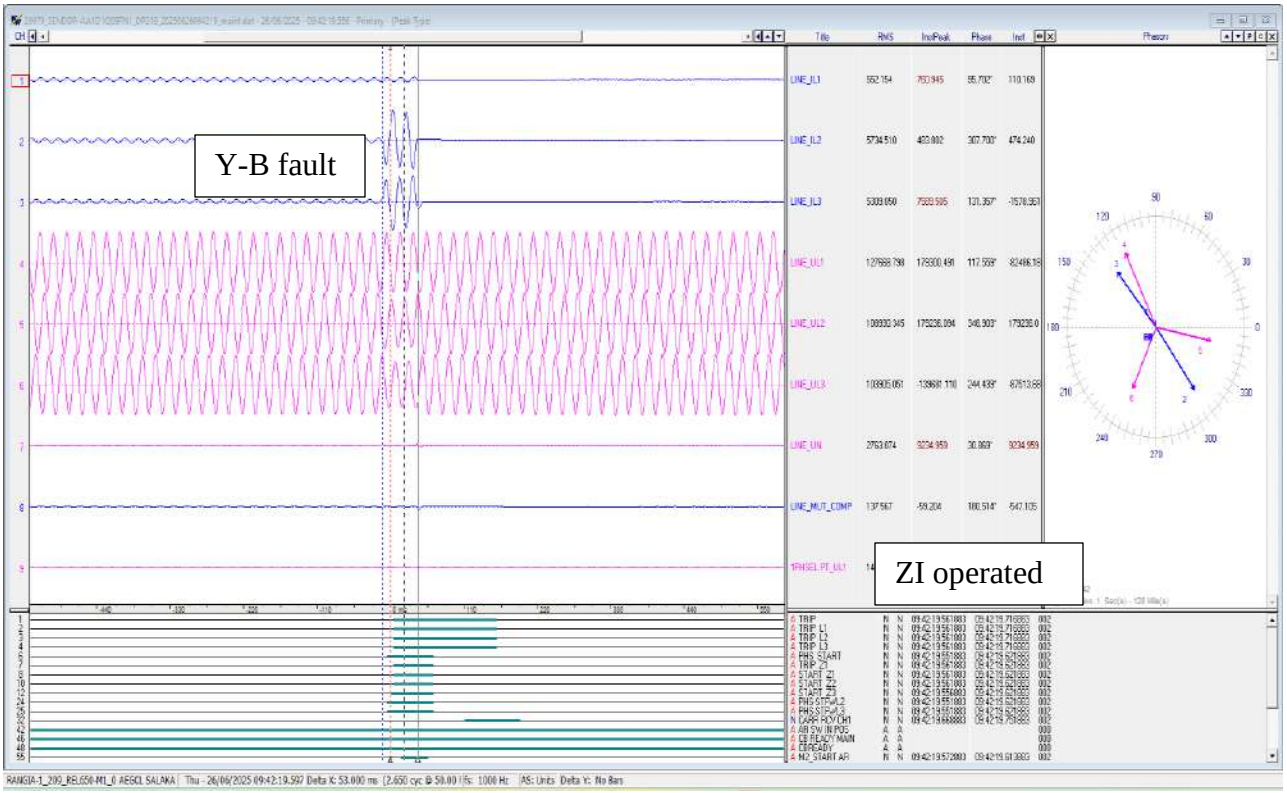


Fig 1: DR snapshot of BTPS for 220 kV Rangia I line

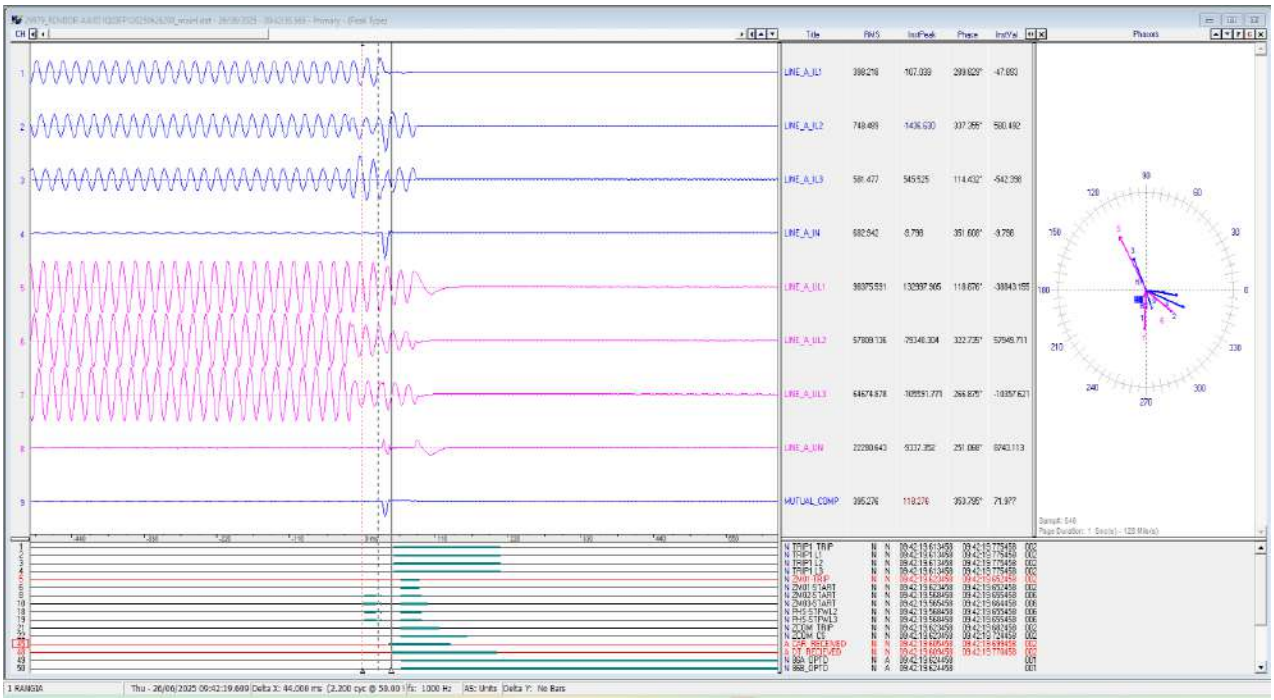


Fig 2: DR snapshot of BTPS for 220 kV Rangia I line

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र के नागालैंड के झादिमा, चीफोबोजो, वोखा और सानिस क्षेत्रों में ग्रिड गड़बड़ी की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Zhadima, Chiephobozou, Wokha and Sanis areas of Nagaland of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

Date (दिनांक): 04-07-2025

1. Event Summary (घटना का सारांश):

Kohima, Zhadima, Chiephobozou, Wokha, Sanis, Meluri and Kiphire areas of Nagaland Power System are connected with rest of NER Grid through 132kV Dimapur-Kohima only.

At **10:41 Hrs** of 26-06-2025, 132kV Dimapur-Kohima line tripped. Due to tripping of this line, Kohima, Zhadima, Chiephobozou, Wokha, Sanis, Meluri and Kiphire areas of Nagaland Power System were isolated from NER Grid and collapsed due to no source available in these areas.

Power supply restored to Kohima, Zhadima, Chiephobozou, Wokha, Sanis, Meluri and Kiphire areas of Nagaland Power System at **10:56 Hrs** of 26-06-2025 by charging 132 kV Karong-kohima line.

2. Time and Date of the Event (घटना का स मय और दिनांक): 10:41 Hrs of 26-06-2025

3. Event Category (ग्रिड घटना का प्रकार): GD-I

4. Location/Control Area (स्थान/नियंत्रण क्षेत्र): Kohima, Zhadima, Chiephobozou, Wokha, Sanis, Meluri and Kiphire areas of Nagaland Power System.

5. Antecedent Conditions (पूर्ववर्ती स्थिति):

	हर्ट्ज में आवृत्ति /Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट)/Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट)/ Regional Demand (MW)	राज्य की मांग (मेगावाट)/ State Demand (MW)
Pre-Event (घटना पूर्व)	49.94	2616	3010	120
Post Event (घटना के बाद)	49.94	2629	2991	100

Pre and post data of 1 minute before and after the event

Important Transmission Line/Unit if under outage (before the event))महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है(	132 kV Doyang-Sanis line was out since 20:19 Hrs of 10-06-2025 (bursting of CT at Doyang incomer of Sanis) and 132 kV Karong- Kohima line was already tripped at 09:44 Hrs of 26-06-2025
Weather Condition (मौसम स्थिति)	Normal

6. Load and Generation loss (लोड और जेनरेशन हानि): Load loss of 20 MW

7. Duration of interruption (रुकावट की अवधि): 15 mins

8. Network across the affected area (प्रभावित क्षेत्र का नक्शा):

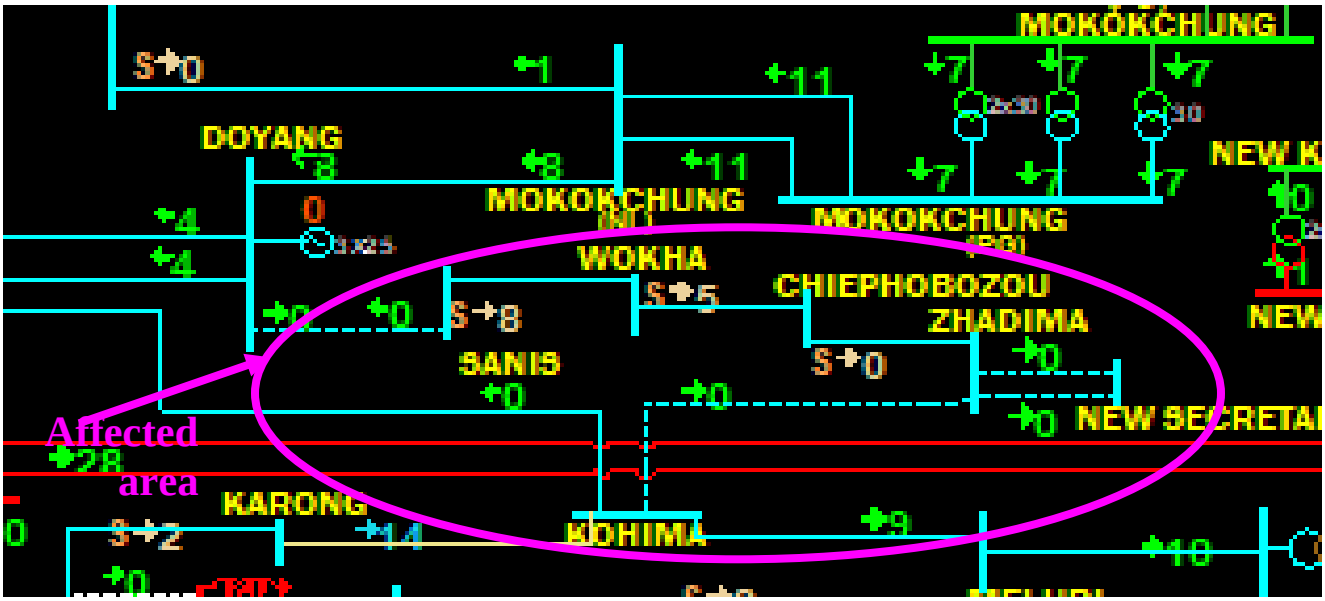


Figure 1: Network across the affected area

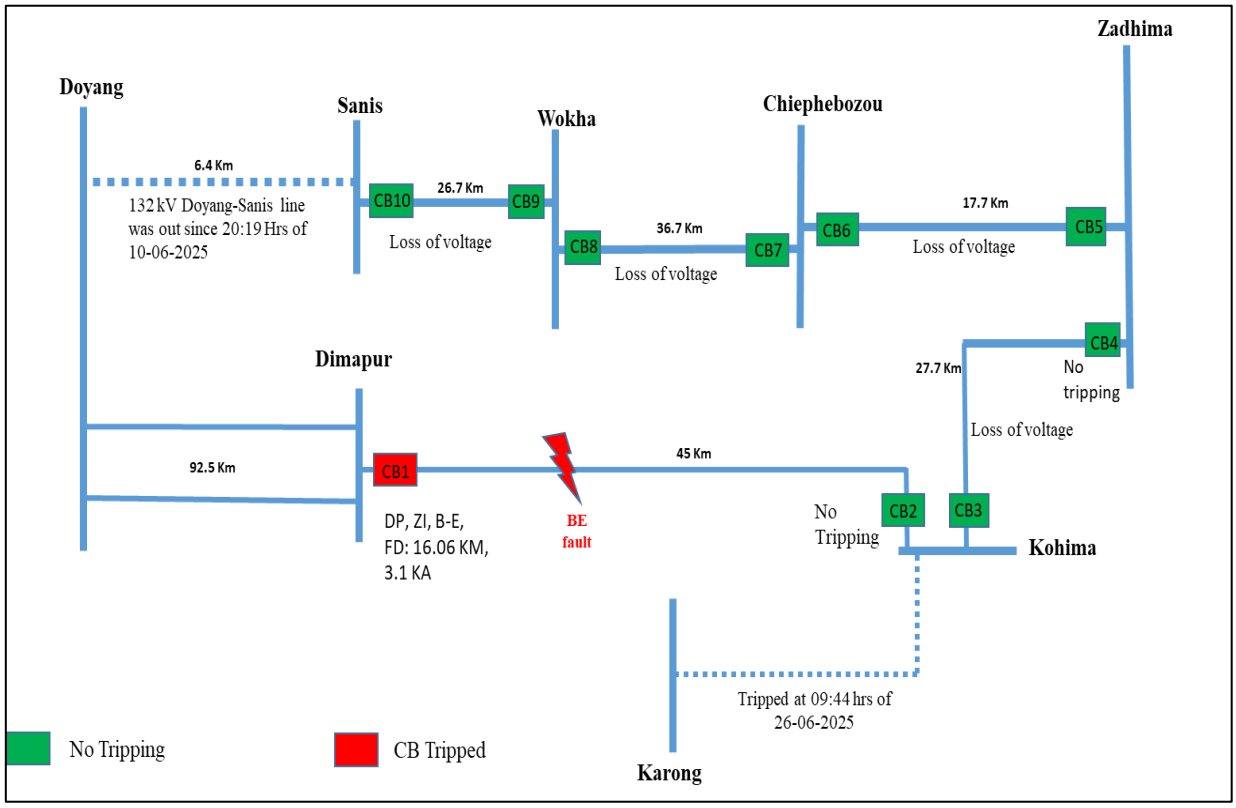
9. Details of Equipment Failure (if any during the event) (उपकरण विफलता का विवरण): NIL

10. Major Elements Tripped (प्रमुख ट्रिपिंग):

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	132kV Dimapur-Kohima	10:41	11:08	DP, ZI, B-E, FD: 16.06 KM	No Tripping
2	132kV Zhadima - Chiephobozou	10:41	10:56	loss of power	

3	132 kV Chiephobozou Wokha	10:41	10:56	loss of power
4	132 kV Sanis Wokha	10:41	10:56	loss of power
5	132kV Kohima-Meluri	10:41	10:56	loss of power

2. **Event Analysis (Based on PMU, SCADA & DR) (घटना का विश्लेषण):**



Due to the outage of 132 kV Doyang – Sanis Line & 132 kV Karong – Kohima line, Kohima, Zhadima, Chiephobozou, Wokha, Sanis, Meluri and Kiphire areas of Nagaland Power System were radially fed from Dimapur SS through 132 kV Dimapur – Kohima Line.

At 10:41:02.000 Hrs, B-E fault appears in the line detected by the main protection in DP, ZI, BE, FD: 16.06 KM and cleared in ZI time. No tripping observed at Kohima due to radially feeding from Dimapur end.

3. **Protection/Operational issues observed (सुरक्षा/परिचालन संबंधी समस्या):** NIL

4. **Action Taken/Remedial Measures (सुधारात्मक उपाय):** NIL

5. Non-compliance observed (विनियमन का गैर-अनुपालन):

Sl. No.	Issues	Regulation Non-Compliance	Utilities
1.	**Flash Report received within 8hrs?**	IEGC section 37.2 (b)	-
2.	**Whether DR/EL provided within 24 Hours?**	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	-
3.	**Detailed Report received within 7 days?**	IEGC section 37.2 (e)	**No violation**
4.	**DR Time Synchronization Issues**	IEGC section 17.3	
5.	**Any other non-compliance**		-

6. Key Lessons Learnt (प्रमुख अधिगम बिंदु):

- Proper patrolling and maintenance related activities needs to be undertaken as per CEA (Grid Standard) Regulation, 2010 on regular basis.

Annexure 1: Sequence of Events as per SCADA-

AREA	CATEGORY	LOCATION	TEXT	SYSTEM_TIME	FIELD_TIME
AEGCL	1C	TNGLA_AS	TANGLA CB 132/33 T1 (SEC) OPEN	26 Jun 2025 09:44:31:000	26 Jun 2025 09:44:21:000
NAGALD	1C	KOHIM_NA	KOHIMA CB 132Kv LINE TO MELUR OPEN	26 Jun 2025 09:44:48:000	26 Jun 2009 09:44:38:000
NAGALD	1C	KOHIM_NA	KOHIMA CB 132Kv LINE-1 TO KARON INVALID	26 Jun 2025 09:44:48:000	26 Jun 2009 09:44:38:000
NAGALD	1C	DIMAP_PG	DIMAPUR CB 132Kv LINE-1 TO KOHIM OPEN	26 Jun 2025 10:41:05:000	26 Jun 2025 10:41:02:000
NAGALD	1C	KOHIM_NA	KOHIMA CB 132 KV COUPLER (02) BETWEEN	26 Jun 2025 10:41:08:000	26 Jun 2009 10:40:58:000

Annexure 2: Disturbance recorder snips showing faults and digital signals

2.1 Event snapshot of Dimapur end for 132 kV Dimapur-Kohima Line

EventTypeChar	DateTime	SignalName	StatusText	CustomInfoText
P	26-Jun-25 11:02:45 AM	TUV1_STG1	Off	25-06-26 11.02;45.757,TUV1_STG 1,0
P	26-Jun-25 11:02:45 AM	TUV1_STG1	On	25-06-26 11.02;45.677,TUV1_STG 1,1
P	26-Jun-25 10:58:34 AM	TUV1_STG1	Off	25-06-26 10.58;34.810,TUV1_STG 1,0
P	26-Jun-25 10:41:02 AM	TRIP L3	Off	25-06-26 10.41;02.099,TRIP L3,0
P	26-Jun-25 10:41:02 AM	TRIP_TRIP	Off	25-06-26 10.41;02.099,TRIP_TRIP, 0
P	26-Jun-25 10:41:02 AM	ZCOM_CS	Off	25-06-26 10.41;02.051,ZCOM_CS, 0
P	26-Jun-25 10:41:02 AM	AR01_P3PH	On	25-06-26 10.41;02.038,AR01_P3P H,1
P	26-Jun-25 10:41:02 AM	TEF1_START	Off	25-06-26 10.41;02.014,TEF1_STA RT,0
P	26-Jun-25 10:41:02 AM	PHS-STFWL3	Off	25-06-26 10.41;02.000,PHS-STFW L3,0
P	26-Jun-25 10:41:02 AM	PHS-STFWPE	Off	25-06-26 10.41;02.000,PHS-STFW PE,0
P	26-Jun-25 10:41:02 AM	ZM01-START	Off	25-06-26 10.41;02.000,ZM01-STA RT,0
P	26-Jun-25 10:41:02 AM	ZM01-TRIP	Off	25-06-26 10.41;02.000,ZM01-TRIP ,0
P	26-Jun-25 10:41:02 AM	ZM02-START	Off	25-06-26 10.41;02.000,ZM02-STA RT,0
P	26-Jun-25 10:41:02 AM	ZM03-START	Off	25-06-26 10.41;02.000,ZM03-STA RT,0
P	26-Jun-25 10:41:01 AM	CB_OPEN	On	25-06-26 10.41;01.998,CB_OPEN, 1
P	26-Jun-25 10:41:01 AM	CB CLOSED	Off	25-06-26 10.41;01.984,CB CLOSED,0
P	26-Jun-25 10:41:01 AM	TUV1_STG1	On	25-06-26 10.41;01.950,TUV1_STG 1,1
P	26-Jun-25 10:41:01 AM	TRIP L3	On	25-06-26 10.41;01.949,TRIP L3,1
P	26-Jun-25 10:41:01 AM	TRIP_TRIP	On	25-06-26 10.41;01.949,TRIP_TRIP, 1

Rev.	Modification	Rel. date	Created by	Replaces / Based on	Project: DIMAPUR LATEST	Responsible department: ABB Ltd.	Technical ref.	Document kind: IED events	Doc. designation: R109REL
							Created by	Title: REL670- 1	Document id.: 0
					DIMAPUR LATEST.DIMAPUR.132KV.KOHIMA ADAPTIVE AR	ABB	Approved by		Rev. / Rel. date / Language / 1 / 2

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
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(A Government of India Enterprise)
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उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र के असम के अमगुरी(जैक्सन) क्षेत्र में ग्रिड गड़बड़ी की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Amguri(Jacson) area of Assam of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

Date (दिनांक): 10-07-2025

1. Event Summary (घटना का सारांश):

Amguri (Jackson) area of Assam Power System was connected to the rest of NER Grid through 220 kV Amguri (Jackson)–Namrup (NTPS) line. Prior to the event, 220 kV Amguri (Jackson)–Mariani (AS) line was under planned shutdown.

At 15:17 Hrs of 26-06-2025, 220 kV Amguri (Jackson)–Namrup (NTPS) line tripped. This tripping led to blackout in Amguri (Jackson) area of Assam power system.

Power supply was extended to Amguri (Jackson) area of Assam Power System by charging 220 kV Amguri (Jackson)–Namrup (NTPS) line at 16:02 Hrs of 26-06-2025.

2. Time and Date of the Event (घटना का स मय और दिनांक): 15:17 Hrs of 26-06-2025

3. Event Category (ग्रिड घटना का प्रकार): GD-I

4. Location/Control Area (स्थान/नियंत्रण क्षेत्र): Amguri(Jacson) area of Assam Power System.

5. Antecedent Conditions (पूर्ववर्ती स्थिति):

	हर्ट्ज में आवृत्ति /Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट)/Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट)/ Regional Demand (MW)
Pre-Event (घटना पूर्व)	49.94	2689	3111
Post Event (घटना के बाद)	50	2657	3159

Pre and post data of 1 minute before and after the event

Important Transmission Line/Unit if under outage (before the event))महत्वपूर्ण संचरण लाइने/ विधुत उत्पादन इकाइयां जो बंद है(	220 kV Amguri (Jackson)–Mariani (AS) line was under planned shutdown
Weather Condition (मौसम स्थिति)	Normal

6. Load and Generation loss (लोड और जेनरेशन हानि): Generation loss of 33 MW

7. Duration of interruption (रुकावट की अवधि): 45 mins

8. Network across the affected area (प्रभावित क्षेत्र का नक्शा):

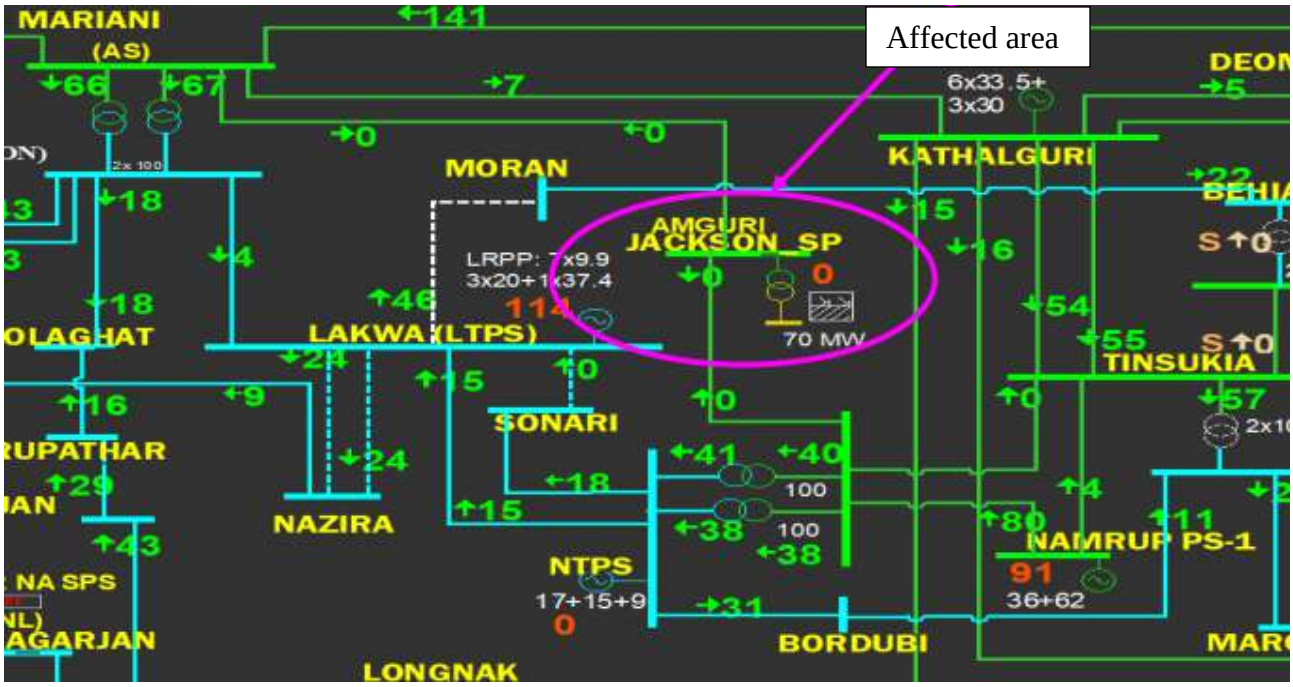


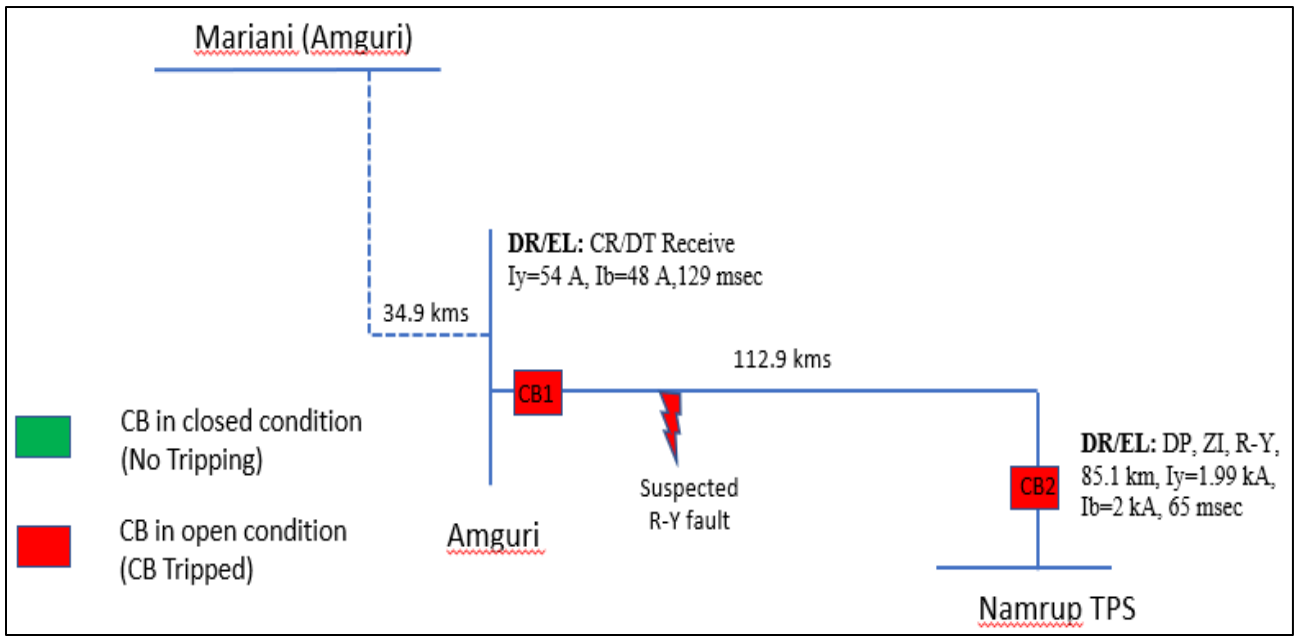
Figure 1: Network across the affected area

9. Details of Equipment Failure (if any during the event) (उपकरण विफलता का विवरण): NIL

10. Major Elements Tripped (प्रमुख ट्रिपिंग):

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	220 kV Amguri(Jacson)-Namrup(NTPS) Line	15:17	16:02	Carrier recieved	DP, ZI, Y-B, 85.1 Km

11. Event Analysis (Based on PMU, SCADA & DR) (घटना का विश्लेषण):



As per DR analysis, Y-B fault (Iy-1.9 kA, Ib-1.9 kA) initiated at 15:19:29.051 Hrs which was cleared within 64 msec from NTPS end on operation of DP, ZI. Amguri Solar (Jackson) end trip after carrier received under protection (PUTT) scheme.

As 220 kV Amguri - Mariani Line was under shutdown, Weak infeed issue was observed from Amguri solar plant for tripping of 220 kV Amguri(Jackson)–Namrup (NTPS) line.

90% 3rd order Harmonic has been observed in DR signal at Amguri end. In this case IBR was obeying LVRT/HVRT Compliance and supply Reactive VAR current was leading the Voltage signal.

The functionality of such renewable sources with numerous converter control options is much different than the conventional synchronous machine based generating units this lead to Non-homogeneity Issue in IBR Protection

12. Protection/Operational issues observed (सुरक्षा/परिचालन संबंधी समस्या):

- As 220 kV Amguri - Mariani Line was under shutdown, Weak infeed issue was observed from Amguri solar plant for tripping of 220 kV Amguri(Jackson)–Namrup (NTPS) line as carrier received at Amguri end under protection (PUTT) scheme.
- DEF based carrier added protection can be explored in case of IBR related protection.
- Weak infeed echo scheme can be explored.

13. Action Taken/Remedial Measures (सुधारात्मक उपाय): NIL

14. Non-compliance observed (विनियमन का गैर-अनुपालन):

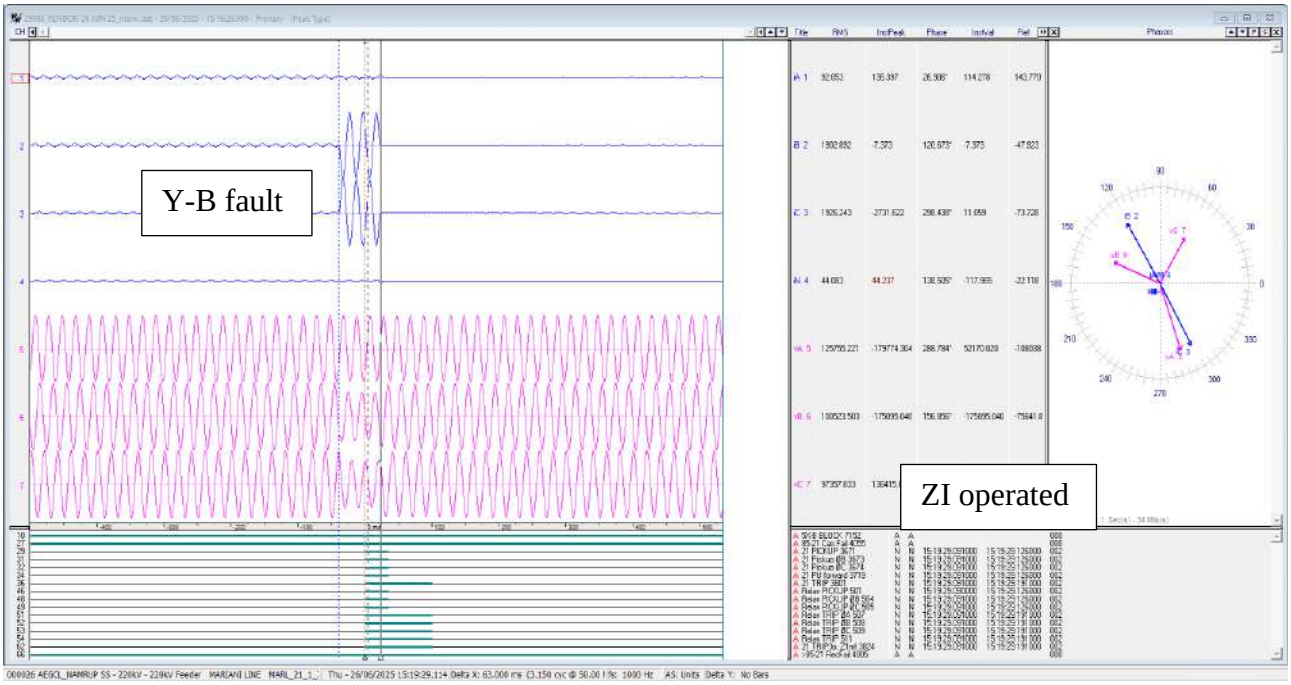
Sl. No.	Issues	Regulation Non-Compliance	Utilities
1.	**Flash Report received within 8hrs?**	IEGC section 37.2 (b)	**AEGCL**
2.	**Whether DR/EL provided within 24 Hours?**	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	**AEGCL**
3.	**Detailed Report received within 7 days?**	IEGC section 37.2 (e)	**AEGCL**
4.	**DR Time Synchronization Issues**	IEGC section 17.3	**Time drift of 1 Hr at Amguri end for 220 kV NTPS line**
5.	**Any other non-compliance**		-

15. Key Lessons Learnt (प्रमुख अधिगम बिंदु):

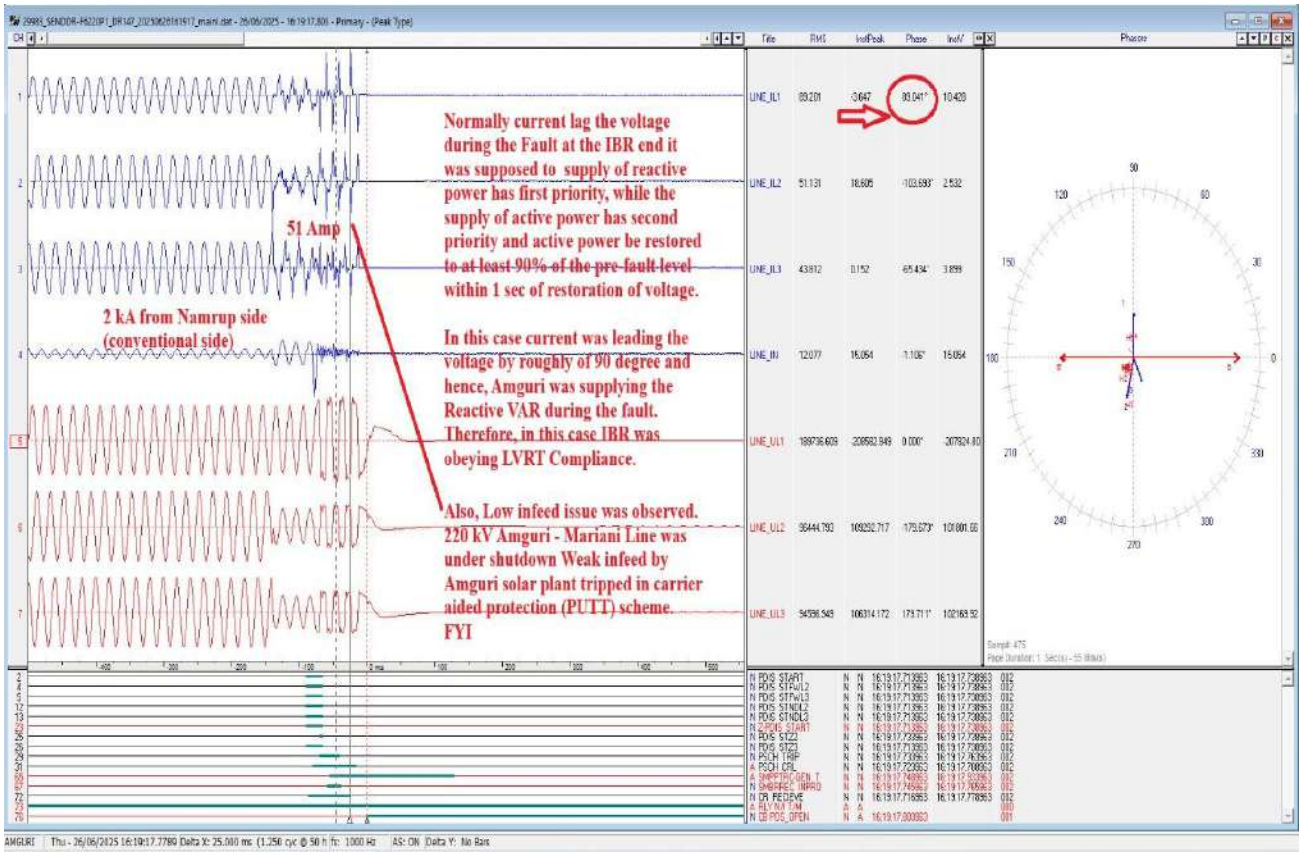
- Proper patrolling and maintenance related activities needs to be undertaken as per CEA (Grid Standard) Regulation, 2010 on regular basis.
- Weak Infeed is major issue in the Grid in case of IBR feeding fault.

Annexure 1: Disturbance recorder snips showing faults and digital signals

1.1 DR snapshot of NTPS end for 220 kV Amguri(Jacson)-NTPS Line



1.2 DR snapshot of NTPS end for 220 kV Amguri(Jacson)-NTPS Line



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कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र के नीपको विद्युत प्रणाली के कोपिली एचईपी में ग्रिड घटना की मसौदा रिपोर्ट / Draft Report of Grid Incidence in Kopili HEP of NEEPCO Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 10-07-2025

1. घटना का सारांश/Event Summary:

At 19:28 Hrs, 19:30 Hrs, 19:33 Hrs & 19:34 Hrs of 26-06-2025, all four generating units of Kopili HEP namely, Kopili Unit-3, Unit-1, Unit-2 & Unit-4 tripped respectively.

Due to these tripping, grid incidence of GI-II category occurred resulting in rescheduling of Kopili generation from Block 87-96 of 26-06-2025.

2. घटना का समय और दिनांक/Time and Date of the Event: 19:34 Hrs of 26-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GI-II

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Kopili HEP of NEEPCO Power System

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	50.01	3000	3716
घटना के बाद/ Post Event	50.01	2960	3713

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से पहले) Important Transmission Line/Unit if under outage (before the event)	NIL
मौसम स्थिति / Weather Condition	Normal

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load loss of 198 MW

7. **व्यवधान की अवधि /Duration of interruption:** 2 Hr 52 mins

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

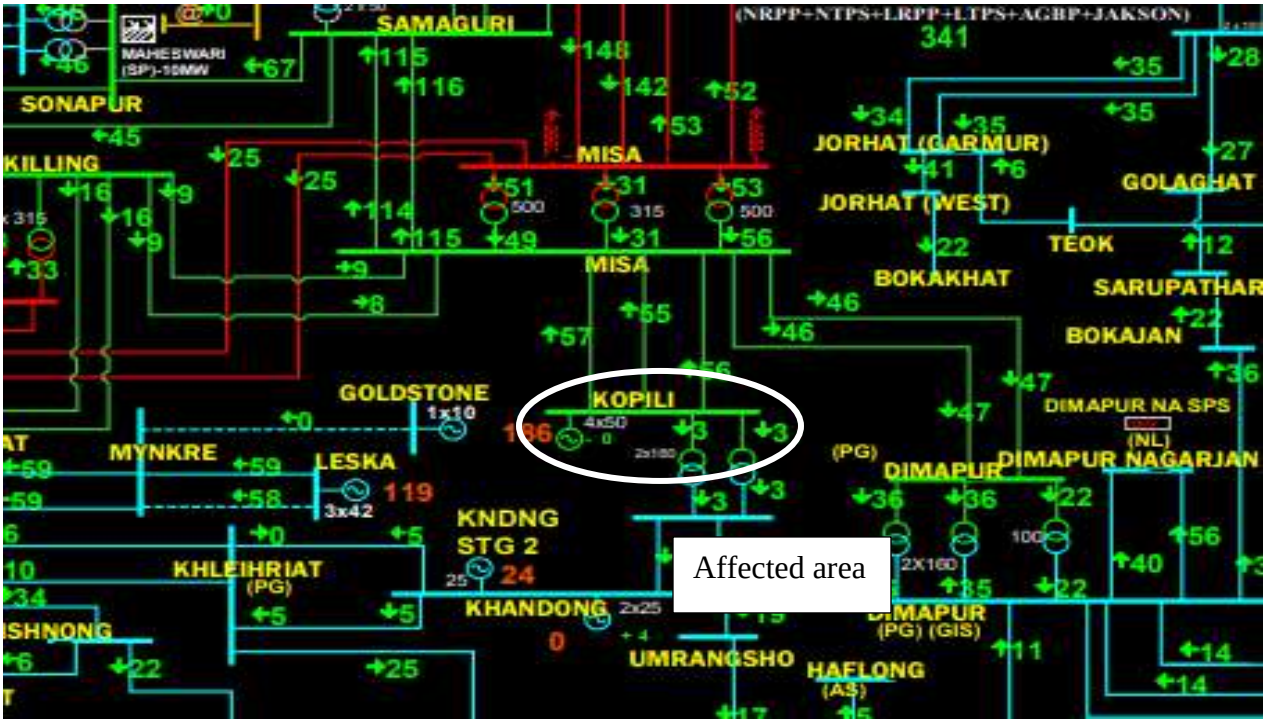

Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event): NIL**

10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	Kopili Unit-1	19:30	23:03	Failure of station DC charger	
2	Kopili Unit-2	19:33	22:41		
3	Kopili Unit-3	19:28	22:56		
4	Kopili Unit-4	19:34	22:26		

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):

All four generating units at Kopili tripped due to failure in the station DC charger, which led to interruption of DC supply to essential protection and control circuits, resulting in an unintentional and simultaneous shutdown of the units.

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed: NIL

13. सुधारात्मक उपाय /Action Taken/Remedial Measures:

- Healthiness of DC system was verified, and the charger was restored to normal condition to ensure continuity of supply to all associated loads.

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	NEEPCO
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	No violation
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	No violation
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	-
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

To mitigate the risk of similar incident in future, it has been proposed to integrate a DC charger failure alarm mechanism within the system architecture. This enhancement will facilitate real-time monitoring of the DC charger's operational status and promptly alert the operational personnel in the event of any anomalies. Proactive detection of DC supply deviations will enhance the reliability of protection systems and ensure stable station operations.

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
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पूर्वोत्तर क्षेत्र के त्रिपुरा विद्युत प्रणाली के रोखिया क्षेत्र में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Rokhia area of Tripura Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 10-07-2025

1. घटना का सारांश/Event Summary:

Rokhia area of Tripura power system is connected with rest of the grid via 132 kV Rokhia – Agartala 1 & 2 line and 132 kV Rokhia -Monarchak Line.

At 06:06 Hrs of 28-06-2025, 132 kV Rokhia – Agartala 1 & 2 line and 132 kV Rokhia - Monarchak Line tripped. Due to tripping of these elements, Rokhia area of Tripura power system got isolated from NER grid due to load generation mismatch in this area.

Power supply extended to Rokhia area by charging 132 kV Rokhia – Agartala I Line at 07:31 Hrs of 28-06-2025.

2. घटना का समय और दिनांक/Time and Date of the Event: 06:06 Hrs of 28-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Rokhia area of Tripura Power System

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	49.95	3076	2567
घटना के बाद/ Post Event	49.95	3045	2584

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से	NIL

पहले) Important Transmission Line/Unit if under outage (before the event)	
मौसम स्थिति / Weather Condition	Normal

6. **<u>लोड और जेनरेशन नुकसान /Load and Generation loss</u>**: Load loss of 11 MW & generation loss of 19 MW
7. **<u>व्यवधान की अवधि /Duration of interruption:</u>** 1 Hr 15 min
8. **<u>प्रभावित क्षेत्र का नक्शा /Network across the affected area:</u>**

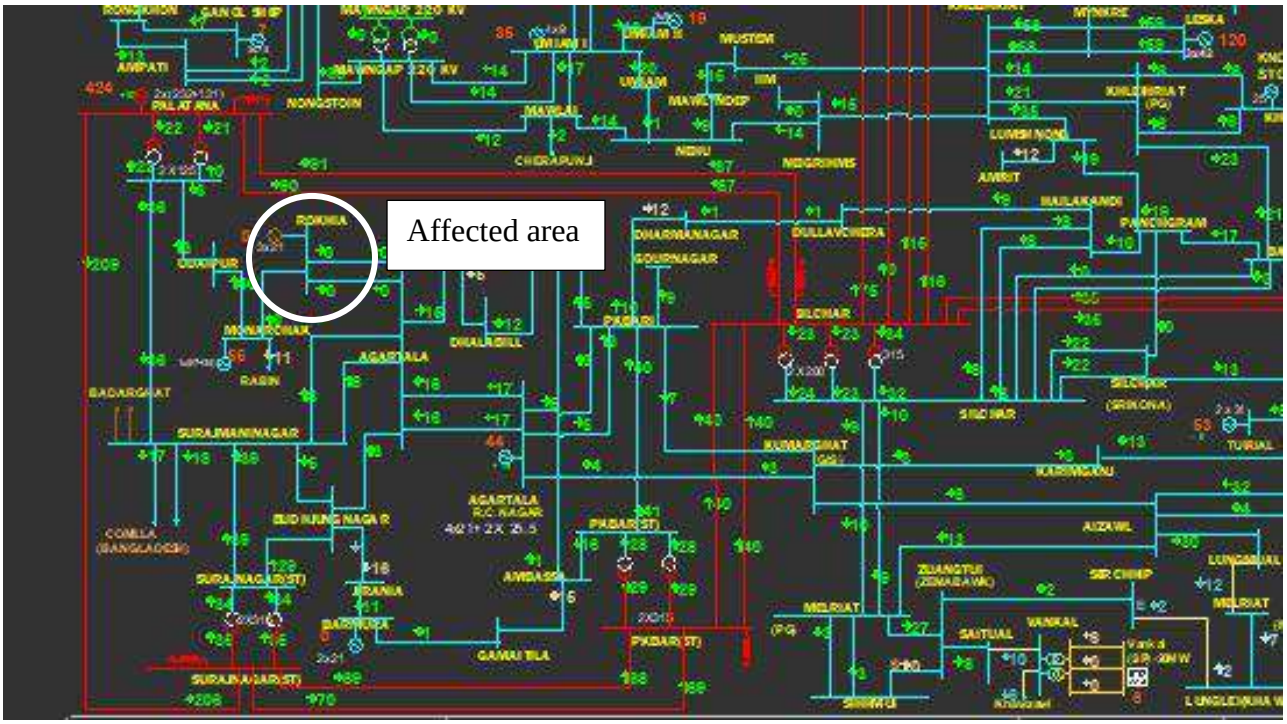


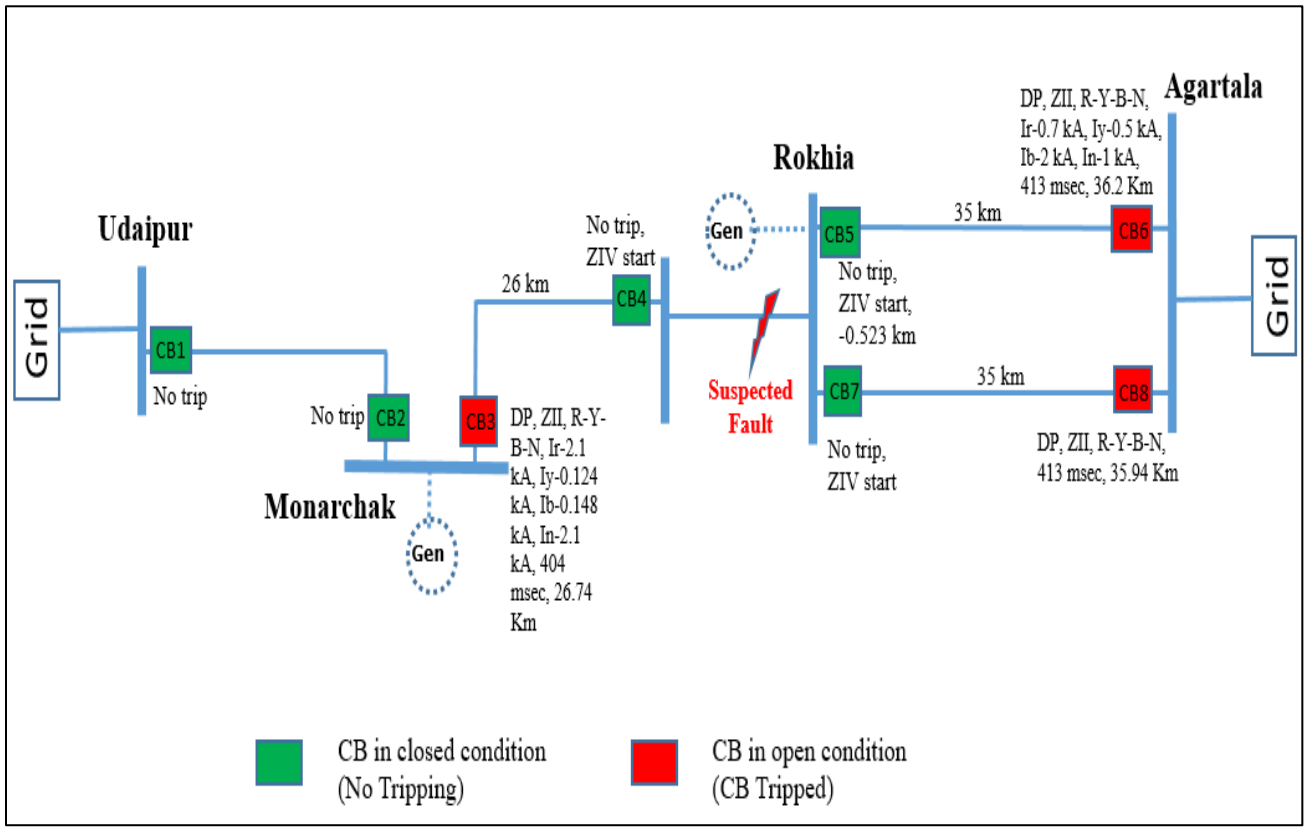
Figure 1: Network across the affected area

9. **<u>उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event):</u> NIL**
10. **<u>प्रमुख ट्रिपिंग /Major Elements Tripped:</u>**

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	132 kV Agartala-Rokhia I Line	06:06	07:31	DP, ZII, R-Y-B-N, 36.2 km	No tripping (Z4 start), -0.523 Km

2	132 kV Agartala-Rokhia II Line	06:06	08:08	DP, ZII, R-Y-B-N, 35.94 Km	No tripping(Z4 start)
3	132 kV Rokhia-Monarchak Line	06:06	08:14	No tripping (Z4 start)	DP, ZII, R-Y-B-N, 26.74 Km
4	Rokhia Unit-7	06:06	09:19	Loss of evacuation path	

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):



132 kV Agartala-Rokhia I Line:

Agartala: R-Y-B-N (Ir-0.7 kA, Iy-0.5 kA, Ib-2 kA, In-1 kA) fault initiated at 06:06:07.964 Hrs which was cleared within 413 msec on operation of DP, ZII.

Rohkia: No tripping , Z4 start, R-Y-B-N fault

132 kV Agartala-Rokhia II Line:

Agartala: R-Y-B-N fault initiated at 06:06:07.493 hrs and cleared within 413 msec on operation of DP, ZII.

Rohkia: No tripping, Z4 start

132 kV Rokhia-Monarchak Line:

Rokhia: No tripping, Z4 start

Monarchak: R-Y-B-N fault (Ir-2.1 kA, Iy-0.124 kA, Ib-0.148 kA, In-2.1 kA) initiated at 06:06:30.254 hrs which was cleared within 404 msec on operation of DP, ZII.

Suspected three phase to ground fault in Rokhia S/S or 132 kV Old Rokhia-New Rokhia Link feeder.

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:

- Non-availability of protection system in 132 kV Old Rokhia-New Rokhia link feeder. LDP to be implemented.
- Non-availability of Bus bar protection at Rokhia S/S. Bus bar protection needs to be implemented in all generating station switchyards as per NPC Uniform Protection protocol.
- DR digital channel is not standardized at Agartala & Rokhia end for 132 kV Agartala-Rokhia I & II Lines. The same needs to be standardized as per recommendation in FOLD working group-3.

13. सुधारात्मक उपाय /Action Taken/Remedial Measures: NIL

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	TSECL
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	TSECL
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	TSECL

4.	**डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues**	IEGC section 17.3	**Time drift of 32 min at Rokhia end for Agartala-I line, 3 min at Rokhia end for Monarchak & Agartala-II lines**
5.	**कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance**		**-**

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.
- Healthiness of protection system needs to be ensured at all times.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

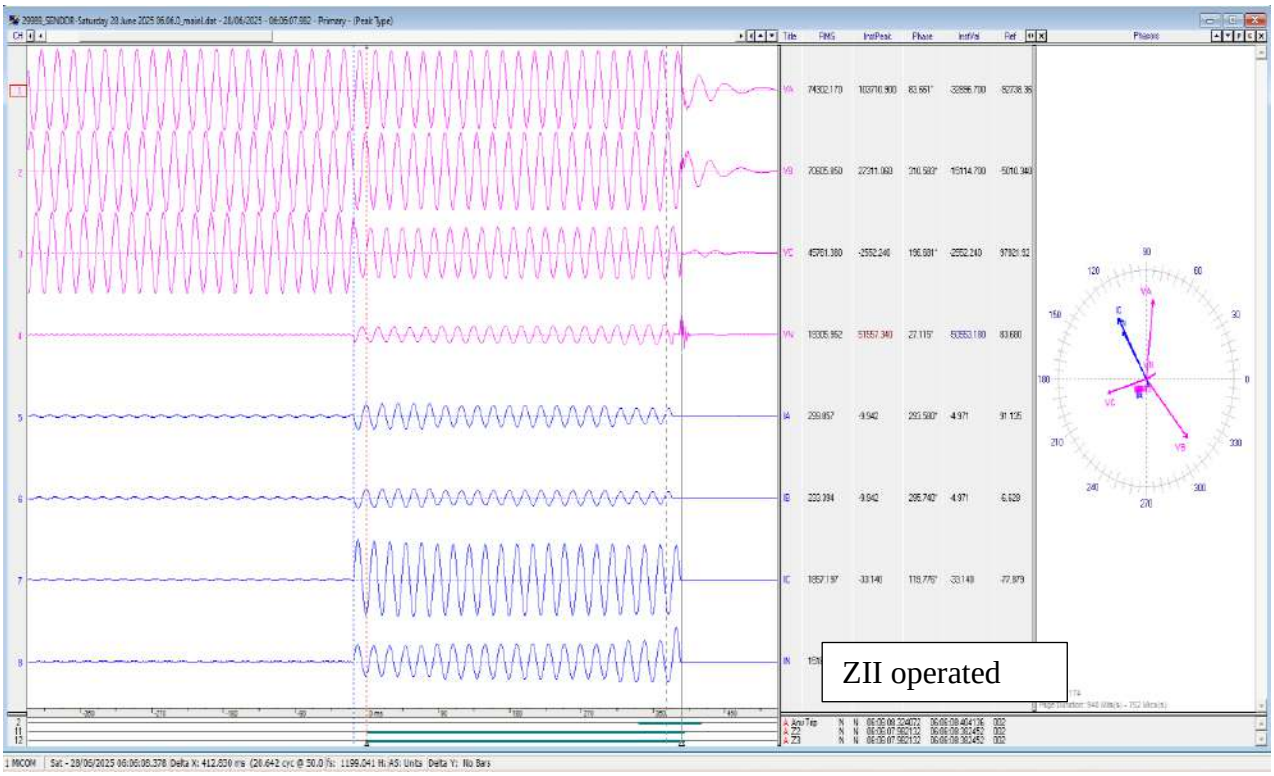


Fig 1: DR snapshot of Agartala for 132 kV Rokhia-I line

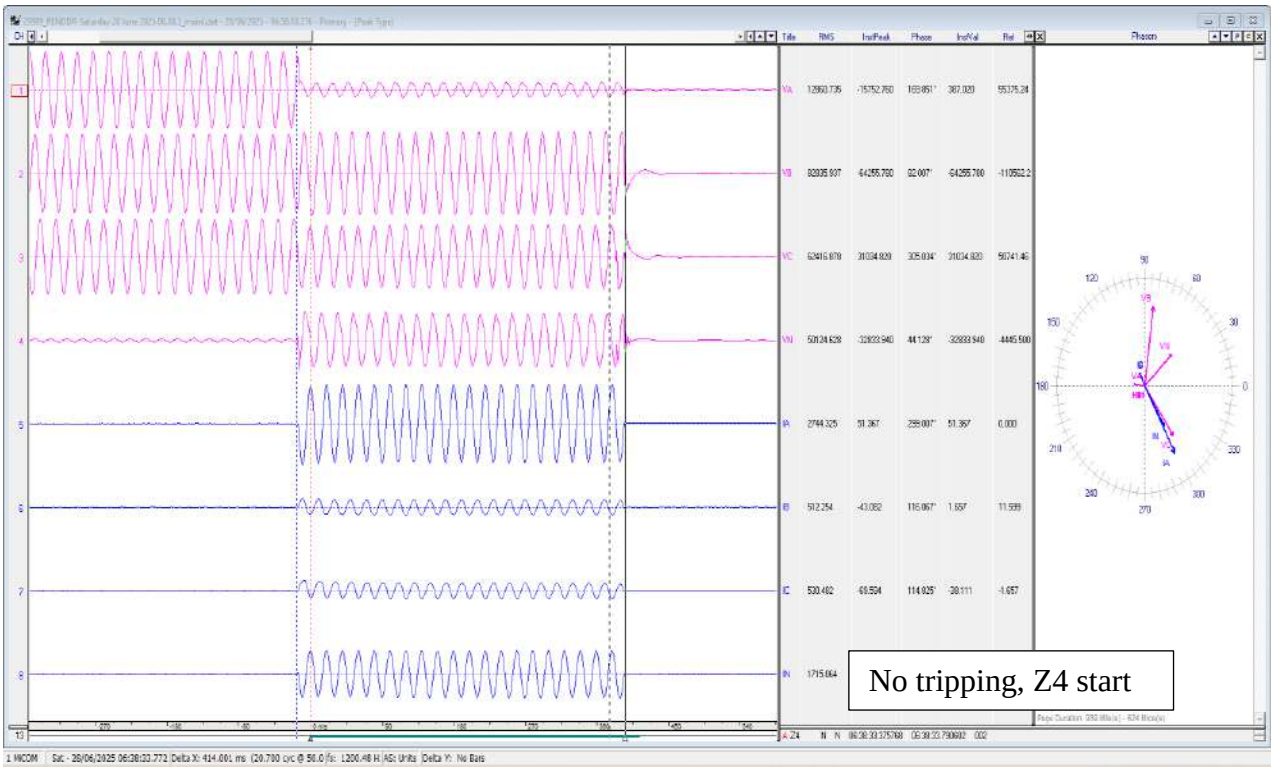


Fig 2: DR snapshot of Rokhia for 132 kV Agartala-I line

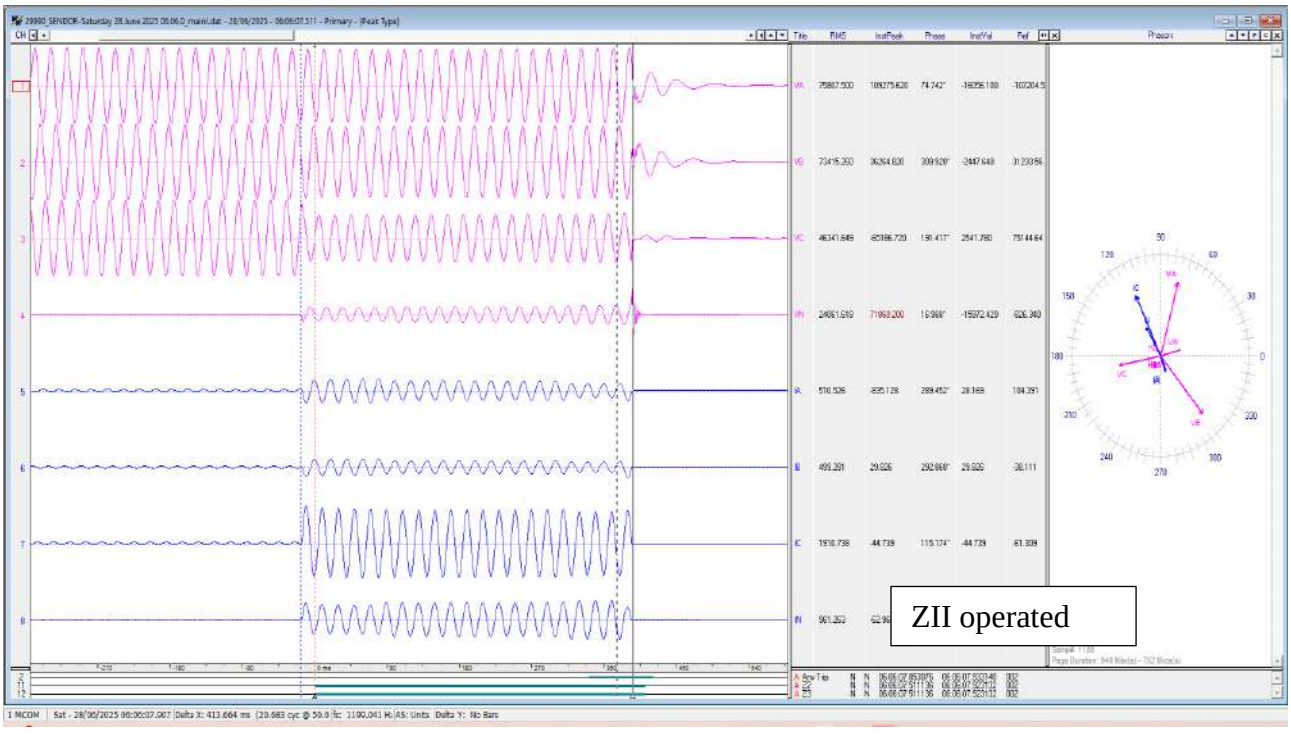


Fig 3: DR snapshot of Agartala for 132 kV Rokhia-II line

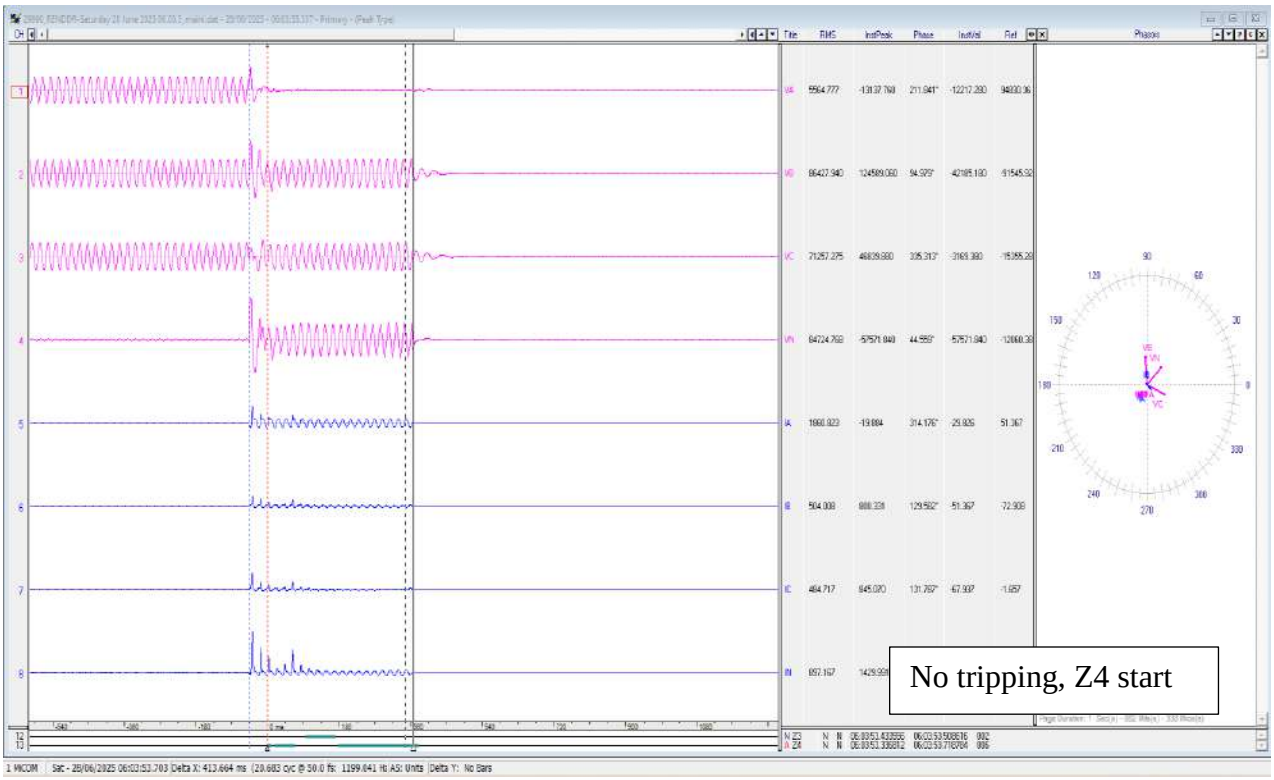


Fig 4: DR snapshot of Rokhia for 132 kV Agartala-II line

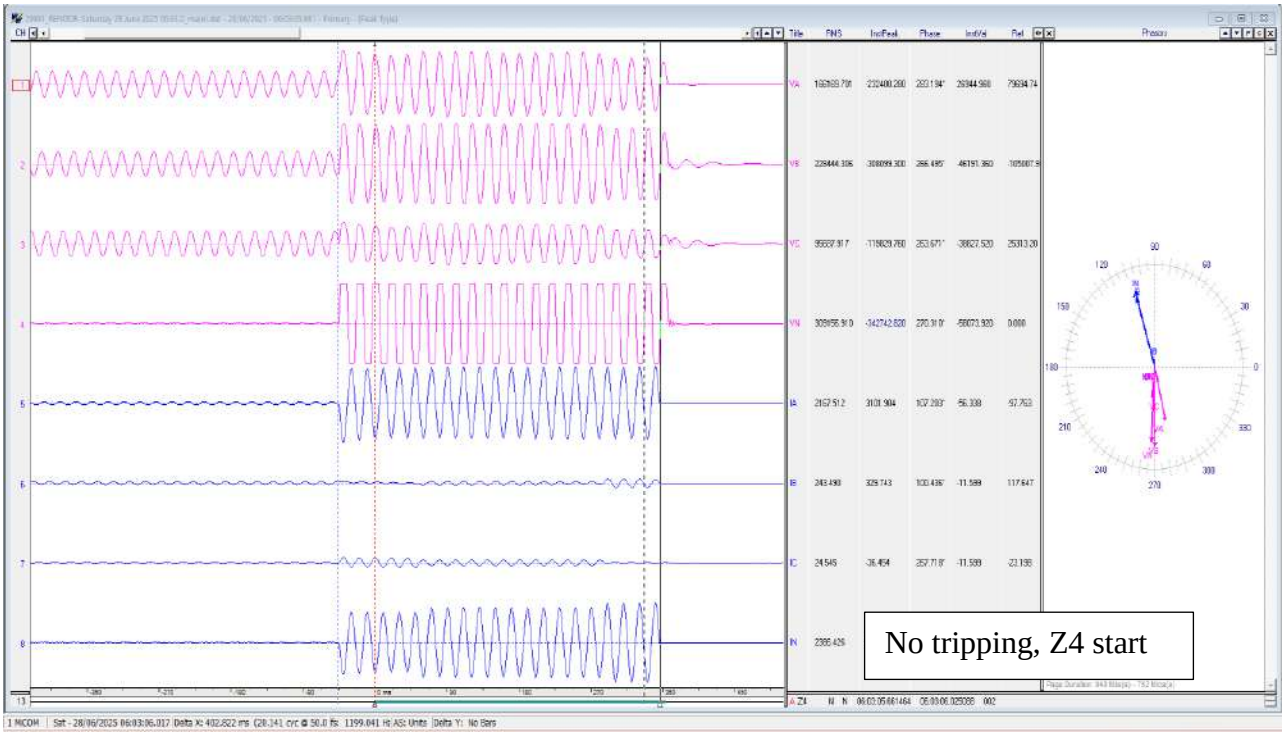


Fig 5: DR snapshot of Rokhia for 132 kV Monarchak line

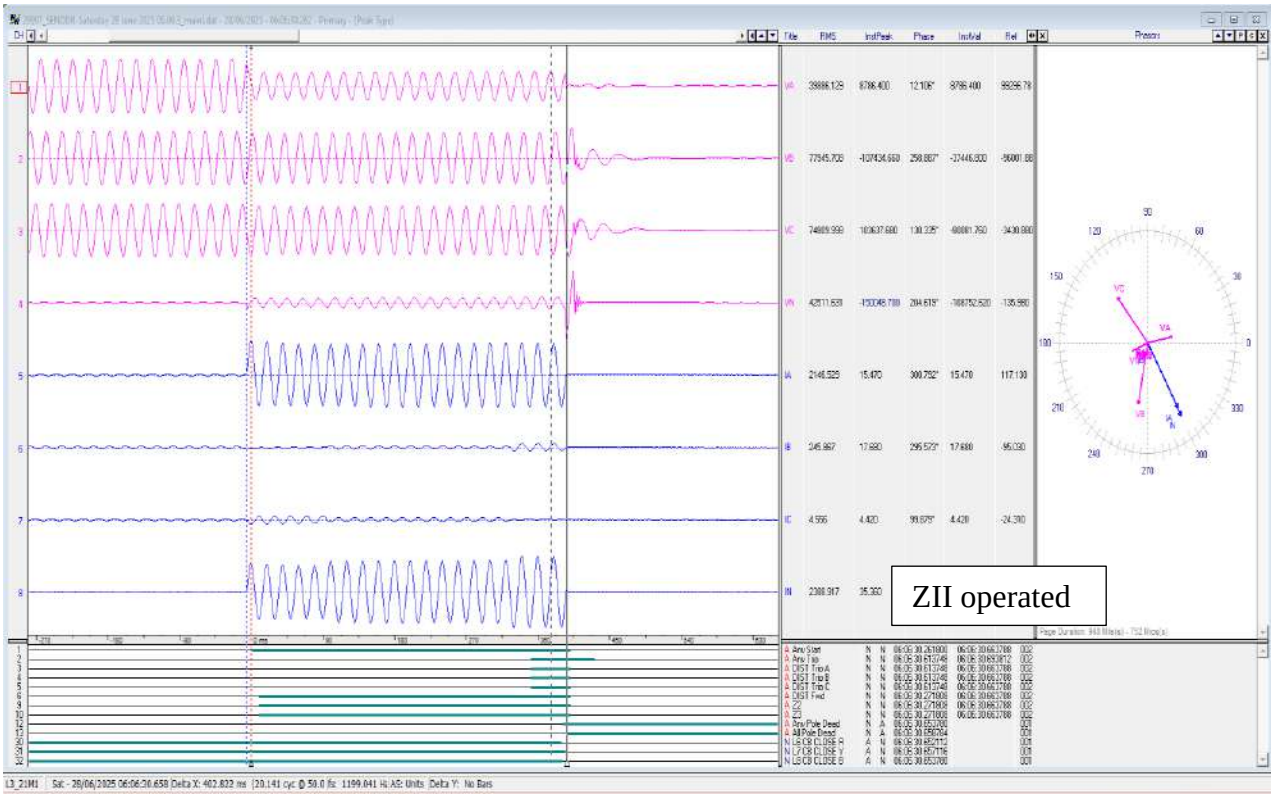


Fig 6: DR snapshot of Monarchak for 132 kV Rokhia line

ग्रिड-इंडिया GRID-INDIA ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
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पूर्वोत्तर क्षेत्र के मिजोरम विद्युत प्रणाली के सैतुअल क्षेत्र में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Saitual area of Mizoram Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 10-07-2025

1. घटना का सारांश/Event Summary:

Saitual area of Mizoram Power System was connected to the rest of the NER grid via 132 kV Saitual–Zuangtui line.

At 15:38 Hrs of 28-06-2025, 132 kV Saitual–Zuangtui line tripped. Due to tripping of this element, Saitual area of Mizoram power system got isolated from NER grid due to no source available in this area.

Power supply was extended to Saitual area by charging 132 kV Saitual–Zuangtui line at 15:47 Hrs of 28-06-2025.

2. घटना का समय और दिनांक/Time and Date of the Event: 15:38 Hrs of 28-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Saitual area of Mizoram Power System

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	49.88	2554	3149
घटना के बाद/ Post Event	49.88	2513	3172

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से	NIL

पहले) Important Transmission Line/Unit if under outage (before the event)	
मौसम स्थिति / Weather Condition	Normal

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load loss of 5 MW

7. **व्यवधान की अवधि /Duration of interruption:** 9 mins

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

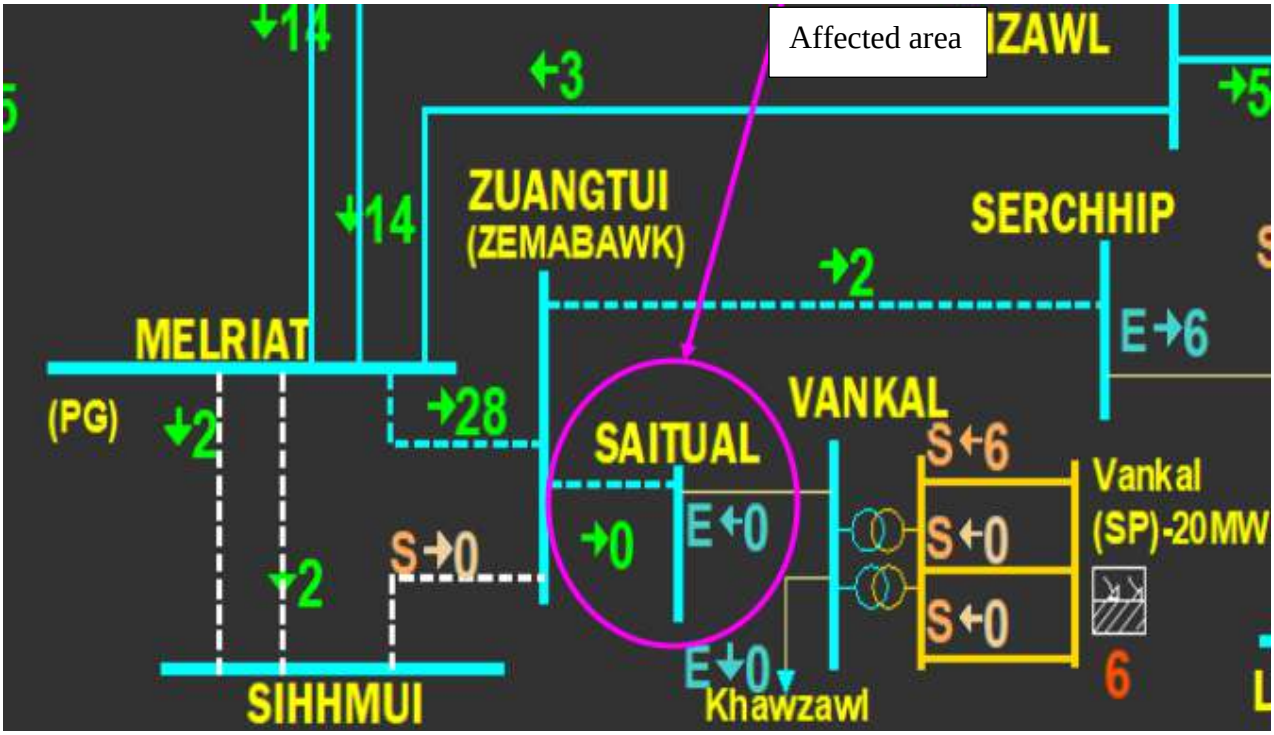

Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event): NIL**

10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	132 kV Zuangtui-Saitual Line	15:38	15:47	E/F operated, R-N	No tripping (radial)

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):

As per DR analysis, resistive R-N fault (Ir-0.431 kA, In-0.401 kA, Vre-64 kV) initiated at 15:38:31.495 Hrs which was cleared within 717 msec from Zuangtui end on operation of E/F protection. There was no tripping from Saitual end (radial). Angle between (in degrees): -11

Fault is likely due to vegetation.

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed: NIL

13. सुधारात्मक उपाय /Action Taken/Remedial Measures: NIL

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	No violation
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	P&ED Mizoram
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	No violation
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	No violation
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

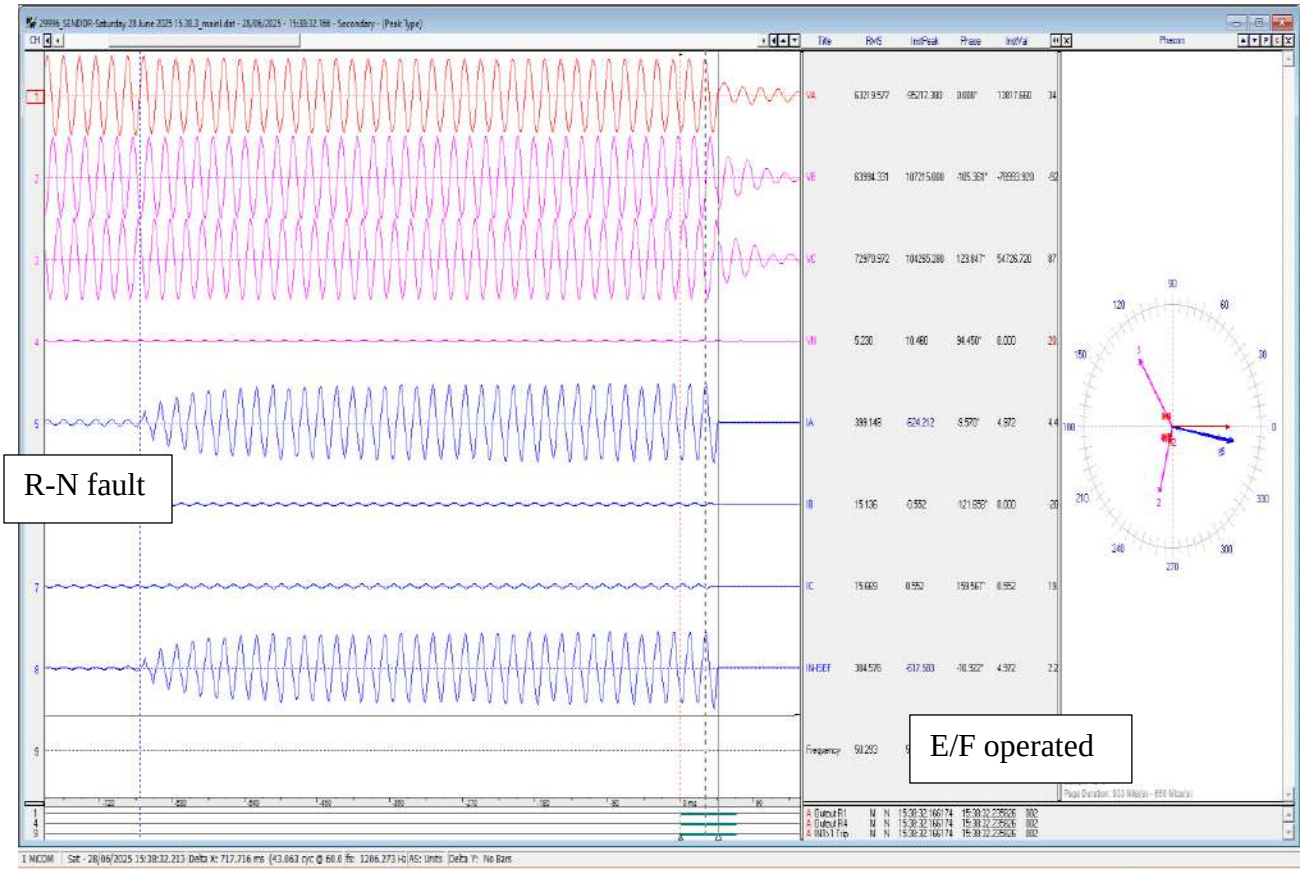

Fig 1: DR snapshot of Zuangtui for 132 kV Saitual line

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र के मेघालय विद्युत प्रणाली के अमृत क्षेत्र में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Amrit area of Meghalaya Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 10-07-2025

1. घटना का सारांश/Event Summary:

Amrit area is radially connected to the rest of the NER grid via the 132 kV Amrit–Lumshnong line.

At 17:45 Hrs of 28-06-2025, 132 kV Amrit–Lumshnong line tripped leading to a blackout at Amrit substation of Meghalaya power system.

Power supply was extended to Amrit substation by charging 132 kV Amrit–Lumshnong line at 17:54 Hrs of 28-06-2025.

2. घटना का समय और दिनांक/Time and Date of the Event: 17:45 Hrs of 28-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Amrit area of Meghalaya Power System

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	49.95	2696	3156
घटना के बाद/ Post Event	49.95	2698	3129

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से पहले) Important Transmission Line/Unit if	NIL

under outage (before the event)	
मौसम स्थिति / Weather Condition	Normal

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load loss of 8 MW
7. **व्यवधान की अवधि /Duration of interruption:** 9 mins
8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

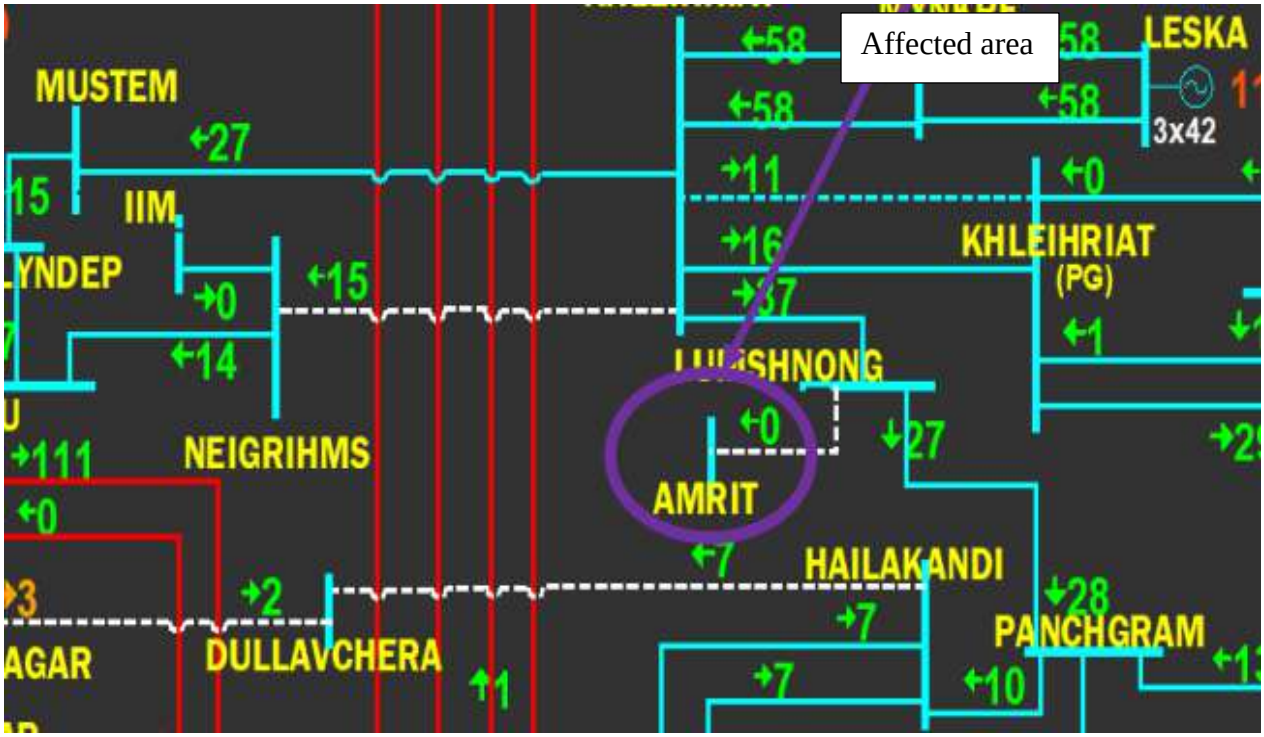

Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event): NIL**
10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	132 kV Lumshnong-Amrit Line	17:45	17:54	Y-B-N, E/F operated (As per FIR)	Loss of voltage (radial)

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):

As per DR analysis, Y-B-N fault (Iy-138 A, Ib-183 A, In-371 A) initiated at 17:43:40.209 Hrs and cleared within 196 msec. It is unclear which protection operated and cleared the fault as DR digitial channel is not standardized at Lumshnong end for 132 kV Amrit Line.

As per FIR, E/F and 86 relay operated at Lumshnong end.

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:

- DR digital channel is not standardized at Lumshnong end for 132 kV Amrit Line. The same needs to be standardized as per recommendation in FOLD working group-3.

13. सुधारात्मक उपाय /Action Taken/Remedial Measures: NIL

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	No violation
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	No violation
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	MePTCL
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	No violation
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

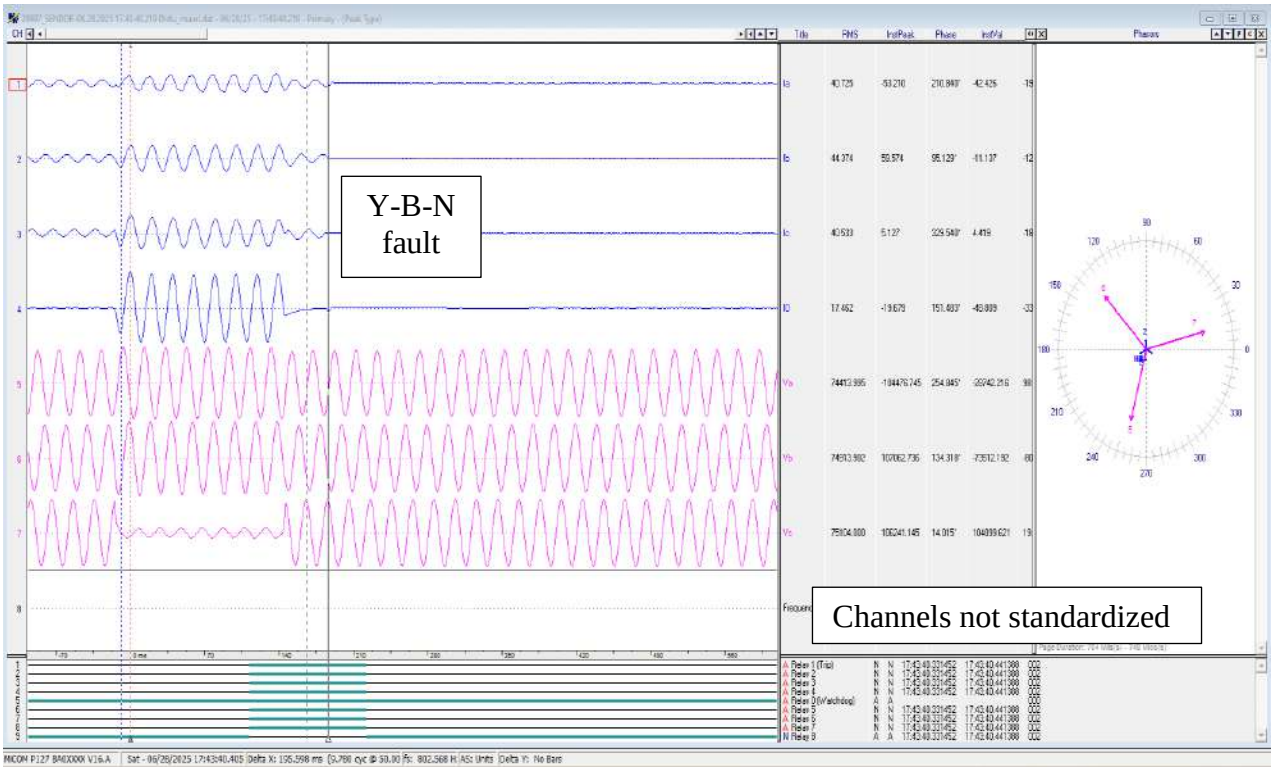

Fig 1: DR snapshot of Lumshnong for 132 kV Amrit line

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पूर्वोत्तर क्षेत्र के मणिपुर विद्युत प्रणाली के रेंगपांग क्षेत्र में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Rengpang area of Manipur Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 10-07-2025

1. घटना का सारांश/Event Summary:

Rengpang area of Manipur Power System is connected with rest of NER Grid through 132 kV Loktak-Rengpang line. Prior to the event, 132 kV Jiribam – Rengpang line was under long outage since 18:18 Hrs of 17.11.2023.

At 09:25 Hrs of 29-06-2025, 132kV Loktak - Rengpang line tripped. Due to tripping of this element, Rengpang area of Manipur Power System was isolated from NER Grid and collapsed due to no source available in this area.

Power supply was extended to Rengpang area of Manipur power system by charging 132 kV Loktak–Rengpang line at 15:31 Hrs of 29-06-2025.

2. घटना का समय और दिनांक/Time and Date of the Event: 09:25 Hrs of 29-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Rengpang area of Manipur Power System

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	49.98	2433	2764
घटना के बाद/ Post Event	49.98	2432	2788

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से पहले) Important Transmission Line/Unit if under outage (before the event)	132kV Jiribam - Rengpang line was under long outage since 18:18 Hrs of 17.11.2023
मौसम स्थिति / Weather Condition	Normal

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load loss of 1 MW

7. **व्यवधान की अवधि /Duration of interruption:** 6 Hr 6 min

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

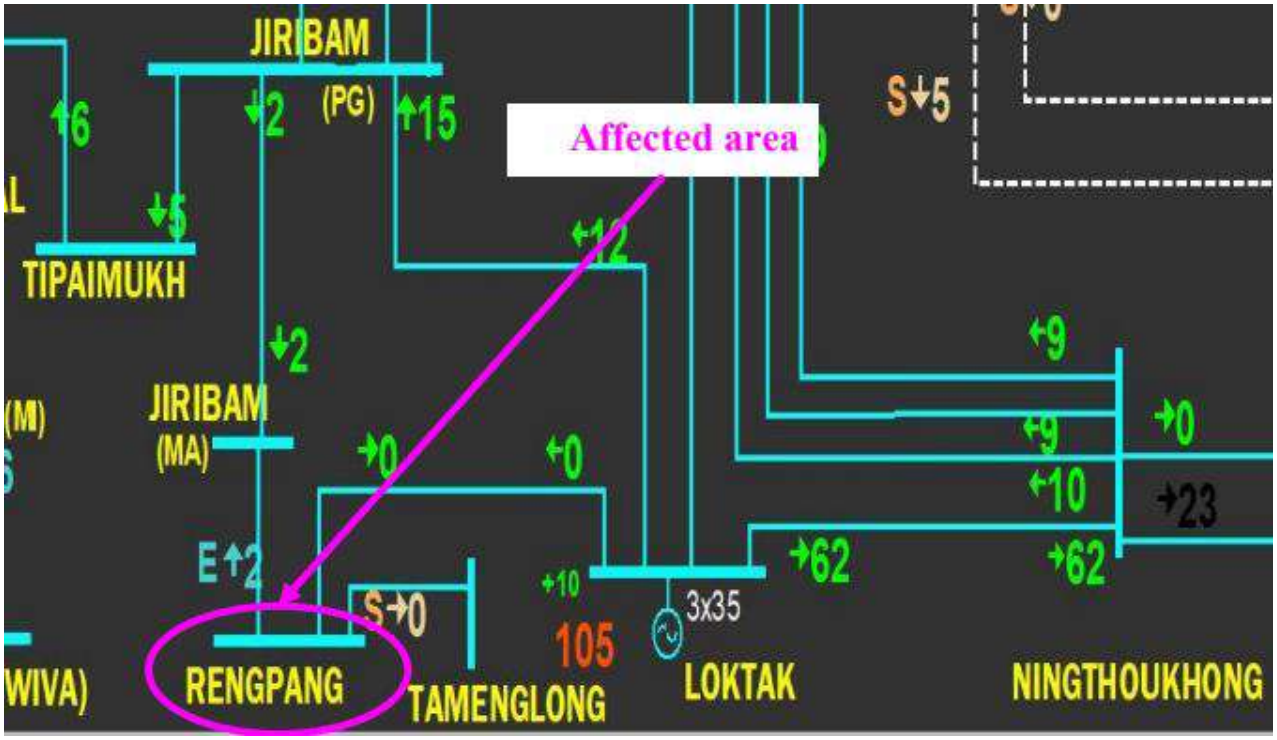

Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event): NIL**

10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	132 kV Loktak-Rengpang Line	09:25	15:31	R-N, SOTF/TOR trip	No tripping (radial)

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):

As per DR analysis, resistive R-N fault (Ir-1.3 kA, In-1.27 kA) initiated at 09:25:27.891 hrs which was cleared within 67 msec from Loktak end. I>1 start at 09:25:27.871 Hrs. At 09:25:27.913 Hrs, SOTF/TOR trip. No tripping from Loktak (radial).

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:

- SOTF/TOR trip observed at Loktak end which is inferred unwanted. The same needs to be investigated.

13. सुधारात्मक उपाय /Action Taken/Remedial Measures: NIL

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	MSPCL
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	NHPC, MSPCL
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	MSPCL
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	No violation
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

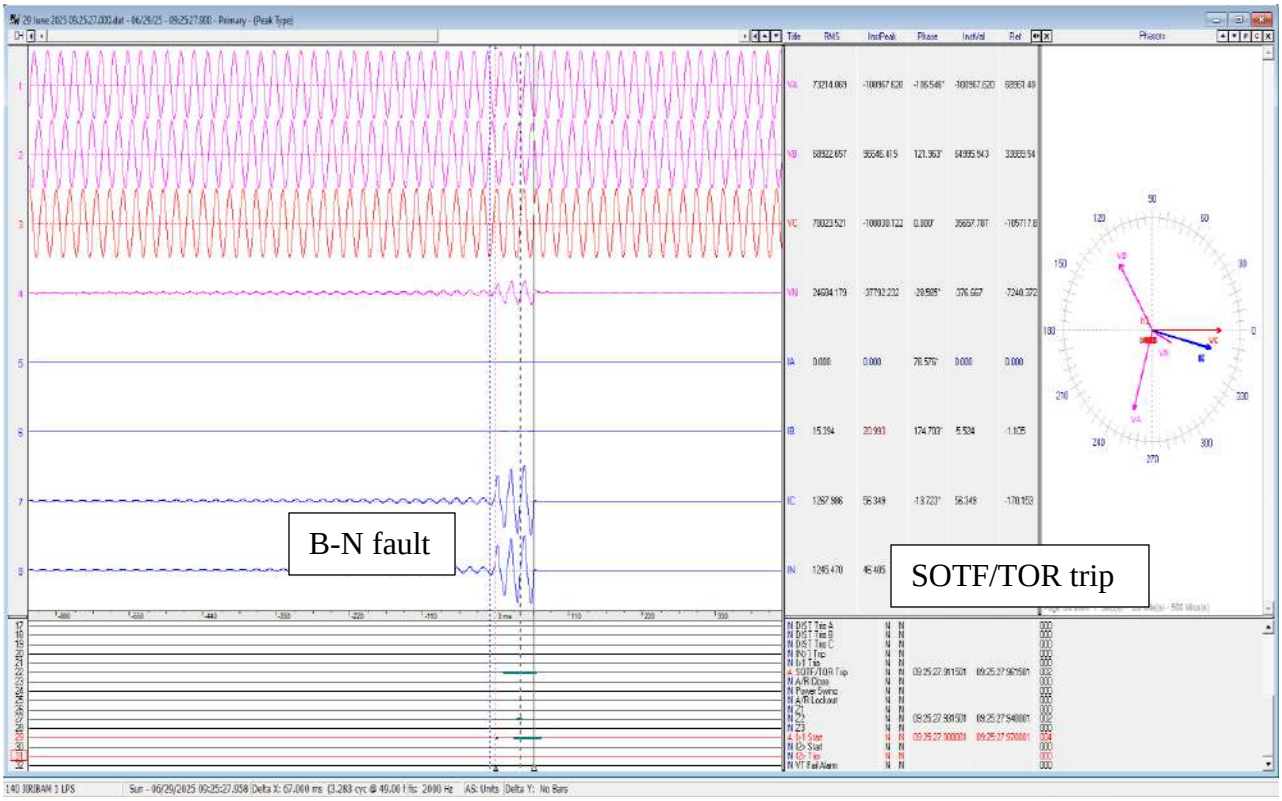

Fig 1: DR snapshot of Loktak for 132 kV Rengpang line

ग्रिड-इंडिया GRID-INDIA ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
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पूर्वोत्तर क्षेत्र के मिजोरम विद्युत प्रणाली के सैतुअल क्षेत्र में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Saitual area of Mizoram Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 10-07-2025

1. घटना का सारांश/Event Summary:

Saitual area of Mizoram Power System is connected to the rest of the NER grid via 132 kV Zuangtui-Saitual line.

At 09:52 Hrs of 30-06-2025, 132 kV Zuangtui-Saitual line tripped. Due to tripping of this element, Saitual area of Mizoram power system got isolated from NER grid due to no source available in this area.

Power supply was extended to Saitual area of Mizoram power system by charging 132 kV Zuangtui-Saitual line at 10:02 Hrs of 30-06-2025.

2. घटना का समय और दिनांक/Time and Date of the Event: 09:52 Hrs of 30-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Saitual area of Mizoram Power System

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	49.87	2559	2815
घटना के बाद/ Post Event	49.87	2538	2858

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से	NIL

पहले) Important Transmission Line/Unit if under outage (before the event)	
मौसम स्थिति / Weather Condition	Normal

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Load loss of 14 MW

7. **व्यवधान की अवधि /Duration of interruption:** 10 mins

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

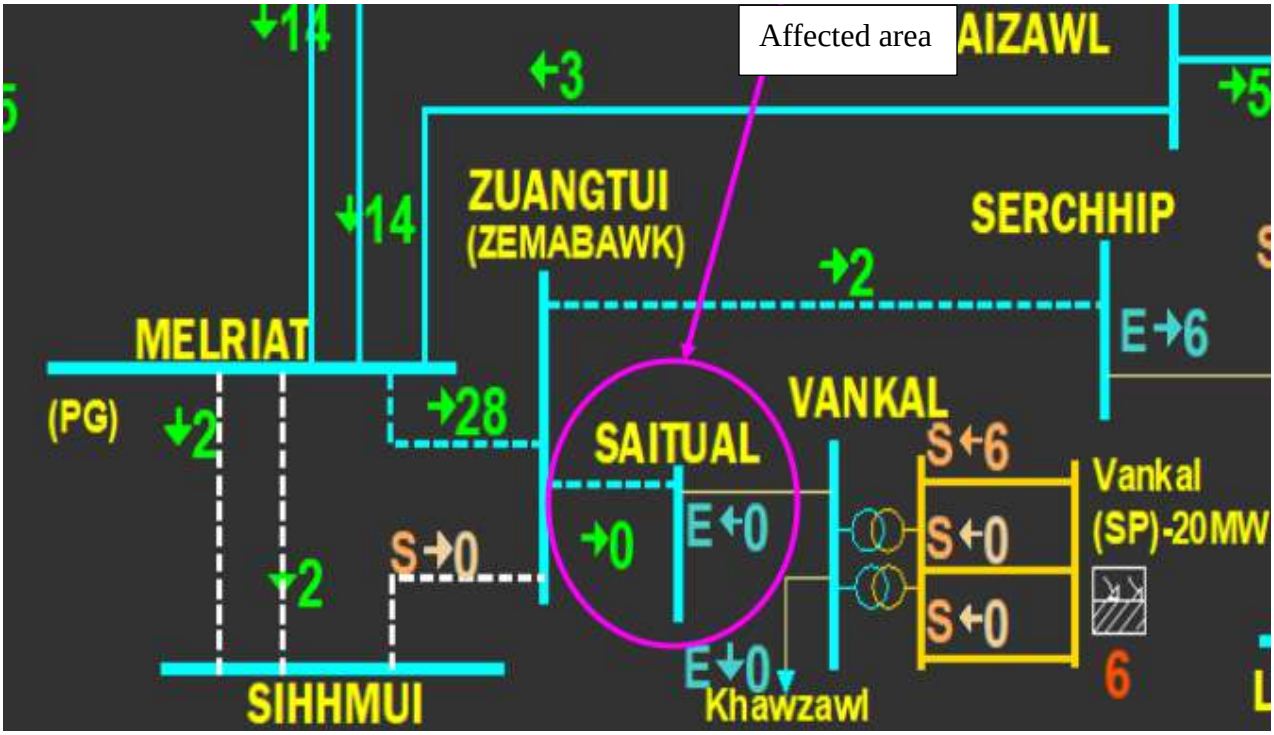

Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event):** NIL

10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	132 kV Zuangtui-Saitual Line	09:52	10:02	Broken conductor trip(as per DR)	No tripping (radial)

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):

As per DR analysis, at 09:51:06.321 Hrs, "Broken Conductor trip" observed at Zuangtui end. Ir-56 A, Iy-12 A, Ib-17 A, In-47 A.

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed: NIL

13. सुधारात्मक उपाय /Action Taken/Remedial Measures:

- Broken Conductor was replaced by P&ED Mizoram.

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	No violation
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	P&ED Mizoram
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	No violation
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	-
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

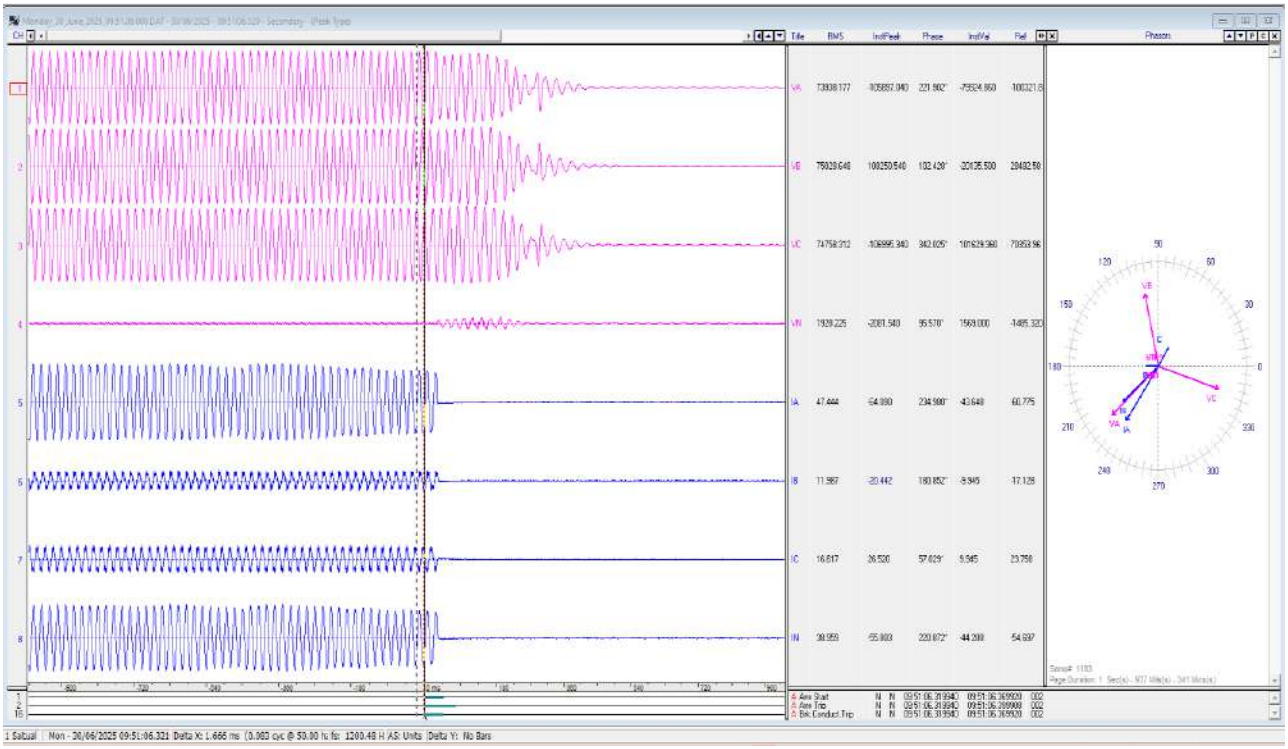

Fig 1: DR snapshot of Zuangtui for 132 kV Saitual Line

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र के मिजोरम विद्युत प्रणाली के बैराबी एचईपी में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Bairabi HEP of Mizoram Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 10-07-2025

1. घटना का सारांश/Event Summary:

Bairabi HEP of Mizoram Power system is connected to the rest of the NER grid through 132 kV Kolasib-Bairabi line.

At 13:09 Hrs of 30-06-2025, 132 kV Kolasib-Bairabi line tripped leading to blackout of Bairabi S/S of Mizoram power system.

Power supply was restored in Bairabi area of Mizoram Power system at 13:18 Hrs of 30-06-2025 by charging 132 kV Kolasib- Bairabi line.

2. घटना का समय और दिनांक/Time and Date of the Event: 13:09 Hrs of 30-06-2025

3. ग्रिड व्यवधान का प्रकार/Event Category: GD-I

4. स्थान/नियंत्रण क्षेत्र/Location/Control Area: Bairabi HEP of Mizoram Power System

5. पूर्ववर्ती स्थिति/Antecedent Conditions:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	49.95	1716	1670
घटना के बाद/ Post Event	49.95	1718	1673

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से पहले) Important Transmission Line/Unit if	NIL

under outage (before the event)	
मौसम स्थिति / Weather Condition	Inclement weather

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Generation loss of 3 MW

7. **व्यवधान की अवधि /Duration of interruption:** 9 mins

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

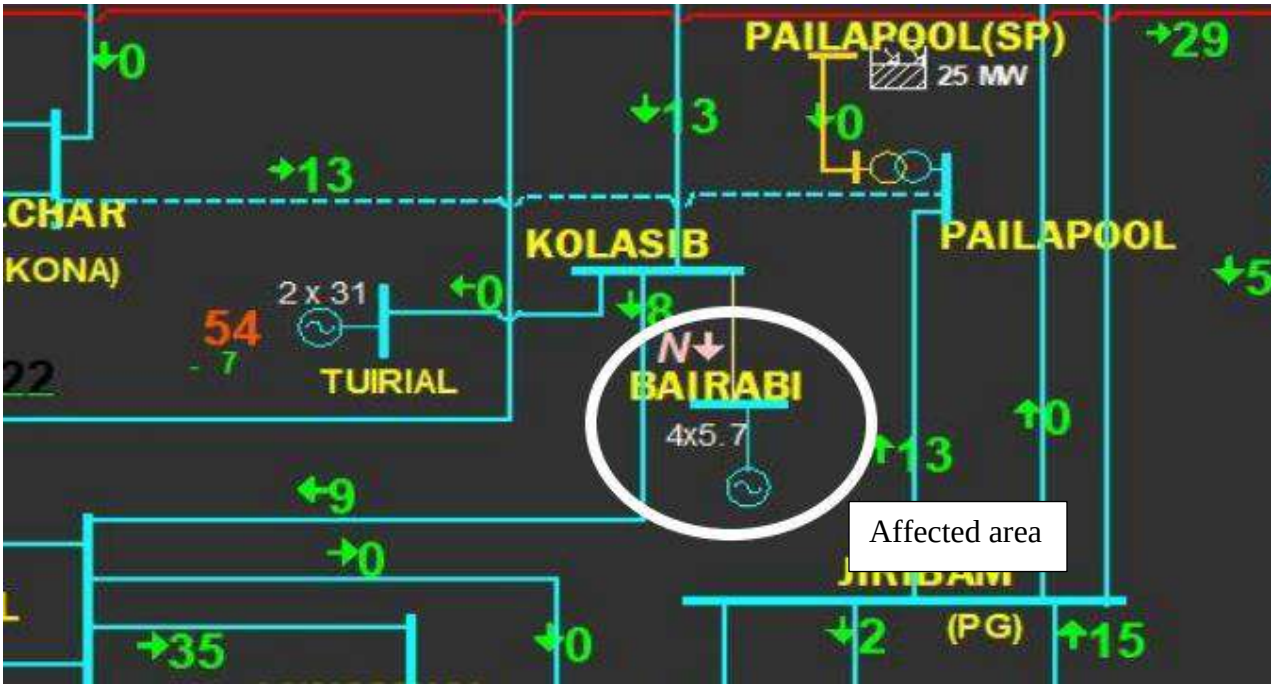

Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event):** NIL

10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	132 kV Kolasib-Bairabi Line	13:09	13:18	No tripping	O/C
2	Bairabi generation	13:09	-	Loss of evacuation path	

11. **घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):**

Proper analysis could not be done due to non-availability of FIR/DR/EL.

12. **सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:**

13. **सुधारात्मक उपाय /Action Taken/Remedial Measures: NIL**

14. **विनियमन का गैर-अनुपालन/Non-compliance observed:**

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	No violation
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	P&ED Mizoram
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	P&ED Mizoram
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	-
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. **प्रमुख शिक्षाएँ/ Key Lessons Learnt:**

- Proper maintenance related activities as per CEA regulations needs to be carried out.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

Not submitted

ग्रिड-इंडिया GRID-INDIA
ग्रिड कंट्रोलर ऑफ इंडिया लिमिटेड
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GRID CONTROLLER OF INDIA LIMITED
(A Government of India Enterprise)
[formerly Power System Operation Corporation Limited (POSOCO)]
उत्तर पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / North Eastern Regional Load Despatch Centre
कार्यालय : लोवर, लापालांग, शिलांग -793006
Office : Lower Nongrah, Lapalang, Shillong- 793006
CIN : U40105DL2009GOI188682, Website : www.nerldc.in, E-mail : nerldc@grid-india.in, Tel.: 0364-2537470/427, Fax: 03642537486

पूर्वोत्तर क्षेत्र के नीपको विद्युत प्रणाली के टुरिअल एचईपी में ग्रिड विघ्न की मसौदा रिपोर्ट / Draft Report of Grid Disturbance in Tuirial HEP of NEEPCO Power System of North Eastern Region

(To be submitted by RLDC/NLDC during Grid Disturbances/Grid Incidents/Near Miss Event as per IEGC section 37.2 (f))
(आई ई जी सी 37.2 (एफ) के अनुपालन में)

दिनांक/Date: 10-07-2025

1. <u>घटना का सारांश/Event Summary:</u>

Turial area of the Mizoram Power system is connected to the rest of the NER grid through 132 kV Kolasib-Turial line.

At 13:15 Hrs of 30-06-2025, 132 kV Kolasib-Turial line tripped leading to blackout in Turial area of Mizoram power system.

Power supply was restored in Turial area of Mizoram Power system at 14:06 Hrs of 30-06-2025 by charging 132 kV Kolasib- Turial line.

2. <u>घटना का समय और दिनांक/Time and Date of the Event</u>: 13:15 Hrs of 30-06-2025

3. <u>ग्रिड व्यवधान का प्रकार/Event Category:</u> GD-I

4. <u>स्थान/नियंत्रण क्षेत्र/Location/Control Area:</u> Tuirial HEP of NEEPCO Power System

5. <u>पूर्ववर्ती स्थिति/Antecedent Conditions</u>:

	आवृत्ति हर्ट्ज में / Frequency in Hz	क्षेत्रीय उत्पादन (मेगावाट) / Regional Generation (MW)	क्षेत्रीय मांग (मेगावाट) / Regional Demand (MW)
घटना पूर्व/Pre-Event	49.95	1716	1670
घटना के बाद/ Post Event	49.95	1718	1673

Pre and post data of 1 minute before and after the event

महत्वपूर्ण ट्रांसमिशन लाइन/यूनिट यदि आउटेज के अंतर्गत हो (घटना से पहले) Important Transmission Line/Unit if	NIL

under outage (before the event)	
मौसम स्थिति / Weather Condition	Inclement weather

6. **लोड और जेनरेशन नुकसान /Load and Generation loss**: Generation loss of 54 MW

7. **व्यवधान की अवधि /Duration of interruption:** 51 mins

8. **प्रभावित क्षेत्र का नक्शा /Network across the affected area:**

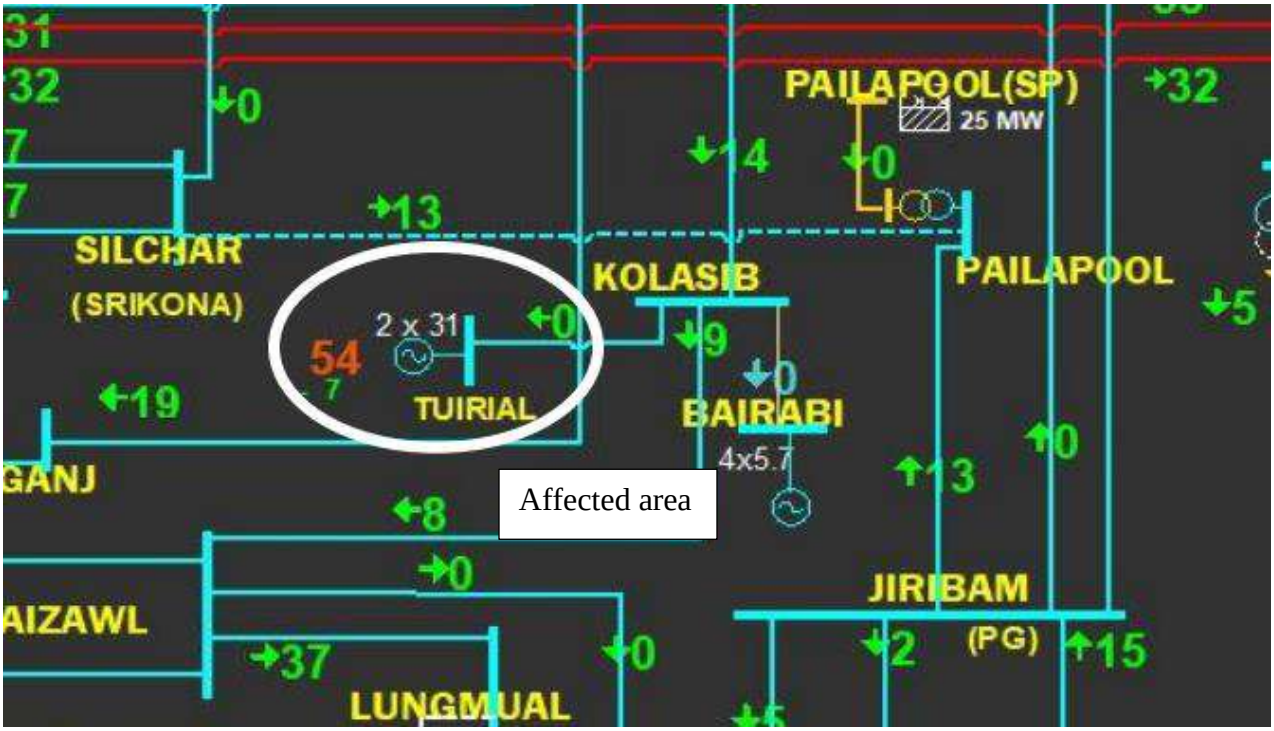

Figure 1: Network across the affected area

9. **उपकरण विफलता का विवरण/Details of Equipment Failure (if any during the event):** NIL

10. **प्रमुख ट्रिपिंग /Major Elements Tripped:**

क्रम. संख्या Sl. No.	नाम Name	ट्रिपिंग का समय Trip time (hh:mm)	पुनर्स्थापना का समय Restoration time	उप केंद्र 1 रिले संकेत Relay indications End 1	उप केंद्र 2 रिले संकेत Relay indications End 2
1	132 kV Tuirial-Kolasib Line	13:15	14:06	E/F High set	No tripping (as per FIR, no DR/EL submitted)

2	Tuirial Unit-1,2&3	13:15		Loss of evacuation path

11. घटना का विश्लेषण/ Event Analysis (Based on PMU, SCADA & DR):

Proper analysis could not be done due to non-availability of DR.

As per EL, IN>2 trip observed at Tuirial end. (Iy-709.3 A, Ib-378.6 A)

12. सुरक्षा/परिचालन संबंधी समस्या/ Protection/Operational issues observed:

- Tripping of 132 kV Tuirial-Kolasib Line on High set E/F is unwanted. High set setting needs to be disabled.

13. सुधारात्मक उपाय /Action Taken/Remedial Measures: NIL

14. विनियमन का गैर-अनुपालन/Non-compliance observed:

क्रम. संख्या/ Sl. No.	समस्याएँ / Issues	विनियमन गैर-अनुपालन / Regulation Non-Compliance	उपयोगिताओं / Utilities
1.	क्या फ्लैश रिपोर्ट 8 घंटों के भीतर प्राप्त हुई?/ Flash Report received within 8hrs?	IEGC section 37.2 (b)	No violation
2.	क्या डिस्टर्बेंस रिकॉर्डर / इवेंट लॉगर 24 घंटे के भीतर प्रदान किया गया?/ Whether DR/EL provided within 24 Hours?	1. IEGC section 37.2 (c) 2. CEA grid Standard 15.3	P&ED Mizoram
3.	क्या विस्तृत रिपोर्ट 7 दिनों के अंदर प्राप्त की गई है?/ Detailed Report received within 7 days?	IEGC section 37.2 (e)	NEEPCO
4.	डिस्टर्बेंस रिकॉर्डर समय समन्वयन संबंधी समस्याएँ/ DR Time Synchronization Issues	IEGC section 17.3	-
5.	कोई अन्य अनुपालन उल्लंघन/ Any other non-compliance		-

15. प्रमुख शिक्षाएँ/ Key Lessons Learnt:

- Proper maintenance related activities as per CEA regulations needs to be carried out.

परिशिष्ट 1: डिस्टर्बेंस रिकॉर्डर और इवेंट लॉगर स्नैपशॉट्स/ Annexure 1: DR and EL snapshots:

Events Report
Substation: 132 kV Switchyard
File: 2025-06-30 15.16.54.evt
Model Number: P141317N3M0460J

Printed on: 30/06/2025 15:22:42

Fig 1: EL snapshot of Tuirial for 132 kV Kolasib Line