भारत सरकार Government of India
विद्युत मंत्रालय Ministry of Power
उत्तर पूर्वी क्षेत्रीय विद्युत समिति
North Eastern Regional Power Committee
एन ई आर पी सी कॉम्प्लेक्स, डोंग पारमाओ, लापालाङ, शिल्लोंग-७९३००६, मेघालय
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No. NERPC/SE/PCC/2016/***2277-2314*** Dated: October 07, 2016

To,

1. Managing Director, AEGCL, Bijuli Bhawan, Guwahati – 781 001
2. Managing Director, APDCL, Bijuli Bhawan, Guwahati – 781 001
3. Managing Director, APGCL, Bijuli Bhawan, Guwahati – 781 001
4. Director (Generation), Me. PGCL, Lumjingshai, Short Round Road, Shillong – 793 001
5. Director (Distribution), Me. ECL, Lumjingshai, Short Round Road, Shillong – 793 001
6. Director(Transmission), Me. PTCL, Lumjingshai, Short Round Road, Shillong – 793 001
7. Managing Director, MSPDCL, Electricity Complex, Keishampat, Imphal – 795 001
8. Managing Director, MSPCL, Electricity Complex, Keishampat, Imphal – 795 001
9. Director (Tech), TSECL, Banamalipur, Agartala – 799 001
10. Director (Tech), TPGL, Banamalipur, Agartala – 799 001
11. Chief Engineer (WE Zone),Department of Power ,Govt. of Arunachal Pradesh, Itanagar- 791111
12. Chief Engineer (EE Zone),Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791111
13. Chief Engineer (TP&MZ),Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791111
14. Engineer-in-Chief (P&E), Department of Power, Govt. of Mizoram, Aizawl – 796 001
15. Chief Engineer (P), Department of Power, Govt. of Nagaland, Kohima – 797 001
16. CGM, (LDC), SLDC Complex, AEGCL, Kahilipara, Guwahati-781 019
17. General Manager, TSECL, Agartala – 799 001
18. Group General Manager, NTPC, Bongaigoan Thermal Power Project, P.O. Salakati, Kokrajhar- 783369
19. General Manager (Coml.), NTPC, 3rd Floor, OLIC Bldg., Pl No- N.17/2, Nayapalli, Bhubaneswar-12
20. ED, NERTS, PGCIL, Dongtieh-Lower Nongrah, Lapalang, Shillong -793 006
21. ED (O&M), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
22. ED (Commercial), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
23. ED (O&M), NHPC, NHPC Office Complex, Sector-33, Faridabad,Haryana-121003
24. GM (Plant), OTPC, Badarghat Complex, Agartala, Tripura - 799014
25. GM, NERLDC, Dongtieh, Lower Nongrah, Lapalang, Shillong -793 006

Sir,

The minutes of the 44th Protection Co-ordination Committee (PCC) of NERPC held on **20th September 2016 (Tuesday)** at Hotel Nandan, **Guwahati** at **10:00 hrs.** is sent herewith for your kind perusal and necessary actions of all concerned.

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भवदीय / Yours faithfully,

(एल. बी. मुआनथंग/ L. B. Muanthang)
अधीक्षण अभियंता / Superintending Engineer

Copy to:

1. CGM, AEGCL, Bijuli Bhavan, Guwahati - 781001
2. CGM, APGCL, Bijuli Bhavan, Guwahati - 781001
3. CGM, DISCOM, Bijuli Bhavan, Guwahati - 781001
4. Head of SLDC, Me.ECL, Lumjingshai, Short Round Road, Umjarain, Shillong – 793 022
5. Head of SLDC, Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791 111
6. Head of SLDC, Department of Power, Dimapur, Nagaland
7. Head of SLDC, Electricity Department, Govt. of Manipur, Keishampat, Imphal – 795 001
8. Head of SLDC, Department of Power, Govt. of Mizoram, Aizawl – 796 001
9. Head of SLDC, TSECL, Agartala – 799 001
10. Chief Engineer(Elect), Loktak HEP,Vidyut Vihar, Kom Keirap, Manipur- 795124
11. Addl. GM (O&M & Elec), NTPC Ltd., Bongaigoan Thermal Power Project, P.O. Salakati, Kokrajhar- 783369
12. DGM (C&M), OTPC, 6th Floor, A-Wing, IFCI Tower -61, Nehru Place, New Delhi – 110019.

निदेशक / **Director/ SE**

North Eastern Regional Power Committee

MINUTES OF THE 44TH PROTECTION COORDINATION SUB-COMMITTEE MEETING OF NERPC

Date of Meeting : 20/09/2016 (Tuesday)

Time of Meeting : 10:00 hrs

Venue : "Hotel Nandan", Guwahati.

The List of Participants in the 44th PCC Meeting is attached at **Annexure - I.**

Member Secretary, NERPC stressed the need more and active participation of members from the constituents by attaching greater importance to the protection system problem in the region. He took exception to the thin participation of members and told the forum that this fact will be taken up for discussion in the higher forum. He then asked Shri Brieflee Lyngkhoi, SE(O),NERPC to take up the agenda for discussion.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF THE MINUTES OF 43RD MEETING OF PROTECTION SUB-COMMITTEE OF NERPC

SE(O) informed that the minutes of 43rd meeting of Protection Sub-committee held on 13th July, 2016 at Guwahati were circulated vide letter No. NERPC/SE (O)/PCC/2015/4520-4555 dated 20th May, 2016.

As no comments/observations were received from any of the constituents, the Sub-Committee confirmed the minutes of 43rd PCCM of NERPC

ITEMS FOR DISCUSSION

A.1 Implementation of 3-phaseAuto Reclosure Scheme in all lines associated with Khandong and Kopili HEP:

For reliable operation of Power system it is required to implement 3-Phase Auto Reclosure Scheme in all the 132kV lines associated with Kopili and Khandong HEP of NEEPCO. The lists of such lines are:

a) 132kV Khandong – Umrangso - Halflong

b) 132kV Kopili – Khandong #1

During 42nd PCC meeting, AEGCL informed the forum that ETL 441 panel is to be shifted from Khandong to Umrangso and Carrier-Intertripping/AR to be checked by POWERGRID at Haflong. NEEPCO informed that at Khandong end Auto- Reclosure is functioning in all circuits. After detailed deliberation, the forum requested Assam, POWERGRID & NEEPCO to fix the suitable date for joint inspection and the above works should be completed within 30th May 2016.

The 43rd PCC forum viewed the matter seriously as the issue was pending for a

very long time. The Sub-committee directed Assam, POWERGRID and NEEPCO to resolve and complete the work within 31.07.2016.

Deliberation in the meeting

SE(O) informed that this forum had resolved that the implementation of 3-phase Auto Reclosure in all the lines associated with Khandong and Kopili Generating Stations is to be completed within the given time-frame and enquired the current status from the concerned utilities. NEEPCO representative stated that panels are to be shifted within 2 or 3 days and then commissioning to be done by AEGCL by 30th September 2016. The A/R at the Kopili-end of the lines are yet to be installed by PGCIL. This work is to be completed with the coordination of NERPC who will fix a date for joint inspection by the parties.

The Sub-committee noted as above.

Action: NEEPCO, AEGCL, NERPC and NERTS.

A.2 Implementation of the recommendations of the Protection Audit:

As per Sl. no 9.1.1 & 9.1.4 of Report on Enquiry Committee on Grid Disturbance in Northern Region on 30th July 2012 and in Northern, Eastern & North-Eastern Region on 31st July 2012, thorough Third Party protection audit needs to be carried out periodically along with independent audit of Fault Recording Instruments.

The status as intimated by NERLDC during 42nd PCC meeting is given below:

Status of submission of data related to Third Party Protection Audit			
Name of Constituent	***As per format of Task Force***	***As per format of NERPC***	***Remarks***
DoP, Ar. Pradesh	***Not submitted***	***Submitted***	***Data as per format of Task Force to be submitted by 30.05.2016***
AEGCL	***Partly submitted***	***Partly Submitted***	
TSECL	***Not submitted***	***Submitted***	***Data as per format of NERPC for Surajmaninagar & Rabindranagar and Data as per Task Force Format for all sub-stations by 30.05.2016***

NEEPCO	***AGTPP Not submitted as per format***	***Not Submitted as per format***	***Data for AGTPP as per Task Force format by 30.05.2016***

After detailed deliberation in 43rd PCCM, the Sub-committee had decided that those who have not submitted the data as per format of Task Force in Annexure A.3 (I) & also, as per the format of NERPC in Annexure A.3 (II) for 3rd Party Protection Audit are requested to furnish these data by *31.07.2016* positively.

Deliberation in the meeting

As the compliance status of the implementation of the recommendations of the Third Party Audit by the constituents had not been satisfactory it is stressed that all the utilities has to comply with the CERC directions at an early date. Audit work will be taken up after finalization of activities that are to be done during the third party protection audit. Sub group to finalize the activities for third party protection audit at the earliest. Subgroup to take up with Assam, Ar. Pradesh and NEEPCO for furnishing the information. Decisions by subgroup on relay settings and other related matters are to be implemented immediately.

The Sub-committee noted as above.

Action: All Constituents.

A.3 Status of R&M Implementation of NER from PSDF:

The Sub-committee requested all constituents to complete the proactive actions like taking Board's approval, floating of NITs, selection of bidders etc., as directed by the Hon'ble CERC.

During the meeting held on 11.12.2015 at Delhi under the Chairmanship CEA, the forum expressed concerned about delay in disbursement of fund and execution of R&M works.

The status as given in 42nd PCC meeting is given below:

Nagaland: NIT & LOAs for complete project of Rs. 39.96 Crores – Completed. Assam: NITs is under progress & LOAs by June-July, 2016 for entire amount of Rs. 356.50 Crores.

MePTCL: NIT for Rs. 37.52 Cr – completed & LOAs for Rs. 8.66 Cr -out of Rs. 69.19 Crores. The rest NITs & LOAs is expected by June-July, 2016

MePGCL: NIT for Rs. 2.51 Crores & LOAs – Rs. 2.51 Cr out of Rs. 32.43 Crores. Other NITs in progress and LOAs will be completed by June - July, 2016

Tripura: NIT for completed project of Rs. 31.05 Crores – completed, LOAs by June - July, 2016

Mizoram: NIT is under progress & LOAs likely by June, 2016 for entire amount of Rs. 26.84 Crores.

Ar. Pradesh & Manipur: Approval from MoP is awaited. However, they have informed that NITs have already been prepared by them and the same would be published once the approval from MoP is received.

The forum requested all the constituents to complete the work at the earliest. Further, the forum directed that the status of progress of work be intimated to NERPC Secretariat every month so that the same can be submitted to Hon'ble CERC & CEA.

During the 43rd PCCM, SE, DoP Mizoram stated that tender has been floated for main equipments and tender papers for diagnostic tools have been completed, however sanction from competent authority is awaited. DGM(SO-II),NERLDC opined that physical progress needs to be checked periodically. S.E.(O),NERPC once again reiterated that award of work is crucial and needs to be expedited urgently. The status of NITs, LOAs will now be reviewed and the same will be filed to Hon'ble CERC about delay as directed

Deliberation in the meeting

SE(O) informed that the status of R&M implementation in NER is progressing very slowly and stressed the need for implementation by the utilities within the given time-frame of CERC. It is resolved that NERPC will regularly monitor the progress of the implementation in each state. Technical review of implemented works also to be done. State transmission licensees are requested to furnish item wise physical progress report of R&M works under PSDF fund in tabulated format on monthly basis. SE(O) to update the status and will be put up in the RPC meeting.

The Sub-committee noted as above.

Action: NERPC

A.4 Root cause analysis of tripping in Southern Part of NER on 08.08.2015 and 24.09.2015 & Remedial Measures:

Remedial Measures suggested by sub group members at the meeting held at NERPC on 29.09.15:

The islanding scheme of AGTPP with Tripura system is to be reviewed so as to ensure successful islanding in such cases of isolation in NER Grid.

During 38th PCC meeting, the Sub-Committee decided that in addition to the recommendations of the sub-group the following should be implemented ASAP:

1. Modification to SPS-1 at Palatana: Unit-I and II to be put in AND logic so that SPS-1 would operate.

During 40th PCC meeting, OTPC informed that the work has already been completed.

DGM (SO-II), NERLDC stated that on 15.12.2015, SPS 1 was triggered when only one module is in operation which is not correct. The SPS 1 should be triggered when both the modules are in service. He requested OTPC to check the scheme and do the necessary logic correction at the earliest.

In 41st PCC meeting, DGM(O&M), OTPC suggested that SPS-1 be disabled when one module is not running, meanwhile OTPC would review the scheme and revert back to the forum with suggestions for further modification(if possible). The forum agreed to

the proposal. DGM, OTPC also proposed for modification to SPS-3 since now both units are running. It was decided to refer the matter to System Studies sub-group.

In 42nd PCC meeting, SE(O), NERPC informed that due to paucity of time, the System Studies sub-group meeting could not be held during the month and the same will be convened soon. It was discussed that review of Islanding Scheme No. 2 are required in view of change in load pattern after commencement of power supply to Bangladesh. NERPC agreed to conduct meeting by end of May.

During the 43rd PCCM, SE(O), NERPC informed that due to paucity of time, the System Studies sub-group meeting could not be held till now. OTPC representative informed that GD-IV on 09.07.2016 may have been aggravated due to non-modification in SPS-3. He stated that in the current scheme once SPS-3 is activated generation is reduced to 200 MW and the other unit goes under runback. He suggested that there is a need to increase the limit of generation to 250 MW so that technical minimum for Unit-I is satisfied.

NERLDC did not concur to the views of OTPC that non-modification of SPS-3 led to the GD-IV on 09.07.2016. It was iterated that as per discussions on SPS-3 in forums of NERPC, it had been decided that Palatana should back down to 200 MW irrespective of their quantum of generation and this will take care for both the modules of Palatana.

The 12th System Studies sub-group meeting was held on 30th August 2016 and the minutes of the meeting attached at Annexure - I.

2. Root Cause Analysis & Remedial Measures by sub group members at the meeting held at NERPC on 18.11.15 regarding Non-Tripping of Azara- Bongaigoan as raised by AEGCL:

Cause: As per information given by POWERGRID, the incidences above are due to high arcing faults.

Remedial Measures:

a. Explore to increase the resistive reach of Z-2 and Z-3.
b. DEF characteristics should be IDMT in place of definite time with 1100msec opening time at maximum fault level
c. Further, Z-3 setting should be 1000msec and necessary co-ordination is required for associated lines.
d. NERPC Secretariat may extend help wherever necessary Administrative coordination is required for clearance of faults.

During 40th PCC meeting, POWERGRID requested AEGCL to implement Zone 3 setting as per the recommendation of task force. Also DEF delay setting should be 100 ms more than Zone 3 setting with IDMT characteristics. AEGCL proposed for review of Zone 3 setting as recommended by task force. However, POWERGRID opined that there is no scope for review as it is the matter for implementation.

AEGCL insisted for joint meeting for which POWERGRID sought agenda from AEGCL.
The Sub-committee requested NERPC to invite AEGCL during the monthly Sub-committee meeting to discuss about various grid incidences being held every month by NERPC along with above issues of Assam.

During 42nd PCC meeting S.E (O) NERPC requested AEGCL to kindly make it

convenient to attend the next Sub-Committee (for GD/GI) meeting, so that the matter may be discussed. The sub-committee requested AEGCL to make Zone-3 protection settings as per Task Force recommendations.

During the 43rd PCCC, It was agreed that during joint visit of POWERGRID and AEGCL to 400 kV Azara for rectification of phase notations, review of DEF and Zone-3 settings as above may also be carried out.

During the 124th OCCM, DGM(AM), NERTS suggested that rather than physically changing the phase notation at Azara end, the matching phases of Silchar and Azara be noted for future analysis. After detailed deliberation the forum agreed to the proposal and decided to drop the agenda item.

It was decided that wherever problem of mismatch in phase-notations arises, is to be listed out by the concerned utility.

Deliberation in the meeting

OTPC representative informed that SPS-III modification was implemented on 09.09.2016 and SPS-II is to be implemented by the end of September 2016. ICT-2 will be charged before puja.

It is decided that empowered sub-groups to be formed through NERPC to implement Ramakhrishna Recommendations. Sub-group will finalize the zone II & zone -III settings by end of Sep'16. Time frame for implementing settings suggested by Ramakrishna taskforce will be intimated by NERPC. NERLDC to circulate the settings suggested by POWERGRID on recommendations given by Ramakrishna taskforce.

The Sub-committee noted as above.

Action: NERPC, NERLDC & NERTS

A.5 Grid Incidences and Grid Disturbances from January, 2016 to June, 2016:

The following numbers of Grid Disturbances (GD) & Grid Incidents (GI) occurred during the period **w.e.f 1st July, 2016 to 31st August, 2016** :-

Sl No	Control Area	Grid Incidents Jul'16 to Aug'16	Grid Disturbance Jul'16 to Aug'16	Grid Incidents During 2016	Grid Disturbance During 2016
1	Palatana	3	1	9	1
2	AGBPP	3	0	13	2
3	AGTPP	6	2	23	2
4	Ranganadi	0	1	0	1
5	Kopili	3	1	1	1
Sl No	**Control Area**	**Grid Incidents Jul'16 to Aug'16**	**Grid Disturbance Jul'16 to Aug'16**	**Grid Incidents During 2016**	**Grid Disturbance During 2016**
6	Khandong	4	1	3	1

7	Doyang	3	2	2	2
8	Loktak	0	1	2	2
9	BgTPP	4	0	5	2
10	Arunachal Pradesh	0	16	0	15
11	Assam	0	6	0	27
12	Manipur	0	4	0	35
13	Meghalaya	0	12	0	44
14	Mizoram	0	5	0	15
15	Nagaland	0	26	0	40
16	Tripura	0	2	0	3

Sl . No.	Category of GD/GI	Grid Disturbance in nos	
		Jul'16 to Aug'16	During 2016
1	GI-I	13	36
2	GI-II	13	31
3	GD I	68	219
4	GD II	2	4
5	GD III	0	0
6	GD IV	1	0
7	GD V	0	1
8	**Total GI**	**26**	**67**
9	**Total GD**	**71**	**224**

This is for information to the members. Remedial Measure are to be taken by the concerned power utilities of NER.

A.6 <u>Analysis & Discussion on Events, Grid Incidences, Grid Disturbances which occurred in NER Grid w.e.f July'16 to August'16.</u>

The following are the major & minor disturbances occurred in NER Grid w.e.f. July'16 to August'16.

I. Grid Disturbance (GD-IV) in NER on 09.07.16 at 1319 Hrs.

A major disturbance of category GD-IV occurred in NER Grid on 09.07.16 at 1319 Hrs.

It was proposed in 42nd PCC Meeting of NERPC to constitute Enquiry Committee for analysis of Grid Disturbances of Category-IV and V with independent members for root cause analysis.

Empowered Committee meeting took place on 31.08.16 to analyze GD-IV and GD-V in NER. It was concluded that the root cause for GD-IV was the simultaneous lightning strike at tower locations 466 & 467 on 400 kV Silchar – Azara and 400 kV Silchar – Byrnihat lines, which led to multi-phase fault and further tripping of these lines. Due to multi-phase fault, Auto-reclose could not operate.

The forum requested OTPC to take adequate steps in modification of SPS-3 so that such types of incidences do not recur due to delay in backing down of Palatana units.

NERLDC requested that reports of operation of UFRs to be furnished timely from SLDCs of NER Grid, which are necessary for proper analysis of causes of grid failure.

Deliberation in the meeting

SE(0), NERPC recommended that since the event occurred due to lightning the Agenda item may be dropped.***The Sub-committee noted as above.***

Action: Agenda item to be dropped.

II. Balipara Substation Blackout:

1 No of disturbance occurred due to tripping of all lines emanating from Balipara Substation (**Sl No. 2 of Disturbance Report of NER Grid attached in Annexure-I**).

Due to tripping of all lines emanating from Balipara Substation, Khupi area, Ziro area, Lekhi area & Capital area of Arunachal Pradesh and Pavoi, Gohpur & Depota area of Assam were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.

Root Cause Analysis:

No trace of reason for Bus-fault found by inspection at Balipara by POWERGRID. Suspected reasons are due to short circuit caused by Monkey (found to be climbing in Gantry in CCTV footage) or due to the earth fault caused by construction work. But, fault in one bus should not have caused tripping of both buses. Problems rectified by PG in co-ordination with CC, POWERGRID as informed by NERTS.

Remedial Measure to be taken:

Ranganadi end Distance Protection relay time delay setting to be modified from 350 msec to around 600 msec, since Rangandi -Biswanath Charali length is more than Biswanath Charali - Balipara line, to be in consistence with recommendations of V.Ramakrishna Task Force committee.

III. Disturbances in Arunachal Pradesh System:

Total **15 Nos** Disturbances have occurred in Arunachal Pradesh system during the month of July'16 to August'16. **(Sl No. 3 to 17 of Disturbance Report of NER Grid attached in Annexure-I)**

1 No of disturbance occurred due to tripping of 132 kV Lekhi – Nirjuli line, while Bus Coupler CB of Gohpur kept open for system requirement **(Sl No. 3 of Disturbance Report of NER Grid attached in Annexure-I)**.

Due to tripping of this element, Nirjuli area of Arunachal Pradesh and Gohpur Area (Gohpur Load) of Assam were separated from rest of NER Grid and subsequently collapsed due to no source in these areas.

Root Cause Analysis:
For Sl. No. 3: The element tripped due to downstream vegetation fault.

Remedial Measure to be taken:
For Sl. No. 3: Vegetation clearance to be done by DoP Arunachal Pradesh / POWERGRID and the progress to be reported.

A. Khupi Area :

13 Nos disturbances occurred due to tripping of 132 kV Balipara- Khupi line, **(Sl No. 4 to 16 of Disturbance Report of NER Grid attached in Annexure-I).**
Due to tripping of this element, Khupi area of Arunachal Pradesh was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Root Cause Analysis:
There were vegetation and ground clearance problems in 132 kV Balipara – Khupi line.

Remedial Measure to be taken:
Vegetation clearance is to be done by NEEPCO. NEEPCO applied for shutdown of 132 kV Balipara – Khupi line to clear vegetation problem. Further progress to be intimated by NEEPCO.

B. Capital Area:

1 No disturbance occurred due to tripping of 132 kV Ranganadi- Lekhi line, **(Sl No. 17 of Disturbance Report of NER Grid attached in Annexure-I).**
Due to tripping of this element, Lekhi & Capital areas of Arunachal Pradesh & part of Gohpur area of Assam were separated from rest of NER Grid and subsequently collapsed due to no source in these areas.

Root Cause Analysis:
Over current relay operated at Lekhi for line flow of around 40 MW(from SCADA). DR outputs from Lekhi end to be submitted by POWERGRID to conclude the root cause.

Remedial Measure to be taken:
Lekhi & Ranganadi over current settings to be reviewed. Sub group Committee for GD-GI analysis suggested POWERGRID and NEEPCO to implement over current relay settings as PSM = 1 with CT ratio 600/1 (Power flow during peak hours of approximately 85 – 90 MW should not cause tripping of the line).
Directionality feature of Over Current as well as Earth fault relay to be enabled at Lekhi **- This item is dropped.**

IV. Disturbances in Assam System:

Total **4 Nos** Disturbances have occurred in Assam system during the month of July'16 to August'16. **(Sl. No. 18 to 21 of Disturbance Report of NER Grid attached in Annexure-I).**

A. Dullavcherra Area:

2 Nos disturbances occurred due to tripping of 132 kV Silchar - Dullavcherra line while 132 kV Dullavcherra- Dharmanagar line was kept open for system requirement, **(Sl No. 18 &19 of Disturbance Report of NER Grid attached in Annexure-I).**

Due to tripping of these elements, Dullavcherra area of Assam was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Root Cause Analysis:
One of the reasons of tripping of these lines is vegetation. Root cause could not be concluded due to DR unavailability and unavailability of Relay indications from AEGCL.

Remedial Measure to be taken:
Vegetation problem in the line is to be checked by AEGCL. Frequent patrolling is to be done by AEGCL and Patrolling report to be submitted.

B. Halflong Area & Umrangshu Area:

1 No of disturbance occurred due to tripping of 132 kV Haflong (PG)- Haflong(S) line **(Sl No. 20 of Disturbance Report of NER Grid attached in Annexure-I).**

Due to tripping of this element, Haflong area of Assam was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

1 No of disturbance occurred due to tripping of 132 kV Khandong – Umrangshu line and 132 kV Haflong- Umrangshu line **(Sl No. 21 of Disturbance Report of NER Grid attached in Annexure-I).**
Due to tripping of this element, Umrangshu area of Assam was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Root Cause Analysis:
For Sl No. 20 Earth fault at downstream of Haflong (PG) cleared at Haflong(PG). Nature of fault is to be furnished by AEGCL.

For Sl No. 21 Due to vegetation problem.

Remedial Measure to be taken:
For Sl No. 20 Relay co-ordination at downstream level to be done by AEGCL in consultation with POWERGRID.

For Sl No. 21 Vegetation clearance is to be done by POWERGRID & AEGCL. Patrolling report is to be submitted and status of vegetation clearance to be reported by POWERGRID & AEGCL.

V. Disturbances in Manipur System:

Total **4 Nos.** Disturbances have occurred in Manipur system during the month of July'16 to August'16. **(Sl No. 22 to 25 of Disturbance Report of NER Grid attached in Annexure-I).**

A. Capital & Karong Areas:

1 No of disturbances occurred due to tripping of 132 kV Imphal (PG)- Imphal (Manipur) I & II lines, **(Sl No. 22 of Disturbance Report of NER Grid attached in Annexure-I).**
Due to tripping of these elements, Capital & Karong area of Manipur were separated from rest of NER Grid and subsequently collapsed due to no source in these areas.

Root Cause Analysis: Fault was in 132 kV Silchar – Imphal 1 line. Due to this fault, transformer at Imphal (MA) tripped.

Remedial Measure to be taken:
Relay coordination has to be done by MSPCL in consultation with POWERGRID. Reason for tripping of Transformer at Imphal(MA) to be furnished by MePTCL.

B. Ningthoukhong Area:

3 Nos. disturbances occurred due to tripping of 132 kV Loktak- Ningthoukhong line while 132 kV Imphal (PG) - Ningthoukhong line kept open for system constraint, **(Sl No. 23 to 25 of Disturbance Report of NER Grid attached in Annexure-I).**

Due to tripping of these elements, Ningthoukhong area of Manipur was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Root Cause Analysis:

Likely due to vegetation problem in the downstream of Ningthoukhong, 132 kV Loktak - Ningthoukhong line tripped. For further analysis, SLDC, MSPCL shall furnish relay indication pertaining to their end as well as patrolling report.

Remedial Measure to be taken:

Vegetation clearance and tower footing resistance are to be checked by MSPCL. POWERGRID is requested to visit Ningthoukong and check relay co-ordination after renovation work has been done by MSPCL.

VI. Disturbances in Meghalaya System:

Total **13 Nos.** Disturbances have occurred in Meghalaya system during the month of July'16 to August'16. **(Sl No. 26 to 38 of Disturbance Report of NER Grid attached in Annexure-I).**

A. Khliehriat Area:

12 Nos disturbances occurred due to tripping of 132 kV Khliehriat (PG)- Khliehriat (MePTCL) I & II lines, **(Sl No. 91 to 138 of Disturbance Report of NER Grid attached in Annexure-I).**

Due to tripping of these elements, Khliehriat area of Meghalaya was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.

Root Cause Analysis:

132 kV Khliehriat (PG) - Khliehriat (ME) I & II lines tripped due to non-clearance of fault at downstream of Khliehriat (ME) system. Fault generated in downstream of Khliehriat (ME) system mostly due to vegetation or lightning.

Remedial Measure to be taken:

Status of earthing work related to Khliehriat (ME) substations is to be furnished by MePTCL. Tower footing resistance is also to be checked and in case of more than 10 ohms, proper earthing has to be done by MePTCL and explore the possibility to install tower LAs. The earthing work of Distribution side of Khliehriat (MePTCL) substation is also to be completed, and relays co-ordinated with upstream.

Relay settings of Meghalaya substations are to be checked by MePTCL in coordination with POWERGRID after the completion of earthing works.

B. Lumshnong Area:

1 No. of disturbances occurred due to tripping of 132 kV Panchgram - Lumshnong line, while 132 kV Lumshnong - Khliehriat line kept open for system requirement. **(Sl No. 38 of Disturbance Report of NER Grid attached in Annexure-I).**

Due to tripping of this element, Lumshnong area of Meghalaya was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Root Cause Analysis:

Due to vegetation problem in the line, 132 kV Lumshnong - Panchgram line tripped.

Remedial Measure to be taken:
Vegetation clearance is to be done by MePTCL & AEGCL. Patrolling report is to be submitted and status of vegetation clearance is to be reported by MePTCL & AEGCL.

VII. Disturbances in Mizoram System:
Total **4 Nos.** Disturbances have occurred in Mizoram system during the month of July'16 to August'16. **(Sl No. 39 to 42 of Disturbance Report of NER Grid attached in Annexure-I).**

A. Kolasib Area:
1 Nos disturbance occurred due to tripping of 132 kV Kolasib - Badarpur line & 132 kV Kolasib - Aizwal lines, **(Sl No. 39 of Disturbance Report of NER Grid attached in Annexure-I).**

Due to tripping of these elements, Kolasib area of Mizoram were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.

Root Cause Analysis:
Due to fault in the downstream of Kolasib, the lines tripped.

Remedial Measure to be taken:
Relay settings of downstream stations to be furnished to POWERGRID by P&ED Mizoram. POWERGRID to review settings and suggests new settings to avoid tripping of in-feeds to Mizoram. Mizoram to adopt suggested relay settings, and intimate status to PCC forum.

B. Zuangtui Area:
3 Nos. disturbances occurred due to tripping of 132 kV Aizawl - Zuangtui line, **(Sl No. 40 to 42 of Disturbance Report of NER Grid attached in Annexure-I).**

Due to tripping of this element, Zuangtui area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Root Cause Analysis:
Due to downstream phase to phase fault, 132 kV Aizawl - Zuangtui line tripped.

Remedial Measure to be taken:
The over current and earth fault relay settings for the outgoing feeders at Zuangtui have been reviewed and communicated to P&ED, Mizoram for implementation. Status is to be informed by P&E Deptt, Mizoram. Vegetation clearance is to be done by P&ED, Mizoram in downstream of Zuangtui. Aizawl (PG) to submit DRs in respect of trippings.

VIII. Disturbances in Nagaland System:
Total **24 Nos.** Disturbances have occurred in Nagaland system during the month of July'16 to August'16. **(Sl No. 43 to 67 of Disturbance Report of NER Grid attached in Annexure-I).**

A. Mokokchung Area:
2 Nos disturbances occurred due to tripping of 132 kV Doyang - Mokokchung (NA) line, **(Sl No. 43 to 44 of Disturbance Report of NER Grid attached in Annexure-I).**

Due to tripping of this element, Mokokchung area of Nagaland was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Root Cause Analysis:
Due to fault in the line, 132 kV Doyang - Mokokchung (NA) line tripped.

Remedial Measure to be taken:
Vegetation clearance is to be done by DoP, Nagaland. NEEPCO is to change static relays to Numerical relay or install separate DR in Doyang HEP so that proper analysis can be done for disturbances associated with Doyang HEP. Patrolling report associated to these events is to be submitted by DoP Nagaland.

B. Dimapur Area:
6 Nos. disturbances occurred due to tripping of 132 kV Dimapur (PG) - Dimapur (NA) I line while 132 kV Dimapur (PG) - Dimapur (NA) II line is under shutdown since 18th April'16, **(Sl No. 45 & 50 of Disturbance Report of NER Grid attached in Annexure-I).**

Due to tripping of these elements, Dimapur area of Nagaland was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Root Cause Analysis:
Fault was due to downstream vegetation since 132 kV Dimapur (PG) - Dimapur (NA) I line is a short line and fault was cleared at Dimapur (PG).

Remedial Measure to be taken:
Relay settings of downstream stations of Nagaland is to be checked by DoP, Nagaland in consultation with POWERGRID. Circuit Breaker problem of Kohima feeder at Dimapur(PG) has been rectified.
Normalization of 132 kV Dimapur (PG) - Dimapur (Nagaland) II line could not be done due to pending consent from DoP Nagaland.
Relay settings of downstream stations to be submitted to POWERGRID by DoP Nagaland for further co-ordination.
Patrolling report is to be submitted and Status of vegetation clearance to be reported by DoP Nagaland.

C. Capital Area:
17 Nos. disturbances occurred due to tripping of 132 kV Dimapur (PG) - Kohima line, **(Sl No. 51 to 67 of Disturbance Report of NER Grid attached in Annexure-I).**

Due to tripping of this element, Capital area of Nagaland was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Root Cause Analysis:
Due to vegetation problem, 132 kV Dimapur (PG) - Kohima line tripped.

Remedial Measure to be taken:
Vegetation clearance is to be done by DoP Nagaland. Relay settings of downstream elements is to be checked by DoP Nagaland in consultation with POWERGRID. Patrolling report is to be submitted and status of vegetation clearance to be reported by DoP Nagaland.

IX. Disturbances in Tripura System:
Total **1 No.** of Disturbance has occurred in Tripura system during the month of July'16 to August'16. **(Sl No. 68 of Disturbance Report of NER Grid attached in Annexure-**

I).

1 No disturbances occurred in Tripura system due to tripping of 132 kV AGTPP – Kumarghat line while 132 KV PK Bari – Dharmanagar line, 132 P K Bari- Kumarghat line and 132 KV Agarthala- Dhalabil line kept open for system requirement and 132 KV Agartala- Budhjung Nagar I & II lines, 132 KV Palatana-Udaipur line, 132 KV Surjamani Nagar- Budhjung Nagar I & II lines, 132 KV Surjamani Nagar - Agartala I & II lines were out of service.
Due to tripping of this element, Tripura system along with AGTPP system was separated from rest of NER Grid.

Root Cause Analysis:
Likely due to lightning fault in 132 kV AGTPP – Kumarghat line but yet to conclude due to absence of DR output. Kumarghat(PG) could not submit DR output due to some software issue as informed by POWERGRID.

Remedial Measure to be taken:
NEEPCO is to furnish DR of the event at the earliest for further analysis. SLDC, TSECL to maintain log of lines kept open for system requirement to avoid unnecessary confusions during real time operation. Further to be discussed. TSECL to provide inputs regarding their system configuration.

X. Power Station Black out:
Total **3 Nos.** Power station Black out incident occurred during the month of July'16 to August'16. **(Sl No. 69 to 71 of Disturbance Report of NER Grid attached in Annexure-I).**

A. Kopili & Khandong Power Plants:
1 No disturbances occurred due to tripping of 220 kV Kopili - Misa I & II lines,132 kV Khandong - Khliehriat(PG) I&II lines and 132 kV Khandong - Umrangso line while 220 kV Kopili - Misa III line was under shutdown since 00:15 Hrs of 27.05.2016 due to CB problem at Kopili , **(Sl No. 196 of Disturbance Report of NER Grid attached in Annexure-I).**

Due to evacuation problem, Kopili and Khandong were blacked out.

Root Cause Analysis:
Fault due to vegetation was in Misa-Kopili I line. This fault was cleared and line was reclosed successfully (concluded after analyzing DR outputs). But, the Line-2 tripped on Overcurrent at Kopili end (though current was only 320 A) and this needs to be rectified.

Remedial Measure to be taken:
Over Current setting to be rectified by NEEPCO at Kopili till Main-II Distance Protection is installed and in-built over current feature is to be enabled at Kopili.

B. Doyang Power Plant:
2 Nos. disturbances occurred due to tripping of 132 kV Dimapur - Doyang I & II lines and 132 kV Doyang- Mokokchung line was not restored after tripping. **(Sl No. 71&72 of Disturbance Report of NER Grid attached in Annexure-I).**

Due to evacuation problem, Doyang Power Station was blacked out.

Root Cause Analysis for Sl No 71:

Vegetation fault was in 132 kV Dimapur - Doyang I. Fault was not cleared or cleared after a delay from Doyang end, which caused tripping of circuit II from Dimapur end.

Root Cause Analysis for Sl No 72:

Fault was in 132 kV Dimapur - Doyang II line due to B-N lightning fault as concluded from DR output. Reason for tripping of other lines is to be investigated.

Remedial Measure to be taken for Sl No 71:

NEEPCO to intimate details like reason for delayed clearance and settings of Earth fault relay. After receipt of relay settings from NEEPCO, there are to be properly co-ordinated.

Remedial Measure to be taken for Sl No 72:

Distance Protection Relay time settings to be checked by NEEPCO at Doyang end and complete relay flag details for this event to be furnished by NEEPCO.

Deliberation in the meeting

The committee decided that those Substations that are connected directly to Grid are to be maintained properly. List of Substations directly connected to Grid are to be sorted out so as to maintain Grid healthiness. It is found that in many substations relay flag informations are not forthcoming. NEEPCO representative informed that the Static Relays installed at Doyang HEP will be replaced with Numerical Relays within a year.

POWERGRID to locate the lightning prone areas and suggest NETC to do the shield wire to ground earthing for both the 400 kV Silchar-Byrnihat & 400 kV Silchar - Azara lines.

Sleeving of of 33 kV system ICT at Balipara was suggested. Also hiring a skilled Langur to avoid tripping of elements due to monkeys was suggested.

For proper analysis of each event by subgroup, relay flag details of both end, patrolling report and DR & EL outputs are required. All the utilities of NER are requested to furnish these data within stipulated time.

It is decided that Root cause analysis for many disturbances related to state systems could not be concluded by the subgroup for GD-GI analysis due to unavailability of proper relay indications, DR&EL outputsand patrolling reports.

44th PCC forum found that the major reason for lacuna in furnishing of appropriate data to SLDCs, NERLDC & RPC is due to the inadequate trained manpower in the critical substations of states in NER. The subgroup is to identify the critical state substations where proper relay indications, DR&EL outputsand patrolling reports are required.

Accordingly, it was decided to add an agenda item in the upcoming RPC meeting regarding the manning up of critical substations of NER that belongs to state.

The Sub-committee noted as above.

Action: NERPC, NERLDC.

A.7 Root Cause Analysis of Major Grid Disturbance on 16th April 2016 and 09th July 2016:

There were 2 major grid disturbances in NER Grid in 2016.

A meeting of Empowered Committee for root cause analysis of the Grid Disturbances

was held on 31st August 2016.

The disturbance of Category-V on 16th April'16 was primarily caused by fault due to lightning strike on 400 kV Bongaigaon – BgTPP (NTPC) I line, which could not be cleared by 400 kV Bongaigaon (PG) end of the line, resulting in tripping of several 400 kV lines at Bongaigaon (PG) from remote ends at 400 kV Binaguri, since as per R-X diagram the fault was lying in the 4th quadrant outside the reach of Distance relay.

The empowered committee for analysis of this disturbance noted that there was no differential protection installed on 400 kV Bongaigaon – BgTPP lines although they were short lines of around 3 kms each. Also, the time setting of Zone-II relays at New-Siliguri end of 400 kV Bongaigaon – NewSiliguri Q/C lines were not as per recommendations of V.Ramakrishna Task Force report. Although there are 400 MW of UFR installed in NER Grid, the UFR operation was not sufficient as observed from PMU plots, even though frequency was below 49.2 Hz for several seconds.

The Disturbance of Category-IV on 09th July'16 was primarily due to multi-phase fault on account of simultaneous lightning strike at tower locations 466 & 467 on 400 kV Silchar – Azara and 400 kV Silchar – Byrnihat lines, and delay in backing down of generation from Palatana CCGT as per SPS-3.

The empowered committee suggested the following:

1) Relay settings of all elements in NER Grid to be made as per recommendations of V.Ramakrishna Task Force report.
2) All substations with List of long lines followed by short lines to be identified and relay settings implementation accordingly.
3) Line differential protection to be installed in all short lines.
4) UFR reports to be submitted by all constituents in case of any event, and periodic inspection of installed UFRs to be carried out for checking healthiness
5) Constituents to ensure healthiness of communication equipment to ensure that real-time voice or data communication is available to NERLDC
6) All requisite details like UFR operation reports, Relay indications, DR outputs, EL outputs, Generator DAS outputs, etc. to be furnished by constituents to enable proper analysis.

Deliberation in the meeting

SEO), NERPC suggested that DGM, NERLDC in consultation with EE , NERPC will prepare the list of longest and shortest line from each substations in NER. Then it will be circulated in the subgroup. List of lines where line differential protection to be installed to be discussed in next sub group meeting. He also suggested that items 4 and 6 may be dropped from the Empowered committee recommendation.

The Sub-committee noted as above.

Action: NERPC, NERLDC.

A.8 Review of remedial actions pertaining to Grid Disturbances w.e.f. 01.01.2016 to 31.03.2016:

Name of Control Area	Disturbance	Remedial action suggested	Status
Assam	At 1020 Hrs 25.02.16, 220 kV Misa (PG) - Mariani(AS) (Misa (PG) – Not Furnished and Mariani(AS) – Auto Reclose Lockout) line, 220 kV Samaguri - Mariani(AS) (Samaguri (AS) – DP, ZI, R-E and Mariani(AS) – DP, ZI, R-E) line and 220 kV AGBPP - Mariani(PG) (AGBPP (NEEPCO) – Direct Trip received and Mariani(PG) – Over Voltage (O/V)) line tripped.	The 42nd PCC recommended installation of 400/220 kV, 2nd 315 MVA ICT at Bongaigaon & 400/220 kV, 2x315 MVA ICT at BgTPP at the earliest and requested AEGCL to kindly attend the next Sub-Group meeting for review of zone-2 and zone-3 settings and other issues pertaining to co-ordination of relay settings. During43rd PCCM, Monitoring of installation of ICT referred to OCC. NERLDC also suggested to include review of Earth Fault (TEF) settings and co-ordinate with timings of Zone-2 and Zone-3.	
	At 1817 Hrs 16.03.16, 400/220/33 kV, 315 MVA ICT at Bongaigaon (PG) (Bongaogaon(PG) - R-Ph, Over Current), 220 Agia (AEGCL)- Azara (AEGCL) (Agia (AEGCL) - Over Current and Azara (AEGCL) - No Tripping) and 220 kV Boko(AEGCL) – Azara (AEGCL) (Boko (AEGCL) - Over Current & Azara (AEGCL) - No Tripping) lines tripped		
Manipur	Multiple tripping of 132 kV Imphal(PG)- Iphal(MSPCL) I&II on 04.01.16,05.01.16, 12.01.16,14. 01.16, 21.01.16,24.01.16, 09.02.16,07.03.16,14.03.16, 19.03.16 & 26.03.16	DGM(AM), NERTS formed that for Imphal(PG)-Imphal(Man) settings for DP, EF/OC have reduced to isolate from faults in Manipur system. He suggested that R&M works need be expedited. After detailed deliberation the Sub-Committee suggested the following: 1) Yurembam & Ningthoukhong S/S R&M works to be checked Status reported by Expert (NERLDC/NERTS/NERPC). 2) Expert Committee to draw action plan for completion of balance activities. 3)After submission of report,	
	Multiple tripping of 132 kV Loktak)-Ningthoukhong(MSPCL) On 01.02.16,19.03.16 &31.03.16		

		NERTS will decide timeline for restoration of settings to normalcy. The forum requested NERPC to write a letter to MD, MSPCL for this issue. During 43rd PCCM, Manager, MSPCL informed that R&M works at 132kV Yurembam & Ningthoukong S/Sn Completed in all respect(except) testing& commissioning). It was decided that a visit for assessment would be finalized after testing activities are completed. NERTS said that even after renovation of Yurembam substation, problem exists circuit-Breaker in Karong feeder at	
Arunachal Pradesh	Tripping of 132kV Ranganadi- Lekhi on 19.01.16 & 21.01.16	The EF relay at Lekhi should be made DEF (directional) towards Nirjuli/Itanagar. The Sub-Group also suggested that EF relay setting to be high set with low time delay (if possible) for speedy fault isolation. NERTS informed that in case of tripping of 132kV Nirjuli-Lekhi line,ithas been observed that there is DGM(AM),NERTS stressed that EF relay at Lekhi for RHEP-Lekhi shouldbe made directional. EE,SLDC,Ar. Pradesh assured	
Nagaland	Tripping of 132 kV Dimapur(PG)-Dimapur(NG) I&II on 11.01.16, 21.02.16.	The 42nd PCC forum decided no proper analysis can be done unless details (relay flags, DR etc.) are submitted by DoP Nagaland. However forum suggested that vegetation clearance activities be taken up in earnest by DoP Nagaland to reduce the number of trippings. As no representative from DoP, Nagaland attended in the meeting, the issues could not be discussed in detail. The	

	Multiple tripping of 132 kV Dimapur(PG)-Kohima(NG) on 12.01.16, 22.01.16, 21.02.16 & 31.03.16. Tripping of 132 kV Doyang(NEEPCO)-Mokokchung(NG) on 08.02.16, 18.02.16, 21.02.16.	members expressed concern over non- representation of DoP, Nagaland to the sub-committee. The forum requested NERPC to write a letter to Chief Engineer, DoP, Nagaland for this issue. Nagaland representative assured that in future tripping details (including relay flag, DR, Event	
Mizoram	At 1420 Hrs 09.01.16, 132 kV Aizwal - Kolasib (Aizwal (PG) - Earth Fault and Kolasib – No Tripping) line and 132 kV Badarpur - Kolasib (Badarpur (PG)- DP, ZIII, R-E and Kolasib - No Tripping) line tripped. Tripping of 132kV Aizawl-Zuangtui on 24.02.16, 14.03.16,28.03.16. At 1621 Hrs 31.03.16, 132 kV Aizwal - Kumarghat (PG) – Not Furnished and Kumarghat- DP, ZII, Y-E), 132 kV Aizwal - Kolasib Aizwal (PG) – DP, ZI, B-E and Kolasib – Not Furnished) and 132 kV Aizwal – Jiribam (Aizwal (PG) – DP, ZII, B-E and Jiribam- Not Furnished) line tripped.	The 42nd PCC forum decided no proper analysis can be done unless details (no tripping, relay flags, DR etc.) are submitted by DoP Mizoram. However forum suggested that vegetation clearance activities be taken up in earnest by DoP Mizoram to reduce the number of trippings. As no representative from P&E Dept., Mizoram attended in the meeting, the trippings pertaining to Mizoram system could not be discussed in detail. The members expressed concern over non- representation of P&E Dept., Mizoram to the sub-committee. The forum requested NERPC to write a letter to Engineer in Chief, P & E Deptt., Mizoram for this issue. SE, DoP, Mizoram assured that in future	

Meghalaya	Multiple tripping of 132 kV Khliehriat(PG)-Khliehriat(ME) I&II on 27.02.16,28.02.16, 19.03.16, 28.03.16 At 1830 Hrs on 29.01.16, 132 kV Agia (AEGCL) - Medipathar (MePTCL) (Agia (AEGCL) – Not Furnished and Medipathar (MePTCL) -Not Furnished) line tripped At 0804 Hrs 04.03.16, 132 kV Lumshong- Panchgram (Lumshong – Earth Fault and Panchgram- Earth Fault) line tripped. At 2150 Hrs 30.03.16, 132 kV Nangalbibra (MePTCL) – Medipathar (MePTCL) (Nangalbibra(MePTCL)- DP,ZII, R-Y-B and Medipathar (MePTCL) –No Tripping) line tripped.	Khliehriat: In the Sub- Group meeting preceding 43rd PCCM SE, MePTCL informed that earthing works have been completed except 18.07.2016. Regarding installation of line results obtained after installation of line LAs would be shared with the members.	
BNC	Tripping of 400kV Ranganadi- BNC I (Overvoltage) on 12.01.16 & 13.01.16.	The 42nd PCC felt proper reactive power compensation is required at BNC-HVDC S/Sn. And it is needed to expedite commissioning of 1 no. Bus Reactor at 400 kV Rangandi. The 43rd PCC forum referred this matter to next SCM of NER.	

	At 1834 Hrs 25.01.16, 132 kV Biswanath Charali - Pavoi I (Biswanath Charali (PG) – No Tripping and Pavoi (AEGCL) – Not Furnished) line, 132 kV Biswanath Charali -Pavoi II (Biswanath Charali (PG) – Over Current and Pavoi (AEGCL) line - Not furnished 220/132 kV, 50 MVA ICT-I at Balipara (Overcurrent) and 50 MVA ICT-II at Balipara (Overcurrent) tripped. At 2030 Hrs 25.01.16, 132 kV Biswanath Charali-Pavoi I (Biswanath Chariali (PG) – No Tripping and Pavoi (AEGCL) – Earth Fault) line, 132 kV Biswanath Charali-Pavoi II (Biswanath	Forum suggested that vegetation clearance activities be taken up in earnest by AEGCL & DoP Ar. Pradesh to reduce the number of trippings. In 43rd PCCM, the trippings were re-analyzed by the sub-group, the root cause and remedial actions may be referred from A.19(B).	

In 43rd PCCM, NERLDC has requested to submit First Information Report as per IEGC (Grid Code) including Relay indication, Patrolling reports, etc., in case of any event in the Grid as per definition of IEGC, and also requested to submit report of vegetation clearance conducted on monthly basis.

Deliberation in the meeting

The sub-committee regretted that none of the utilities had submitted progress of the vegetation clearances on monthly basis. Most of the faults are due lightning or vegetation. It is requested that all utilities must take vegetation clearance activity regularly.

The Sub-committee noted as above.

Action: All Utilities.

A.9 Tripping of generating units at AGTCCPP-NEEPCO:

a. At 0654 Hrs on 10.01.2016, Units # 3 of AGTPP tripped due to Differential pressure high in inlet air filter (Generation Loss = 14 MW)
b. At 0324 Hrs on 11.01.2016, Units # 2 of AGTPP tripped due to Differential pressure high in inlet air filter (Generation Loss = 13 MW)
c. At 1520 Hrs on 05.02.2016, Unit # 3 of AGTPP tripped due to control system problem (Generation Loss = 15 MW)
d. At 1914 Hrs on 05.02.2016, STG II of AGTPP tripped due to high core temperature (Generation Loss = 20 MW)
e. At 1128 Hrs on 15.02.2016, STG I of AGTPP tripped due to tripping of operator console (Generation Loss = 22 MW)
f. At 1901 Hrs on 03.03.2016, STG II of AGTPP tripped due to operation of Rotor earth fault protection (Generation Loss = 23 MW)
g. At 2340 Hrs on 03.03.2016, Unit # 1 and STG-I of AGTPP tripped due to low control oil pressure (Generation Loss = 34 MW)

h. At 1042 Hrs on 04.03.2016, Unit # 1 of AGTPP tripped due to boiler problem (Generation Loss = 20 MW)
i. At 2127 Hrs on 27.03.2016, Unit # 3 of AGTPP tripped (Generation Loss =15 MW)
j. At 1031 Hrs on 28.03.2016, Unit # 3 of AGTPP tripped due to problem in Control System (Generation Loss = 4 MW)

During 42nd PCCM, NEEPCO informed that cause and rectification(s) done, if any, would be furnished by them at the earliest. The main cause of this disturbance could be un-cleared fault in Tripura system. However, due to absence of any representative from TSECL, the matter could not be discussed in detail. The sub- committee expressed concern over non-participation of TSECL in PCC meetings in spite of repeated requests. The forum requested NERPC to write a letter to CMD, TSECL for this issue.
During the 43rd PCCM, DGM(SO-II),NERLDC informed that the list of lines with protection system details in Tripura system were circulated by NERLDC to NERPC, NERTS, Assam, NEEPCO and Tripura after 122nd OCC so that the process of protection audit of 79 Tilla and Surjamaninagar substations of TSECL can be begun. After detailed deliberation it was decided that Shri Prasenjit Sarkar, Manager, NEEPCO would also be a part of audit team.

Deliberation of the Committee.

A.10 Completion of activities within specified time as per directives of CERC vide order in Petition No. 113/MP/2014

As per order in Petition No. 113/MP/2014 of Hon'ble CERC, CERC directed to power utilities and organizations of NER to complete the activities within specified time/submit monthly reports as per provisions of IEGC & Grid Standards of CEA etc.
List of actions/activities/reports to be completed within specified time as per directives of CERC vide order in Petition No. 113/MP/2014 attached at - Annexure II.

During 42nd PCC meeting, All the utilities were once again requested to submit compliance status latest by 20.05.2016.

During the 43rd PCCM, the latest status was shared.

Deliberation in the meeting

It is decided that for completion of R&M works within the specified time as per directive of CERC regular monitoring of the progress of the work physically as well as financially is a necessity.
The Sub-committee noted as above.

Action: All Utilities.

A.11 Standardization of Disturbance Recorder Channels:

Disturbance Recorders on Transmission elements are necessary for post disturbance analysis, and identification & rectification of any protection operation. As per CBIP's manual on Protection of Generators, GT, Transformers and Networks, it is recommended to have minimum 8(eight) analog signals and 16(sixteen) binary signals per bay or circuit. Also, it should have a minimum of 5 sec of total recording time, minimum pre-fault recording time of 100 msec and minimum post-fault recording time of 1000 msec.

POWERGRID had standardized Disturbance Recorder Channels for lines, transformers

& reactors.

The Sub-committee requested NERPC/NERLDC to circulate the above standardization to all constituents of NER for giving comments and suggestion by 24.07.15. NERLDC had sent this document to all constituents of NER for giving comments and suggestion by 24.07.15.

Till date no comments has been received from any constituents. It is requested all constituents of NER to standardize Disturbance Recorder Channels at the earliest.

During 42nd PCC meeting, the forum requested NTPC to provide their standardized DR Channels for generator so that it may be standardized for all generating units of NER. NTPC representative readily agreed. S.E.(O) once again requested all the constituents to kindly furnish their comments so that the process may be completed.

During the 43rd PCCM, DGM(SO-II),NERLDC stated since no comments/observations were received from the constituents it may be assumed that the DR channels for line, transformer and reactor is finalized. After detailed deliberation, forum decided DR channels as finalized have to be implemented in all ISTS lines and intra-state lines with numerical relays, within 31.07.2016 and gradually for all 220kV and 132kV lines.

The forum agreed that since Assam system is the largest state system of NER Grid, standardization of DR channels in lines of Assam is felt necessary. It was decided that Assam may complete implementation of standardized DR channels by 31st August 2016, and take help from NERTS if necessary.

NTPC agreed to submit standardized DR channels for generator by 20.07.2016., which can then be discussed for adoption by all generators of NER Grid.

Deliberation in the meeting

AEGCL representative informed the forum that the work of DR standardization to be completed by 30th Nov'16.NTPC to submit the standardized DR channels for generator.

The Sub-committee noted as above.

Action: AEGCL,NTPC.

A.12 Protection System in Tripura and its ramifications in NER grid:

During 40th PCC meeting, SE(O), NERPC stated that the main concern is the protection within Tripura system. As it is learnt that no primary protection system is in place in many of their important lines and any delayed tripping on their system may affect the power supply to Bangladesh. Further, he stated that the issue was brought to the notice of Tripura in many occasions but no positive response was made from Tripura side. After detailed deliberation, the Sub- committee requested NERPC to write letter to highest authority of Tripura with a copy to MoP in this regard.

In 41st PCC meeting, SE(O), NERPC informed the forum that intimation has already been given to Govt. of Tripura, however response in this regard is awaited. The forum viewed seriously the non participation of TSECL representative in PCC meetings of NERPC and requested that this matter to be raised in the next TCC/RPC meeting.

In 121st OCC meeting in agenda item No. D.23 NEEPCO had raised the matter of frequent tripping of AGTCCPP units “Instances of tripping AGTCCPP units in many occasions exists due to nu-cleared downstream disturbance in Tripura system”. This

has resulted to heavy stress to the machines in addition to reduce the maintenance interval time. Tripura is requested to analyze the fault and rectify the same at the earliest." and in item No. D.15 NERLDC had raised the matter of disturbance in power supply to Bangladesh.

As per deliberation of the Sub-Group (preceding 42nd PCC meeting) for analysis of Grid Disturbances the following were suggested for improvement of the protection system in Tripura:- Proper protection systems are required urgently for 132 kV Surjamaninagar, 132 kV Udaipur and 132 kV 79 Tilla (Agartala).

In response to TSECL representative's request for CTU help in relay settings at the above stations, NERTS suggested that the following may please be provided:

<A> Feeder details- Name of feeder, kV level, Circuit configuration [D/C or S/C], MVA level(Short Circuit level), % impedance, line length, type of conductor, shortest and longest line length at next station at same voltage level.

<B> ICT Details- % impedance, tap position.

<C> Existing connected relay details and relay settings.

<D> C.T. and P.T. ratio for all feeders.

The 42nd PCC forum approved the above. Regarding generation interruption at Palatana GBPP it was suggested that to prevent ICT tripping in case of fault in Tripura system, settings of 132 kV Palatana-S M Nagar and 132 kV Palatana-Udaipur lines are to be changed by OTPC in co-ordination with settings at 132 kV S M Nagar and 132 kV Udaipur S/Sn. Members readily agreed to the suggestion.

DGM(AM), NERTS suggested that Protection Audit of Tripura Power System needs to be done and sent to MoP. The forum unanimously agreed and requested to NERPC to kindly initiate action in this regard.

During deliberation it is discussed that Tripura has to ensure physical existence and proper functioning of Main & Back Up Protective Relays for all the elements connected to 79, Tilla and Surjamani Grid Sub Station buses to avoid undesirable tripping of Main Grid Lines including Bangladesh Line during fault in Tripura System. Further, DGM (AM) suggested forming a group of protection experts from AEGCL, POWERGRID and OPTC to visit Sujamani and 79 Tilla Grid Sub Station for activation and implementation of correction setting to available healthy relays. Further, the same group will carry out Protection Audit of Tripura Power System and submit the recommendation for corrective measures to TSECL, for implementation in stipulated time frame, and NERPC, for monitoring on regular basis in OCC & PCC Meeting. However, in case of any delay in implementation matter will be referred to CERC / MoP. The forum unanimously agreed and requested to NERPC to kindly initiate action in this regard.

As per 43rd PCCM, please refer to discussion in Agenda Item No.A.9.

Deliberation in the meeting

The forum decided that protection auditing of Tripura system is to be carried out and the dates of Audit in Tripura is tentatively fixed from 7th to 10th November excluding travelling days.

The Sub-committee noted as above.

A.13 Maintenance Procedure adopted by utilities:

It has been observed that number of Grid Disturbances in NER occurred due to failure of the equipment. As per Section 20 of the Grid Standards Regulation, 2010 of CEA, each entity shall prepare maintenance procedure for each equipment in line with manufactures recommendations and prudent utility practices.
It is requested to all utilities of NER to follow their maintenance schedule as per maintenance procedures. It is also requested to utilities who have no maintenance procedures, to prepare and finalize maintenance procedures at the earliest.

As per discussions in 43rd PCCM, DGM (SO-II), NERLDC requested the forum to develop Model Maintenance Procedure

for all power utilities as mandated by CEA Grid Standards regulations, Sec.20. After detailed deliberation it was decided that before maintenance procedure be finalized an assessment of testing equipment available with state utilities need to be made. Only after that a committee may be set up to streamline maintenance procedure.

All utilities to submit their testing equipment details for purpose of carrying out maintenance activities, by next OCC meeting.

Deliberation in the meeting

It is decided that the required Maintenance procedure to be prepared by subgroup and the Manual shall contain minimum procedures to be followed and detailed procedures to be followed.

The Sub-committee noted as above.

A.14 Review of Relay settings and Co-ordination:

Most of the Grid disturbances in NER Grid are occurring due to tripping of radial feeders, where the fault lies in downstream region. The faults are being cleared by Remote ends at EHV level instead of clearance at downstream distribution level.

Proper co-ordination of relay-settings amongst all voltage levels may reduce the number of Grid Disturbances in NER grid, and result in less Value of Lost Load.

It is requested that all utilities of NER may submit their relay settings (including Distribution side viz. 33 kV levels) for proper co-ordination with EHV side, to NERTS, NERPC and NERLDC. The relay settings, once approved by the PCC forum, should be adopted by all utilities, and any modification in relay settings should be done only after recommendation by PCC forum.
The major Grid Disturbance of Category-V in NER Grid on 16.04.16 occurred due to mal-operation of relays at 400 kV New-Siliguri end of 400 kV New-Siliguri – Bongaigaon Q/C lines, where the time setting on Zone-II was kept as 350 msec instead of around 600 msec as recommended by V.Ramakrishna Task Force report.
It is proposed that all substation wise List of long lines followed by Short lines be identified, and the relay settings modified accordingly as per recommendations of V.Ramakrishna Task Force.

Deliberation in the meeting

It is decided that subgroup will suggest revised relay settings as per guidelines of Ramakrishna task force report. Subgroup shall follow the model settings circulated by POWERGRID on implementation of guidelines of Ramakrishna task force. All utilities

shall implement 50 percent of the settings recommended by subgroup by 31st October 2016 and rest 50 percent by 30th November.

The Sub-committee noted as above.

Action: NERLDC, NERPC.

A.15 Review of Zone-II relay settings:

Several disturbances and major trippings in NER Grid are occurring on account of fault due to vegetation etc, resulting in high-resistive faults that fall outside the characteristic of Zone-II of Distance Protection. This results in delayed fault clearance by Earth fault relays, and the trippings are widespread.

In view of this it is proposed that the Resistive reach of Zone-II of Distance protection be reviewed by all utilities.

Deliberation in the meeting

After detailed deliberation it was decided that calculation of Zone-II relay settings will be done by 30th Sep'16 by subgroup and Implementation of 50 percent of the settings recommended by subgroup to be completed by 31st October 2016 and rest 50 percent by 30th November by all utilities..

The Sub-committee noted as above.

Action: NERLDC, NERPC.

A.16 Adoption of Numerical relays:

It has been observed that several lines in NER Grid are having Static/ Electromechanical relays as Overcurrent/Earth-fault relays. The Numerical relays, wherever available, have inbuilt Overcurrent/Earth-fault feature. The time-synchronised Disturbance Recording facility is available only in Numerical relays, absence of which lead to inconclusive analysis of Grid events.

It is proposed to enable the inbuilt Overcurrent/Earth-fault feature of Numerical relays, wherever available, to enable receipt of Disturbance Recorder outputs corresponding to all events of NER Grid. The time-synchronised Disturbance Recording facility is available only in Numerical relays, absence of which lead to inconclusive analysis of Grid events. Upon enabling the inbuilt feature of Numerical relays, the existing static / electromechanical relays may but put out of service.

It has been observed that in systems of NEEPCO in particular in Central sector, Numerical relays are not available and Static/electromechanical relays are being used instead. Guidelines of CEA recommend replacement of static/electromechanical relays with Numerical relays which are time synchronised to the Grid.

It is proposed to upgrade all existing Electromechanical / Static relays of Central Sector elements with Numerical relays having Time-synchronised Disturbance Recording facility.

Deliberation in the meeting

After detailed deliberation it was decided that the upgradation of all existing Electromechanical/Static Relays of Central Sector elements with adoption of Numerical Relays will be done after the completion of R&M activities in case of State Substations/elements. NEEPCO representative had told the forum that installation of Numerical relays at AGTPP, Doyang and Ranganadi(only main-II) are still pending.

The Sub-committee noted as above.

Action: NEEPCO.

A.17 Manual for Protection Systems:

It has been noticed that several grid events are occurring on account of different practices for protection adopted by different utilities leading to lack of co-ordination. As per Sec.7 of CEA Technical Standards for Connectivity to the Grid Regulations, 2007, utilities shall develop their own protection manuals conforming to various standards for the reference and use of its personnel.

It is requested to all utilities of NER to develop their own protection manuals consistent with various regulations and orders / reports.

Deliberation in the meeting

SE(O), NERPC suggested that it may be decided in the sub group meeting.

The Sub-committee noted as above.

Action: NERPC.

A.18 Fault / Lack of Synchronisation facility:

On 31st August 2016, there was a disturbance in Tripura system post tripping of 132 kV AGTPP – Kumarghat line while several tie-lines of Tripura system to rest of NER Grid was kept open.

At the time of synchronisation of the islanded Tripura system with rest of NER Grid, it was found that there exists no synchronisation facility within Tripura system. Further, while attempting to synchronise the island by charging of 132 kV P K Bari – Kumarghat line, the attempt failed due to faulty synchroscope at 132 kV Kumarghat (PG).

Also, at the time of synchronisation of islanded parts of NER Grid during GD-V in NER on 16.04.16, the restoration process got delayed due to faulty synchronisation facility at 132 kV Kumarghat (PG), 132 kV Badarpur (PG).

Availability of synchronisation facility is critical to restoration following Grid Events. It is requested that synchronisation facility be made available at all critical substations of NER Grid, and existing synchronisation facilities at substations be kept healthy at all times.

Deliberation in the meeting

DGM(AM), NERTS informed that the Kumarghat problem was with the wire for bus voltage. At Badarpur fault was due to CVT fuse failure and the problems are rectified. Forum suggested for periodic checking of synchronization facilities of critical stations and healthy status to be intimated to RLDC & RPC. The criticality of the situation was discussed in PCC and the constituents decided that PSDF funding is required. As such it is decided to be put up to NERPC forum.

The Sub-committee noted as above.

Any other item:

Date and Venue of next PCC

It is proposed to hold the 45th PCC meeting of NERPC on second week of November, 2016. The exact venue will be intimated in due course.

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Annexure-I

List of Participants in the 44th PCC Meetings held on 20/09/2016

SN	Name & Designation	Organization	Contact No.
1.	Sh. Ashutosh Bhattacharya, DM(AEGCL)	Assam	09435332928
2.	Ms. Jharna Devi, AM	Assam	08822798944
3.	Sh. A. G. Thum, AEE, SLDC	Meghalaya	09774664034
4.	Sh. B. Nikhla, EE, SLDC	Meghalaya	09436314163
5.	Sh. Amaresh Mallick, DGM(SO-II)	NERLDC	09436302220
6.	Sh. Jerin Jacob, Engineer	NERLDC	09402120113
7.	Sh. Joypal Roy, Sr. Manager	NEEPCO	09435577726
8.	Sh. P. Kanungo, DGM- AM	PGCIL	09436302823
9.	Sh. Alokesh Hazarika, Sr. Executive	OTPC	07085060480
10.	Sh. P.K. Mishra, MS	NERPC	-
11.	Sh. L. B. Muanthang, SE	NERPC	09436731488
12.	Sh. B. Lyngkhoi, Director/S.E (O)	NERPC	09436163419
13.	Sh. P. N. Sarkar, EE	NERPC	09830027523
14.	Sh. Sadiq Imam, AD-I/AEE	NERPC	07004133772

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16													
क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	400 kV Silchar - Azara	NETC & AEGCL	**00/01/1900 13:07:37.596**	Silchar	DP, ZI, R-Y-E,165.3 Kms.	Not applicable	Yes	Yes	Loss of Load: 249	GD-IV	7/9/2016 13:59	SPS 3 operated	0.102
				Azara	DP, ZI, R-Y-E,98.7 Kms.	Not applicable	No	No					
	400 kV Silchar - Byrnihat	NETC & MePTCL	**09/07/2016 13:07:37.599**	Silchar	DP, ZI, Y-B-E,163.4 Kms.	Not applicable	Yes	Yes			7/9/2016 14:10	SPS 3 operated	
				Byrnihat	DP, ZI, Y-B-E,64.07 Kms.	Not applicable	No	No					
	132 kV Dimapur - Imphal	POWERGRID	**09/07/2016 13:19:00.000**	Dimapur	No Tripping	Not applicable	No	No			7/9/2016 13:53	No SPS	
				Imphal	Power Swing	Not applicable	Yes	No					
	132 kV Khliehriat (PG)-Badarpur	POWERGRID	**09/07/2016 13:19:00.000**	Khliehriat(PG)	Power Swing	Not applicable	No	No			7/9/2016 13:55	No SPS	
				Badarpur	No Tripping	Not applicable	No	No					
	132 kV Palatana-Udaipur	TSECL	**09/07/2016 13:20:06.845**	Palatana	Under Frequency	Not applicable	No	No			7/9/2016 15:00	No SPS	
				Udaipur	Not Furnished	Not applicable	No	No					

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16

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	132 kV Surjamaninagar-Palatana I	POWERGRID	**09/07/2016 13:20:06.848**	Surjamaninagar	Not Furnished	Not applicable	No	No			7/9/2016 14:30	No SPS	
				Palatana	Under Frequency	Not applicable	No	No					
	132 kV Silchar-P K Bari I	POWERGRID	**09/07/2016 13:19:00.000**	Silchar	Power Swing	Not applicable	No	No			7/9/2016 14:16	No SPS	
				PK Bari	Not Furnished	Not applicable	No	No					
	132 kV Silchar-P K Bari II	POWERGRID	**09/07/2016 13:19:00.000**	Silchar	Power Swing	Not applicable	No	No			7/9/2016 14:16	No SPS	
				PK Bari	Not Furnished	Not applicable	No	No					
	132 kV AGTPP - Kumarghat	POWERGRID	**09/07/2016 13:19:00.000**	AGTPP	Under Frequency	Not applicable	No	No			7/9/2016 13:59	No SPS	
				Kumarghat	Power Swing	Not applicable	No	No					
	132 kV Silchar - Dullavcherra	POWERGRID & AEGCL	**09/07/2016 13:19:00.000**	Silchar	Power Swing	Not applicable	No	No			7/9/2016 14:06	No SPS	
				Dullavcherra	Not Furnished	Not applicable	No	No					

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
1	132 kV Silchar - Panchgram	POWERGRID & AEGCL	**09/07/2016 13:28:00.000**	Silchar	Due to opeartion of SPS I	Not applicable	No	No			7/9/2016 14:05	SPS 1 operated	
				Panchgram		Not applicable	No	No					
	132 kV Silchar - Srikona I	POWERGRID		Silchar		Not applicable	No	No			7/9/2016 14:03	SPS 1 operated	
				Srikona		Not applicable	No	No					
	132 kV Silchar - Srikona II	POWERGRID		Silchar		Not applicable	No	No			7/9/2016 14:03	SPS 1 operated	
				Srikona		Not applicable	No	No					
	132 kV Badarpur - Panchgram	POWERGRID		Badarpur		Not applicable	No	No			7/9/2016 13:34	SPS 1 operated	
				Panchgram		Not applicable	No	No					
	Palatana GTG I	OTPC	**09/07/2016 13:15:59.745**	Palatana	Over Frequency	Not applicable	Yes	No			7/11/2016 19:36	SPS 3 operated	
	Palatana GTG II	OTPC	**09/07/2016 13:19:59.049**	Palatana	Over Frequency	Not applicable	Yes	No		CD IV	7/9/2016 20:00	No SPS	

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	Palatana STG I	OTPC	**09/07/2016 13:16:09.276**	Palatana	Due to Tripping of GTG-I	Not applicable	Yes	No		GD-IV	7/11/2016 23:10	SPS 3 operated	
	Palatana STG II	OTPC	**09/07/2016 13:28:45.938**	Palatana	Due to Tripping of GTG-II	Not applicable	Yes	No			7/9/2016 21:15	No SPS	
	AGTPP U 1	NEEPCO	**09/07/2016 13:19:00.000**	AGTPP	Under Voltage and Reverse Power Relay operated	Not applicable	No	No	Loss of Generation: 684	GD-IV	7/9/2016 14:05	No SPS	2.429
	AGTPP U 2	NEEPCO	**09/07/2016 13:19:00.000**	AGTPP		Not applicable	No	No			7/9/2016 14:09	No SPS	
	AGTPP U 3	NEEPCO	**09/07/2016 13:24:00.000**	AGTPP	Reverse Power Relay operated	Not applicable	No	No			7/9/2016 14:15	No SPS	
	AGTPP U 4	NEEPCO	**09/07/2016 13:24:00.000**	AGTPP	Under Voltage and Reverse	Not applicable	No	No			7/9/2016 13:26	No SPS	
	AGTPP STG I	NEEPCO	**09/07/2016 13:24:00.000**	AGTPP	Due to Tripping of GTGs	Not applicable	No	No			7/9/2016 18:56	No SPS	
	AGTPP STG II	NEEPCO	**09/07/2016 13:24:00.000**	AGTPP	Due to Tripping of GTGs	Not applicable	No	No			7/10/2016 2:21	No SPS	
	FIR by the constituent	Yes (AGTPP,Tripura,Palatana and POWERGRID)											

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16														
क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Brief Description of the Incident	NER Grid was in synchronism with NEWS Grid through 400kV Bongaigaon - New Siliguri II, III and IV lines & 220 kV Birpara - Salakati I & II and and asynchronously connected with NR Grid through +/- 800 kV Biswanath Charali-Agra pole I (400kV Bongaigaon - New Siliguri I kept open from 22:55 Hrs on 25.06.16 to contain over voltage). Southern part of NER Grid(consisting of South Assam, Manipur ,Mizoram, Tripura including radial load of Bangladesh along with AGTPP, Palatana, Loktak & Tripura generation) was connected with rest of NER Grid through 400 kV Silchar - Azara line, 400 kV Silchar – Byrnihat line, 132 kV Imphal – Dimapur line and 132 kV Badarpur – Khliehriat line(132 kV Karong-Kohima line & 132 kV Khliehriat-Lumnsnong line kept open for system requirement and 132 kV Halflong – Jiribam line was under Emergency Shutdown from 11:00 Hrs on 09.07.16).At around 13:19:55.200 Hrs on 09.07.16, 400 kV Silchar – Azara (13:07:37.596 Hrs-DR timing) and 400 kV Silchar – Byrnihat (13:07:37.599 Hrs-DR timing) tripped. Due to delayed backing down of Palatana generation (as per design of SPS-III), 132 kV Badarpur – Khliehriat line and 132 kV Imphal – Dimapur lines tripped on overloading / power swing protection. Due to tripping of these elements, Southern part of NER Grid consisting of South Assam, Manipur, and Mizoram and Tripura systems along with Palatana & AGTPP separated from rest of NER Grid. Tripura systems along with AGTPP & radial load of Bangladesh were connected to NER Grid through 132 kV AGTPP – Kumarghat line, 132 kV Palatana – Surjamaninagar line, 132 kV Palatana – Udaipur and 132 kV Silchar – PK Bari I & II lines (132 kV P K Bari – Kumarghat and 132 kV P K Bari – Dharmanagar line kept open for system requirement).At 13:19 Hrs on 09.07.16, 132 kV AGTPP – Kumarghat tripped (AGTPP: UFR & 86A, 186A/B ; Kumarghat : Power swing). At 13:20 Hrs on 09.07.16, 132 kV Palatana – Surjamaninagar line, 132 kV Palatana – Udaipur and 132 kV Silchar – PK Bari I & II lines tripped.Due to tripping of these lines, Tripura systems along with AGTPP & radial load of Bangladesh were separated from rest of the isolated southern part of NER Grid and subsequently collapsed due to load generation mismatch. Palatana GTG 1 & 2 Tripped at 13:19 Hrs and STG 1 tripped at 13:20 Hrs. At 13:28 Hrs, STG 2 tripped due to under frequency. After tripping of STG-2 at Palatana, the SPS-I related to load reduction in South Assam of 100 MW operated and the frequency shot up to 54.09 Hz from 46.71 MW (change of 7.38 Hz).The rest of the island survived with Manipur and Mizoram load (Manipur – 55 MW & Mizoram – 29 MW) with Loktak generation (82 MW). The Southern part of NER Grid was synchronized with rest of NER Grid through 132 kV Imphal – Dimapur line at 13:52:01.960 Hrs. NER grid was progressively restored at 14:14 Hrs.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2114 MW , Antecedent Load : 1856 MW)**												
	Root Cause	Due to lightning strike at loc. 466 in R-phase on Silchar - Azara line & at loc. No. 467 in B-phase on Silchar - Byrnihat line , flashover occurred in bottom insulator as informed by POWERGRID. Flashover occurred in 2 consecutive towers.DR shows lightning strike - flashover. Surface burn occurred in the insulators as informed ny POWERGRID.												
	Remedial Measures	POWERGRID measured tower footing resistance in these 2 locations. In loc. 466, it was found to be 9.6 ohms and in other,resistance found to be 92 ohms (very high as 10 ohm is the norminal value). Earthing to be done by POWERGRID by 1. Counterpoise earthing 2. direct earthing of shield wire to ground if necessary 3. If any difficulty in the already suggested remedies, POWERGRID to install Tower Lightning Arresters. In PCCM, forum suggested POWERGRID to locate the lightning prone areas and suggest NETC to do the shield wire to ground earthing for both the 400 kV Silchar-Byrnihat & 400 kV Silchar - Azara lines.											

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	400 kV Balipara - Bongaigaon I	POWERGRID	**7/21/2016 10:16**	Balipara	DP, Z V, R-E,Over Voltage	Not applicable	No	No		GD-II	7/24/2016 19:56	No SPS	
				Bongaigaon	DP, ZII, R-E,370.1 Kms.	Not applicable	Yes	Yes					
	400 kV Balipara - Bongaigaon II	POWERGRID	**7/21/2016 10:16**	Balipara	DP, Z V, R-E,Over Voltage	Not applicable	No	No			7/21/2016 10:42	No SPS	
				Bongaigaon	DP, ZII, R-E,348.1 Kms.	Not applicable	Yes	Yes					
	400 kV Balipara - Bongaigaon IV	POWERGRID	**7/21/2016 10:16**	Balipara	DP, ZIV, R-E,19.31 Kms.	Not applicable	No	No			7/21/2016 11:20	No SPS	
				Bongaigaon	DP, ZII, R-E,332 Kms.	Not applicable	Yes	Yes					
	400 kV Balipara-Biswanath Charali I	POWERGRID	**7/21/2016 10:16**	Balipara	No tripping	Not applicable	No	No			7/21/2016 11:32	No SPS	
				Biswanath Charali	DP, ZII, R-E,60 Kms.	Not applicable	Yes	No					
	400 kV Balipara-Biswanath Charali II	POWERGRID	**7/21/2016 10:16**	Balipara	No tripping	Not applicable	No	No			7/21/2016 11:24	No SPS	
				Biswanath Charali	DP, ZII, R-E,60 Kms.	Not applicable	Yes	No					
	400 kV Balipara-Biswanath Charali III	POWERGRID	**7/21/2016 10:16**	Balipara	No tripping	Not applicable	No	No			7/21/2016 11:10	No SPS	
				Biswanath Charali	DP, ZII, R-E,57 Kms.	Not applicable	Yes	No					

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2	400 kV Balipara-Biswanath Charali 1V	POWERGRID	**7/21/2016 10:16**	Balipara	No tripping	Not applicable	No	No	Loss of Load: 114	GD-II	7/21/2016 11:34	No SPS	0.12
				Biswanath Charali	DP, ZII, R-E,57 Kms.	Not applicable	Yes	No					
	400 kV Ranganadi-Biswanath Charali 1	POWERGRID	**7/21/2016 10:16**	Ranganadi	DP, ZII, R-E,220 Kms.	Not applicable	No	No			7/21/2016 11:19	No SPS	
				Biswanath Charali	No tripping	Not applicable	No	No					
	400 kV Ranganadi-Biswanath Charali 1I	POWERGRID	**7/21/2016 10:16**	Ranganadi	DP, ZII, R-E,219 Kms.	Not applicable	No	No			7/21/2016 11:33	No SPS	
				Biswanath Charali	No tripping	Not applicable	No	No					
	400 kV Misa - Balipara I	POWERGRID	**7/21/2016 10:16**	Misa	DP, ZII, R-E,120 Kms.	Not applicable	Yes	No			7/21/2016 10:53	No SPS	
				Balipara	DP, ZIV, R-E	Not applicable	No	No					
	400 kV Misa -Balipara II	POWERGRID	**7/21/2016 10:16**	Misa	DP, ZII, R-E,120.5 Kms.	Not applicable	Yes	No			7/21/2016 11:05	No SPS	
				Balipara	DP, ZIV, R-E	Not applicable	No	No					
	Ranganadi U 1	NEEPCO	**7/21/2016 10:16**	Ranganadi	Tripped due to loss of evacuation path	Not applicable	No	No	Loss of Generation: 330		7/21/2016 11:15	No SPS	0.324
	Ranganadi U 2	NEEPCO		Ranganadi		Not applicable	No	No			7/21/2016 12:19	No SPS	
	Ranganadi U 3	NEEPCO		Ranganadi		Not applicable	No	No			7/21/2016 12:41	No SPS	

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	FIR by the constituent	Yes(POWERGRID)											
	Brief Description of the Incident	Khupi area,Ziro area, Lekhi area & Capital area of Arunachal Pradesh and Pavoi, Gohpur & Depota area of Assam were connected with rest of NER Grid through 400 kV Balipara - Bongaigaon I,II & IV lines, 400 kV Balipara-Misa I & II and +/- 800 kV Biswanath Charali-Agra pole I (Bus Coupler CB of Gohpur,132 kV Rangia-Sipajhar line & 132 kV Rangia-Rowta line kept open for system requirement and 400 kV Balipara - Bongaigaon III kept open to contain over voltage since 05:55 Hrs on 21.07.16). At 10:16 Hrs on 21.07.16, 400 kV Balipara - Bongaigaon I,II & IV lines, 400 kV Balipara-Biswanath Charali I,II,III&IV lines, 400 kV Balipara-Misa I&II lines and 400 kV Ranganadi-Biswanath Charali I&II lines tripped. Due to tripping of these elements, Khupi area, Ziro area, Lekhi area & Capital area of Arunachal Pradesh and Pavoi, Gohpur & Depota area of Assam were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2056 MW , Antecedent Load : 1652 MW)**											
	Root Cause	No trace of reason for Bus-fault found by inspection at Balipara by POWERGRID. Suspected reasons are due to short circuit caused by Monkey (found to be climbing in Gantry in CCTV footage) , or due to the earth fault caused by construction work. But, fault in one bus should not have caused tripping of both buses. Problems rectified by PG in co-ordination with CC, POWERGRID.											
	Remedial Measures	Balipara end bus-fault was seen by Ranganadi, which should not happen. Ranganadi end Distance Protection relay time delay setting to be modified from 350 msec to 500 msec, since Rangandi -Biswanath Charali length is more than Biswanath Charali - Balipara line.Sleeving of of 33 kV system ICT at Balipara was suggested in PCCM. Also hiring a skilled Langur to avoid tripping of elements due to monkeys was suggested.											

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3	132 kV Lekhi - Nirjuli	DoP AP & POWERGRID	**7/28/2016 11:20**	Lekhi	Earth Fault	Not applicable	No	No	Loss of Load: 26	GD-I	7/28/2016 11:39	No SPS	0.011
				Nirjuli	No tripping	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Nirjuli area of Arunachal Pradesh and Gohpur Area(Gohpur Load) of Assam were connected with rest of NER Grid through 132 kV Lekhi - Nirjuli line (Bus Coupler CB of Gohpur kept open for system requirement). At 11:20 Hrs on 28.07.16, 132 kV Ranganadi-Lekhi line tripped. Due to tripping of this element, Nirjuli area of Arunachal Pradesh and Gohpur Area(Gohpur Load) of Assam were separated from rest of NER Grid and subsequently collapsed due to no source in this area.										
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2186 MW , Antecedent Load : 1553 MW)**											
	Root Cause	On Tower no. 1,2,3,4, near the LILO section of 132 kV Ranganadi-Nirjuli line at Lekhi, vegetation problem is there due to large trees. Some trees were also found to be burnt due to fault. But, cutting of the trees could not be done since owners need to be compensated.Due to fault in downstream of Nirjuli											
	Remedial Measures	Presently PSM on Lekhi-Nirjuli is 0.6 with CT ratio 600/1. After tripping of Ranganadi - Lekhi, actual overcurrent (>360 A) occurs as total load are around 85 MW (35 MW-Chimpu, 50 MW - Nirjuli). PSM will be modified by POWERGRID after seeing available margin in conductor as per Tx Planning Criteria.											

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4	132 kV Balipara - Khupi	NEEPCO	**7/1/2016 12:24**	Balipara	DP, ZI, Y-E, 49.19 KM	Not Furnished	No	No	Loss of Load: 14	GD-I	7/1/2016 12:46	No SPS	0.013
				Khupi	No tripping	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Khupi area of Arunachal Pradesh was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 12:24 Hrs on 01.07.16 , 132 kV Balipara- Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1922 MW , Antecedent Load : 1603 MW)**											
	Root Cause	Due to vegetation problem											
	Remedial Measures	NEEPCO applied for shutdown to clear vegetation problem.											
5	132 kV Balipara - Khupi	NEEPCO	**7/2/2016 21:41**	Balipara	DP, ZI, Y-E, 63 KM	Not Furnished	No	No	Loss of Load: 21	GD-I	7/2/2016 22:02	No SPS	0.018
				Khupi	Not Furnished	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Khupi area of Arunachal Pradesh was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 21:41 Hrs on 02.07.16 , 132 kV Balipara- Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1883 MW , Antecedent Load : 2035 MW)**											

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	Root Cause	Due to vegetation problem											
	Remedial Measures	NEEPCO applied for shutdown to clear vegetation problem.											
6	132 kV Balipara - Khupi	NEEPCO	**7/5/2016 22:04**	Balipara	Not Furnished	Not Furnished	No	No	Loss of Load: 21	GD-I	7/5/2016 22:34	No SPS	0.016
				Khupi	Not Furnished	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Khupi area of Arunachal Pradesh was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 22:04 Hrs on 05.07.16, 132 kV Balipara- Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2163 MW , Antecedent Load : 1948 MW)**											
	Root Cause	Due to vegetation problem											
	Remedial Measures	NEEPCO applied for shutdown to clear vegetation problem.											
7	132 kV Balipara - Khupi	NEEPCO	**7/6/2016 10:30**	Balipara	DP, ZII, B-E, 56.39 KM	Not Furnished	No	No	Loss of Load: 21	GD-I	7/6/2016 11:11	No SPS	0.02
				Khupi	No Indication	Not Furnished	No	No					
	FIR by the constituent	No											

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Brief Description of the Incident	Khupi area of Arunachal Pradesh was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 10:30 Hrs on 06.07.16, 132 kV Balipara- Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2157 MW , Antecedent Load : 1657 MW)**											
	Root Cause	Due to vegetation problem											
	Remedial Measures	NEEPCO applied for shutdown to clear vegetation problem.											
8	132 kV Balipara - Khupi	NEEPCO	**7/8/2016 9:24**	Balipara	DP, ZI, R-Y-E,34.8 Kms.	Not Furnished	No	No	Loss of Load: 22	GD-I	7/8/2016 20:19	No SPS	0.262
				Khupi	Not Furnished	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Khupi area of Arunachal Pradesh was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 09:24 Hrs on 08.07.16, 132 kV Balipara- Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2041 MW , Antecedent Load : 1736 MW)**											
	Root Cause	Due to vegetation problem											
	Remedial Measures	NEEPCO applied for shutdown to clear vegetation problem.											

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
9	132 kV Balipara - Khupi	NEEPCO	**7/18/2016 12:22**	Balipara	DP, ZI, R-Y-E, 40 Kms.	Not Furnished	No	No	Loss of Load: 20	GD-I	7/18/2016 12:53	No SPS	0.048
				Khupi	Not Furnished	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Khupi area of Arunachal Pradesh was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 12:22 Hrs on 18.07.16, 132 kV Balipara- Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2099 MW , Antecedent Load : 1657 MW)**											
	Root Cause	Due to vegetation problem											
	Remedial Measures	NEEPCO applied for shutdown to clear vegetation problem.											
10	132 kV Balipara - Khupi	NEEPCO	**7/22/2016 13:05**	Balipara	DP, ZI, Y-E, 38.8 Kms.	Not Furnished	No	No	Loss of Load: 21	GD-I	7/23/2016 15:58	No SPS	0.454
				Khupi	Not Furnished	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Khupi area of Arunachal Pradesh was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 13:05 Hrs on 22.07.16, 132 kV Balipara- Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1963 MW , Antecedent Load : 1538 MW)**											

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Root Cause	Due to vegetation problem											
	Remedial Measures	NEEPCO applied for shutdown to clear vegetation problem.											
11	132 kV Balipara - Khupi	NEEPCO	**7/31/2016 12:59**	Balipara	Back Up Earth Fault	Not applicable	No	No	Loss of Load: 20	GD-I	7/31/2016 13:26	No SPS	0.023
				Khupi	Not Furnished	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Khupi area of Arunachal Pradesh was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 12:59 Hrs on 31.07.16, 132 kV Balipara- Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2223 MW , Antecedent Load : 1734 MW)**											
	Root Cause	Due to vegetation problem											
	Remedial Measures	NEEPCO applied for shutdown to clear vegetation problem.											
12	132 kV Balipara - Khupi	NEEPCO	**8/12/2016 1:27**	Balipara	DP, ZI, Y-B-E, 19.4 Kms.	Not Furnished	No	No	Loss of Load: 20	GD-I	8/12/2016 2:01	No SPS	0.017
				Khupi	Not Furnished	Not Furnished	No	No					
	FIR by the constituent	No											

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Brief Description of the Incident	Khupi area of Arunachal Pradesh was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 01:27 Hrs on 12.08.16 , 132 kV Balipara- Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1883 MW , Antecedent Load : 1932 MW)**											
	Root Cause	Due to vegetation problem											
	Remedial Measures	NEEPCO applied for shutdown to clear vegetation problem.											
13	132 kV Balipara - Khupi	NEEPCO	**8/21/2016 14:36**	Balipara	Directional Over Current	Not applicable	No	No	Loss of Load: 21	GD-I	8/21/2016 15:48	No SPS	0.031
				Khupi	No tripping	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Khupi area of Arunachal Pradesh was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 14:36 Hrs on 21.08.16 , 132 kV Balipara- Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1940 MW , Antecedent Load : 1692 MW)**											
	Root Cause	Due to vegetation problem											
	Remedial Measures	NEEPCO applied for shutdown to clear vegetation problem.											

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
14	132 kV Balipara - Khupi	NEEPCO	**8/21/2016 20:56**	Balipara	DP, ZI, Y-B-E, 53 Kms.	Not Furnished	No	No	Loss of Load: 16	GD-I	8/21/2016 21:06	No SPS	0.006
				Khupi	No tripping	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Khupi area of Arunachal Pradesh was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 20:56 Hrs on 21.08.16 , 132 kV Balipara- Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2269 MW , Antecedent Load : 2028 MW)**											
	Root Cause	Due to vegetation problem											
	Remedial Measures	NEEPCO applied for shutdown to clear vegetation problem.											
15	132 kV Balipara - Khupi	NEEPCO	**8/21/2016 16:12**	Balipara	Directional Over Current	Not applicable	No	No	Loss of Load: 10	GD-I	8/21/2016 17:09	No SPS	0.011
				Khupi	No tripping	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Khupi area of Arunachal Pradesh was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 16:12 Hrs on 21.08.16 , 132 kV Balipara- Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16														
क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1943 MW , Antecedent Load : 1715 MW)**											
	Root Cause	Due to vegetation problem											
	Remedial Measures	NEEPCO applied for shutdown to clear vegetation problem.											
16	132 kV Balipara - Khupi	NEEPCO	**8/22/2016 1:23**	Balipara	DP, ZI, R-Y-B, 31.56 Kms.	Not Furnished	No	No	Loss of Load: 18	GD-I	8/22/2016 1:35	No SPS	0.007
				Khupi	Not Furnished	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Khupi area of Arunachal Pradesh was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At 01:23 Hrs on 22.08.16, 132 kV Balipara- Khupi line tripped. Due to tripping of this element, Khupi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1778 MW , Antecedent Load : 1724 MW)**											
	Root Cause	Due to vegetation problem											
	Remedial Measures	NEEPCO applied for shutdown to clear vegetation problem.											

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
17	132 kV Ranganadi - Lekhi	POWERGRID & DoP AP	**8/4/2016 13:07**	Ranganadi	Over current	Not applicable	No	No	Loss of Load: 40	GD-I	8/4/2016 13:34	No SPS	0.02
				Lekhi	No tripping	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Lekhi area & Capital area of Arunachal Pradesh and Gohpur Area of Assam were connected with rest of NER Grid through 132 kV Ranganadi-Lekhi line (Bus Coupler CB of Gohpur kept open for system requirement). At 13:07 Hrs on 04.08.16, 132 kV Ranganadi-Lekhi line tripped. Due to tripping of this element, Lekhi area & Capital area & Gohpur area were separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1910 MW , Antecedent Load : 1774 MW)**											
	Root Cause	As informed by POWERGRID, relay flags are as follows: Lekhi - Over current,Ranganadi - No tripping.											
	Remedial Measures	DR outputs of Lekhi end to be submitted by POWERGRID to conclude the root cause. Lekhi & Ranganadi over current settings to be reviewed.Directional feature of Over Current as well as Earth fault relay to be enabled at Lekhi.											

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
18	132 kV Silchar - Dullavcherra	POWERGRID & AEGCL	**8/4/2016 23:09**	Silchar	DP, ZI, Y-E, 25.85 Kms.	Not Furnished	No	No	Loss of Load: 34	GD-I	8/4/2016 23:23	No SPS	0.009
				Dullavcherra	No tripping	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Dullavcherra area of Assam was connected with rest of NER Grid through 132 kV Silchar- Dullavcherra line(132 kV Dullavcherra-Dharmanagar line kept open for system requirement). At 23:09 Hrs on 04.08.16, 132 kV Silchar- Dullavcherra line tripped. Due to tripping of this element, Dullavcherra area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1950 MW , Antecedent Load : 2157 MW)**											
	Root Cause	Fault was beyond jurisdiction of POWERGRID(POWERGRID portion up to 17 Kms).Root cause could not be concluded due to DR unavailability.											
	Remedial Measures	AEGCL to furnish patrolling report. POWERGRID to submit DR output of Silchar end.											
19	132 kV Silchar - Dullavcherra	POWERGRID & AEGCL	**8/31/2016 0:51**	Silchar	DP, ZI, Y-E, 19.52 Kms.	Not Furnished	No	No	Loss of Load: 27	GD-I	8/31/2016 1:05	No SPS	0.009
				Dullavcherra	Not Furnished	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Dullavcherra area of Assam was connected with rest of NER Grid through 132 kV Silchar- Dullavcherra line(132 kV Dullavcherra-Dharmanagar line kept open for system requirement). At 00:51 Hrs on 31.08.16,132 kV Silchar- Dullavcherra line tripped. Due to tripping of this element, Dullavcherra area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16													
क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Antecedent Conditions of NER Grid	**(Antecedent Generation : MW , Antecedent Load : MW)**											
	Root Cause	Fault was beyond jurisdiction of POWERGRID(POWERGRID portion up to 17 Kms).Root cause could not be concluded due to DR unavailability.											
	Remedial Measures	AEGCL to furnish patrolling report. POWERGRID to submit DR output of Silchar end.											

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
20	132 kV Haflong(PG) - Haflong	AEGCL	**8/24/2016 5:15**	Haflong(PG)	Earth Fault	Not applicable	No	No	Loss of Load: 1	GD-I	8/24/2016 6:14	No SPS	0.001
				Haflong	Over current	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Haflong area of Assam was connected with rest of NER Grid through 132kV Haflong (AS)-Haflong(PG) line. At 05:15Hr on 24.08.16,132kV Haflong (AS)-Haflong(PG) line tripped. Due to tripping of this element, Haflong area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1805 MW , Antecedent Load : 1958 MW)**											
	Root Cause	Downstream fault											
	Remedial Measures	To be discussed in PCCM											
21	132 kV Khandong - Umrangso	POWERGRID & AEGCL	**8/28/2016 12:06**	Khandong	Earth Fault	Not applicable	No	No	Loss of Load: 5	GD-I	8/28/2016 12:57	No SPS	0.003
				Umrangso	Loss of Voltage	Not applicable	No	No					
	132 kV Haflong- Umrangso	POWERGRID & AEGCL		Haflong	Loss of Voltage	Not applicable	No	No			8/28/2016 12:45	No SPS	
				Umrangso	Loss of Voltage	Not applicable	No	No					
	FIR by the constituent	No											

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16													
क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Brief Description of the Incident	Umrangso area of Assam was connected with rest of NER Grid through 132 kV Khandong-Umrangsho line & 132 kV Haflong-Umrangsho line .At 12:06 Hrs on 28.08.16, 132 kV Khandong-Umrangsho line & 132 kV Haflong-Umrangsho line tripped. Due to tripping of these elements, Umrangsho area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1889 MW , Antecedent Load : 1819 MW)**											
	Root Cause	Fault due to vegetation problem.											
	Remedial Measures	Vegetation clearance to be done by POWERGRID & AEGCL.Patrolling report to be submitted and Status of vegetation clearance to be reported by POWERGRID & AEGCL.											

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16													
क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16													
क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
22	132 kV Imphal (PG) - Imphal (MA) I	POWERGRID	7/30/2016 12:39	Imphal (PG)	No tripping	Not applicable	No	No	Loss of Load: 26	GD-I	7/30/2016 12:59	No SPS	0.013
				Imphal	Earth Fault	Not applicable	No	No					
	132 kV Imphal (PG) - Imphal (MA) II	POWERGRID		Imphal (PG)	No tripping	Not applicable	No	No			7/30/2016 12:59	No SPS	
				Imphal	Earth Fault	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Capital area & Karong area of Manipur were connected with rest of NER Grid through 132 kV Imphal-Imphal I & II lines (132 kV Kakching-Kongba line & 132 kV Karong-Kohima line kept open for system requirement). At 12:39 Hrs on 30.07.16, 132 kV Imphal-Imphal I & II lines tripped. Due to tripping of these elements, Capital area & Karong area were separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2190 MW , Antecedent Load : 1804 MW)**											
	Root Cause	There was no tripping of 132 kV Imphal (PG) - Imphal (MA) I&II lines as informed by PG.											
	Remedial Measures	Karong CB has been attended by PG.Reason for tripping of Transformer at Imphal(MA) to be furnished by MePTCL.Relay coordination has to be done by MSPCL in consultation with POWERGRID											

List of Grid Disturbances in North-Eastern Regional Grid during July'16-August'16														
क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU

List of Grid Disturbances in North-Eastern Regional Grid during January 2016

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
23	132 kV Loktak - Ningthoukhong	MSPCL	**8/9/2016 6:12**	Loktak	DP, ZIII, R-E, 38.28 Kms.	Not applicable	Yes	No	Loss of Load: 30	GD-I	8/9/2016 7:32	No SPS	0.044
				Ningthoukhong	No Indication	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Ningthoukhong area of Manipur was connected with rest of NER Grid through 132 kV Loktak-Ningthoukhong line (132 kV kakching-Kongba line & 132 kV Imphal(PG)-Ningthoukhong line kept open for system constraint). At 06:12 Hrs on 09.08.16, 132 kV Loktak-Ningthoukhong line tripped. Due to tripping of this element, Ningthoukhong area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1849 MW , Antecedent Load : 1337 MW)**											
	Root Cause	Likely due to downstream fault in Manipur system.											
	Remedial Measures	To be discussed in PCCM											
24	132 kV Loktak - Ningthoukhong	MSPCL	**8/12/2016 9:35**	Loktak	DP, ZII, B-E, 23.96 Kms.	Not applicable	Yes	No	Loss of Load: 22	GD-I	8/12/2016 11:24	No SPS	0.04
				Ningthoukhong	No tripping	Not applicable	NA	NA					
	FIR by the constituent	No											
	Brief Description of the Incident	Ningthoukhong area of Manipur was connected with rest of NER Grid through 132 kV Loktak-Ningthoukhong line (132 kV kakching-Kongba line & 132 kV Imphal(PG)-Ningthoukhong line kept open for system constraint). At 09:35 Hrs on 12.08.16, 132 kV Loktak-Ningthoukhong line tripped. Due to tripping of this element, Ningthoukhong area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											

List of Grid Disturbances in North-Eastern Regional Grid during January 2016													
क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1751 MW , Antecedent Load : 1688 MW)**											
	Root Cause	Likely due to downstream fault in Manipur system.											
	Remedial Measures	To be discussed in PCCM											
25	132 kV Loktak - Ningthoukhong	MSPCL	**8/21/2016 0:28**	Loktak	Over current,R-Y-B phase	Not applicable	No	No	Loss of Load: 8	GD-I	8/21/2016 7:10	No SPS	0.057
				Ningthoukhong	Not Furnished	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Ningthoukhong area of Manipur was connected with rest of NER Grid through 132 kV Loktak-Ningthoukhong line (132 kV kakching-Kongba line & 132 kV Imphal(PG)-Ningthoukhong line kept open for system requirement). At 00:28 Hrs on 21.08.16, 132 kV Loktak-Ningthoukhong line tripped. Due to tripping of this element, Ningthoukhong area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1768 MW , Antecedent Load : 1777 MW)**											
	Root Cause	Likely due to Phase to Phase fault in the the line or downstream of Ningthoukhong.											
	Remedial Measures	To be discussed in PCCM											

List of Grid Disturbances in North-Eastern Regional Grid during January 2016													
क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU

List of Grid Disturbances in North-Eastern Regional Grid during January 2016

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	7/5/2016 13:21	Khliehriat (PG)	DP, ZI, R-Y-B, 79.2 km	Not Furnished	No	No	Loss of Load: 88	GD-I	7/5/2016 13:47	No SPS	0.006
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL		Khliehriat (PG)	DP, ZI, R-Y-B, 68 km	Not Furnished	No	No			7/5/2016 13:49	No SPS	
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV NEIGRIHMS - Khliehriat (ME)	MePTCL		NEIGRIHMS	No tripping	Not Furnished	No	No			7/5/2016 13:25	No SPS	
				Khliehriat	Earth Fault	Not Furnished	No	No					
	132 kV Mustem-Khliehriat	MePTCL		Mustem	No tripping	Not Furnished	No	No			7/5/2016 13:31	No SPS	
				Khliehriat	DP, ZII, R-Y-B, 16.53 Kms	Not Furnished	No	No					
	132 kV NEHU - NEIGRIHMS	MePTCL		NEHU	Earth Fault	Not Furnished	No	No			7/5/2016 13:38	No SPS	
				NEIGRIHMS	No tripping	Not Furnished	No	No					
	Umiam Stg I U 2	MePGCL		Umiam Stg I	Generator O/C, under Volatge 86C.	Not applicable	No	No			7/5/2016 13:30	No SPS	
	Umiam Stg I U 3	MePGCL		Umiam Stg I	Generator O/C, 86C.	Not applicable	No	No			7/5/2016 13:35	No SPS	
	Umiam Stg I U 4	MePGCL		Umiam Stg I	Generator O/C, 86C.	Not applicable	No	No			7/5/2016 13:40	No SPS	

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26	Umiam Stg II U 1	MePGCL	**7/5/2016 13:21**	Umiam Stg II	Generator under voltage.	Not applicable	No	No	Loss of Generation: 145	GD-I	7/5/2016 13:32	No SPS	0.027
	Umiam Stg II U 2	MePGCL		Umiam Stg II	Generator under voltage.	Not applicable	No	No			7/5/2016 13:40	No SPS	
	Leshka U 1	MePGCL		Leshka	86A, 86B, 86FT.	Not applicable	No	No			7/5/2016 15:25	No SPS	
	Leshka U 2	MePGCL		Leshka	86A, 86B, 86FT.	Not applicable	No	No			7/5/2016 14:32	No SPS	
	Leshka U 3	MePGCL		Leshka	86A, 86B, 86FT.	Not applicable	No	No			7/5/2016 14:34	No SPS	
	FIR by the constituent	Yes (Meghalaya)											
	Brief Description of the Incident	Khliehriat area (includes Khliehriat, Mustem, NEIGRIHMS, NEHU, Umiam, Mawlai, Mawphlang and Nongstoin loads) of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines (132 kV Khliehriat-Lumnsnong line, Nongstoin - Nangalbibra line and 132 kV Umium Stg I - Umium Stg III I&II lines kept open for system requirement). At 13:21 Hrs on 05.07.16 ,132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines,132 kV NEIGRIHMS - Khliehriat (ME) line,132 kV Mustem-Khliehriat line and 132 kV NEHU - NEIGRIHMS line tripped. Due to tripping of these elements, Khleihriat area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2131 MW , Antecedent Load : 1554 MW)**											
	Root Cause	Fault likely due to bampoo touching in 132 kV NEHU - NEIGRIHMS line as informed by MePTCL.											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Remedial Measures	MePTCL to confirm whether Meghalaya has installed Numerical relays on their feeders in next PCC meeting. Installation of Numerical relays on 132 kV Khliehriat (PG) - Leshka (ME) I&II feeders could not be completed due to non-availability of shutdown of these feeders as Leshka generation is full at this time. Matter referred to PCC meeting.											
27	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**7/30/2016 13:42**	Khliehriat (PG)	DP, ZI, B-E, 16.58 Kms.	Not Furnished	No	No	Loss of Load: 24	GD-I	7/30/2016 14:17	No SPS	0.004
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Khliehriat (PG) - Khliehriat (MePTCL) II	MePTCL		Khliehriat (PG)	DP, ZI, B-E, 10.76 Kms.	Not Furnished	No	No			7/30/2016 14:18	No SPS	
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Mustem-NEHU	MePTCL	**7/30/2016 13:42**	Mustem	Back Up Over Current	Not applicable	No	No	Loss of Load: 24	GD-I	7/30/2016 14:05	No SPS	0.004
				NEHU	No tripping	Not applicable	No	No					
	132 kV NEHU - NEIGRIHMS	MePTCL		NEHU	Over current	Not applicable	No	No			7/30/2016 13:52	No SPS	
				NEIGRIHMS	No tripping	Not applicable	No	No					
	Leshka U 1	MePGCL		Leshka	Over Frequency	Not applicable	No	No	Loss of Generation: 126		7/30/2016 15:29	No SPS	0.181
	Leshka U 2	MePGCL		Leshka	Over Frequency	Not applicable	No	No			7/30/2016 15:09	No SPS	
	Leshka U 3	MePGCL		Leshka	Over Frequency	Not applicable	No	No			7/30/2016 15:15	No SPS	
	FIR by the constituent	Yes(Meghalaya)											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Brief Description of the Incident	Khliehriat area of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines ,132 kV Mustem-NEHU line & 132 kV NEIGRIHMS - NEHU line (132 kV Khliehriat-Lumnsnong line kept open for system requirement). At 13:42 Hrs on 30.07.16 ,132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV Mustem-NEHU line & 132 kV NEIGRIHMS - NEHU line tripped. Due to tripping of these elements, Khleihriat area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.												
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2182 MW , Antecedent Load : 1797 MW)**											
	Root Cause	Fault likely on account of lightning.											
	Remedial Measures	MePTCL to inform the status of substation earthing.After completing S/S earthing,tower footing resistance to be measured.MePTCL to install Tower LA as these lines tripped many times due to lightning fault.											
	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**7/31/2016 12:00**	Khliehriat (PG)	DP, ZI, R-Y-B-E, 46.2 Kms.	Not Furnished	No	No	Loss of Load: 22	GD-I	7/31/2016 12:23	No SPS	0.001
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Khliehriat (PG) - Khliehriat (MePTCL) II	MePTCL		Khliehriat (PG)	DP, ZI, R-Y-B-E, 26.4 Kms.	Not Furnished	No	No			7/31/2016 12:24	No SPS	
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Leshka - Khleihriat (ME) I	MePTCL		Leshka	DP, ZI, R-E	Not Furnished	No	No			7/31/2016 12:20	No SPS	
				Khliehriat (ME)	No tripping	Not Furnished	No	No					
	132 kV Leshka - Khleihriat (ME) II	MePTCL		Leshka	DP, ZI, R-E	Not Furnished	No	No			7/31/2016 12:13	No SPS	
				Khliehriat (ME)	Over current	Not Furnished	No	No					

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28	132 kV NEIGRIHMS - Khliehriat (ME)	MePTCL		NEIGRIHMS	Earth Fault	Not Furnished	No	No			7/31/2016 12:12	No SPS	
				Khliehriat (ME)	No tripping	Not Furnished	No	No					
	132 kV Mustem-NEHU	MePTCL		Mustem	Earth Fault	Not Furnished	No	No			7/31/2016 12:05	No SPS	
				NEHU	No tripping	Not Furnished	No	No					
	Leshka U 1	MePGCL	7/31/2016 12:00	Leshka	Over Frequency	Not applicable	No	No	Loss of Generation: 126	GD-I	7/31/2016 13:33	No SPS	0.092
	Leshka U 2	MePGCL		Leshka	Over Frequency	Not applicable	No	No			7/31/2016 12:52	No SPS	
	Leshka U 3	MePGCL		Leshka	Over Frequency	Not applicable	No	No			7/31/2016 13:09	No SPS	
	FIR by the constituent	Yes(Meghalaya)											
	Brief Description of the Incident	Khliehriat area of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines ,132 kV Mustem-NEHU line & 132 kV NEIGRIHMS - Khliehriat (ME) line (132 kV Khliehriat-Lumnsnong line kept open for system requirement). At 12:08 Hrs on 31.07.16 ,132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines ,132 kV Mustem-NEHU line & 132 kV NEIGRIHMS - Khliehriat (ME) line tripped. Due to tripping of these elements, Khleihriat area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2226 MW , Antecedent Load : 1750 MW)**											
	Root Cause	Fault likely on account of lightning. Fault was in 132 kV Leshka - Khleihriat (ME) D/C lines. This fault picked up by Khllt (PG) end.											
	Remedial Measures	MePTCL to inform the status of substation earthing.After completing S/S earthing,tower footing resistance to be measured.MePTCL to install Tower LA as these lines tripped many times due to lightning fault.											

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29	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	8/5/2016 21:06	Khliehriat (PG)	DP, ZI, R-Y-B-E, 20 Kms.	Not Furnished	No	No	Loss of Load: 43	GD-I	8/5/2016 21:33	No SPS	0.003
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL		Khliehriat (PG)	DP, ZI, R-Y-B-E, 15.64 Kms.	Not Furnished	No	No			8/5/2016 21:37	No SPS	
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Leshka - Khleihriat (ME) I	MePTCL		Leshka	DP, ZI, R-Y-B-E	Not Furnished	No	No			8/5/2016 21:18	No SPS	
				Khliehriat (ME)	No tripping	Not Furnished	No	No					
	132 kV Leshka - Khleihriat (ME) II	MePTCL		Leshka	DP, ZI, R-Y-B-E	Not Furnished	No	No			8/5/2016 21:38	No SPS	
				Khliehriat (ME)	Tripped,Indications not available	Not Furnished	No	No					
	132 kV NEHU - NEIGRIHMS	MePTCL		NEHU	No tripping	Not Furnished	No	No			8/5/2016 21:11	No SPS	
				NEIGRIHMS	Tripped,Indications not available	Not Furnished	No	No					
	132 kV Mustem-NEHU	MePTCL		Mustem	DP, ZI, R-Y-B-E, 42.8 Kms.	Not Furnished	No	No			8/5/2016 21:10	No SPS	
				NEHU	No tripping	Not Furnished	No	No					

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	Leshka U 2	MePGCL	8/5/2016 21:06	Leshka	Over frequency	Not applicable	No	No	Loss of Generation: 84	GD-I	8/5/2016 22:34	No SPS	0.067
	Leshka U 3	MePGCL		Leshka	Over frequency	Not applicable	No	No			8/5/2016 21:50	No SPS	
	FIR by the constituent	Yes(Meghalaya)											
	Brief Description of the Incident	Khliehriat area of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEHU - NEIGRIHMS line and 132 kV Mustem-NEHU line (132 kV Khliehriat-Lumnsnong line kept open for system requirement). At 21:06 Hrs on 05.08.16, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEHU - NEIGRIHMS line and 132 kV Mustem-NEHU line tripped. Due to tripping of these elements, Khleihriat area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1943 MW , Antecedent Load : 2454 MW)**											
	Root Cause	Most of the tripping are due to lightning as informed by MePTCL but could not be confirmed due to DR unavalability.											
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).											
	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID		Khliehriat (PG)	DP, ZI, R-Y-E, 8.524 Kms.	Not Furnished	No	No			8/8/2016 10:02	No SPS	
				Khliehriat(ME)	No tripping	Not Furnished	NA	NA					
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL		Khliehriat (PG)	DP, ZI, R-Y-E, 5.485 Kms.	Not Furnished	No	No			8/8/2016 10:03	No SPS	
				Khliehriat(ME)	No tripping	Not Furnished	NA	NA					

List of Grid Disturbances in North-Eastern Regional Grid during January 2016

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
30	132 kV Mustem-NEHU	MePTCL	**8/8/2016 9:25**	Mustem	DP, ZI, R-Y-B-E, 20.79 Kms.	Not Furnished	No	No	Loss of Load: 16	GD-I	8/8/2016 9:28	No SPS	0.001
				NEHU	No tripping	Not applicable	NA	NA					
	132 kV NEHU - NEIGRIHMS	MePTCL		NEHU	Trip Relay Operated	Lockout	No	No			8/8/2016 9:38	No SPS	
				NEIGRIHMS	No tripping	Not applicable	NA	NA					
	132 kV Khandong - Khliehriat(PG) I	POWERGRID		Khandong	No tripping	Not Furnished	No	No			8/8/2016 9:43	No SPS	
				Khliehriat(PG)	Earth Fault	Not Furnished	NA	NA					
	Leshka U 1	MePGCL	**8/8/2016 9:25**	Leshka	Over Frequency	Not applicable	No	No	Loss of Generation: 42		8/8/2016 10:01	No SPS	0.025
	FIR by the constituent	Yes(Meghalaya)											
	Brief Description of the Incident	Khliehriat area of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEHU - NEIGRIHMS line and 132 kV Mustem-NEHU line (132 kV Khliehriat-Lumnsnong line kept open for system requirement). At 09:25 Hrs on 08.08.16, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEHU - NEIGRIHMS line and 132 kV Mustem-NEHU line tripped. Due to tripping of these elements, Khleihriat area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1850 MW , Antecedent Load : 1627 MW)**											
	Root Cause	Most of the tripping are due to lightning as informed by MePTCL but could not be confirmed due to DR unavalability.											

List of Grid Disturbances in North-Eastern Regional Grid during January 2016

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).											
	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**8/15/2016 1:26**	Khliehriat (PG)	DP, ZII, R-Y-B-E, 45.3 Kms.	Not applicable	No	No	Loss of Load: 15	GD-I	8/15/2016 2:39	No SPS	0.004
				Khliehriat(ME)	No tripping	Not applicable	No	No					
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL		Khliehriat (PG)	DP, ZII, R-Y-B-E, 38.79 Kms.	Not applicable	No	No			8/15/2016 2:35	No SPS	
				Khliehriat(ME)	No tripping	Not applicable	No	No					
	132 kV Leshka - Khleihriat (ME) I	MePTCL	**8/15/2016 1:26**	Leshka	Earth fault	Not applicable	No	No		GD-I	8/15/2016 1:50	No SPS	0.004
				Khliehriat (ME)	No tripping	Not applicable	No	No					
	132 kV Leshka - Khleihriat (ME) II	MePTCL		Leshka	Earth fault	Not applicable	No	No			8/15/2016 1:50	No SPS	
				Khliehriat (ME)	Earth fault	Not applicable	No	No					
	132 kV Mustem-NEHU	MePTCL		Mustem	DP, 36 Kms.,Other inf. Not furnished	Not applicable	No	No			8/15/2016 1:45	No SPS	
				NEHU	No tripping	Not applicable	No	No					

List of Grid Disturbances in North-Eastern Regional Grid during January 2016

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
31	132 kV NEIGRIHMS - Khliehriat (ME)	MePTCL		NEIGRIHMS	Earth fault	Not applicable	No	No			8/15/2016 1:42	No SPS	
				Khliehriat	No tripping	Not applicable	No	No					
	Leshka U 1	MePGCL	**8/15/2016 1:26**	Leshka	86A, 86B, 86FT	Not applicable	No	No	Loss of Generation: 126	GD-I	8/15/2016 2:43	No SPS	0.162
	Leshka U 2	MePGCL		Leshka		Not applicable	No	No			8/15/2016 2:44	No SPS	
	Leshka U 3	MePGCL		Leshka		Not applicable	No	No			8/15/2016 2:52	No SPS	
	FIR by the constituent	Yes(Meghalaya)											
	Brief Description of the Incident	Khliehriat area of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEIGRIHMS - Khliehriat (ME) line and 132 kV Mustem-NEHU line (132 kV Khliehriat-Lumnsnong line kept open for system requirement). At 01:26 Hrs on 15.08.16, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEIGRIHMS - Khliehriat (ME) line and 132 kV Mustem-NEHU line tripped. Due to tripping of these elements, Khleihriat area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1820 MW , Antecedent Load : 1829 MW)**											
	Root Cause	Most of the tripping are due to lightning as informed by MePTCL but could not be confirmed due to DR unavalability.											
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).											

List of Grid Disturbances in North-Eastern Regional Grid during January 2016

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	8/15/2016 3:19	Khliehriat (PG)	DP, ZI, R-Y-B-E, 1.9 Kms.	Not Furnished	No	No	Loss of Load: 26	GD-I	8/15/2016 4:29	No SPS	0.003
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL		Khliehriat (PG)	DP, ZI, R-Y-B-E, 16.85 Kms.	Not Furnished	No	No			8/15/2016 11:13	No SPS	
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Khandong - Khliehriat(PG) I	POWERGRID		Khandong	DP, ZI, R-Y-B-E, 3.22 Kms.	Not Furnished	No	No			8/15/2016 4:20	No SPS	
				Khliehriat(PG)	DP, ZI, R-Y-B	Not Furnished	No	No					
	132 kV Leshka - Khleihriat (ME) I	MePTCL		Leshka	DP, ZI, R-Y-B	Not applicable	No	No			8/15/2016 4:10	No SPS	0.003
				Khliehriat (ME)	No tripping	Not applicable	No	No					
	132 kV Leshka - Khleihriat (ME) II	MePTCL		Leshka	DP, ZI, R-Y-B	Not applicable	No	No			8/15/2016 4:10	No SPS	
				Khliehriat (ME)	No tripping	Not applicable	No	No					
	132 kV Mustem-NEHU	MePTCL		Mustem	DP, 32 Kms.,Other Inf. Not furnished	Not applicable	No	No			8/15/2016 3:29	No SPS	

List of Grid Disturbances in North-Eastern Regional Grid during January 2016

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
32			8/15/2016 3:19	NEHU	No tripping	Not applicable	No	No		GD-I			
	132 kV NEHU - NEIGRIHMS	MePTCL		NEHU	Over Current	Not applicable	No	No			8/15/2016 3:32	No SPS	
				NEIGRIHMS	No tripping	Not applicable	No	No					
	Leshka U 1	MePGCL		Leshka	86A, 86B, 86FT	Not applicable	No	No	Loss of Generation: 126		8/15/2016 4:38	No SPS	0.166
	Leshka U 2	MePGCL				Not applicable	No	No			8/15/2016 4:53	No SPS	
	Leshka U 3	MePGCL				Not applicable	No	No			8/15/2016 6:35	No SPS	
	FIR by the constituent	Yes(Meghalaya)											
	Brief Description of the Incident	Khliehriat area of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEHU - NEIGRIHMS line and 132 kV Mustem-NEHU line (132 kV Khliehriat-Lumnsnong line kept open for system requirement). At 03:19 Hrs on 15.08.16, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEHU - NEIGRIHMS line and 132 kV Mustem-NEHU line tripped. Due to tripping of these elements, Khleihriat area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1813 MW , Antecedent Load : 1750 MW)**											
	Root Cause	Due to lightning as informed by MePTCL.DR also checked.											

List of Grid Disturbances in North-Eastern Regional Grid during January 2016

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.											
	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**8/15/2016 23:51**	Khliehriat (PG)	DP, ZI, R-Y-E, 27.14 Kms.	Not Furnished	No	No	Loss of Load: 19	GD-I	8/16/2016 0:21	No SPS	0.003
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL		Khliehriat (PG)	DP, ZI, R-Y-E, 88.53 Kms.	Not Furnished	No	No			8/16/2016 0:30	No SPS	
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Mustem-Khliehriat	MePTCL	**8/15/2016 23:51**	Mustem	No tripping	Not applicable	No	No			8/16/2016 0:03	No SPS	
				Khliehriat	Over Current	Not applicable	No	No					
	132 kV NEIGRIHMS - Khliehriat (ME)	MePTCL		NEIGRIHMS	Over Current	Not applicable	No	No			8/16/2016 0:08	No SPS	
				Khliehriat	No tripping	Not applicable	No	No					
	Leshka U 1	MePGCL	**8/15/2016 23:51**	Leshka	86A, 86B, 86FT	Not applicable	No	No	Loss of Generation: 126		8/16/2016 3:15	No SPS	0.077
	Leshka U 2	MePGCL		Leshka		Not applicable	No	No			Not Yet Restored	No SPS	

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Leshka U 3	MePGCL		Leshka		Not applicable	No	No			8/16/2016 0:28	No SPS	
	FIR by the constituent	Yes(Meghalaya)											
	Brief Description of the Incident	Khliehriat area of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEIGRIHMS - Khliehriat (ME) line and 132 kV Mustem-Khliehriat line (132 kV Khliehriat-Lumnsnong line kept open for system requirement). At 23:51 Hrs on 15.08.16, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEIGRIHMS - Khliehriat (ME) line and 132 kV Mustem-Khliehriat line tripped. Due to tripping of these elements, Khleihriat area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2261 MW , Antecedent Load : 1964 MW)**											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2013 MW , Antecedent Load : 1530 MW)**											
	Root Cause	Most of the tripping are due to lightning as informed by MePTCL but could not be confirmed due to DR unavalability.											
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).											
	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**8/18/2016 23:39**	Khliehriat (PG)	DP, ZI, Y-E, 110.3 Kms.	Not Furnished	No	No	Loss of Load: 25	GD-I	8/19/2016 0:08	No SPS	0.002
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Khliehriat (PG) -	MePTCL		Khliehriat (PG)	DP, ZI, Y-E, 36 Kms.	Not Furnished	No	No			8/19/2016 0:09	No SPS	

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Khliehriat (ME) II	MePTCL		Khliehriat(ME)	No tripping	Not Furnished	No	No			8/19/2016 0:03	No SPS	
33	132 kV Leshka - Khleihriat (ME) I	MePTCL	8/18/2016 23:39	Leshka	Earth fault	Not applicable	No	No		GD-I	8/18/2016 23:48	No SPS	0.002
				Khliehriat (ME)	No tripping	Not applicable	No	No					
	132 kV Leshka - Khleihriat (ME) II	MePTCL		Leshka	Earth fault	Not applicable	No	No			8/18/2016 23:48	No SPS	
				Khliehriat (ME)	No tripping	Not applicable	No	No					
	132 kV Mustem-NEHU	MePTCL		Mustem	Earth fault	Not applicable	No	No			8/18/2016 23:43	No SPS	
				NEHU	No tripping	Not applicable	No	No					
	132 kV NEIGRIHMS - Khliehriat (ME)	MePTCL		NEIGRIHMS	Over Current	Not applicable	No	No			8/18/2016 23:48	No SPS	
				Khliehriat	No tripping	Not applicable	No	No					
	Leshka U 1	MePGCL		Leshka	86A, 86B, 86FT & Over Frequency	Not applicable	No	No	Loss of Generation: 70		8/19/2016 0:14		0.041
	Leshka U 2	MePGCL		Leshka		Not applicable	No	No			8/19/2016 0:15		

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	FIR by the constituent	Yes(Meghalaya)											
	Brief Description of the Incident	Khliehriat area of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEIGRIHMS - Khliehriat (ME) line and 132 kV Mustem-NEHU line (132 kV Khliehriat-Lumnsnong line kept open for system requirement). At 23:39 Hrs on 18.08.16, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEIGRIHMS - Khliehriat (ME) line and 132 kV Mustem-NEHU line tripped. Due to tripping of these elements, Khleihriat area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1971 MW , Antecedent Load : 2010 MW)**											
	Root Cause	Most of the tripping are due to lightning as informed by MePTCL but could not be confirmed due to DR unavalability.											
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).											
	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**8/25/2016 9:23**	Khliehriat (PG)	DP, ZI, R-Y-E, 40.17 Kms.	Not Furnished	No	No	Loss of Load: 24	GD-I	8/25/2016 9:51	No SPS	0.003
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL		Khliehriat (PG)	DP, ZI, R-Y-E, 73 Kms.	Not Furnished	No	No			8/25/2016 9:51	No SPS	
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV NEHU - NEIGRIHMS	MePTCL	**8/25/2016 9:23**	NEHU	DP,Other info. Not furnished	Not applicable	No	No	Loss of Load: 24	GD-I	8/25/2016 9:37	No SPS	0.003
				NEIGRIHMS	No tripping	Not applicable	No	No					
	132 kV Mustem-NEHU	MePTCL		Mustem	Earth Fault	Not applicable	No	No			8/25/2016 9:29	No SPS	

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
34	132 kV Mustem-NEHU	MePTCL		NEHU	No tripping	Not applicable	No	No			8/25/2016 9:29	No SPS	
	FIR by the constituent	Yes(Meghalaya)											
	Brief Description of the Incident	Khliehriat area(Mustem,NEIGRIHMS & Khliehriat) of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEIGRIHMS - NEHU line and 132 kV Mustem-NEHU line (132kV Lumshnong- Panchgram line was under Shutdown from 10:00 Hrs on 24.08.16). At 09:23 Hrs on 25.08.16, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEIGRIHMS - NEHU line and 132 kV Mustem-NEHU line tripped. Due to tripping of these elements, Khleihriat area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.										
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1882 MW , Antecedent Load : 1955 MW)**											
	Root Cause	Most of the tripping are due to lightning as informed by MePTCL but could not be confirmed due to DR unavalability.											
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).											
	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**8/25/2016 13:16**	Khliehriat (PG)	DP, ZI, R-Y-E, 61 Kms.	Not Furnished	No	No	Loss of Load: 10	GD-I	8/25/2016 13:34	No SPS	0.001
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL		Khliehriat (PG)	DP, ZI, R-Y-E, 38 Kms.	Not Furnished	No	No			8/25/2016 13:35	No SPS	
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Mustem-NEHU	MePTCL		Mustem	Over current	Not applicable	No	No			8/25/2016 13:18	No SPS	
				NEHU	No tripping	Not applicable	No	No					

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
35	**FIR by the constituent**	Yes(Meghalaya)											
	Brief Description of the Incident	Khliehriat area (Mustem & Khliehriat) of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEIGRIHMS - NEHU line and 132 kV Mustem-NEHU line (132kV Lumshnong- Panchgram line was under Shutdown from 10:00 Hrs on 24.08.16). At 09:23 Hrs on 25.08.16, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEIGRIHMS - NEHU line and 132 kV Mustem-NEHU line tripped. Due to tripping of these elements, Khleihriat area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1878 MW , Antecedent Load : 1989 MW)**											
	Root Cause	Most of the tripping are due to lightning as informed by MePTCL but could not be confirmed due to DR unavalability.											
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).											
	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**8/28/2016 10:08**	Khliehriat (PG)	DP, ZI, B-E, 30.46 Kms.	Not Furnished	No	No	Loss of Load: 23	GD-I	8/28/2016 11:58	No SPS	0.002
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL		Khliehriat (PG)	DP, ZI, B-E, 36.47 Kms.	Not Furnished	No	No			8/28/2016 12:03	No SPS	
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV NEHU - NEIGRIHMS	MePTCL	**8/28/2016 10:08**	NEHU	DP,Other info. Not furnished	Not Furnished	No	No	Loss of Load: 23	GD-I	8/28/2016 10:11	No SPS	0.002
				NEIGRIHMS	No tripping	Not Furnished	No	No					
	132 kV Mustem-NEHU	MePTCL		Mustem	Earth Fault	Not Furnished	No	No			8/28/2016 10:15	No SPS	

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
36	132 kV Mustem-NEHU	MePTCL		NEHU	No tripping	Not Furnished	No	No			8/28/2016 10:15	No SPS	
	Leshka U 1	MePGCL		Leshka	Not Furnished	Not applicable	No	No	Loss of Generation: 35		8/28/2016 12:20	No SPS	0.071
	FIR by the constituent	Yes(Meghalaya)											
	Brief Description of the Incident	Khliehriat area (Mustem,NEIGRIHMS,Lumshnong & Khliehriat) of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEIGRIHMS - NEHU line and 132 kV Mustem-NEHU line (132kV Lumshnong- Khliehriat line kept open for system requirement). At 10:08 Hrs on 28.08.16, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV NEIGRIHMS - NEHU line and 132 kV Mustem-NEHU line tripped. Due to tripping of these elements, Khleihriat area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1901 MW , Antecedent Load : 1688 MW)**											
	Root Cause	Most of the tripping are due to lightning as informed by MePTCL but could not be confirmed due to DR unavalability.											
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).											
	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**8/24/2016 15:45**	Khliehriat (PG)	DP, ZI, R-E, 10.75 Kms.	Not Furnished	No	No	Loss of Load: 8	GD-I	8/24/2016 16:01	No SPS	0.006
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL		Khliehriat (PG)	DP, ZI, R-E, 7.435 Kms.	Not Furnished	No	No			8/24/2016 16:02	No SPS	
				Khliehriat(ME)	No tripping	Not Furnished	No	No					
	132 kV Khandong -	POWERGRID		Khandong	Over current	Not Furnished	No	No			8/24/2016 16:06	No SPS	

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
37	Khliehriat(PG) I	POWERGRID		Khliehriat(PG)	No tripping	Not Furnished	Yes	No			8/24/2016 16:06	No SPS	
	FIR by the constituent	Yes(Meghalaya)											
	Brief Description of the Incident	Khliehriat area (Mustem & Khliehriat) of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines. (132 kV Khliehriat-Lumnsnong line & 132 kV NEHU-Mustem line were kept open for system requirement and 132kV Khliehriat- NEIGRIHMS line was faulty since 12:23 Hrs of 23.08.16). At 15:45 Hrs on 24.08.16,132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines tripped. Due to tripping of these elements, Khleihriat area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.										
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1782 MW , Antecedent Load : 1836 MW)**											
	Root Cause	Most of the tripping are due to lightning as informed by MePTCL but could not be confirmed due to DR unavalability.											
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).											

List of Grid Disturbances in North-Eastern Regional Grid during January 2016

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
38	132 kV Lumshnong - Panchgram	MePTCL & AEGCL	**8/30/2016 11:10**	Lumshnong	DP, ZI, B-E, 34.37 Kms.	Not Furnished	No	No	Loss of Load: 7	GD-I	8/30/2016 18:55	No SPS	0.003
				Panchgram	DP, ZI, B-E, 16.4 Kms.	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Lumshnong area of Meghalaya was connected with rest of NER Grid through 132 kV Lumshnong - Panchgram line (132 kV Khliehriat-Lumnsnong line kept open for system requirement) . At 11:10 Hrs on 30.08.16, 132 kV Aizawl- Luangmual line tripped. Due to tripping of this element, Lumshnong area was separated from rest of NER Grid and subsequent collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : MW , Antecedent Load : MW)**											
	Root Cause	Fault in the line due to vegetation.											
	Remedial Measures	Vegetation clearance to be done by MePTCL & AEGCL.Patrolling report to be submitted and Status of vegetation clearance to be reported by MePTCL & AEGCL.											

List of Grid Disturbances in North-Eastern Regional Grid during January 2016													
क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
39	132 kV Badarpur - Kolasib	POWERGRID	**8/15/2016 1:15**	Badarpur	DP, ZII, R-B-E, 129.9 Kms.	Not applicable	Yes	No	Loss of Load: 7	GD-I	8/15/2016 1:34	No SPS	0.004
				Kolasib	No tripping	Not applicable	No	No					
	132 kV Aizawl - Kolasib	POWERGRID	**8/15/2016 1:15**	Aizawl	DP, ZII, R-B-E, 75.8 Kms.	Not applicable	No	No	Loss of Generation: 6		8/15/2016 1:42	No SPS	0.003
				Kolasib	No tripping	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Kolasib area of Mizoram was connected with rest of NER Grid through 132 kV Kolasib-Badarpur line & 132 kV Kolasib-Aizwal line. At 01:15 Hrs on 15.08.16, 132 kV Kolasib-Badarpur line & 132 kV Kolasib-Aizwal line tripped. Due to tripping of these elements, Kolasib area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1822 MW , Antecedent Load : 1850 MW)**											
	Root Cause	Due to fault in Kolasib downstream											
	Remedial Measures	Relay settings of Downstream stations to be furnished to POWERGRID by P&ED Mizoram. POWERGRID to review settings and suggests new settings to avoid tripping of in feeds to Mizoram.											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
40	132 kV Aizwal - Zuangtui	POWERGRID	**7/31/2016 5:45**	Aizawl	Over current	Not applicable	No	No	Loss of Load: 28	GD-I	7/31/2016 6:21	No SPS	0.022
				Zuangtui	Not Furnished	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Zuangtui area of Mizoram was connected with rest of NER Grid through 132 kV Aizawl- Zuangtui line. At 05:45 Hrs on 31.07.16 , 132 kV Aizawl- Zuangtui line tripped. Due to tripping of this element, Zuangtui area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2186 MW , Antecedent Load : 1632 MW)**											
	Root Cause	Likely due to phase -phase fault in downstream of Zuangtui											
	Remedial Measures	POWERGRID has already given the updated relay settings to Mizoram, which Mizoram is yet to implement (as on 28-Aug-16). Mizoram to implement soon.											
41	132 kV Aizwal - Zuangtui	POWERGRID	**7/31/2016 13:37**	Aizawl	Over current	Not applicable	No	No	Loss of Load: 28	GD-I	7/31/2016 14:06	No SPS	0.014
				Zuangtui	No tripping	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Zuangtui area of Mizoram was connected with rest of NER Grid through 132 kV Aizawl- Zuangtui line. At 13:37 Hrs on 31.07.16 , 132 kV Aizawl- Zuangtui line tripped. Due to tripping of this element, Zuangtui area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											

List of Grid Disturbances in North-Eastern Regional Grid during January 2016

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2235 MW , Antecedent Load : 1713 MW)**											
	Root Cause	Likely due to phase -phase fault in downstream of Zuangtui											
	Remedial Measures	POWERGRID has already given the updated relay settings to Mizoram, which Mizoram is yet to implement (as on 28-Aug-16). Mizoram to implement soon.											
42	132 kV Aizwal - Zuangtui	POWERGRID	**8/3/2016 8:40**	Aizawl	Over current	Not applicable	No	No	Loss of Load: 27	GD-I	8/3/2016 9:04	No SPS	0.01
				Zuangtui	Not Furnished	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Zuangtui area of Mizoram was connected with rest of NER Grid through 132 kV Aizawl- Zuangtui line. At 08:40 Hrs on 03.08.16, 132 kV Aizawl- Zuangtui line tripped. Due to tripping of this element, Zuangtui area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1957 MW , Antecedent Load : 1802 MW)**											
	Root Cause	Phase to phase downstream fault like earlier events. Likely due to far way nature of fault, distance protection could not operate.											
	Remedial Measures	Mizoram to implement relay settings suggested by POWERGRID.POWERGRID to use built-in over current feature in the Main Numerical relay instead of Electro Mechanical over current relay.											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
43	132 kV Doyang - Mokokchung(NA)	DoP Nagaland	**7/12/2016 2:14**	Doyang	Over current	Not applicable	No	No	Loss of Load: 23	GD-I	7/12/2016 2:52	No SPS	0.014
				Mokokchung(NA)	Over current	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Mokokchung area of Nagaland was connected with rest of NER Grid through 132 kV Doyang-Mokokchung (NA) line. (220 kV Mariani (PG)-Mokokchung (PG) I & II lines were out due to tower collapse at around 01:11 Hrs on 12.07.16, 132 kV Mokokchung(NA)-Marianai(AS) is under long outage & 66 kV Tuengsang-Likimro line kept open for system requirement). At 02:14 Hrs on 12.07.16, 132 kV Doyang-Mokokchung (NA) line tripped. Due to tripping of this element, Mokokchung area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.										
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1997 MW , Antecedent Load : 1827 MW)**											
	Root Cause	Likely due to phase -phase fault in downstream of Mokokchung end.											
	Remedial Measures	DoP Nagaland to check if their O/C relay at Mokokchung is directional or not.											
44	132 kV Doyang - Mokokchung(NA)	DoP Nagaland	**8/2/2016 12:20**	Doyang	DP, ZI, R-Y-E, 36.1 Kms.	Not Furnished	No	No	Loss of Load: 15	GD-I	8/2/2016 12:30	No SPS	0.003
				Mokokchung(NA)	Not Furnished	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Mokokchung area of Nagaland was connected with rest of NER Grid through 132 kV Doyang-Mokokchung (NA) line(220 kV Mokokchung(PG)-Marianai(PG) I & II lines were not in service due to tower collapse since 01:11 Hrs on 12.07.16, 132 kV Mokokchung(NA)-Marianai(AS) line is under long outage & 66 kV Tuengsang-Likimro line kept open for system requirement). At 12:20 Hrs on 02.08.16, 132 kV Doyang-Mokokchung (NA) line tripped. Due to tripping of this element, Mokokchung area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.										

List of Grid Disturbances in North-Eastern Regional Grid during January 2016													
क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1997 MW , Antecedent Load : 1596MW)**											
	Root Cause	Fault in the line. Nature of the fault could not be concluded due to DR unavailability.											
	Remedial Measures	NEEPCO to change static relay to Numerical relay or install separate DR in Doyang HEP so that proper analysis can be done for disturbances associated with Doyang HEP. Patrolling report associated to this event to be submitted by DoP Nagaland.											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
45	132 kV Dimapur (PG) - Dimapur (Nagaland) I	DoP Nagaland	**8/1/2016 10:12**	Dimapur (PG)	Earth Fault	Not applicable	No	No	Loss of Load: 49	GD-I	8/1/2016 10:35	No SPS	0.023
				Dimapur	Not Furnished	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Dimapur area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur (PG)-Dimapur (NA) I line(132 kV Dimapur (PG)-Dimapur (NA) II line is out since 18.04.16). At 10:12 Hrs on 01.08.16,132 kV Dimapur (PG)-Dimapur (NA) I line tripped. Due to tripping of this element, Dimapur area was separated from rest of NER Grid and subsequently collapsed due to no source in this area											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2097 MW , Antecedent Load : 1719 MW)**											
	Root Cause	Likely due to downstream vegetation fault											
	Remedial Measures	Circuit Breaker problem of Kohima feeder at Dimapur(PG) has been rectified. Normalization of 132 kV Dimapur (PG) - Dimapur (Nagaland) II line could not be done due to pending consent from DoP Nagaland.This issue to be discussed in next PCC. Downstream relay coordination to be done by DoP Nagaland. Relay settings of downstream stations to be submitted to POWERGRID by DoP Nagaland.Patrolling report to be submitted and Status of vegetation clearance to be reported by DoP Nagaland.											
46	132 kV Dimapur (PG) - Dimapur (Nagaland) I	DoP Nagaland	**8/11/2016 18:32**	Dimapur (PG)	Directional Over Current	Not applicable	No	No	Loss of Load: 52	GD-I	8/11/2016 18:45	No SPS	0.024
				Dimapur	Not Furnished	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Dimapur area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur (PG)-Dimapur (NA) I line(132 kV Dimapur (PG)-Dimapur (NA) II line is out since 18.04.16). At 18:32 Hrs on 11.08.16,132 kV Dimapur (PG)-Dimapur (NA) I line tripped. Due to tripping of this element, Dimapur area was separated from rest of NER Grid and subsequently collapsed due to no source in this area											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2185 MW , Antecedent Load : 2249 MW)**											
	Root Cause	Likely due to downstream vegetation fault											
	Remedial Measures	Circuit Breaker problem of Kohima feeder at Dimapur(PG) has been rectified. Normalization of 132 kV Dimapur (PG) - Dimapur (Nagaland) II line could not be done due to pending consent from DoP Nagaland.This issue to be discussed in next PCC. Downstream relay coordination to be done by DoP Nagaland. Relay settings of downstream stations to be submitted to POWERGRID by DoP Nagaland.Patrolling report to be submitted and Status of vegetation clearance to be reported by DoP Nagaland.											
47	132 kV Dimapur (PG) - Dimapur (Nagaland) I	DoP Nagaland	**8/15/2016 12:36**	Dimapur (PG)	Earth fault	Not applicable	No	No	Loss of Load: 54	GD-I	8/15/2016 15:14	No SPS	0.148
				Dimapur	Not Furnished	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Dimapur area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur (PG)-Dimapur (NA) I line(132 kV Dimapur (PG)-Dimapur (NA) II line is out since 18.04.16). At 12:36 Hrs on 15.08.16,132 kV Dimapur (PG)-Dimapur (NA) I line tripped. Due to tripping of this element, Dimapur area was separated from rest of NER Grid and subsequently collapsed due to no source in this area											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1945 MW , Antecedent Load : 1552 MW)**											
	Root Cause	Likely due to downstream vegetation fault											
	Remedial Measures	Circuit Breaker problem of Kohima feeder at Dimapur(PG) has been rectified. Normalization of 132 kV Dimapur (PG) - Dimapur (Nagaland) II line could not be done due to pending consent from DoP Nagaland.This issue to be discussed in next PCC. Downstream relay coordination to be done by DoP Nagaland. Relay settings of downstream stations to be submitted to POWERGRID by DoP Nagaland.Patrolling report to be submitted and Status of vegetation clearance to be reported by DoP Nagaland.											
				Dimapur (PG)	Earth fault	Not applicable	No	No					

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
48	132 kV Dimapur (PG) - Dimapur (Nagaland) I	DoP Nagaland	**8/15/2016 15:29**	Dimapur	B-Phase jumper snapped,No indication	Not applicable	No	No	Loss of Load: 63	GD-I	8/15/2016 17:26	No SPS	0.129
	FIR by the constituent	No											
	Brief Description of the Incident	Dimapur area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur (PG)-Dimapur (NA) I line(132 kV Dimapur (PG)-Dimapur (NA) II line is out since 18.04.16). At 15:29 Hrs on 15.08.16, 132 kV Dimapur (PG)-Dimapur (NA) I line tripped. Due to tripping of this element, Dimapur area was separated from rest of NER Grid and subsequently collapsed due tono source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1883 MW , Antecedent Load : 1661 MW)**											
	Root Cause	Likely due to jumper snapping											
	Remedial Measures	Circuit Breaker problem of Kohima feeder at Dimapur(PG) has been rectified. Normalization of 132 kV Dimapur (PG) - Dimapur (Nagaland) II line could not be done due to pending consent from DoP Nagaland.This issue to be discussed in next PCC. Downstream relay coordination to be done by DoP Nagaland. Relay settings of downstream stations to be submitted to POWERGRID by DoP Nagaland.											
49	132 kV Dimapur (PG) - Dimapur (Nagaland) I	DoP Nagaland	**8/25/2016 15:50**	Dimapur (PG)	Earth Fault	Not applicable	No	No	Loss of Load: 46	GD-I	8/25/2016 16:00	No SPS	0.038
				Dimapur	No tripping	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Dimapur area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur (PG)-Dimapur (NA) I line(132 kV Dimapur (PG)-Dimapur (NA) II line is out since 18.04.16). At 15:50 Hrs on 25.08.16,132 kV Dimapur (PG)-Dimapur (NA) I line tripped. Due to tripping of this element, Dimapur area was separated from rest of NER Grid and subsequently collapsed due to no source in this area											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1786 MW , Antecedent Load : 1660 MW)**											
	Root Cause	Likely due to vegetation fault in the line or downstream of Kohima											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID. Vegetation clearance to be done by DoP Nagaland.											
50	132 kV Dimapur (PG) - Dimapur (Nagaland) I	DoP Nagaland	**8/31/2016 15:55**	Dimapur (PG)	Earth Fault	Not applicable	No	No	Loss of Load: 57	GD-I	8/31/2016 16:14	No SPS	0.025
				Dimapur	No tripping	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Dimapur area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur (PG)-Dimapur (NA) I line(132 kV Dimapur (PG)-Dimapur (NA) II line is out since 18.04.16). At 15:55 Hrs on 31.08.16,132 kV Dimapur (PG)-Dimapur (NA) I line tripped. Due to tripping of this element, Dimapur area was separated from rest of NER Grid and subsequently collapsed due to no source in this area											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : MW , Antecedent Load : MW)**											
	Root Cause	Likely due to vegetation fault in the line or downstream of Kohima											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID. Vegetation clearance to be done by DoP Nagaland.											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
51	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**7/12/2016 12:17**	Dimapur (PG)	DP, ZI, B-E	Not Furnished	No	No	Loss of Load: 24 Generation Loss: 24	GD-I	7/12/2016 12:30	No SPS	0.018
				Kohima	No tripping	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 12:17 Hrs on 12.07.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1946 MW , Antecedent Load : 1801 MW)**											
	Root Cause	Likely due to vegetation problem in the line											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID. Vegetation clearance to be done by POWERGRID & DoP Nagaland.											
52	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**7/13/2016 13:27**	Dimapur (PG)	General Trip	Not Furnished	No	No	Loss of Load: 18 Generation Loss: 24	GD-I	7/13/2016 14:22	No SPS	0.047
				Kohima	Not Furnished	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 13:27 Hrs on 13.07.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2006 MW , Antecedent Load : 1859 MW)**											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Root Cause	Relay indication from both end is required to analyze this event.											
	Remedial Measures	Relay indication from Dimapur end and Kohima end to be furnished by POWERGRID and DoP Nagaland respectively.POWERGRID to elaborate on General Trip.											
53	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**7/26/2016 14:17**	Dimapur (PG)	DP, ZI, R-E	Not Furnished	No	No	Loss of Load: 18& Loss of Generation: 21	GD-I	7/26/2016 14:37	No SPS	0.006
				Kohima	Tripped	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 14:17 Hrs on 26.07.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2190 MW , Antecedent Load : 1488 MW)**											
	Root Cause	Likely due to vegetation problem in the line											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID. Vegetation clearance to be done by POWERGRID & DoP Nagaland.											
	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**7/30/2016 14:45**	Dimapur (PG)	Over current	Not applicable	No	No	Loss of Load: 21& Loss of Generation: 8	GD-I	7/30/2016 14:55	No SPS	0.003
				Kohima	No tripping	Not applicable	No	No					

List of Grid Disturbances in North-Eastern Regional Grid during January 2016													
क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
54	**FIR by the constituent**	No											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 14:45 Hrs on 30.07.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2185 MW , Antecedent Load : 1860 MW)**											
	Root Cause	Likely due to Phase to phase fault in the line or downstream of Kohima											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID.											
55	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**8/3/2016 16:58**	Dimapur (PG)	Not Furnished	Not Furnished	No	No	Loss of Load: 20& Loss of Generation: 18	GD-I	8/3/2016 18:10	No SPS	0.024
				Kohima	Tripped	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 16:58 Hrs on 03.08.16,132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1976 MW , Antecedent Load : 1967 MW)**											
	Root Cause	Fault was in 132 kV Dimapur - Imphal line due to Y-phase insulator puncturing at location no. 522.Distance protection operated at Dimapur(PG) looking at reverse zone.											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Remedial Measures	Distance Relay mal operation at Dimapur(PG),to be checked by POWERGRID											
56	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**8/8/2016 14:36**	Dimapur (PG)	DP, ZI, B-E, Distance not available	Not Furnished	No	No	Loss of Load: 20& Loss of Generation: 21	GD-I	8/8/2016 14:56	No SPS	0.01
				Kohima	No tripping	Not Furnished	NA	NA					
	FIR by the constituent	No											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 14:36 Hrs on 08.08.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1854 MW , Antecedent Load : 1906 MW)**											
	Root Cause	Likely due to vegetation problem in the line											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID. Vegetation clearance to be done by POWERGRID & DoP Nagaland.Patrolling report to be submitted and Status of vegetation clearance to be reported by DoP Nagaland.											
57	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**8/11/2016 11:58**	Dimapur (PG)	Over Current	Not Furnished	No	No	Loss of Load: 16& Loss of Generation: 24	GD-I	8/11/2016 12:05	No SPS	0.005
				Kohima	No tripping	Not Furnished	NA	NA					

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	FIR by the constituent	No											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 11:58 Hrs on 11.08.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1939 MW , Antecedent Load : 1823 MW)**											
	Root Cause	Likely due to Phase to phase fault in the line or downstream of Kohima											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID.											
58	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**8/15/2016 15:29**	Dimapur (PG)	General Trip	Not applicable	No	No	Loss of Load: 23 & Loss of Generation: 24		8/15/2016 15:41	No SPS	0.004
				Kohima	No tripping	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 15:29 Hrs on 15.08.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1883 MW , Antecedent Load : 1661 MW)**											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Root Cause	Relay indication from Dimapur(PG) is required to analyze this event.											
	Remedial Measures	Relay indication from Dimapur end to be furnished by POWERGRID.POWERGRID to elaborate on General Trip.											
59	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**8/16/2016 10:50**	Dimapur (PG)	Over current	Not applicable	No	No	Loss of Load: 15& Loss of Generation: 24	GD-I	8/16/2016 10:55	No SPS	0.001
				Kohima	No tripping	Not applicable	No	No					
	FIR by the constituent	Yes(Nagaland)											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 10:50 Hrs on 16.08.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2013 MW , Antecedent Load : 1530 MW)**											
	Root Cause	Likely due to Phase to phase fault in the line or downstream of Kohima											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID.											
60	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**8/16/2016 14:19**	Dimapur (PG)	Over current	Not applicable	No	No	Loss of Load: 13	GD-I	8/16/2016 14:23	No SPS	0.002
				Kohima	No tripping	Not applicable	No	No					
	FIR by the constituent	Yes(Nagaland)											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 14:19 Hrs on 16.08.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2014 MW , Antecedent Load : 1711 MW)**											
	Root Cause	Likely due to Phase to phase fault in the line or downstream of Kohima											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID.											
61	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**8/16/2016 16:59**	Dimapur (PG)	Over current	Not applicable	No	No	Loss of Load: 21& Loss of Generation: 24	GD-I	8/16/2016 17:33	No SPS	0.013
				Kohima	No tripping	Not applicable	No	No					
	FIR by the constituent	Yes(Nagaland)											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 16:59 Hrs on 16.08.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2013 MW , Antecedent Load : 1839 MW)**											
	Root Cause	Likely due to Phase to phase fault in the line or downstream of Kohima											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID.											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
62	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**8/17/2016 7:37**	Dimapur (PG)	Over current	Not applicable	No	No	Loss of Load: 20& Loss of Generation: 24	GD-I	8/17/2016 7:48	No SPS	0.005
				Kohima	No tripping	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 07:37 Hrs on 17.08.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2025 MW , Antecedent Load : 1909 MW)**											
	Root Cause	Likely due to Phase to phase fault in the line or downstream of Kohima											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID.											
63	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**8/19/2016 9:55**	Dimapur (PG)	Earth fault	Not applicable	No	No	Loss of Load: 16& Loss of Generation: 24	GD-I	8/19/2016 10:02	No SPS	0.002
				Kohima	Earth fault	Not applicable	No	No					
	FIR by the constituent	Yes(Nagaland)											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 09:55 Hrs on 19.08.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1888 MW , Antecedent Load : 1731 MW)**											
	Root Cause	Likely due to vegetation fault in downstream of Kohima(fault in 132 kV Kohima-- Kiphire line)											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID. Patrolling report to be submitted and Status of vegetation clearance to be reported by DoP Nagaland.											
64	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**8/21/2016 11:33**	Dimapur (PG)	Earth fault	Not applicable	No	No	Loss of Load: 14& Loss of Generation: 8	GD-I	8/21/2016 11:53	No SPS	0.006
				Kohima	Earth fault	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 11:33 Hrs on 21.08.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1945 MW , Antecedent Load : 1639 MW)**											
	Root Cause	Likely due to vegetation fault in downstream of Kohima											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID. Patrolling report to be submitted and Status of vegetation clearance to be reported by DoP Nagaland.											
65	132 kV Dimapur (PG) -	POWERGRID		Dimapur (PG)	Earth fault	Not applicable	No	No	Loss of Load:				

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
65	Kohima	& DoP Nagaland	**8/21/2016 12:25**	Kohima	Earth fault	Not applicable	No	No	13& Loss of Generation: 8	GD-I	8/21/2016 12:33	No SPS	0.003
	FIR by the constituent	No											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 12:25 Hrs on 21.08.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1939 MW , Antecedent Load : 1704 MW)**											
	Root Cause	Likely due to vegetation fault in downstream of Kohima											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID. Patrolling report to be submitted and Status of vegetation clearance to be reported by DoP Nagaland.											
66	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**8/25/2016 14:40**	Dimapur (PG)	Earth Fault	Not applicable	Yes	No	Loss of Load: 17	GD-I	8/25/2016 14:55	No SPS	0.011
				Kohima	No tripping	Not applicable	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 14:40 Hrs on 25.08.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1884 MW , Antecedent Load : 2040 MW)**											

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	Root Cause	Likely due to vegetation fault in downstream of Kohima											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID. Patrolling report to be submitted and Status of vegetation clearance to be reported by DoP Nagaland.											
67	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**8/25/2016 15:40**	Dimapur (PG)	DP, ZI, B-E	Not Furnished	No	No	Loss of Load: 12	GD-I	8/25/2016 16:05	No SPS	0.005
				Kohima	No tripping	Not Furnished	No	No					
	FIR by the constituent	No											
	Brief Description of the Incident	Capital area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur(PG)-Kohima line (132 kV Kohima-Karong line & 66 kV Tuensang-Likimro line kept open for system requirement). At 15:40 Hrs on 25.08.16, 132 kV Dimapur(PG)-Kohima line tripped. Due to tripping of this element, Capital area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1909 MW , Antecedent Load : 1910 MW)**											
	Root Cause	Likely due to vegetation problem in the line											
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID. Vegetation clearance to be done by POWERGRID & DoP Nagaland.											

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68	132 kV AGTPP - Kumarghat	POWERGRID	**8/31/2016 7:50**	AGTPP	DP, ZI, Y-B-E, 72.85 Kms.	Not Furnished	No	No	Loss of Load: 23& Loss of Generation: 20	GD-I	8/31/2016 14:46	SPS-6 operated	
				Kumarghat	DP, ZI, Y-B-E, 24.1 Kms.	Not Furnished	No	No					
	AGTPP U 3	NEEPCO	**8/31/2016 7:50**	AGTPP	SPS-6 operated	Not applicable	No	No			8/31/2016 9:02	SPS-6 operated	
	FIR by the constituent	Yes(Tripura,AGTPP)											
	Brief Description of the Incident	Tripura system along with AGTPP system was connected with rest of NER Grid through 132 kV AGTPP – Kumarghat line (132 KV PK Bari – Dharmanagar line, 132 P K Bari-Kumarghat line and 132 KV Agarthala- Dhalabil line kept open for system requirement and 132 KV Agartala- Budhjung Nagar I & II lines, 132 KV Palatana-Udaipur line, 132 KV Surjamani Nagar- Budhjung Nagar I & II lines, 132 KV Surjamani Nagar - Agartala I & II lines were out of service). At 07:51 Hrs on 31.08.16, 132 kV AGTPP – Kumarghat line tripped. Due to tripping of this element, Tripura system along with AGTPP system was separated from rest of NER Grid.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : MW , Antecedent Load : MW)**											
	Root Cause	Likely due to lightning fault but yet to conclude due to absence of DR output. Kumarghat(PG) could not submit DR output due to some software issue as informed by POWERGRID.											
	Remedial Measures	DR to be furnished by POWERGRID and NEEPCO for detailed analysis.											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
69	220 kV Kopili - Misa I	POWERGRID	7/7/2016 13:46	Kopili	DP, ZI, B-E,28.6 Kms.	Not Furnished	Yes	No	Loss of Load: 0	GD-II	7/7/2016 15:00	No SPS	-
				Misa	DP, ZI, R-Y-B-E,62 Kms.	Not Furnished	No	No					
	220 kV Kopili - Misa II	POWERGRID		Kopili	Directional Over current	Not Furnished	Yes	No			7/7/2016 14:02	No SPS	
				Misa	No tripping	Not Furnished	No	No					
	132 kV Khandong - Khliehriat(PG) I	POWERGRID		Khandong	Over current	Not applicable	Yes	No			7/7/2016 14:43	No SPS	
				Khliehriat(PG)	No tripping	Not applicable	No	No					
	132 kV Khandong - Khliehriat(PG) II	POWERGRID	7/7/2016 13:46	Khandong	Over current	Not applicable	Yes	No			7/7/2016 14:43	No SPS	
				Khliehriat(PG)	No tripping	Not applicable	No	No					
	132 kV Khandong - Umrangso	POWERGRID & AEGCL		Khandong	Over current	Not applicable	Yes	No			7/7/2016 14:44	No SPS	
				Umrangso	No tripping	Not applicable	No	No					
	Kopili U 1	NEEPCO		Kopili	Excitation failure	Not applicable	Yes	No	Loss of Generation: 257		7/7/2016 15:51	No SPS	0.248
	Kopili U 2	NEEPCO		Kopili	Excitation failure	Not applicable	Yes	No			7/7/2016 16:57	No SPS	
	Kopili U 3	NEEPCO		Kopili	Excitation failure	Not applicable	No	No			7/7/2016 14:47	No SPS	
	Kopili U 4	NEEPCO		Kopili	Excitation failure	Not applicable	No	No			7/7/2016 14:44	No SPS	
	Khandong U 1	NEEPCO		Khandong	Excitation failure	Not applicable	Yes	No			7/7/2016 15:02	No SPS	

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Khandong U 2	NEEPCO		Khandong	Excitation failure	Not applicable	Yes	No			7/7/2016 15:25	No SPS	
	Kopili Stg II	NEEPCO		Khandong	Excitation failure	Not applicable	Yes	No			7/7/2016 15:50	No SPS	
	FIR by the constituent	Yes (Khandong,Kopili)											
	Brief Description of the Incident	Kopili & Khandong Power Station were connected with rest of NER Grid through 220 kV Kopili - Misa I & II lines,132 kV Khandong - Khliehriat(PG) I&II lines and 132 kV Khandong - Umrangso line (220 kV Kopili - Misa III line was under shutdown since 00:15 Hrs of 27.05.2016 due to CB problem at Kopili) . At 13:46 Hrs on 07.07.16, 220 kV Kopili - Misa I&II lines,132 kV Khandong - Khliehriat(PG) I&II lines and 132 kV Khandong - Umrangso line tripped. Due to evacuation problem, Kopili & Khandong Power Station were blacked out.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2012 MW , Antecedent Load : 1730 MW)**											
	Root Cause	Fault due to vegetation was in Misa-Kopili Ckt-1. This fault was cleared, line even reclosed successfully and Normal power flow resumed (concluded after analyzing DR outputs) But, the Line-2 tripped on Overcurrent at Kopili end (though current was only 320 A) and this needs to be rectified. Fault current observed from DR was about 2.45 kA.											
	Remedial Measures	Over Current setting to be rectified till Main-II Distance Protection is installed. The Over Current feature is best to be replaced with Distance Protection relay.											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
70	132 kV Dimapur - Doyang I	POWERGRID	**7/27/2016 10:55**	Dimapur	DP, ZI, B-E, 27.08 Kms.	Not Furnished	Yes	Yes	Loss of Load: 12	GD-I	7/27/2016 11:33	No SPS	0.007
				Doyang	Not Furnished	Not Furnished	No	No					
	132 kV Dimapur - Doyang II	POWERGRID		Dimapur	Back Up Earth Fault	Not Furnished	No	No			7/27/2016 11:45	No SPS	
				Doyang	Not Furnished	Not Furnished	No	No					
	132 kV Doyang - Mokokchung(NA)	DoP Nagaland		Doyang	Not Furnished	Not Furnished	No	No			7/27/2016 11:41	No SPS	
				Mokokchung(NA)	Tripped	Not Furnished	No	No					
	Doyang U 1	NEEPCO	**7/27/2016 10:55**	Doyang	Due to tripping of evacuation lines	Not applicable	No	No	Loss of Generation: 68	GD-I	7/27/2016 11:55	No SPS	0.059
	Doyang U 2	NEEPCO	**7/27/2016 10:55**	Doyang		Not applicable	No	No			7/27/2016 11:47	No SPS	
	Doyang U 3	NEEPCO	**7/27/2016 10:55**	Doyang		Not applicable	No	No			7/27/2016 12:10	No SPS	
	FIR by the constituent	No											
	Brief Description of the Incident	Mokokchung area of Nagaland and Doyang System were connected with rest of NER Grid through 132 kV Doyang- Dimapur I & II lines & 132 kV Doyang-Mokokchung(NA) line. (220 kV Mokokchung(PG)-Marianai(PG) I & II lines were not in service due to tower collapse since 01:11 Hrs on 12.07.16, 132 kV Mokokchung(NA)-Marianai(AS) line is under long outage & 66 kV Tuengsang-Likimro line kept open for system requirement). At 10:55 Hrs on 27.07.16 , 132 kV Doyang- Dimapur I & II lines & 132 kV Doyang-Mokokchung(NA) line tripped.Due to tripping of these elements, Mokokchung area of Nagaland and Doyang System were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2224 MW , Antecedent Load : 1830 MW)**											

List of Grid Disturbances in North-Eastern Regional Grid during January 2016

क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Root Cause	Vegetation problem caused fault on 132 kV Dimapur - Doyang I. Probably fault was not cleared or cleared after a delay from Doyang end, which caused tripping of circuit II from Dimapur end.											
	Remedial Measures	NEEPCO to intimate further details like whether CB tripped or not, if tripped reason for delayed clearance, characteristics of Earth fault relay - IDMT/Standard Inverse ect..											
71	132 kV Dimapur - Doyang I	POWERGRID	**8/15/2016 6:04**	Dimapur	DP, ZI, R-B-E, 52.9 Kms.	Not Furnished	No	No	Loss of Generation: 72	GD-I	8/15/2016 6:38	No SPS	0.055
				Doyang	DP, Other informations not furnished	Not Furnished	No	No					
	132 kV Dimapur - Doyang II	POWERGRID		Dimapur	DP, ZI, R-B-E, 46.25 Kms.	Not Furnished	No	No			8/15/2016 6:40	No SPS	
				Doyang	DP, Other informations not furnished	Not Furnished	No	No					
	132 kV Doyang - Mokokchung(NA)	DoP Nagaland	**8/15/2016 6:05**	Doyang	Over current	Not applicable	No	No			8/15/2016 6:39	No SPS	
				Mokokchung(NA)	Not Furnished	Not applicable	No	No					
	Doyang U 1	NEEPCO	**8/15/2016 6:05**	Doyang	Elect/ Non-Elect. Lockout 86 I	Not applicable	No	No			8/15/2016 6:51	No SPS	
	Doyang U 2	NEEPCO	**8/15/2016 6:05**	Doyang		Not applicable	No	No			8/15/2016 6:53	No SPS	
	Doyang U 3	NEEPCO	**8/15/2016 6:05**	Doyang	Over Speed	Not applicable	No	No			8/15/2016 6:53	No SPS	
	FIR by the constituent	No											

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क्रम संख्या/ Sl. No.	बिजली व्यवस्था तत्व / विवरण / Name of tripping element/ Description	मालिक / Owner	दिनांक और घटना के समय सीआर ऑपरेटर द्वारा प्रदान की / Date & Time of Event provided by CR operator	नोड के नाम / Name of Node	सीआर ऑपरेटर द्वारा प्रदान की रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	प्रभाव (मेगावाट में लोड और उत्पादन की हानि) / Effect (Loss of Load & Generation in MW)	श्रेणी सीईए ग्रिड मानकों के अनुसार / Category as per CEA Grid Standards	सीआर ऑपरेटर द्वारा प्रदान की तिथि और समय या बहाली / Date and time of restoration provided by CR operator	एसपीएस संचालन के विवरण / Details of SPS Operation	एमयू में हानि/ Loss in MU
	Brief Description of the Incident	Doyang Power Station was connected with rest of NER Grid through 132 kV Doyang- Dimapur I & II lines & 132 kV Doyang-Mokokchung(NA) line. At 06:05 Hrs on 15.08.16 , 132 kV Doyang-Mokokchung(NA) line tripped (132 kV Doyang- Dimapur I & II lines tripped at 06:04 Hrs on 15.08.16). Due to evacuation problem, Doyang Power Station was blacked out.											
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1951 MW , Antecedent Load : 1707 MW)**											
	Root Cause	Fault was in 132 kV Dimapur - Doyang II line due to B-N lightning fault as concluded from DR output.Reason for tripping of other lines to be investigated.											
	Remedial Measures	Distance Protection Relay time settings to be checked at Doyang end and complete relay flag details to be furnished by NEEPCO.											

क्रम सं. / Sl. No.	ट्रिपिंग तत्वका नाम / Name of tripping element	मालिक / Owner	डाटा प्रदान करना है / Data to be furnished by	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना के तारिख / Date of Event provided by CR operator	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना का समय/ Time of Event provided by CR operator	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना के तारिख और समय / Date & Time of Event provided by CR operator	नोड का नाम / Name of Node	सी.आर. ऑपरेटर के द्वारा प्रदान की गई रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नही) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नही) / EL output furnished within 24 hours (Y/N)	लोड की हानि (मेगावाट में) / Effect (Loss of Load in MW)	जनरेशन की हानि (मेगावाट में) / Effect (Loss of Generation in MW)	लोड और जनरेशन की हानि (मेगावाट में) / Effect (Loss of Load & Generation in MW)	सी.ई.ए ग्रिड मापदंड के अनुसार कौन सा श्रेणी/ Category as per CEA Grid Standards	सी.आर ऑपरेटर के द्वारा प्रदान की गई रेस्टोरेशन का दिनांक / Date of restoration provided by CR operator	सी.आर ऑपरेटर के द्वारा प्रदान की गई रेस्टोरेशन की समय / Time of restoration provided by CR operator	सी.आर ऑपरेटर के द्वारा प्रदान की गई दिनांक और रेस्टोरेशन की समय / Date and time of restoration provided by CR operator	आउटेज की अवधि / Outage duration	एस.पी.ए स संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	Remarks
1	+/- 800 kV Biswanath Charali-Agra II	POWERGRID	**POWERGRID**	**1-Jul-16**	**7:28**	**7/1/2016 7:28**	Biswanath Charali	Pole Control Protection	Not applicable	No	No	-	-	-	-	1-Jul-16	9:24	7/1/2016 9:24	1:56	No SPS	-	
							Agra	Low Voltage Switching	Not applicable	No	No											
	Root Cause	Due to auxiliary supply failure at Agra end																				
	Remedial Measures	-																				
2	400 kV Bongaigaon - New Siliguri II	POWERGRID	**POWERGRID**	**1-Jul-16**	**7:28**	**7/1/2016 7:28**	Bongaigaon	Over Voltage	Not applicable	No	No	-	-	-	-	1-Jul-16	7:57	7/1/2016 7:57	0:29	No SPS	-	
							New Siliguri	DT Received	Not applicable	No	No											
	Root Cause	Over Voltage protection mal-operated at Bongaigaon as 438 kV was the instantaneous voltage at Bongaigaon from PMU.																				
	Remedial Measures	Over Voltage relay settings at Bongaigaon to be checked by POWERGRID.DR output of the event to be furnished by POWERGRID																				
3	+/- 800 kV Biswanath Charali-Agra II	POWERGRID	**POWERGRID**	**3-Jul-16**	**12:12**	**7/3/2016 12:12**	Biswanath Charali	Tripped due to DC line fault at a distance of 1056.7 Km from BNC	Not Furnished	No	No	-	-	-	-	3-Jul-16	15:46	7/3/2016 15:46	3:34	No SPS	-	
							Agra		Not Furnished	No	No											
	Root Cause	Line fault as confirmed by POWERGRID																				
	Remedial Measures	More details regarding the nature of fault to be furnished by POWERGRID.Fault is already attended as informed by POWERGRID.																				
4	+/- 800 kV Biswanath Charali-Agra II	POWERGRID	**POWERGRID**	**5-Jul-16**	**9:04**	**7/5/2016 9:04**	Biswanath Charali	Tripped due to DC line fault at a distance of 1056 km from BNC	Not applicable	No	No	-	-	-	-			Not Yet Restored	#VALUE!	No SPS	-	
							Agra		Not applicable	No	No											
	Root Cause	Line fault as confirmed by POWERGRID																				
	Remedial Measures	More details regarding the nature of fault to be furnished by POWERGRID.Fault is already attended as informed by POWERGRID.																				
5	132 kV Rangia - Motonga	BPC	**AEGCL & BPC**	**6-Jul-16**	**11:46**	**7/6/2016 11:46**	Rangia	Over current	Not applicable	No	No	-	-	-	-	6-Jul-16	12:32	7/6/2016 12:32	0:46	No SPS	-	
							Motonga	No tripping	Not applicable	No	No											
6	132 kV Rangia - Motonga	BPC	**AEGCL & BPC**	**6-Jul-16**	**13:23**	**7/6/2016 13:23**	Rangia	Over current	Not applicable	No	No	-	-	-	-	6-Jul-16	15:17	7/6/2016 15:17	1:54	No SPS	-	
							Motonga	No tripping	Not applicable	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
7	132 kV Rangia - Motonga	BPC	**AEGCL & BPC**	**8-Jul-16**	**17:04**	**7/8/2016 17:04**	Rangia	Over current	Not applicable	No	No	-	-	-	-	8-Jul-16	17:54	7/8/2016 17:54	0:50	No SPS	-	
							Motonga	No tripping	Not applicable	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
8	+/- 800 kV Biswanath Charali-Agra I	POWERGRID	**POWERGRID**	**12-Jul-16**	**12:16**	**7/12/2016 12:16**	Biswanath Charali	Tripped due to operation of Smoke Detector(VESDA) at Agra	Not Furnished	No	No	-	-	-	-	12-Jul-16	13:49	7/12/2016 13:49	1:33	No SPS	-	
							Agra		Not Furnished	No	No											
	Root Cause	Mal operation of VESDA at Agra End.																				
	Remedial Measures	-																				
9	+/- 800 kV Biswanath Charali-Agra I	POWERGRID	**POWERGRID**	**13-Jul-16**	**23:39**	**7/13/2016 23:39**	Biswanath Charali	Tripped due to miscellenous protection operation at Agra	Not Furnished	No	No	-	-	-	-	14-Jul-16	0:47	7/14/2016 0:47	1:08	No SPS	-	
							Agra		Not Furnished	No	No											
10	+/- 800 kV Biswanath Charali-Agra I	POWERGRID	**POWERGRID**	**14-Jul-16**	**12:50**	**7/14/2016 12:50**	Biswanath Charali	Tripped due to operation of Smoke Detector(VESDA) at Agra	Not applicable	No	No	-	-	-	-	14-Jul-16	14:15	7/14/2016 14:15	1:25	No SPS	-	Smoke dectector operated at Agra end
							Agra		Not applicable	No	No											
	Root Cause	Mal operation of VESDA at Agra End.																				
	Remedial Measures	-																				
11	132 kV Rangia - Motonga	BPC	**AEGCL & BPC**	**15-Jul-16**	**13:50**	**7/15/2016 13:50**	Rangia	No tripping	Not Furnished	No	No	-	-	-	-	15-Jul-16	15:42	7/15/2016 15:42	1:52	No SPS	-	
							Motonga	Not Furnished	Not Furnished	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
12	220 kV Birpara - Salakati II	POWERGRID	**POWERGRID**	**17-Jul-16**	**19:10**	**7/17/2016 19:10**	Birpara	DPR, Z-I, Y- E, 124.7 Kms.	Not Furnished	No	No	-	-	-	-	17-Jul-16	19:41	7/17/2016 19:41	0:31	No SPS	-	Restoration time collected from CPCC
							Salakati	No tripping	Not Furnished	No	No											
	Root Cause	Fault was in 220 kV BTPS - Salakati II. Jumper opened at Loc 469 Y-Phase. While charging 220 kV BTPS - Salakati II line,Circuit Breaker at Birpara tripped as both 220 kV Birpara - Salakati II line & 220 kV BTPS - Salakati II line were in same bus.																				
	Remedial Measures	Jumper tightning to be done by POWERGRID.																				

13	400 kV Bongaigaon - New Siliguri I	POWERGRID	**POWERGRID**	**19-Jul-16**	**19:51**	**7/19/2016 19:51**	Bongaigaon	DP, ZI, B-E,59.59 Kms.	Not Furnished	No	No	-	-	-	-	2-Aug-16	19:18	8/2/2016 19:18	23:27	No SPS	-	Taken to shutdown on 20.07.16 at 10:30
							New Siliguri	DP, ZI, B-E,150.3 Kms.	Not Furnished	No	No											
	Root Cause	Lightning induced B-E fault.Auto reclause operated successfully but fault was not cleared.																				
	Remedial Measures	To be monitored by NERTS.If repeatedly occuring,tower footing resistance to be measured and installation of Tower LAs to be explored.																				
14	+/- 800 kV Biswanath Charali-Agra I	POWERGRID	**POWERGRID**	**24-Jul-16**	**18:12**	**7/24/2016 18:12**	Biswanath Charali	Tripped due to tripping at Agra End	Not applicable	No	No	-	-	-	-	24-Jul-16	19:34	7/24/2016 19:34	1:22	No SPS	-	
							Agra	Sparking at Filter Bank	Not applicable	No	No											
	Root Cause	Sparking occurred in filter bank at Agra End																				
	Remedial Measures	-																				
15	400 kV Bongaigaon - New Siliguri I	POWERGRID	**POWERGRID**	**2-Aug-16**	**13:56**	**8/2/2016 13:56**	Bongaigaon	DP, ZI, Y-E, 18.93 Kms.	Not Furnished	No	No	-	-	-	-	6-Aug-16	15:51	8/6/2016 15:51	1:55	No SPS	-	
							New Siliguri	DP, ZIL Y-E, 216 Kms.	Not Furnished	Yes	Yes											
	Root Cause	Due to lightning (concluded by checking DR output)																				
	Remedial Measures	POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																				
16	+/- 800 kV Biswanath Charali-Agra I	POWERGRID	**POWERGRID**	**10-Aug-16**	**13:57**	**8/10/2016 13:57**	Biswanath Charali	VESDA Operated at Agra End	Not applicable	No	No	-	-	-	-	10-Aug-16	19:11	8/10/2016 19:11	5:14	No SPS	-	
							Agra		Not applicable	No	No											
	Root Cause	Referred to NLDC.																				
		-																				
17	400 kV Bongaigaon - New Siliguri I	POWERGRID	**POWERGRID**	**11-Aug-16**	**12:44**	**8/11/2016 12:44**	Bongaigaon	DP, ZI, B-E, 24.15 Kms.	Not Furnished	Yes	No	-	-	-	-	11-Aug-16	21:19	8/11/2016 21:19	8:35	No SPS	-	
							New Siliguri	Not Furnished	Not Furnished	No	No											
	Root Cause	Permanent fault with high current and high angle.Root cause could not be concluded.																				
	Remedial Measures	Remedial measures after concluding root cause.																				
18	+/- 800 kV Biswanath Charali-Agra II	POWERGRID	**POWERGRID**	**13-Aug-16**	**19:09**	**8/13/2016 19:09**	Biswanath Charali	Corana in thyristor at BNC	Not applicable	No	No	-	-	-	-	16-Aug-16	10:49	8/16/2016 10:49	15:40	No SPS	-	
							Agra		Not applicable	No	No											
	Root Cause	Shutdown taken to attend corona.																				
	Remedial Measures	-																				
19	400 kV Bongaigaon - New Siliguri IV	ENICL	**POWERGRID**	**15-Aug-16**	**22:25**	**8/15/2016 22:25**	Bongaigaon	DP, ZI, R-B-E, 4.79 Kms.	Not Furnished	Yes	No	-	-	-	-	17-Aug-16	13:34	8/17/2016 13:34	15:09	No SPS	-	
							New Siliguri	DP, ZI, R-B-E, 168 Kms.	Not Furnished	No	No											
	Root Cause	Due to lightning fault (concluded by checking DR output)																				
	Remedial Measures	POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																				
20	400 kV Bongaigaon - New Siliguri III	ENICL	**POWERGRID**	**13-Aug-16**	**13:13**	**8/13/2016 13:13**	Bongaigaon	DP, ZI, Y-E, 115.6 Kms.	Not Furnished	No	No	-	-	-	-	14-Aug-16	21:47	8/14/2016 21:47	8:34	No SPS	-	
							New Siliguri	Not Furnished	Not Furnished	No	No											
	Root Cause	Due to B-N lightning fault (concluded by checking DR output)																				
	Remedial Measures	POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																				
21	132 kV Surjamaninagar-Comilla I	POWERGRID & PGCB	**POWERGRID & PGCB**	**16-Aug-16**	**16:52**	**8/16/2016 16:52**	Surjamaninagar	Not Furnished	Not Furnished	No	No	-	-	-	-	16-Aug-16	17:19	8/16/2016 17:19	0:27	No SPS	-	
							Comilla	Not Furnished	Not Furnished	No	No											
	Root Cause	Fault in the Bangladesh section of the line.																				
	Remedial Measures	Referred to PCCM.																				
22	132 kV Salakati-Gelephu	POWERGRID	**POWERGRID & BPC**	**17-Aug-16**	**15:55**	**8/17/2016 15:55**	Salakati	DP, ZI, R-Y-E, 8.8 Kms.	Not Furnished	Yes	No	-	-	-	-	17-Aug-16	18:19	8/17/2016 18:19	2:24	No SPS	-	
							Gelephu	DP, ZI, R-Y-E, 41.89 Kms.	Not Furnished	No	No											
	Root Cause	Due to R-Y-N vegetation fault (concluded from DR) in the line.																				
	Remedial Measures	Vegetation clearance to be done by POWERGRID and status to be reported.																				
23	132 kV Salakati-Gelephu	POWERGRID	**POWERGRID & BPC**	**18-Aug-16**	**1:05**	**8/18/2016 1:05**	Salakati	DP, ZI, R-Y-B-E, 7.643 Kms.	Successful operation	Yes	No	-	-	-	-	18-Aug-16	1:30	8/18/2016 1:30	0:25	No SPS	-	
							Gelephu	DP, ZI, R-Y-B-E, 44.21 Kms.	Not Furnished	No	No											
	Root Cause	Due to R-Y-B-N vegetation fault (concluded from DR) in the line.																				
	Remedial Measures	Vegetation clearance to be done by POWERGRID and status to be reported.																				
24	400 kV Bongaigaon - New Siliguri IV	ENICL	**POWERGRID**	**18-Aug-16**	**20:41**	**8/18/2016 20:41**	Bongaigaon	DP, ZI, Y-E, 83.5 Kms.	Not Furnished	Yes	No	-	-	-	-	19-Aug-16	19:41	8/19/2016 19:41	23:00	No SPS	-	
							New Siliguri	Not Furnished	Not Furnished	No	No											
	Root Cause	Due to vegetation fault (concluded from DR as current is increasing slowly and angle between Iy and Vy is around 60 degrees) in the line.																				
	Remedial Measures	Vegetation clearance to be done by POWERGRID and status to be reported.																				
25	+/- 800 kV Biswanath Charali-Agra II	POWERGRID	**POWERGRID**	**24-Aug-16**	**12:56**	**8/24/2016 12:56**	Biswanath Charali	DC line fault	Not Furnished	No	No	-	-	-	-	24-Aug-16	19:45	8/24/2016 19:45	6:49	No SPS	-	
							Agra		Not Furnished	No	No											
26	+/- 800 kV Biswanath Charali-Agra I	POWERGRID	**POWERGRID**	**24-Aug-16**	**12:58**	**8/24/2016 12:58**	Biswanath Charali	DC line fault	Not Furnished	No	No	-	-	-	-	24-Aug-16	15:19	8/24/2016 15:19	2:21	No SPS	-	
							Agra		Not Furnished	No	No											
	Root Cause	Referred to NLDC.																				
	Remedial Measures	-																				
27	220 kV Birpara - Salakati II	POWERGRID	**POWERGRID**	**25-Aug-16**	**5:19**	**8/25/2016 5:19**	Birpara	No tripping	Not Furnished	No	No	-	-	-	-	25-Aug-16	5:45	8/25/2016 5:45	0:26	No SPS	-	
							Salakati	DP, ZI, B-E, 109.3 Kms.	Not Furnished	No	No											
	Root Cause	Due to fault in the line.Root cause could not be concluded due to unavailability of DR outputs.																				

	Remedial Measures	POWERGRID to provide DR outputs of Salakati end for this event for further analysis.																					
28	132 kV Surjamaninagar-Comilla I	POWERGRID & PGCB	**POWERGRID & PGCB**	**25-Aug-16**	**20:10**	**8/25/2016 20:10**	Surjamaninagar	DP,No other info. Furnished	Not Furnished	No	No	-	-	-	-	25-Aug-16	20:49	8/25/2016 20:49	0:39	No SPS	-	
							Comilla	No tripping	Not Furnished	No	No												
	Root Cause	Referred to PCCM.																					
	Remedial Measures	POWERGRID to furnish proper relay indication as well as patrolling report.																					
29	+/- 800 kV Biswanath Charali-Agra II	POWERGRID	**POWERGRID**	**28-Jul-16**	**5:27**	**7/28/2016 5:27**	Biswanath Charali	Filter bank tripped on Diff. protection at Agra end	Not applicable	No	No	-	-	-	-	28-Jul-16	9:17	7/28/2016 9:17	3:50	No SPS	-	
							Agra		Not applicable	No	No												
	Root Cause	Referred to NLDC.																					
	Remedial Measures	-																					
30	220 kV Birpara - Salakati I	POWERGRID	**POWERGRID**	**29-Aug-16**	**4:27**	**8/29/2016 4:27**	Birpara	DP, ZI, R-E	Successful operation	No	No	-	-	-	-	29-Aug-16	4:53	8/29/2016 4:53	0:26	No SPS	-	
							Salakati	DP, ZI, R-E, 121 Kms.	Not Furnished	No	No												
	Root Cause	Due to fault in the line.Root cause could not be concluded due to unavailability of DR outputs.																					
	Remedial Measures	POWERGRID to provide DR outputs of Salakati end for this event for further analysis.																					

क्रम सं. / Sl. No.	ट्रिपिंग तत्वका नाम / Name of tripping element	मालिक / Owner	डाटा प्रदान करना है / Data to be furnished by	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना के तारीख / Date of Event provided by CR operator	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना का समय/ Time of Event provided by CR operator	सी.आर. ऑपरेटर के द्वारा घटना की तारिख और समय / Date & Time of Event provided by CR operator	नोड का नाम / Name of Node	सी.आर. ऑपरेटर के द्वारा प्रदान की गई रिले संकेत / Relay indications provided by CR operator	ऑटो रैक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	लोड की हानि (मेगावाट में) / Effect (Loss of Load in MW)	जनरेशन की हानि (मेगावाट में) / Effect (Loss of Generation in MW)	लोड और जनरेशन की हानि (मेगावाट में) / Effect (Loss of Load & Generation in MW)	सी.ई.ए ग्रिड मापदंड के अनुसार कौन सा श्रेणी/ Category as per CEA Grid Standards	सी.आर ऑपरेटर के द्वारा प्रदान की गई रेस्टरेशन का दिनांक / Date of restoration provided by CR operator	सी.आर ऑपरेटर के द्वारा प्रदान की गई रेस्टरेशन की समय / Time of restoration provided by CR operator	सी.आर ऑपरेटर के द्वारा प्रदान की गई दिनांक और रेस्टरेशन की समय / Date and time of restoration provided by CR operator	आउटेज की अवधि / Outage duration	एस.पी.ए स संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	Remarks
31	400 kV Misa - Balipara I	POWERGRID	**POWERGRID**	**6-Jul-16**	**19:27**	**7/6/2016 19:27**	Misa	Y-Phase LA blast at Balipara	Not applicable	No	No	-	-	-	-	7-Jul-16	13:31	7/7/2016 13:31	18:04	No SPS	-	While Charging the Balipara-Bongaigaon III line, Y phase LA blast at Balipara end
							Balipara		Not applicable	No	No											
	Root Cause	Due to LA blast at Balipara, 400 kV Misa - Balipara I line tripped.LA was 20 years old.																				
	Remedial Measures	Periodic maintenance of the switch yard equipments as per norms to be done by POWERGRID																				
32	400 kV Silchar - Azara	NETC & AEGCL	**POWERGRID & AEGCL**	**11-Jul-16**	**16:52**	**7/11/2016 16:52**	Silchar	DPR, Z-I, R- E, 31.74 Kms.	Successful operation	No	No	-	-	-	-	11-Jul-16	17:01	7/11/2016 17:01	0:09	No SPS	-	
							Azara	DPR, Z-I, B- E, 259.4 Kms.	Not Furnished	No	No											
	Root Cause	Fault due to lightning as informed by POWERGRID.																				
	Remedial Measures	Auto reclause facility at Azara end to be checked by AEGCL(This matter to be discussed in the next PCC meeting) .DR from both ends to be submitted by POWERGRID & AEGCL.																				
33	400 kV Palatana - Silchar II	NETC	**OTPC & POWERGRID**	**26-Jul-16**	**11:34**	**7/26/2016 11:34**	Palatana	DP, ZI, R-E, 40 Kms.	Not Furnished	No	No	-	-	-	-	26-Jul-16	12:10	7/26/2016 12:10	0:36	No SPS	-	
							Silchar	DP, ZI, R-E, 179.2 Kms.	Not Furnished	No	No											
	Root Cause	Root cause yet to finalize as there is no finding after petrolling as informed by POWERGRID and angle is coming around 30 degree durning fault.																				
	Remedial Measures	Remedial measure after finalizing the root cause.																				
34	400 kV Silchar - Byrnihat	NETC & MePTCL	**POWERGRID & MePTCL**	**4-Aug-16**	**16:06**	**8/4/2016 16:06**	Silchar	Over Voltage	Not applicable	Yes	No	-	-	-	-	4-Aug-16	16:47	8/4/2016 16:47	0:41	No SPS	-	
							Byrnihat	Earth Fault, B-ph	Not applicable	No	No											
	Root Cause	Likely due to B-N lightning fault in the line.																				
	Remedial Measures	DT from Byrnihat to be checked (may be due to over voltage at killing).DR to be submitted by MePTCL of Byrnihat End.POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																				
35	400 kV Balipara-Biswanath Charali II	POWERGRID	**POWERGRID**	**6-Aug-16**	**2:15**	**8/6/2016 2:15**	Balipara	DP, ZII, R-E, Carrier Aided Trip	Not Furnished	No	No	-	-	-	-	6-Aug-16	2:30	8/6/2016 2:30	0:15	No SPS	-	
							Biswanath Charali	DP, ZI, R-E, 20.28 Kms.	Not Furnished	No	No											
	Root Cause	Due to R-N lightning fault (concluded by checking DR output)																				
	Remedial Measures	POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																				
36	400 kV Balipara - Bongaigaon II	POWERGRID	**POWERGRID**	**9-Aug-16**	**2:12**	**8/9/2016 2:12**	Balipara	DP, ZI, B-E, 40.42 Kms.	Not Furnished	Yes	No	-	-	-	-	9-Aug-16	2:24	8/9/2016 2:24	0:12	No SPS	-	
							Bongaigaon	DP, ZII, B-E, 254.1 Kms.	Not Furnished	Yes	No											
	Root Cause	Due to B-N lightning fault (concluded by checking DR output).AR successful at Bongaigaon end.																				
	Remedial Measures	DT received at Balipara end to be investigated by POWERGRID. POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																				
37	400 kV Balipara - Bongaigaon III	POWERGRID	**POWERGRID**	**11-Aug-16**	**1:25**	**8/11/2016 1:25**	Balipara	Over Voltage	Not applicable	Yes	No	-	-	-	-	11-Aug-16	11:25	8/11/2016 11:25	10:00	No SPS	-	
							Bongaigaon	Direct Trip received	Not applicable	No	No											
	Root Cause	Accidental operation of reactor protection during maintenance works.																				
	Remedial Measures	These type of events shall be avoided by POWERGRID.																				
38	400 kV Balipara - Bongaigaon IV	POWERGRID	**POWERGRID**	**11-Aug-16**	**10:57**	**8/11/2016 10:57**	Balipara	DP, ZII, Y-E, 203.2 Kms.	Not applicable	Yes	No	-	-	-	-	12-Aug-16	14:22	8/12/2016 14:22	3:25	No SPS	-	
							Bongaigaon	DP, ZI, Y-E, 142.1 Kms.	Not Furnished	Yes	No											
	Root Cause	High resistive fault caused by miscreants.																				
	Remedial Measures	Distance calculation of DPR to be reviewed by POWERGRID.																				
39	400 kV Balipara - Bongaigaon I	POWERGRID	**POWERGRID**	**11-Aug-16**	**16:09**	**8/11/2016 16:09**	Balipara	Direct Trip received	Not applicable	No	No	-	-	-	-	11-Aug-16	17:48	8/11/2016 17:48	1:39	No SPS	-	
							Bongaigaon	No tripping	Not Furnished	Yes	No											
	Root Cause	Accidental operation of reactor protection during maintenance works.																				
	Remedial Measures	These type of events shall be avoided by POWERGRID.																				
40	400 kV Balipara-Biswanath Charali III	POWERGRID	**POWERGRID**	**11-Aug-16**	**16:26**	**8/11/2016 16:26**	Balipara	No tripping	Not applicable	No	No	-	-	-	-	11-Aug-16	16:35	8/11/2016 16:35	0:09	No SPS	-	
							Biswanath Charali	Direct Trip received	Not Furnished	No	No											
	Root Cause	Due to PLCC mal-operation.																				
	Remedial Measures	These type of events shall be avoided by POWERGRID.																				
41	400 kV Balipara - Bongaigaon IV	POWERGRID	**POWERGRID**	**13-Aug-16**	**10:49**	**8/13/2016 10:49**	Balipara	DP, ZI, Y-E, 198.19 Kms.	Not applicable	No	No	-	-	-	-	13-Aug-16	11:08	8/13/2016 11:08	0:19	No SPS	-	
							Bongaigaon	DP, ZI, Y-E, 138.6 Kms.	Not Furnished	No	No											
	Root Cause	DR indicates low resistive Y-N fault and Iy lags Vy by 57 Degrees. Auto reclosure attempted but not successful due to persisted fault.Root cause could not be concluded.																				
	Remedial Measures	Patrolling report to be submitted by POWERGRID.																				
42	400 kV Balipara - Bongaigaon III	POWERGRID	**POWERGRID**	**17-Aug-16**	**9:35**	**8/17/2016 9:35**	Balipara	Direct Trip received	Not applicable	Yes	No	-	-	-	-	17-Aug-16	10:02	8/17/2016 10:02	0:27	No SPS	-	
							Bongaigaon	Over Voltage	Not applicable	Yes	No											
	Root Cause	Due to B-N vegetation fault (concluded from DR,Ib lags Vb by 35 degrees) in the line.																				
	Remedial Measures	Vegetation clearance to be done by POWERGRID and status to be reported.But the line tripped on O/V and this is to be investigated.																				
43	400 kV Bongaigaon - Azara	NETC & AEGCL	**POWERGRID & AEGCL**	**17-Aug-16**	**14:11**	**8/17/2016 14:11**	Bongaigaon	DP, ZI, B-E, 99.5 Kms.	Successful operation	Yes	No	-	-	-	-	17-Aug-16	14:29	8/17/2016 14:29	0:18	No SPS	-	
							Azara	DP, ZI, B-E, 83.92 Kms.	Not Furnished	No	No											
	Root Cause	Due to Y-N lightning fault (concluded by checking DR output,Iy lags Vy by 70 Degrees)																				
	Remedial Measures	AEGCL to review the AR scheme at Azara. NETC & AEGCL is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																				
44	400 kV Balipara - Bongaigaon I	POWERGRID	**POWERGRID**	**23-Aug-16**	**13:02**	**8/23/2016 13:02**	Balipara	Direct Trip received	Not applicable	No	No	-	-	-	-	23-Aug-16	13:36	8/23/2016 13:36	0:34	No SPS	-	
							Bongaigaon	NGR Bucholtz relay operated	Not applicable	No	No											
	Root Cause	Bucholtz relay of NGR operated at Bongaigaon.																				
	Remedial Measures	Conditional as well as periodic maintenance of equipments to be done by POWERGRID.																				
45	400 kV Balipara -	POWERGRID	**POWERGRID**	**24-Aug-16**	**7:57**	**8/24/2016 7:57**	Balipara	Directional Earth Fault	Not applicable	No	No	-	-	-	-	24-Aug-16	8:35	8/24/2016 8:35	0:38	No SPS	-	

	Bongaigaon III						Bongaigaon	Direct Trip received	Not applicable	Yes	No													
	Root Cause	Due to B-N vegetation fault (concluded from DR) in the line.																						
	Remedial Measures	Vegetation clearance to be done by POWERGRID and status to be reported.																						
46	400 kV Ranganadi-Biswanath Charali 1	POWERGRID	**NEEPCO & POWERGRID**	**27-Aug-16**	**11:07**	**8/27/2016 11:07**	Ranganadi	Over Voltage	Not applicable	No	No	-	-	-	-	27-Aug-16	17:59	8/27/2016 17:59	6:52	No SPS	-		
							Biswanath Charali	Direct Trip received	Not applicable	No	No													
	Root Cause	Over Voltage Relay of Ranganadi end mal-operated as Voltage at Balipara PMU was around 418 kV at the time of event.																						
	Remedial Measures	Over Voltage Relay settings of Ranganadi to be reviewed by NEEPCO.DR of BNC end to be submitted by POWERGRID.																						
47	400 kV Silchar - Byrnihat	NETC & MePTCL	**POWERGRID & MePTCL**	**28-Aug-16**	**2:15**	**8/28/2016 2:15**	Silchar	DP, ZII, R-E, 185 Kms.	Not applicable	Yes	No	-	-	-	-	28-Aug-16	2:38	8/28/2016 2:38	0:23	No SPS	-		
							Byrnihat	Over current	Not applicable	No	No													
	Root Cause	Likely due to R-N lightning fault(concluded from DR output) in the line.																						
	Remedial Measures	AR scheme at Silchar and Byrnihat to be reviewed.POWERGRID & MePTCL to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																						

क्रम सं. / Sl. No.	ट्रिपिंग तत्वका नाम / Name of tripping element	मालिक / Owner	डाटा प्रदान करना है / Data to be furnished by	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना के तारिख / Date of Event provided by CR operator	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना का समय/ Time of Event provided by CR operator	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना के तारिख और समय / Date & Time of Event provided by CR operator	नोड का नाम / Name of Node	सी.आर. ऑपरेटर के द्वारा प्रदान की गई रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नही) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नही) / EL output furnished within 24 hours (Y/N)	लोड की हानि (मेगावाट में) / Effect (Loss of Load in MW)	जनरेशन की हानि (मेगावाट में) / Effect (Loss of Generation in MW)	लोड और जनरेशन की हानि (मेगावाट में) / Effect (Loss of Load & Generation in MW)	सी.ई.ए ग्रिड मापदंड के अनुसार कौन सा श्रेणी/ Category as per CEA Grid Standards	सी.आर ऑपरेटर के द्वारा प्रदान की गई रेस्टोरेशन का दिनांक / Date of restoration provided by CR operator	सी.आर ऑपरेटर के द्वारा प्रदान की गई रेस्टोरेशन की समय / Time of restoration provided by CR operator	सी.आर ऑपरेटर के द्वारा प्रदान की गई दिनांक और रेस्टोरेशन की समय / Date and time of restoration provided by CR operator	आउटेज की अवधि / Outage duration	एस.पी.ए स संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	Remarks
48	220 kV Misa - Mariani(AS)	POWERGRID	**POWERGRID & AEGCL**	**3-Jul-16**	**18:17**	**7/3/2016 18:17**	Misa	DP, ZI, B-E	Not Furnished	No	No	-	-	-	-	3-Jul-16	18:35	7/3/2016 18:35	0:18	No SPS	-	
							Mariani (AS)	DP, ZI, B-E	Not Furnished	No	No											
	Root Cause	Line fault due to lightning as informed by POWERGRID.																				
	Remedial Measures	Reason for non operation of Auto reclause to be furnished by POWERGRID.DR from both ends to be submitted by POWERGRID and AEGCL.																				
49	220 kV Mariani(PG)-Mokokchung (PG) II	POWERGRID	**POWERGRID**	**4-Jul-16**	**20:44**	**7/4/2016 20:44**	Mariani(PG)	Over Voltage	Not applicable	No	No	-	-	-	-	4-Jul-16	21:08	7/4/2016 21:08	0:24	No SPS	-	
							Mokokchung(PG)	Direct Trip received	Not applicable	No	No											
	Root Cause	Mal operation of Over Voltage relay at Mariani(PG)																				
	Remedial Measures	DR from both ends to be submitted by POWERGRID.																				
50	220 kV Mariani(PG)-Mokokchung (PG) II	POWERGRID	**POWERGRID**	**12-Jul-16**	**1:11**	**7/12/2016 1:11**	Mariani(PG)	Backup Over Current	Not applicable	No	No	-	-	-	-			Not Yet Restored	#VALUE!	No SPS	-	Tower Collapsed
							Mokokchung(PG)	DPR, Z-I, R-Y- E, 24.51 Kms.	Not Furnished	No	No											
No neutral current	**Root Cause**	Fault not involving ground as there no neutral current during the fault(from DR).Root cause could not be finalized.																				
	Remedial Measures	Remedial measure after finalizing the root cause.																				
51	220 kV Misa - Samaguri II	POWERGRID	**POWERGRID & AEGCL**	**12-Jul-16**	**14:59**	**7/12/2016 14:59**	Misa	DP, ZI, R-E	Successful operation	No	No	-	-	-	-	12-Jul-16	15:24	7/12/2016 15:24	0:25	No SPS	-	
							Samaguri	Not Furnished	Not Furnished	No	No											
	Root Cause	Flash over occurred at Location No. 49 in R-Phase(Bottom conductor),due to lightning as informed by POWERGRID.																				
	Remedial Measures	Tower footing resistance to be checked by POWERGRID.																				
52	220 kV Birpara - Salakati II	POWERGRID	**POWERGRID**	**17-Jul-16**	**19:10**	**7/17/2016 19:10**	Birpara	DPR, Z-I, Y- E, 124.7 Kms.	Not Furnished	No	No	-	-	-	-	17-Jul-16	19:41	7/17/2016 19:41	0:31	No SPS	-	Restoration time collected from CPCC
							Salakati	No tripping	Not Furnished	No	No											
	Root Cause	Fault was in 220 kV BTPS - Salakati II. Jumper opened at Loc 469 Y-Phase. While charging 220 kV BTPS - Salakati II line,Circuit Breaker at Birpara tripped as both 220 kV Birpara - Salakati II line & 220 kV BTPS - Salakati II line were in same bus.																				
	Remedial Measures	Jumper tightning to be done by POWERGRID.																				
53	220 kV Samaguri - Mariani II	AEGCL	**AEGCL**	**22-Jul-16**	**7:25**	**7/22/2016 7:25**	Samaguri	DP, ZI, R-Y-E,33.6 Kms.	Not Furnished	No	No	-	-	-	-	22-Jul-16	15:43	7/22/2016 15:43	8:18	No SPS	-	
							Mariani	DP, ZI, R-Y-E,36.7 Kms.	Not Furnished	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
54	220 kV Azara - Sarusajai I	AEGCL	**AEGCL**	**22-Jul-16**	**12:15**	**7/22/2016 12:15**	Azara	Not Furnished	Not applicable	No	No	-	-	-	-	22-Jul-16	18:30	7/22/2016 18:30	6:15	No SPS	-	
							Sarusajai	R-Ph, LA burst at Sarusajai	Not applicable	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
55	220 kV Misa - Dimapur I	POWERGRID	**POWERGRID**	**26-Jul-16**	**14:08**	**7/26/2016 14:08**	Misa	DP, ZI, R-E, 96.27 Kms.	Not Furnished	Yes	No	-	-	-	-	26-Jul-16	14:32	7/26/2016 14:32	0:24	No SPS	-	Not in Logsheet,Taken from Flash Report
							Dimapur	DP, ZI, R-E, 20 Kms.	Not Furnished	Yes	No											
	Root Cause	R-phase insulator punctured and de-capped at Location No. 315 due to lightning.																				
	Remedial Measures	To be monitored by NERTS.If repeatedly occuring,tower footing resistance to be measured and installation of Tower LAs to be explored.																				
56	220 kV Misa - Mariani(PG)	POWERGRID	**POWERGRID**	**30-Jul-16**	**3:01**	**7/30/2016 3:01**	Misa	DP, ZI, R-E, 152.8 Kms.	Not Furnished	Yes	No	-	-	-	-	30-Jul-16	4:49	7/30/2016 4:49	1:48	No SPS	-	
							Mariani (PG)	Direct Trip received	Not Furnished	No	No											
	Root Cause	Siemens relay at Misa over reached.																				
	Remedial Measures	Siemens relay at Misa to be tested by POWERGRID at the earliest.																				
57	220 kV Mariani(PG)-Mokokchung (PG) I	POWERGRID	**POWERGRID**	**9-Aug-16**	**4:10**	**8/9/2016 4:10**	Mariani(PG)	Hand Tripped	Not applicable	No	No	-	-	-	-	9-Aug-16	13:31	8/9/2016 13:31	9:21	No SPS	-	
							Mokokchung(PG)	Over Voltage	Not applicable	No	No											
	Root Cause	Root cause could not be concluded due to unavailability of DR outputs.																				
	Remedial Measures	PLCC link at Mariani(PG) and Mokokchung(PG) to be checked.DR to be submitted by POWERGRID.																				
58	220 kV AGBPP - Tinsukia II	AEGCL	**NEEPCO & AEGCL**	**10-Aug-16**	**15:00**	**8/10/2016 15:00**	AGBPP	DP, ZII, R-Y-B	Not applicable	No	No	-	-	-	-	10-Aug-16	15:28	8/10/2016 15:28	0:28	No SPS	-	
							Tinsukia	DP, ZII, R-Y-B	Not applicable	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized in next PCC meeting																				
59	220 kV Mariani(PG)-Mokokchung (PG) I	POWERGRID	**POWERGRID**	**13-Aug-16**	**0:07**	**8/13/2016 0:07**	Mariani(PG)	DP, ZI, R-E, 22 Kms.	Not Furnished	No	No	-	-	-	-	13-Aug-16	0:39	8/13/2016 0:39	0:32	No SPS	-	
							Mokokchung(PG)	DP, ZI, R-E, 24 Kms.	Not Furnished	No	No											
	Root Cause	Due to R-N lightning fault (concluded by checking DR output,Ir lags Vr by 78 degrees)																				
	Remedial Measures	POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																				
60	220 kV Mariani(PG)-Mokokchung (PG) I	POWERGRID	**POWERGRID**	**14-Aug-16**	**15:25**	**8/14/2016 15:25**	Mariani(PG)	Over Voltage	Not applicable	No	No	-	-	-	-	14-Aug-16	16:25	8/14/2016 16:25	1:00	No SPS	-	
							Mokokchung(PG)	Direct Trip received	Not applicable	No	No											
	Root Cause	Root cause could not be concluded due to unavailability of DR outputs.There was no over voltage at Misa (from PMU).																				
	Remedial Measures	POWERGRID to provide DR outputs of Mariani & Mokokchung for this event.																				

61	220 kV Balipara - Sonabil	AEGCL	**POWERGRID & AEGCL**	**15-Aug-16**	**12:02**	**8/15/2016 12:02**	Balipara	DP, Y-E, Dist. Not furnished	Not Furnished	Yes	No	-	-	-	-	15-Aug-16	12:22	8/15/2016 12:22	0:20	No SPS	-	
							Sonabil	No tripping	Not Furnished	No	No											
	Root Cause	Due to Y-N fault sensed as Zone I fault.																				
	Remedial Measures	DPR settings at Balipara to be reviewed by POWERGRID. Patrolling report to be submitted by AEGCL.																				
62	220 kV Mariani(PG)-Mokokchung (PG) I	POWERGRID	**POWERGRID**	**16-Aug-16**	**3:26**	**8/16/2016 3:26**	Mariani(PG)	No tripping	Not applicable	No	No	-	-	-	-	16-Aug-16	11:40	8/16/2016 11:40	8:14	No SPS	-	
							Mokokchung(PG)	Over Voltage	Not applicable	No	No											
	Root Cause	Root cause could not be concluded due to unavailability of DR outputs.There was no over voltage at Misa (from PMU).																				
	Remedial Measures	PLCC link at Mariani(PG) and Mokokchung(PG) to be checked.DR to be submitted by POWERGRID.																				
63	220 kV Balipara - Sonabil	AEGCL	**POWERGRID & AEGCL**	**22-Aug-16**	**13:31**	**8/22/2016 13:31**	Balipara	Earth Fault	Not applicable	No	No	-	-	-	-	22-Aug-16	14:12	8/22/2016 14:12	0:41	No SPS	-	
							Sonabil	No tripping	Not applicable	No	No											
	Root Cause	Same time,220 kV 220 kV Samaguri - Sonabil line also tripped.Matter referred to PCC.																				
	Remedial Measures	Remedial measures after concluding root cause.																				
64	220 kV Mariani(PG)-Mokokchung (PG) II	POWERGRID	**POWERGRID**	**25-Aug-16**	**13:54**	**8/25/2016 13:54**	Mariani(PG)	Direct Trip received	Not applicable	No	No	-	-	-	-	25-Aug-16	14:44	8/25/2016 14:44	0:50	No SPS	-	
							Mokokchung(PG)	Over Voltage	Not applicable	No	No											
	Root Cause	Root cause could not be concluded due to unavailability of DR outputs.There was no over voltage at Misa (from PMU).																				
	Remedial Measures	PLCC link at Mariani(PG) and Mokokchung(PG) to be checked.DR to be submitted by POWERGRID.																				
65	220 kV Misa - Mariani(AS)	POWERGRID	**POWERGRID & AEGCL**	**30-Aug-16**	**1:30**	**8/30/2016 1:30**	Misa	DP, ZI, R-E, 142.6 Kms.	Not Furnished	No	No	-	-	-	-	30-Aug-16	3:04	8/30/2016 3:04	1:34	No SPS	-	
							Mariani (AS)	DP, ZI, R-E, 15.71 Kms.	Not Furnished	No	No											
	Root Cause	Due to fault in the line.Root cause could not be concluded due to unavailability of DR outputs.																				
	Remedial Measures	POWERGRID to provide DR outputs of Salakati end for this event for further analysis.																				
66	220 kV Mariani(PG)-Mokokchung (PG) I	POWERGRID	**POWERGRID**	**30-Aug-16**	**3:03**	**8/30/2016 3:03**	Mariani(PG)	Direct Trip received	Not applicable	No	No	-	-	-	-	30-Aug-16	13:47	8/30/2016 13:47	10:44	No SPS	-	
							Mokokchung(PG)	Over Voltage	Not applicable	No	No											
	Root Cause	Root cause could not be concluded due to unavailability of DR outputs.There was no over voltage at Misa (from PMU).																				
	Remedial Measures	PLCC link at Mariani(PG) and Mokokchung(PG) to be checked.DR to be submitted by POWERGRID.																				

क्रम सं. / Sl. No.	ट्रिपिंग तत्वका नाम / Name of tripping element	मालिक / Owner	डाटा प्रदान करना है / Data to be furnished by	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना के तारीख / Date of Event provided by CR operator	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना का समय/ Time of Event provided by CR operator	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना के तारिख और समय / Date & Time of Event provided by CR operator	नोड का नाम / Name of Node	सी.आर. ऑपरेटर के द्वारा प्रदान की गई रिले संकेत / Relay indications provided by CR operator	ऑटो रैक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हाँ / नही) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हाँ / नही) / EL output furnished within 24 hours (Y/N)	नोड की हानि (मेगावाट में) / Effect (Loss of Load in MW)	जनरेशन की हानि (मेगावाट में) / Effect (Loss of Generation in MW)	नोड और जनरेशन की हानि (मेगावाट में) / Effect (Loss of Load & Generation in MW)	सी.ई.ए ग्रिड मापदंड के अनुसार कौन सा श्रेणी/ Category as per CEA Grid Standards	सी.आर ऑपरेटर के द्वारा प्रदान की गई रेस्टोरेशन का दिनांक / Date of restoration provided by CR operator	सी.आर ऑपरेटर के द्वारा प्रदान की गई रेस्टोरेशन की समय / Time of restoration provided by CR operator	सी.आर ऑपरेटर के द्वारा प्रदान की गई दिनांक और रेस्टोरेशन की समय / Date and time of restoration provided by CR operator	आउटेज की अवधि / Outage duration	एस.पी.ए स संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	Remarks	
67	220/132 kV Salakati ICT I	POWERGRID	POWERGRID	**17-Jul-16**	**18:46**	**7/17/2016 18:46**	Salakati	Backup Earth Fault	Not applicable	Yes	No	-	-	-	-	17-Jul-16	20:32	7/17/2016 20:32	1:46	No SPS	-		
68	220/132 kV Salakati ICT II	POWERGRID	POWERGRID	**17-Jul-16**	**19:01**	**7/17/2016 19:01**	Salakati	Over Current	Not applicable	No	No	-	-	-	-	17-Jul-16	20:32	7/17/2016 20:32	1:31	No SPS	-		
	Root Cause	Fault was in 220 kV BTPS - Salakati IL Jumper opened at Loc 469 Y-Phase. Along with line ICT I tripped on Earth Fault protection.																					
	Remedial Measures	Jumper tightning to be done by POWERGRID.																					
69	220/132 kV, 50 MVA ICT II at Balipara	AEGCL	POWERGRID	**26-Jul-16**	**1:55**	**7/26/2016 1:55**	Balipara	Tripped due to operation of Buchholtz	Not applicable	No	No	-	-	-	-	26-Jul-16	17:05	7/26/2016 17:05	15:10	No SPS	-	Restoration time-from CPCC	
	Root Cause	Matter referred to next PCC meeting,Due to low oil level as informed by POWERGRID.																					
	Remedial Measures	To be finalized after next PCC meeting																					
70	400/132 kV ICT I at Biswanath Charali	POWERGRID	POWERGRID	**29-Jul-16**	**5:51**	**7/29/2016 5:51**	Biswanath Charali	Oil Surge Relay Operated	Not applicable	No	No	-	-	-	-	29-Jul-16	8:32	7/29/2016 8:32	2:41	No SPS	-		
	Root Cause	Oil surge relay mal-operated due to problem with the diverter																					
	Remedial Measures	POWERGRID to take up this issue and rectify it at the earliest.																					

क्रम सं. / Sl. No.	टिपिंग तत्वका नाम / Name of tripping element	मालिक / Owner	डाटा प्रदान करना है / Data to be furnished by	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना के तारिख / Date of Event provided by CR operator	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना का समय/ Time of Event provided by CR operator	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना के तारिख और समय / Date & Time of Event provided by CR operator	नोड का नाम / Name of Node	सी.आर. ऑपरेटर के द्वारा प्रदान की गई रिले संकेत / Relay indications provided by CR operator	ऑटो रैक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	नोड की हानि (मेगावाट में) / Effect (Loss of Load in MW)	जनरेशन की हानि (मेगावाट में) / Effect (Loss of Generation in MW)	नोड और जनरेशन की हानि (मेगावाट में) / Effect (Loss of Load & Generation in MW)	सी.ई.ए ग्रिड मापदंड के अनुसार कौन सा श्रेणी/ Category as per CEA Grid Standards	सी.आर ऑपरेटर के द्वारा प्रदान की गई रेस्टोरेशन का दिनांक / Date of restoration provided by CR operator	सी.आर ऑपरेटर के द्वारा प्रदान की गई रेस्टोरेशन की समय / Time of restoration provided by CR operator	सी.आर ऑपरेटर के द्वारा प्रदान की गई दिनांक और रेस्टोरेशन की समय / Date and time of restoration provided by CR operator	आउटेज की अवधि / Outage duration	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	Remarks
71	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**3-Jul-16**	**3:18**	**7/3/2016 3:18**	Khliehriat (PG)	DP, Z1, R-Y-B, 64.62 Kms.	Not Furnished	No	No	-	-	-	-	3-Jul-16	4:23	7/3/2016 4:23	1:05	No SPS	-	
							Khliehriat(ME)	No tripping	Not Furnished	No	No											
72	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**3-Jul-16**	**5:05**	**7/3/2016 5:05**	Khliehriat (PG)	DP, ZI, R-Y-B	Not Furnished	No	No	-	-	-	-	3-Jul-16	5:14	7/3/2016 5:14	0:09	No SPS	-	
							Khliehriat(ME)	No tripping	Not Furnished	No	No											
	Root Cause	Fault likely due to lightning.																				
	Remedial Measures	MePTCL to confirm whether Meghalaya has installed Numerical relays on their feeders in next PCC meeting. Installation of Numerical relays on 132 kV Khliehriat (PG) - Leshka (ME) I&II feeders could not be completed due to non-availability of shutdown of these feeders as Leshka generation is full at this time. Matter referred to PCC meeting.																				
73	132 kV Silchar - Imphal (PG) I	POWERGRID	**POWERGRID**	**30-Jul-16**	**12:39**	**7/30/2016 12:39**	Silchar	DP, ZII, Y-E, 141.5 Kms.	Not Furnished	No	No	-	-	-	-	30-Jul-16	18:32	7/30/2016 18:32	5:53	No SPS	-	
							Imphal (PG)	DP, ZI, R-Y-B-E, 15.77 Kms.	Not Furnished	No	No											
74	132 kV Silchar - Imphal (PG) II	POWERGRID	**POWERGRID**	**30-Jul-16**	**12:39**	**7/30/2016 12:39**	Silchar	DP, ZII, B-E, 192.9 Kms.	Not Furnished	No	No	-	-	-	-	30-Jul-16	13:06	7/30/2016 13:06	0:27	No SPS	-	
							Imphal (PG)	No tripping	Not Furnished	No	No											
	Root Cause	Fault was in 132 kV Silchar - Imphal (PG) I line as the jumper opened in this line and touched the tower. Relays at Imphal (Mani) end should not have operated.																				
	Remedial Measures	POWERGRID to inform location of the fault in next PCC meeting.Mal-operation of Silchar end relays on Line-II to be further investigated by POWERGRID.																				
75	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**30-Jul-16**	**14:38**	**7/30/2016 14:38**	Khliehriat (PG)	DP, ZI, R-Y-B-E, 19.5 Kms.	Not applicable	No	No	-	-	-	-	30-Jul-16	14:44	7/30/2016 14:44	0:06	No SPS	-	
							Khliehriat(ME)	No tripping	Not applicable	No	No											
76	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**30-Jul-16**	**14:51**	**7/30/2016 14:51**	Khliehriat (PG)	DP, ZI, R-Y-B-E, 124 Kms.	Not applicable	No	No	-	-	-	-	30-Jul-16	15:18	7/30/2016 15:18	0:27	No SPS	-	
							Khliehriat(ME)	No tripping	Not applicable	No	No											
77	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**30-Jul-16**	**14:38**	**7/30/2016 14:38**	Khliehriat (PG)	DP, ZII, R-Y-B-E, 19.5 Kms.	Not applicable	No	No	-	-	-	-	30-Jul-16	14:44	7/30/2016 14:44	0:06	No SPS	-	
							Khliehriat(ME)	No tripping	Not applicable	No	No											
	Root Cause	To be discussed in the next PCC meeting.																				
	Remedial Measures	MePTCL to confirm whether Meghalaya has installed Numerical relays on their feeders in next PCC meeting. Installation of Numerical relays on 132 kV Khliehriat (PG) - Leshka (ME) I&II feeders could not be completed due to non-availability of shutdown of these feeders as Leshka generation is full at this time. Matter referred to PCC meeting.																				
78	132 kV Badarpur - Kumarghat	POWERGRID	**POWERGRID**	**31-Jul-16**	**14:57**	**7/31/2016 14:57**	Badarpur	DP, ZII, B-E, 121.6 Kms.	Not applicable	Yes	No	-	-	-	-	31-Jul-16	15:30	7/31/2016 15:30	0:33	No SPS	-	B-Phase LA of 20 MVAR Bus reactor blasted
							Kumarghat	No tripping	Not applicable	Yes	Yes											
79	132 kV AGTPP - Kumarghat	POWERGRID	**NEEPCO & POWERGRID**				AGTPP	DP, ZII, B-E, 96.83 Kms.	Not applicable	No	No	-	-	-	-	31-Jul-16	15:39	7/31/2016 15:39	15:39	No SPS	-	
							Kumarghat	DP, ZIV, B-E	Not applicable	Yes	Yes											
80	132 kV Aizwal - Kumarghat	POWERGRID	**POWERGRID**				Aizawl	DP, ZII, B-E, 120 Kms.	Not applicable	Yes	No	-	-	-	-	31-Jul-16	15:42	7/31/2016 15:42	15:42	No SPS	-	
							Kumarghat	DP, ZIV, B-E	Not applicable	Yes	Yes											
81	132 kV P K Bari - Kumarghat	TSECL	**TSECL & POWERGRID**				PK Bari	Already was in open condition	Not applicable	No	No	-	-	-	-	31-Jul-16	16:04	7/31/2016 16:04	16:04	No SPS	-	
							Kumarghat	DP, ZIV, B-E	Not applicable	No	No											
	Root Cause	Due to B-Phase LA of 20 MVAR Bus reactor blast.Back up impedance relay of Bus reactor was the only protection that covered LA.Time delay of this protection is around 900 ms which is more than zone II settings of remote end.																				
	Remedial Measures	1.Differential protection of Kumarghat to be modified by POWERGRID, so that the protection is able to cover the LA also 2. Both Aizawl and Kumarghat reactor differntial protections to be reviewed.																				
82	132 kV AGTPP - Agartala I	POWERGRID	**NEEPCO & TSECL**	**3-Aug-16**	**13:02**	**8/3/2016 13:02**	AGTPP	DP, ZI, B-E	Not Furnished	No	No	-	-	-	-	3-Aug-16	13:30	8/3/2016 13:30	0:28	No SPS	-	
							Agartala	Earth Fault	Not applicable	No	No											
83	132 kV AGTPP - Agartala II	POWERGRID	**NEEPCO & TSECL**	**3-Aug-16**	**13:06**	**8/3/2016 13:06**	AGTPP	DP, ZII, B-E	Not applicable	No	No	-	-	-	-	3-Aug-16	13:15	8/3/2016 13:15	0:09	No SPS	-	
							Agartala	Earth Fault	Not applicable	No	No											
	Root Cause	R-phase insulator punctured and de-capped in 132 kV AGTPP - Agartala I line. As per POWERGRID record, Directional Earth fault relay operated at both ends.																				
	Remedial Measures	Proper maintenance is to be done by POWERGRID and delayed tripping of 132 kV AGTPP - Agartala II line to be investigated																				
84	132 kV AGTPP - Agartala I	POWERGRID	**NEEPCO & TSECL**	**3-Aug-16**	**13:43**	**8/3/2016 13:43**	AGTPP	Directional Over Current	Not applicable	No	No	-	-	-	-	3-Aug-16	14:32	8/3/2016 14:32	0:49	No SPS	-	
							Agartala	Earth Fault	Not applicable	No	No											
85	132 kV AGTPP - Agartala II	POWERGRID	**NEEPCO & TSECL**	**3-Aug-16**	**13:46**	**8/3/2016 13:46**	AGTPP	Directional Over Current	Not applicable	No	No	-	-	-	-	3-Aug-16	13:52	8/3/2016 13:52	0:06	No SPS	-	
							Agartala	No tripping	Not applicable	No	No											
	Root Cause	R-phase insulator punctured and de-capped in 132 kV AGTPP - Agartala I line. As per POWERGRID record, Directional Earth fault relay operated at both ends.																				
	Remedial Measures	Proper maintenance is to be done by POWERGRID and delayed tripping of 132 kV AGTPP - Agartala II line to be investigated																				
86	220 kV Misa - Mariani(PG)	POWERGRID	**POWERGRID**	**14-Aug-16**	**15:25**	**8/14/2016 15:25**	Misa	DP, ZI, R-E, 160.6 Kms.	Not Furnished	No	No	-	-	-	-	14-Aug-16	15:55	8/14/2016 15:55	0:30	No SPS	-	
							Mariani (PG)	Direct Trip received	Not applicable	No	No											
87	220 kV AGBPP - Mariani(PG)	POWERGRID	**NEEPCO & POWERGRID**	**14-Aug-16**	**15:25**	**8/14/2016 15:25**	AGBPP	No tripping	Not applicable	No	No	-	-	-	-	14-Aug-16	16:03	8/14/2016 16:03	0:38	No SPS	-	
							Mariani (PG)	Over Voltage	Not applicable	No	No											
	Root Cause	Misa relay over reached for fault in any of the line from Mariani(PG).No other events where recorded except tripping of 220 kV AGBPP - Mariani(PG) line on over voltage at Mariani.																				
	Remedial Measures	DPR settings at Misa to be reviewed by POWERGRID.																				
88	220 kV Kopili - Misa III	POWERGRID	**NEEPCO & POWERGRID**	**17-Aug-16**	**12:54**	**8/17/2016 12:54**	Kopili	DP, ZI, Y-E, 58 Kms.	Not Furnished	No	No	-	-	-	-	17-Aug-16	13:21	8/17/2016 13:21	0:27	No SPS	-	
							Misa	DP, ZI, Y-E, 15 Kms.	Not Furnished	No	No											
89	220 kV Kopili - Misa III	POWERGRID	**NEEPCO & POWERGRID**	**17-Aug-16**	**13:22**	**8/17/2016 13:22**	Kopili	DP, ZI, Y-E, 61.64 Kms.	Not Furnished	No	No	-	-	-	-	17-Aug-16	17:21	8/17/2016 17:21	3:59	No SPS	-	
							Misa	DP, ZI, Y-E, 14.7 Kms.	Not Furnished	No	No											
	Root Cause	Vegetation fault caused by miscreants at location No 178-179.																				
	Remedial Measures	Referred to PCCM.																				
90	400 kV Ranganadi-Biswanath Charali 1	POWERGRID	**NEEPCO & POWERGRID**	**18-Aug-16**	**20:58**	**8/18/2016 20:58**	Ranganadi	No tripping	Not applicable	No	No	-	-	-	-	18-Aug-16	21:21	8/18/2016 21:21	0:23	No SPS	-	
							Biswanath Charali	Over Voltage	Not applicable	No	No											
91	400 kV Balipara-Biswanath Charali I	POWERGRID	**POWERGRID**	**18-Aug-16**	**20:58**	**8/18/2016 20:58**	Balipara	Over Voltage	Not applicable	No	No	-	-	-	-	18-Aug-16	21:31	8/18/2016 21:31	0:33	No SPS	-	
							Biswanath Charali	Over Voltage	Not applicable	No	No											

	Root Cause	From PMU at Balipara,voltage was around 438 kV for 1 Minute.																					
	Remedial Measures	Over Voltage Relay settings of Biswanath Charali to be reviewed by POWERGRID.DR of BNC end to be submitted by POWERGRID.																					
92	132 kV Aizwal - Kolasib	POWERGRID	**POWERGRID & P&ED, Mizoram**	**25-Aug-16**	**16:43**	**8/25/2016 16:43**	Aizawl	DP, ZII, Y-E, 69.2 Kms.	Not applicable	No	No	-	-	-	-	25-Aug-16	17:44	8/25/2016 17:44	1:01	No SPS	-		
							Kolasib	No tripping	Not applicable	No	No												
93	132 kV Badarpur - Kolasib	POWERGRID	**POWERGRID & P&ED, Mizoram**	**25-Aug-16**	**16:43**	**8/25/2016 16:43**	Badarpur	DP, ZII, Y-E, 129.9 Kms.	Not applicable	No	No	-	-	-	-	25-Aug-16	17:44	8/25/2016 17:44	1:01	No SPS	-		
							Kolasib	No tripping	Not applicable	No	No												
	Root Cause	Due to fault in Kolasib downstream																					
	Remedial Measures	Relay settings of Downstream stations to be furnished to POWERGRID by P&ED Mizoram. POWERGRID to review settings and suggests new settings to avoid tripping of in feeds to Mizoram.																					
94	132 kV Silchar - Srikona I	POWERGRID	**POWERGRID & AEGCL**	**30-Aug-16**	**14:39**	**8/30/2016 14:39**	Silchar	SPS I operated	Not applicable	Yes	No	-	-	-	-	30-Aug-16	14:49	8/30/2016 14:49	0:10	SPS 1 operated	-		
							Srikona		Not applicable	No	No												
95	132 kV Silchar - Srikona II	POWERGRID	**POWERGRID & AEGCL**	**30-Aug-16**	**14:39**	**8/30/2016 14:39**	Silchar		Not applicable	Yes	No	-	-	-	-	30-Aug-16	15:36	8/30/2016 15:36	0:57	SPS 1 operated	-		
							Srikona		Not applicable	No	No												
96	132 kV Silchar - Panchgram	POWERGRID & AEGCL	**POWERGRID & AEGCL**	**30-Aug-16**	**14:39**	**8/30/2016 14:39**	Silchar		Not applicable	No	No	-	-	-	-	30-Aug-16	15:02	8/30/2016 15:02	0:23	SPS 1 operated	-		
							Panchgram		Not applicable	No	No												
97	132 kV Badarpur - Panchgram	POWERGRID	**POWERGRID & AEGCL**	**30-Aug-16**	**14:39**	**8/30/2016 14:39**	Badarpur		Not applicable	No	No	-	-	-	-	30-Aug-16	15:07	8/30/2016 15:07	0:28	SPS 1 operated	-		
							Panchgram		Not applicable	No	No												
	Root Cause	SPS-1 operated.																					
	Remedial Measures	-																					
98	220 kV BTPS - Salakati I	POWERGRID	**AEGCL & POWERGRID**	**31-Aug-16**	**17:45**	**8/31/2016 17:45**	BTPS	Tripped	Not Furnished	No	No	-	-	-	-	31-Aug-16	18:48	8/31/2016 18:48	1:03	No SPS	-		
							Salakati	No tripping	Not Furnished	No	No												
99	220 kV BTPS - Salakati II	POWERGRID	**AEGCL & POWERGRID**	**31-Aug-16**	**17:45**	**8/31/2016 17:45**	BTPS	Not Furnished	Not Furnished	No	No	-	-	-	-	31-Aug-16	19:01	8/31/2016 19:01	1:16	No SPS	-		
							Salakati	Due to tripping of Bus Coupler	Not Furnished	No	No												
100	220/132 kV, 50 MVA ICT I at Salakati	POWERGRID	POWERGRID	**31-Aug-16**	**17:45**	**8/31/2016 17:45**	Salakati	Earth Fault	Not applicable	No	No			-	-	31-Aug-16	19:22	8/31/2016 19:22	1:37	No SPS	-		
101	220 kV Birpara - Salakati I	POWERGRID	**POWERGRID**	**31-Aug-16**	**17:45**	**8/31/2016 17:45**	Birpara	Directional Earth Fault	Not applicable	No	No	-	-	-	-	31-Aug-16	19:15	8/31/2016 19:15	1:30	No SPS	-		
							Salakati	No tripping	Not applicable	No	No												
	Root Cause	220 kV BTPS - Salakati II jumper opened near substation.																					
	Remedial Measures	Jumper tightning to be done by POWERGRID.Tripping of 220 kV Birpara - Salakati I line to be investigated.																					

क्रम सं./ Sl. No.	ट्रिपिंग तत्वका नाम / Name of tripping element	मालिक / Owner	डाटा प्रदान करना है / Data to be furnished by	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना के तारीख / Date of Event provided by CR operator	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना का समय/ Time of Event provided by CR operator	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना के तारिख और समय / Date & Time of Event provided by CR operator	नोड का नाम / Name of Node	सी.आर. ऑपरेटर के द्वारा प्रदान की गई रिले संकेत / Relay indications provided by CR operator	ऑटो रैक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नहीं) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नहीं) / EL output furnished within 24 hours (Y/N)	लोड की हानि (मेगावाट में) / Effect (Loss of Load in MW)	जनरेशन की हानि (मेगावाट में) / Effect (Loss of Generation in MW)	लोड और जनरेशन की हानि (मेगावाट में) / Effect (Loss of Load & Generation in MW)	सी.ई.ए ग्रिड मापदंड के अनुसार कौन सा श्रेणी/ Category as per CEA Grid Standards	सी.आर ऑपरेटर के द्वारा प्रदान की गई रेस्टोरेशन का दिनांक / Date of restoration provided by CR operator	सी.आर ऑपरेटर के द्वारा प्रदान की गई रेस्टोरेशन की समय / Time of restoration provided by CR operator	सी.आर ऑपरेटर के द्वारा प्रदान की गई दिनांक और रेस्टोरेशन की समय / Date and time of restoration provided by CR operator	आउटेज की अवधि / Outage duration	एस.पी.ए स संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	Remarks
102	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**POWERGRID & DoP,Nagaland**	**1-Jul-16**	**15:05**	**7/1/2016 15:05**	Dimapur (PG)	DP, ZI, Y-E	Not applicable	No	No	-	-	-	-	3-Jul-16	19:06	7/3/2016 19:06	4:01	No SPS	-	
							Kohima	Earth Fault	Not applicable	No	No											
	Root Cause	Likely due to vegetation problem in the line																				
	Remedial Measures	POWERGRID to co-ordinate settings of 132 kV Dimapur with downstream level. Settings already exchanged with Nagaland as informed by POWERGRID.																				
103	132 kV Balipara - Depota	AEGCL	**POWERGRID & AEGCL**	**5-Jul-16**	**22:04**	**7/5/2016 22:04**	Balipara	R phase Earth fault, 57.4 Kms.	Not applicable	No	No	-	-	-	-	5-Jul-16	23:08	7/5/2016 23:08	1:04	No SPS	-	
							Depota	No Indication	Not applicable	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
104	132 kV Balipara - Depota	AEGCL	**POWERGRID & AEGCL**	**6-Jul-16**	**12:41**	**7/6/2016 12:41**	Balipara	R phase Earth fault, 27.5 Kms.	Not applicable	No	No	-	-	-	-	6-Jul-16	12:55	7/6/2016 12:55	0:14	No SPS	-	
							Depota	No tripping	Not applicable	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
105	132 kV Khliehriat (PG) - Khliehriat (ME) li	MePTCL	**POWERGRID & MePTCL**	**8-Jul-16**	**0:56**	**7/8/2016 0:56**	Khliehriat (PG)	DP, ZI, R-Y-B-E,27.62 Kms.	Not Furnished	No	No	-	-	-	-	8-Jul-16	1:14	7/8/2016 1:14	0:18	No SPS	-	
							Khliehriat(ME)	No tripping	Not Furnished	No	No											
	Root Cause	Fault likely due to lightning.To be discussed in the next PCC meeting.																				
	Remedial Measures	MePTCL to confirm whether Meghalaya has installed Numerical relays on their feeders in next PCC meeting. Installation of Numerical relays on 132 kV Khliehriat (PG) - Leshka (ME) l&II feeders could not be completed due to non-availability of shutdown of these feeders as Leshka generation is full at this time. Matter referred to PCC meeting.																				
106	132 kV Dimapur - Bokajan	AEGCL	**POWERGRID & AEGCL**	**13-Jul-16**	**13:30**	**7/13/2016 13:30**	Dimapur	DPR, Z-I, B- E, 4.71 Kms.	Not Furnished	No	No	-	-	-	-	13-Jul-16	14:03	7/13/2016 14:03	0:33	No SPS	-	
							Bokajan	Not Furnished	Not Furnished	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
107	132 kV Dimapur (PG) - Dimapur (Nagaland) I	DoP Nagaland	**POWERGRID & DoP,Nagaland**	**13-Jul-16**	**13:30**	**7/13/2016 13:30**	Dimapur (PG)	Over current	Not applicable	No	No	-	-	-	-	13-Jul-16	15:56	7/13/2016 15:56	2:26	No SPS	-	
							Dimapur	Not Furnished	Not applicable	No	No											
	Root Cause	DR to be furnished by POWERGRID for Dimapur(PG) end to check whether the event is a case of over loading/phase to phase fault.																				
	Remedial Measures	132 kV Dimapur (PG) - Dimapur (Nagaland) II line to be restored at the earliest by DoP,Nagaland.																				
108	132 kV Balipara - Depota	AEGCL	**POWERGRID & AEGCL**	**15-Jul-16**	**0:17**	**7/15/2016 0:17**	Balipara	DPR, Z-III, B- E, 30.5 Kms.	Not applicable	No	No	-	-	-	-	15-Jul-16	0:55	7/15/2016 0:55	0:38	No SPS	-	
							Depota	No tripping	Not applicable	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
109	132 kV Badarpur - Kolasib	POWERGRID	**POWERGRID & P&ED, Mizoram**	**15-Jul-16**	**17:31**	**7/15/2016 17:31**	Badarpur	DPR, Z-II, B- E, 105.92 Kms.	Not applicable	Yes	No	-	-	-	-	15-Jul-16	17:59	7/15/2016 17:59	0:28	No SPS	-	
							Kolasib	No Indication	Not applicable	No	No											
	Root Cause	Fault was in Downstream of Kolasib																				
	Remedial Measures	POWERGRID has already given the updated relay settings to Mizoram, which Mizoram is yet to implement (as on 28-Aug-16). Mizoram to implement soon.																				
110	132 kV Jiribam - Aizwal	POWERGRID	**POWERGRID**	**19-Jul-16**	**12:29**	**7/19/2016 12:29**	Jiribam	DP, ZII, Y-E, 147.2 Kms.	Not applicable	Yes	No	-	-	-	-	19-Jul-16	12:43	7/19/2016 12:43	0:14	No SPS	-	
							Aizawl	DP, ZII, Y-E, 25.25 Kms.	Not applicable	Yes	No											
	Root Cause	High resistive vegetation fault in the line as angle from DR comes around zero.																				
	Remedial Measures	Resistive reach to be increased.Earlier resistive reach was set at 20 Ohms.Now settings changed as per Ramakrishna Task Force.To be discussed in the next PCC meeting.Relay indication at the Aizwal end to be checked by POWERGRID.Vegetation clearance in this line to be done by POWERGRID.																				
111	132 kV Dimapur - Doyang II	POWERGRID	**POWERGRID & NEEPCO**	**25-Jul-16**	**10:45**	**7/25/2016 10:45**	Dimapur	No Tripping	Not applicable	No	No	-	-	-	-	25-Jul-16	11:26	7/25/2016 11:26	0:41	No SPS	-	Relay indi-Dim(PG) from CPCC
							Doyang	Earth Fault	Not applicable	No	No											
	Root Cause	DC earth fault at Doyang																				
	Remedial Measures	NEEPCO to take up this issue and rectify this problem at the earliest.																				
112	132 kV Dimapur - Imphal	POWERGRID	**POWERGRID**	**30-Jul-16**	**8:28**	**7/30/2016 8:28**	Dimapur	DP, ZII, R-Y-E, 68.46 Kms.	Not Furnished	Yes	Yes	-	-	-	-	30-Jul-16	8:59	7/30/2016 8:59	0:31	No SPS	-	Not in Logsheet, from CPCC
							Imphal	DP, ZII, R-Y-E, 85.83 Kms.	Not Furnished	No	No											
No neutral current	**Root Cause**	Fault not involving ground as there no neutral current during the fault(from DR).Root cause could not be finalized.																				
	Remedial Measures	Remedial measure after finalizing the root cause.																				
113	132 kV Jiribam - Aizwal	POWERGRID	**POWERGRID**	**30-Jul-16**	**12:04**	**7/30/2016 12:04**	Jiribam	Earth Fault, R,Y,B-Ph	Not applicable	Yes	Yes	-	-	-	-	30-Jul-16	12:30	7/30/2016 12:30	0:26	No SPS	-	
							Aizawl	DP, ZII, R-Y-E, 147.2 Kms.	Not applicable	Yes	Yes											
	Root Cause	High resistive vegetation fault in the line as angle from DR comes around zero.																				
	Remedial Measures	Resistive reach to be increased.Earlier resistive reach was set at 20 Ohms.Now settings changed as per Ramakrishna Task Force.To be discussed in the next PCC meeting.Relay indication at the Aizwal end to be checked by POWERGRID.Vegetation clearance in this line to be done by POWERGRID.																				
114	132 kV Dimapur - Doyang II	POWERGRID	**POWERGRID & NEEPCO**	**31-Jul-16**	**11:19**	**7/31/2016 11:19**	Dimapur	DP, ZI, R-E, 63.9 Kms.	Not Furnished	No	No	-	-	-	-			Not Yet restored	#VALUE!	No SPS	-	
							Doyang	DP, ZI, R-E, 45.5 Kms.	Not Furnished	No	No											
	Root Cause	Fault in the line due to vegetation problem																				
	Remedial Measures	Vegetation clearance to be done by POWERGRID																				
115	132 kV Silchar - Panchgram	POWERGRID & AEGCL	**POWERGRID & AEGCL**	**1-Aug-16**	**13:19**	**8/1/2016 13:19**	Silchar	DP, ZIII, R-E, 46.46 Kms.	Not applicable	No	No	-	-	-	-	1-Aug-16	18:53	8/1/2016 18:53	5:34	No SPS	-	
							Panchgram	Not Furnished	Not applicable	No	No											
	Root Cause	High resistive R-Phase fault turned in to R-B-E fault (concluded by checking DR output), downstream of Panchgram.																				

	Remedial Measures	Zone III reach and timing settings to be reviewed by POWERGRID. Vegetation clearance to be done by MSPCL and status to be reported.																						
116	132 kV Jiribam - Aizwal	POWERGRID	**POWERGRID**	**3-Aug-16**	**10:20**	**8/3/2016 10:20**	Jiribam	Over current	Not applicable	No	No	-	-	-	-	3-Aug-16	12:36	8/3/2016 12:36	2:16	No SPS	-			
							Aizawl	Back Up Earth Fault	Not applicable	Yes	No													
	Root Cause	High resistive fault (concluded by checking DR output), in the line as both end protective relays operated.																						
	Remedial Measures	Resistive reach of DPR to be reviewed by POWERGRID. Vegetation clearance to be done by POWERGRID and status to be reported.Patrolling report for the event to be furnished.																						
117	132 kV Dimapur - Imphal	POWERGRID	**POWERGRID**	**3-Aug-16**	**16:58**	**8/3/2016 16:58**	Dimapur	DP, ZI, Y-E, 1 Kms.	Not Furnished	No	No	-	-	-	-	4-Aug-16	8:53	8/4/2016 8:53	15:55	No SPS	-			
							Imphal	DP, ZII, Y-E, 153.7 Kms.	Not Furnished	No	No													
	Root Cause	Y-phase insulator punctured at Location 522.																						
	Remedial Measures	Proper maintenance is to be done by POWERGRID .Porcelein insulator will replaced soon by polymer insulator as informed by POWERGRID.																						
118	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**3-Aug-16**	**17:21**	**8/3/2016 17:21**	Khliehriat (PG)	DP, ZI, R-Y-B-E, 101.5 Kms.	Not Furnished	No	No	-	-	-	-	3-Aug-16	17:38	8/3/2016 17:38	0:17	No SPS	-			
							Khliehriat(ME)	No tripping	Not Furnished	No	No													
	Root Cause	To be discussed in the next PCC meeting.																						
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).																						
119	132 kV Dimapur - Imphal	POWERGRID	**POWERGRID**	**4-Aug-16**	**10:59**	**8/4/2016 10:59**	Dimapur	DP, ZI, R-E, 102.4 Kms.	Not Furnished	Yes	Yes	-	-	-	-	4-Aug-16	18:53	8/4/2016 18:53	7:54	No SPS	-			
							Imphal	DP, ZI, R-E, 50.26 Kms.	Not Furnished	No	No													
	Root Cause	R-phase insulator punctured at Location 173.																						
	Remedial Measures	Proper maintenance is to be done by POWERGRID .Porcelein insulator will replaced soon by polymer insulator as informed by POWERGRID.																						
120	132 kV Aizwal - Kumarghat	POWERGRID	**POWERGRID**	**4-Aug-16**	**11:03**	**8/4/2016 11:03**	Aizawl	DP, ZII, B-E, 120.1 Kms.	Not Furnished	No	No	-	-	-	-	4-Aug-16	11:22	8/4/2016 11:22	0:19	No SPS	-			
							Kumarghat	DP, ZI, R-B-E, 74.1 Kms.	Not Furnished	Yes	Yes													
	Root Cause	R-Phase vegetation fault (concluded by checking DR output,Ir lags Vr by 17 degrees).																						
	Remedial Measures	Distance calculation and Auto-reclosure settings of DPR to be reviewed by POWERGRID. Vegetation clearance is to be done by POWERGRID and status to be reported.																						
121	132 kV Doyang - Mokokchung(NA)	DoP Nagaland	**NEEPCO & DoP,Nagaland**	**4-Aug-16**	**17:56**	**8/4/2016 17:56**	Doyang	Power Swing	Not applicable	No	No	-	-	-	-	4-Aug-16	19:30	8/4/2016 19:30	1:34	No SPS	-			
							Mokokchung(NA)	Not Furnished	Not applicable	No	No													
	Root Cause	Matter referred to next PCC meeting.																						
	Remedial Measures	To be finalized in next PCC meeting																						
122	132 kV Loktak - Jiribam(PG)	POWERGRID	**NHPC & POWERGRID**	**5-Aug-16**	**14:56**	**8/5/2016 14:56**	Loktak	DP, ZII, R-Y-E, 76.47 Kms.	Lockout	Yes	No	-	-	-	-	5-Aug-16	15:08	8/5/2016 15:08	0:12	No SPS	-			
							Jiribam(PG)	DP, ZI, R-Y-E	Successful operation	Yes	Yes													
	Root Cause	Likely due to R-Y lightning fault in the line.																						
	Remedial Measures	PLCC link at Loktak to be checked.AR scheme at Loktak and Jiribam to be reviewed.POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																						
123	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**8-Aug-16**	**23:25**	**8/8/2016 23:25**	Khliehriat (PG)	DP, ZI, R-Y-E, 15.85 Kms.	Not Furnished	No	No	-	-	-	-	8-Aug-16	23:43	8/8/2016 23:43	0:18	No SPS	-			
							Khliehriat(ME)	No tripping	Not Furnished	NA	NA													
	Root Cause	To be discussed in the next PCC meeting.																						
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).																						
124	132 kV Dimapur - Imphal	POWERGRID	**POWERGRID**	**11-Aug-16**	**16:26**	**8/11/2016 16:26**	Dimapur	DP, ZI, Y-B-E, 81.9 Kms.	Not Furnished	Yes	No	-	-	-	-	12-Aug-16	13:40	8/12/2016 13:40	21:14	No SPS	-			
							Imphal	DP, ZI, Y-B-E, 91.42 Kms.	Not Furnished	No	No													
	Root Cause	Due to Y-B-N lightning fault.																						
	Remedial Measures	POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																						
125	132 kV Loktak - Imphal (PG)	POWERGRID	**NHPC & POWERGRID**	**12-Aug-16**	**11:06**	**8/12/2016 11:06**	Loktak	Over current	Not applicable	Yes	No	-	-	-	-	12-Aug-16	11:22	8/12/2016 11:22	0:16	No SPS	-			
							Imphal (PG)	DP, ZIII,B-E, 117 Kms.	Not applicable	No	No													
	Root Cause	Due to vegetation fault(concluded from DR).																						
	Remedial Measures	Vegetation clearance to be done by POWERGRID & MSPCL and status to be reported.																						
126	132 kV Dimapur - Imphal	POWERGRID	**POWERGRID**	**12-Aug-16**	**12:08**	**8/12/2016 12:08**	Dimapur	DP, ZI, B-E, 85.73 Kms.	Not Furnished	No	No	-	-	-	-	12-Aug-16	13:40	8/12/2016 13:40	1:32	No SPS	-			
							Imphal	DP, ZI, B-E, 93.03 Kms.	Not Furnished	No	No													
	Root Cause	Due to insulator failure caused by lightning at Location No. 210 .																						
	Remedial Measures	Proper maintenance is to be done by POWERGRID .Porcelein insulator will replaced soon by polymer insulator as informed by POWERGRID.POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																						
127	132 kV Dimapur - Imphal	POWERGRID	**POWERGRID**	**13-Aug-16**	**11:02**	**8/13/2016 11:02**	Dimapur	No tripping	Not Furnished	No	No	-	-	-	-	13-Aug-16	18:24	8/13/2016 18:24	7:22	No SPS	-			
							Imphal	DP, ZI, B-E, 77.4 Kms.	Not Furnished	No	No													
	Root Cause	Due to insulator failure caused by lightning at Location No. 210 .																						
	Remedial Measures	Proper maintenance is to be done by POWERGRID .Porcelein insulator will replaced soon by polymer insulator as informed by POWERGRID.POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																						
128	132 kV Dimapur - Imphal	POWERGRID	**POWERGRID**	**14-Aug-16**	**7:00**	**8/14/2016 7:00**	Dimapur	DP, ZI, B-E, 94.6 Kms.	Not Furnished	No	No	-	-	-	-	15-Aug-16	14:46	8/15/2016 14:46	7:46	No SPS	-			
							Imphal	DP, ZI, B-E, 77.42 Kms.	Not Furnished	No	No													
	Root Cause	Due to insulator failure caused by lightning at Location No. 210 .																						
	Remedial Measures	Proper maintenance is to be done by POWERGRID .Porcelein insulator will replaced soon by polymer insulator as informed by POWERGRID.POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																						
129	132 kV Jiribam - Aizwal	POWERGRID	**POWERGRID**	**14-Aug-16**	**18:41**	**8/14/2016 18:41**	Jiribam	Backup Earth Fault	Not applicable	No	No	-	-	-	-	14-Aug-16	19:01	8/14/2016 19:01	0:20	No SPS	-			
							Aizawl	Backup Earth Fault	Not applicable	No	No													
	Root Cause	Due to B-N vegetation fault (concluded from DR) in the line as both end relays operated.																						
	Remedial Measures	Vegetation clearance to be done by POWERGRID and status to be reported.																						
130	132 kV Jiribam - Aizwal	POWERGRID	**POWERGRID**	**14-Aug-16**	**23:18**	**8/14/2016 23:18**	Jiribam	DP, ZI, R-Y-B-E, 11.18 Kms.	Not Furnished	No	No	-	-	-	-	14-Aug-16	23:35	8/14/2016 23:35	0:17	No SPS	-			
							Aizawl	DP, ZII, R-Y-B-E,	Not Furnished	No	No													

	Root Cause	Downstream fault cleared at Haflong(PG).																					
	Remedial Measures	Downstream relay settings to be submitted to POWERGRID by AEGCL.																					
132	132 kV Haflong(PG) - Jiribam	POWERGRID	**POWERGRID**	**15-Aug-16**	**2:10**	**8/15/2016 2:10**	Haflong(PG)	DP, ZI, R-E, 59.77 Kms.	Not Furnished	Yes	No	-	-	-	-	15-Aug-16	2:46	8/15/2016 2:46	0:36	No SPS	-		
							Jiribam	DP, ZI, R-E, 34.33 Kms.	Not Furnished	No	No												
	Root Cause	Due to R-N lightning fault (concluded by checking DR output,Ir lags Vr by 71 Degrees)																					
	Remedial Measures	POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																					
133	132 kV Dimapur - Doyang II	POWERGRID	**POWERGRID & NEEPCO**	**15-Aug-16**	**4:55**	**8/15/2016 4:55**	Dimapur	DP, ZI, B-E, 59.93 Kms.	Not Furnished	No	No	-	-	-	-	15-Aug-16	5:18	8/15/2016 5:18	0:23	No SPS	-		
							Doyang	DP, ZI, R-E, 19.6 Kms.	Not Furnished	No	No												
	Root Cause	Due to B-N lightning fault (concluded by checking DR output,Ib lags Vb by 75 Degrees)																					
	Remedial Measures	POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																					
134	132 kV Silchar - Panchgram	POWERGRID & AEGCL	**POWERGRID & AEGCL**	**15-Aug-16**	**21:15**	**8/15/2016 21:15**	Silchar	No tripping	Not Furnished	No	No	-	-	-	-	15-Aug-16	21:28	8/15/2016 21:28	0:13	No SPS	-		
							Panchgram	Not Furnished	Not Furnished	No	No												
	Root Cause	Due to Mal operation of relay at panchgram.																					
	Remedial Measures	SLDC, AEGCL to furnish the relay indication of Panchgram end. Relay settings at Panchgram to be reviewed.																					
135	132 kV Silchar-P K Bari I	POWERGRID	**POWERGRID & TSECL**	**15-Aug-16**	**21:40**	**8/15/2016 21:40**	Silchar	DP, ZI, Y-E, 25.86 Kms.	Not Furnished	Yes	No	-	-	-	-	15-Aug-16	22:02	8/15/2016 22:02	0:22	No SPS	-		
							PK Bari	Master Trip Relay Operated	Not Furnished	No	No												
	Root Cause	Due to Y-N lightning fault (concluded by checking DR output,Iy lags Vy by 66 Degrees)																					
	Remedial Measures	POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																					
136	132 kV Lumshnong - Panchgram	MePTCL & AEGCL	**MePTCL & AEGCL**	**15-Aug-16**	**22:15**	**8/15/2016 22:15**	Lumshnong	DP, ZI, Y-B-E, 34.8 Kms.	Not Furnished	No	No	-	-	-	-	15-Aug-16	23:12	8/15/2016 23:12	0:57	No SPS	-		
							Panchgram	DP, ZI, Y-B-E	Not Furnished	No	No												
	Root Cause	Due to vegetation fault in the line as both end relays operated in Zone I.																					
	Remedial Measures	Vegetation clearance to be done by MePTCL & AEGCL and status to be reported.																					
137	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**16-Aug-16**	**0:11**	**8/16/2016 0:11**	Khliehriat (PG)	DP, ZI, R-Y-B-E, 130.7 Kms.	Not Furnished	No	No	-	-	-	-	16-Aug-16	1:24	8/16/2016 1:24	1:13	No SPS	-		
							Khliehriat(ME)	No tripping	Not Furnished	No	No												
	Root Cause	To be discussed in the next PCC meeting.																					
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).																					
138	132 kV Loktak - Jiribam(PG)	POWERGRID	**NHPC & POWERGRID**	**16-Aug-16**	**15:57**	**8/16/2016 15:57**	Loktak	DP, ZII, B-E, 36.78 Kms.	Not applicable	No	No	-	-	-	-	16-Aug-16	16:07	8/16/2016 16:07	0:10	No SPS	-		
							Jiribam(PG)	DP, ZII, B-E, 57 Kms.	Not applicable	Yes	No												
	Root Cause	Due to B-N vegetation fault (concluded from DR,Ib lags Vb by 25 degrees) in the line.																					
	Remedial Measures	Vegetation clearance to be done by POWERGRID and status to be reported.																					
139	132 kV Dimapur - Imphal	POWERGRID	**POWERGRID**	**18-Aug-16**	**11:17**	**8/18/2016 11:17**	Dimapur	DP, ZI, R-Y-E, 131.1 Kms.	Not Furnished	No	No	-	-	-	-	18-Aug-16	11:26	8/18/2016 11:26	0:09	No SPS	-		
							Imphal	DP, ZI, R-Y-E, 22 Kms.	Not Furnished	Yes	No												
	Root Cause	Due to R-N vegetation fault converted to R-Y-N fault (concluded from DR,Iy lags Vy by 3 degrees) in the line.																					
	Remedial Measures	Vegetation clearance to be done by POWERGRID and status to be reported.																					
140	132 kV Haflong(PG) - Jiribam	POWERGRID	**POWERGRID**	**21-Aug-16**	**13:21**	**8/21/2016 13:21**	Haflong(PG)	DP, ZI, R-Y-E, 24.99 Kms.	Not Furnished	Yes	No	-	-	-	-	21-Aug-16	13:33	8/21/2016 13:33	0:12	No SPS	-		
							Jiribam	DP, ZI, R-Y-E, 70.83 Kms.	Not Furnished	Yes	No												
	Root Cause	Due to Y-N vegetation fault converted to R-Y-N fault (concluded from DR) in the line.																					
	Remedial Measures	Vegetation clearance to be done by POWERGRID and status to be reported.																					
141	132 kV Loktak - Imphal (PG)	POWERGRID	**NHPC & POWERGRID**	**22-Aug-16**	**12:49**	**8/22/2016 12:49**	Loktak	DP, ZI, R-B-E, 7.92 Kms.	Not Furnished	No	No	-	-	-	-	22-Aug-16	12:55	8/22/2016 12:55	0:06	No SPS	-		
							Imphal (PG)	DP, ZI, B-E, 35.76 Kms.	Successful operation	Yes	No												
	Root Cause	Likely due to R-Y-B-N lightning fault in the line.																					
	Remedial Measures	PLCC link at Loktak to be checked.AR scheme at Loktak and Jiribam to be reviewed.POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																					
142	132 kV Badarpur - Panchgram	POWERGRID	**POWERGRID & AEGCL**	**23-Aug-16**	**14:21**	**8/23/2016 14:21**	Badarpur	SPS-3 operated	Not applicable	No	No	-	-	-	-	23-Aug-16	14:30	8/23/2016 14:30	0:09	No SPS	-		
							Panchgram	No tripping	Not applicable	No	No												
	Root Cause	SPS mal-operated.																					
	Remedial Measures	Reason for SPS signal at Badarpur to be investigated by POWERGRID & AEGCL.																					
143	132 kV Dimapur - Bokajan	AEGCL	**POWERGRID & AEGCL**	**24-Aug-16**	**10:16**	**8/24/2016 10:16**	Dimapur	DP, ZI, R-Y-B, 15.35 Kms.	Not applicable	No	No	-	-	-	-	24-Aug-16	10:38	8/24/2016 10:38	0:22	No SPS	-		
							Bokajan	Earth Fault	Not applicable	No	No												
	Root Cause	Due to vegetation fault in the line.																					
	Remedial Measures	Vegetation clearance to be done by AEGCL and status to be reported.																					
144	132 kV Jiribam - Aizwal	POWERGRID	**POWERGRID**	**25-Aug-16**	**16:02**	**8/25/2016 16:02**	Jiribam	DP, ZI, Y-E, 58.23 Kms.	Not Furnished	Yes	No	-	-	-	-	25-Aug-16	16:13	8/25/2016 16:13	0:11	No SPS	-		
							Aizawl	DP, ZI, Y-E, 114 Kms.	Not Furnished	No	No												
	Root Cause	Likely due to Y-B-N lightning fault in the line.																					
	Remedial Measures	AR scheme at Aizwal and Jiribam to be reviewed.POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																					
145	132 kV Badarpur - Kumarghat	POWERGRID	**POWERGRID**	**25-Aug-16**	**17:14**	**8/25/2016 17:14**	Badarpur	DP, ZI, R-Y-E, 17.96 Kms.	Not Furnished	Yes	No	-	-	-	-	25-Aug-16	17:32	8/25/2016 17:32	0:18	No SPS	-		
							Kumarghat	DP, ZI, R-Y-E, 89.9 Kms.	Not Furnished	Yes	No												
	Root Cause	Likely due to Y-B-N lightning fault in the line.																					
	Remedial Measures	AR scheme at Badarpur and Kumarghat to be reviewed.POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																					
146	132 kV Aizwal - Kumarghat	POWERGRID	**POWERGRID**	**25-Aug-16**	**17:14**	**8/25/2016 17:14**	Aizawl	DP, ZI, Y-E, 60.83 Kms.	Not Furnished	No	No	-	-	-	-	25-Aug-16	17:32	8/25/2016 17:32	0:18	No SPS	-		
							Kumarghat	DP, ZI, R-Y-B	Not Furnished	No	No												

	Remedial Measures	AR scheme at Jiribam and Aizwal to be reviewed.POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																						
148	132 kV Jiribam - Aizwal	POWERGRID	**POWERGRID**	**25-Aug-16**	**21:21**	**8/25/2016 21:21**	Jiribam	DP, ZI, R-E, 58.7 Kms.	Not Furnished	Yes	No	-	-	-	-	25-Aug-16	21:34	8/25/2016 21:34	0:13	No SPS	-			
							Aizawl	DP, ZI, R-E, 114 Kms.	Not Furnished	No	No													
	Root Cause	Likely due to R-N lightning fault(concluded from DR output,Ir lags Vr by 70 degrees) in the line.																						
	Remedial Measures	AR scheme at Jiribam and Aizwal to be reviewed.POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																						
149	132 kV AGTPP - Agartala I	POWERGRID	**NEEPCO & TSECL**	**25-Aug-16**	**1:46**	**8/25/2016 1:46**	AGTPP	DP, ZI, B-E, 8.017 Kms.	Not applicable	No	No				-	25-Aug-16	13:14	8/25/2016 13:14	11:28	No SPS	-			
							Agartala	Earth Fault	Not applicable	No	No													
	Root Cause	Fault in the line. Root cause could not be concluded due to unavailability of DR outputs.																						
	Remedial Measures	DR of AGTPP end for this event to be submitted by NEEPCO.																						
150	132 kV Jiribam - Aizwal	POWERGRID	**POWERGRID**	**25-Aug-16**	**10:26**	**8/25/2016 10:26**	Jiribam	DP, ZII, Y-E, 14.77 Kms.	Not applicable	Yes	No	-	-	-	-	25-Aug-16	10:43	8/25/2016 10:43	0:17	No SPS	-			
							Aizawl	Earth Fault	Not applicable	No	No													
	Root Cause	High resistive vegetation Y-N fault (concluded by checking DR output,Iy lags Vy by 3.6 degrees and fault current is very low ~800 Amps.), in the line as both end protective relays operated.																						
	Remedial Measures	Resistive reach of DPR to be reviewed by POWERGRID. Vegetation clearance to be done by POWERGRID and status to be reported.Patrolling report for the event to be furnished.																						
151	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**25-Aug-16**	**13:59**	**8/25/2016 13:59**	Khliehriat (PG)	DP, ZI, R-Y-B, 26.72 Kms.	Not Furnished	No	No	-	-	-	-	25-Aug-16	14:36	8/25/2016 14:36	0:37	No SPS	-			
							Khliehriat(ME)	No tripping	Not Furnished	No	No													
	Root Cause	To be discussed in the next PCC meeting.																						
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).																						
152	132 kV Dimapur - Imphal	POWERGRID	**POWERGRID**	**25-Aug-16**	**14:55**	**8/25/2016 14:55**	Dimapur	DP, ZI, R-B-E, 50.39 Kms.	Not Furnished	Yes	No	-	-	-	-	25-Aug-16	15:21	8/25/2016 15:21	0:26	No SPS	-			
							Imphal	DP, ZI, R-B-E, 122.8 Kms.	Not Furnished	Yes	No													
	Root Cause	Likely due to R-B-N lightning fault(concluded from DR output) in the line.																						
	Remedial Measures	AR scheme at Dimapur and Imphal to be reviewed.POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																						
153	132 kV Silchar - Imphal (PG) II	POWERGRID	**POWERGRID**	**25-Aug-16**	**15:19**	**8/25/2016 15:19**	Silchar	DP, ZI, B-E, 58.14 Kms.	Not Furnished	No	No	-	-	-	-	25-Aug-16	15:30	8/25/2016 15:30	0:11	No SPS	-			
							Imphal (PG)	DP, ZI, B-E, 93.81 Kms.	Not Furnished	Yes	No													
	Root Cause	Likely due to R-B-N lightning fault(concluded from DR output,Ib lags Vb by 76 degrees) in the line.																						
	Remedial Measures	AR scheme at Silchar and Imphal to be reviewed.POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																						
154	132 kV Loktak - Jiribam(PG)	POWERGRID	**NHPC & POWERGRID**	**25-Aug-16**	**15:43**	**8/25/2016 15:43**	Loktak	DP, ZII, B-E, 72.5 Kms.	Not Furnished	No	No	-	-	-	-	25-Aug-16	15:57	8/25/2016 15:57	0:14	No SPS	-			
							Jiribam(PG)	DP, ZI, B-E, 11.94 Kms.	Successful operation	Yes	No													
	Root Cause	Fault in the line.Root cause could not be concluded due to unavailability of DR outputs.																						
	Remedial Measures	PLCC link at Loktak to be checked.AR scheme at Loktak and Jiribam to be reviewed.																						
155	132 kV Silchar - Panchgram	POWERGRID & AEGCL	**POWERGRID & AEGCL**	**25-Aug-16**	**16:47**	**8/25/2016 16:47**	Silchar	DP, ZIII, R-Y-E, 52.57 Kms.	Not applicable	No	No	-	-	-	-	25-Aug-16	17:10	8/25/2016 17:10	0:23	No SPS	-			
							Panchgram	Over current	Not applicable	No	No													
	Root Cause	Due to Mal operation of relay at panchgram.																						
	Remedial Measures	SLDC, AEGCL to furnish the relay indication of Panchgram end. Relay settings at Panchgram to be reviewed.																						
156	132 kV Silchar - Panchgram	POWERGRID & AEGCL	**POWERGRID & AEGCL**	**27-Aug-16**	**4:38**	**8/27/2016 4:38**	Silchar	DP, ZIII, B-E, 49.28 Kms.	Not applicable	No	No	-	-	-	-	27-Aug-16	5:08	8/27/2016 5:08	0:30	No SPS	-			
							Panchgram	Earth Fault	Not applicable	No	No													
	Root Cause	Due to Mal operation of relay at panchgram.																						
	Remedial Measures	SLDC, AEGCL to furnish the relay indication of Panchgram end. Relay settings at Panchgram to be reviewed.																						
157	132 kV Silchar-P K Bari II	POWERGRID	**POWERGRID & TSECL**	**27-Aug-16**	**5:16**	**8/27/2016 5:16**	Silchar	DP, ZI, B-E, 88.12 Kms.	Not Furnished	Yes	No	-	-	-	-	27-Aug-16	5:47	8/27/2016 5:47	0:31	No SPS	-			
							PK Bari	Master trip relay operated	Not Furnished	No	No													
	Root Cause	Fault in the line due to bad weather condition.																						
	Remedial Measures	POWERGRID to furnish DR output of the event.																						
158	132 kV Badarpur - Kumarghat	POWERGRID	**POWERGRID**	**27-Aug-16**	**5:33**	**8/27/2016 5:33**	Badarpur	DP, ZI, Y-E, 24.65 Kms.	Not applicable	No	No	-	-	-	-	27-Aug-16	5:54	8/27/2016 5:54	0:21	No SPS	-			
							Kumarghat	DP, ZI, Y-E, 104.2 Kms.	Not applicable	No	No													
	Root Cause	Due to Y-N vegetation fault as concluded from DR(due to bad weather condition).																						
	Remedial Measures	Vegetation clearance to be done by POWERGRID and status to be reported.Patrolling report for the event to be furnished.																						
159	132 kV Silchar-P K Bari II	POWERGRID	**POWERGRID & TSECL**	**27-Aug-16**	**21:13**	**8/27/2016 21:13**	Silchar	DP, ZI, B-E, 67 Kms.	Not Furnished	Yes	No	-	-	-	-	27-Aug-16	21:34	8/27/2016 21:34	0:21	No SPS	-			
							PK Bari	Master trip relay operated	Not Furnished	No	No													
	Root Cause	Likely due to B-N lightning fault(concluded from DR output,Ib lags Vb by 79 degrees) in the line.																						
	Remedial Measures	AR scheme at Silchar and P K Bari to be reviewed.POWERGRID is to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																						
160	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**28-Aug-16**	**1:41**	**8/28/2016 1:41**	Khliehriat (PG)	DP, ZI, R-Y-B, 11 Kms.	Not Furnished	No	No	-	-	-	-	28-Aug-16	1:51	8/28/2016 1:51	0:10	No SPS	-			
							Khliehriat(ME)	No tripping	Not Furnished	No	No													
	Root Cause	To be discussed in the next PCC meeting.																						
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).																						
161	132 kV Haflong(PG) - Jiribam	POWERGRID	**POWERGRID**	**28-Aug-16**	**12:06**	**8/28/2016 12:06**	Haflong(PG)	DP, ZI, Y-E, 73.62 Kms.	Not Furnished	Yes	No	-	-	-	-	28-Aug-16	12:30	8/28/2016 12:30	0:24	No SPS	-			
							Jiribam	DP, ZII, Y-E, 87.23 Kms.	Not Furnished	Yes	No													
	Root Cause	Likely due to Y-N lightning fault(concluded from DR output) in the line.																						
	Remedial Measures	AR scheme at Haflong and Jiribam to be reviewed.POWERGRID to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																						
162	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**29-Aug-16**	**14:29**	**8/29/2016 14:29**	Khliehriat (PG)	DP, ZI, R-Y-B-E, 80.69 Kms.	Not Furnished	No	No	-	-	-	-	29-Aug-16	14:48	8/29/2016 14:48	0:19	No SPS	-			
							Khliehriat(ME)	No tripping	Not Furnished	No	No													
	Root Cause																							

	Remedial Measures	POWERGRID to furnish more details for further analysis.																						
164	132 kV Biswanath Charali-Pavoi I	POWERGRID	**POWERGRID & AEGCL**	**30-Aug-16**	**18:21**	**8/30/2016 18:21**	Biswanath Charali	DP, ZI, R-E, 2.8 Kms.	Not Furnished	Yes	No	-	-	-	-	30-Aug-16	18:48	8/30/2016 18:48	0:27	No SPS	-		
							Pavoi	DP, ZI, R-E, 7.719 Kms.	Not Furnished	No	No												
	Root Cause	Due to fault in the line.Root cause could not be concluded due to unavailability of DR outputs.																						
	Remedial Measures	POWERGRID to furnish DR of BNC end for further analysis.																						
165	132 kV Jiribam - Aizwal	POWERGRID	**POWERGRID**	**31-Aug-16**	**0:01**	**8/31/2016 0:01**	Jiribam	DP, ZI, R-Y-B-E, 34.78 Kms.	Not Furnished	Yes	No	-	-	-	-	31-Aug-16	0:19	8/31/2016 0:19	0:18	No SPS	-		
							Aizawl	DP, ZI, R-Y-B-E, 132.9 Kms.	Not Furnished	No	No												
	Root Cause	Likely due to R-Y-N lightning fault(concluded from DR output) in the line.																						
	Remedial Measures	AR scheme at Aizwal and Jiribam to be reviewed.POWERGRID to check the tower footing resistance of all towers in the lightning prone areas. If the resistance goes above 10 Ohm , proper earthing to be done by POWERGRID by 1. Counterpoise earthing 2. Direct earthing of shield wire to ground if necessary 3. Install Tower Lightning Arresters.																						
166	132 kV AGTPP - Agartala II	POWERGRID	**NEEPCO & TSECL**	**31-Aug-16**	**8:01**	**8/31/2016 8:01**	AGTPP	No tripping	Not Furnished	No	No	-	-	-	-	31-Aug-16	14:46	8/31/2016 14:46	6:45	No SPS	-		
							Agartala	Not Furnished	Not Furnished	No	No												
	Root Cause	Root cause could not be concluded due to unavailability of DR outputs as well as proper relay indications.																						
	Remedial Measures	POWERGRID to furnish patrolling report for further analysis.Relay indications to be furnished by NEEPCO & SLDC,TSECL.																						
167	132 kV AGTPP - Agartala II	POWERGRID	**NEEPCO & TSECL**	**31-Aug-16**	**23:44**	**8/31/2016 23:44**	AGTPP	DP, ZI, Y-B-E, 2.124 Kms.	Not Furnished	No	No	-	-	-	-	1-Sep-16	11:50	9/1/2016 11:50	12:06	No SPS	-		
							Agartala	Not Furnished	Not Furnished	No	No												
	Root Cause	Y-phase jumper failed at Loc No. 15.																						
	Remedial Measures	Proper maintenance and jumper tightning to be done by POWERGRID.																						

क्रम सं. / Sl. No.	ट्रिपिंग तत्का नाम / Name of tripping element	मालिक / Owner	डाटा प्रदान करना है / Data to be furnished by	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना के तारिख / Date of Event provided by CR operator	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना का समय/ Time of Event provided by CR operator	सी.आर. ऑपरेटर के द्वारा प्रदान की गई घटना के तारिख और समय / Date & Time of Event provided by CR operator	नोड का नाम / Name of Node	सी.आर. ऑपरेटर के द्वारा प्रदान की गई रिले संकेत / Relay indications provided by CR operator	ऑटो रीक्लोजर का ऑपरेशन / Operation of Auto Reclose	24 घंटे के भीतर डी.आर. पेश किया (हां / नही) / DR output furnished within 24 hours (Y/N)	24 घंटे के भीतर ई.एल. पेश किया (हां / नही) / EL output furnished within 24 hours (Y/N)	नोड की हानि (मेगावाट में) / Effect (Loss of Load in MW)	जनरेशन की हानि (मेगावाट में) / Effect (Loss of Generation in MW)	नोड और जनरेशन की हानि (मेगावाट में) / Effect (Loss of Load & Generation in MW)	सी.ई.ए ग्रिड मापदंड के अनुसार कौन सा श्रेणी/ Category as per CEA Grid Standards	सी.आर ऑपरेटर के द्वारा प्रदान की गई रेस्टोरेशन का दिनांक / Date of restoration provided by CR operator	सी.आर ऑपरेटर के द्वारा प्रदान की गई रेस्टोरेशन की समय / Time of restoration provided by CR operator	सी.आर ऑपरेटर के द्वारा प्रदान की गई दिनांक और रेस्टोरेशन की समय / Date and time of restoration provided by CR operator	आउटेज की अवधि / Outage duration	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	Remarks
5	132 kV Rangia - Motonga	BPC	**AEGCL & BPC**	**6-Jul-16**	**11:46**	**7/6/2016 11:46**	Rangia	Over current	Not applicable	No	No	-	-	-	-	6-Jul-16	12:32	7/6/2016 12:32	0:46	No SPS	-	
							Motonga	No tripping	Not applicable	No	No											
6	132 kV Rangia - Motonga	BPC	**AEGCL & BPC**	**6-Jul-16**	**13:23**	**7/6/2016 13:23**	Rangia	Over current	Not applicable	No	No	-	-	-	-	6-Jul-16	15:17	7/6/2016 15:17	1:54	No SPS	-	
							Motonga	No tripping	Not applicable	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
7	132 kV Rangia - Motonga	BPC	**AEGCL & BPC**	**8-Jul-16**	**17:04**	**7/8/2016 17:04**	Rangia	Over current	Not applicable	No	No	-	-	-	-	8-Jul-16	17:54	7/8/2016 17:54	0:50	No SPS	-	
							Motonga	No tripping	Not applicable	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
11	132 kV Rangia - Motonga	BPC	**AEGCL & BPC**	**15-Jul-16**	**13:50**	**7/15/2016 13:50**	Rangia	No tripping	Not Furnished	No	No	-	-	-	-	15-Jul-16	15:42	7/15/2016 15:42	1:52	No SPS	-	
							Motonga	Not Furnished	Not Furnished	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
17	400 kV Bongaigaon - New Siliguri I	POWERGRID	**POWERGRID**	**11-Aug-16**	**12:44**	**8/11/2016 12:44**	Bongaigaon	DP, ZI, B-E, 24.15 Kms.	Not Furnished	Yes	No	-	-	-	-	11-Aug-16	21:19	8/11/2016 21:19	8:35	No SPS	-	
							New Siliguri	Not Furnished	Not Furnished	No	No											
	Root Cause	Permanent fault with high current and high angle.Root cause could not be concluded.																				
	Remedial Measures	Remedial measures after concluding root cause.																				
21	132 kV Surjamaninagar-Comilla I	POWERGRID & PGCB	**POWERGRID & PGCB**	**16-Aug-16**	**16:52**	**8/16/2016 16:52**	Surjamaninagar	Not Furnished	Not Furnished	No	No	-	-	-	-	16-Aug-16	17:19	8/16/2016 17:19	0:27	No SPS	-	
							Comilla	Not Furnished	Not Furnished	No	No											
	Root Cause	Fault in the Bangladesh section of the line.																				
	Remedial Measures	Referred to PCCM.																				
71	220 kV Birpara - Salakati II	POWERGRID	**POWERGRID**	**25-Aug-16**	**5:19**	**8/25/2016 5:19**	Birpara	No tripping	Not Furnished	No	No	-	-	-	-	25-Aug-16	5:45	8/25/2016 5:45	0:26	No SPS	-	
							Salakati	DP, ZI, B-E, 109.3 Kms.	Not Furnished	No	No											
	Root Cause	Due to fault in the line.Root cause could not be concluded due to unavailability of DR outputs.																				
	Remedial Measures	POWERGRID to provide DR outputs of Salakati end for this event for further analysis.																				
76	132 kV Surjamaninagar-Comilla I	POWERGRID & PGCB	**POWERGRID & PGCB**	**25-Aug-16**	**20:10**	**8/25/2016 20:10**	Surjamaninagar	DP,No other info. Furnished	Not Furnished	No	No	-	-	-	-	25-Aug-16	20:49	8/25/2016 20:49	0:39	No SPS	-	
							Comilla	No tripping	Not Furnished	No	No											
	Root Cause	Referred to PCCM.																				
	Remedial Measures	POWERGRID to furnish proper relay indication as well as patrolling report.																				
30	220 kV Birpara - Salakati I	POWERGRID	**POWERGRID**	**29-Aug-16**	**4:27**	**8/29/2016 4:27**	Birpara	DP, ZI, R-E	Successful operation	No	No	-	-	-	-	29-Aug-16	4:53	8/29/2016 4:53	0:26	No SPS	-	
							Salakati	DP, ZI, R-E, 121 Kms.	Not Furnished	No	No											
	Root Cause	Due to fault in the line.Root cause could not be concluded due to unavailability of DR outputs.																				
	Remedial Measures	POWERGRID to provide DR outputs of Salakati end for this event for further analysis.																				
33	400 kV Palatana - Silchar II	NETC	**OTPC & POWERGRID**	**26-Jul-16**	**11:34**	**7/26/2016 11:34**	Palatana	DP, ZI, R-E, 40 Kms.	Not Furnished	No	No	-	-	-	-	26-Jul-16	12:10	7/26/2016 12:10	0:36	No SPS	-	
							Silchar	DP, ZI, R-E, 179.2 Kms.	Not Furnished	No	No											
	Root Cause	Root cause yet to finalize as there is no finding after petrolling as informed by POWERGRID and angle is coming around 30 degree durning fault.																				
	Remedial Measures	Remedial measure after finalizing the root cause.																				
44	220 kV Balipara - Sonabil	AEGCL	**POWERGRID & AEGCL**	**22-Aug-16**	**13:31**	**8/22/2016 13:31**	Balipara	Earth Fault	Not applicable	No	No	-	-	-	-	22-Aug-16	14:12	8/22/2016 14:12	0:41	No SPS	-	
							Sonabil	No tripping	Not applicable	No	No											
	Root Cause	Same time,220 kV 220 kV Samaguri - Sonabil line also tripped.Matter referred to PCC.																				
	Remedial Measures	Remedial measures after concluding root cause.																				
50	220 kV Mariani(PG)-Mokokchung (PG) II	POWERGRID	**POWERGRID**	**12-Jul-16**	**1:11**	**7/12/2016 1:11**	Mariani(PG)	Backup Over Current	Not applicable	No	No	-	-	-	-			Not Yet Restored	#VALUE!	No SPS	-	Tower Collapsed
							Mokokchung(PG)	DPR, Z-I, R-Y- E, 24.51 Kms.	Not Furnished	No	No											
No neutral current	**Root Cause**	Fault not involving ground as there no neutral current during the fault(from DR).Root cause could not be finalized.																				
	Remedial Measures	Remedial measure after finalizing the root cause.																				
53	220 kV Samaguri -	AEGCL	**AEGCL**	**22-Jul-16**	**7:25**	**7/22/2016 7:25**	Samaguri	DP, ZI, R-Y-E,33.6 Kms.	Not Furnished	No	No	-	-	-	-	22-Jul-16	15:43	7/22/2016 15:43	8:18	No SPS	-	

	Mariani II	AEGCL	AEGCL	22-Jul-16	7:23	7/22/2016 7:23	Mariani	DP, ZI, R-Y-E,36.7 Kms.	Not Furnished	No	No	-	-	-	-	22-Jul-16	15:43	7/22/2016 15:43	8:18	No SPS	-		
	Root Cause	Matter referred to next PCC meeting.																					
	Remedial Measures	To be finalized after next PCC meeting																					
54	220 kV Azara - Sarusajai I	AEGCL	**AEGCL**	**22-Jul-16**	**12:15**	**7/22/2016 12:15**	Azara	Not Furnished	Not applicable	No	No	-	-	-	-	22-Jul-16	18:30	7/22/2016 18:30	6:15	No SPS	-		
							Sarusajai	R-Ph, LA burst at Sarusajai	Not applicable	No	No												
	Root Cause	Matter referred to next PCC meeting.																					
	Remedial Measures	To be finalized after next PCC meeting																					
57	220 kV Mariani(PG)-Mokokchung (PG) I	POWERGRID	**POWERGRID**	**9-Aug-16**	**4:10**	**8/9/2016 4:10**	Mariani(PG)	Hand Tripped	Not applicable	No	No	-	-	-	-	9-Aug-16	13:31	8/9/2016 13:31	9:21	No SPS	-		
							Mokokchung(PG)	Over Voltage	Not applicable	No	No												
	Root Cause	Root cause could not be concluded due to unavailability of DR outputs.																					
	Remedial Measures	PLCC link at Mariani(PG) and Mokokchung(PG) to be checked.DR to be submitted by POWERGRID.																					
58	220 kV AGBPP - Tinsukia II	AEGCL	**NEEPCO & AEGCL**	**10-Aug-16**	**15:00**	**8/10/2016 15:00**	AGBPP	DP, ZII, R-Y-B	Not applicable	No	No	-	-	-	-	10-Aug-16	15:28	8/10/2016 15:28	0:28	No SPS	-		
							Tinsukia	DP, ZII, R-Y-B	Not applicable	No	No												
	Root Cause	Matter referred to next PCC meeting.																					
	Remedial Measures	To be finalized in next PCC meeting																					
60	220 kV Mariani(PG)-Mokokchung (PG) I	POWERGRID	**POWERGRID**	**14-Aug-16**	**15:25**	**8/14/2016 15:25**	Mariani(PG)	Over Voltage	Not applicable	No	No	-	-	-	-	14-Aug-16	16:25	8/14/2016 16:25	1:00	No SPS	-		
							Mokokchung(PG)	Direct Trip received	Not applicable	No	No												
	Root Cause	Root cause could not be concluded due to unavailability of DR outputs.There was no over voltage at Misa (from PMU).																					
	Remedial Measures	POWERGRID to provide DR outputs of Mariani & Mokokchung for this event.																					
61	220 kV Balipara - Sonabil	AEGCL	**POWERGRID & AEGCL**	**15-Aug-16**	**12:02**	**8/15/2016 12:02**	Balipara	DP, Y-E, Dist. Not furnished	Not Furnished	Yes	No	-	-	-	-	15-Aug-16	12:22	8/15/2016 12:22	0:20	No SPS	-		
							Sonabil	No tripping	Not Furnished	No	No												
	Root Cause	Due to Y-N fault sensed as Zone I fault.																					
	Remedial Measures	DPR settings at Balipara to be reviewed by POWERGRID. Patrolling report to be submitted by AEGCL.																					
64	220 kV Mariani(PG)-Mokokchung (PG) II	POWERGRID	**POWERGRID**	**25-Aug-16**	**13:54**	**8/25/2016 13:54**	Mariani(PG)	Direct Trip received	Not applicable	No	No	-	-	-	-	25-Aug-16	14:44	8/25/2016 14:44	0:50	No SPS	-		
							Mokokchung(PG)	Over Voltage	Not applicable	No	No												
	Root Cause	Root cause could not be concluded due to unavailability of DR outputs.There was no over voltage at Misa (from PMU).																					
	Remedial Measures	PLCC link at Mariani(PG) and Mokokchung(PG) to be checked.DR to be submitted by POWERGRID.																					
65	220 kV Misa - Mariani(AS)	POWERGRID	**POWERGRID & AEGCL**	**30-Aug-16**	**1:30**	**8/30/2016 1:30**	Misa	DP, ZI, R-E, 142.6 Kms.	Not Furnished	No	No	-	-	-	-	30-Aug-16	3:04	8/30/2016 3:04	1:34	No SPS	-		
							Mariani (AS)	DP, ZI, R-E, 15.71 Kms.	Not Furnished	No	No												
	Root Cause	Due to fault in the line.Root cause could not be concluded due to unavailability of DR outputs.																					
	Remedial Measures	POWERGRID to provide DR outputs of Salakati end for this event for further analysis.																					
66	220 kV Mariani(PG)-Mokokchung (PG) I	POWERGRID	**POWERGRID**	**30-Aug-16**	**3:03**	**8/30/2016 3:03**	Mariani(PG)	Direct Trip received	Not applicable	No	No	-	-	-	-	30-Aug-16	13:47	8/30/2016 13:47	10:44	No SPS	-		
							Mokokchung(PG)	Over Voltage	Not applicable	No	No												
	Root Cause	Root cause could not be concluded due to unavailability of DR outputs.There was no over voltage at Misa (from PMU).																					
	Remedial Measures	PLCC link at Mariani(PG) and Mokokchung(PG) to be checked.DR to be submitted by POWERGRID.																					
69	220/132 kV, 50 MVA ICT II at Balipara	AEGCL	POWERGRID	**26-Jul-16**	**1:55**	**7/26/2016 1:55**	Balipara	Tripped due to operation of Buchholtz	Not applicable	No	No	-	-	-	-	26-Jul-16	17:05	7/26/2016 17:05	15:10	No SPS	-	Restoration time-from CPCC	
	Root Cause	Matter referred to next PCC meeting.Due to low oil level as informed by POWERGRID.																					
	Remedial Measures	To be finalized after next PCC meeting																					
73	132 kV Silchar - Imphal (PG) I	POWERGRID	**POWERGRID**	**30-Jul-16**	**12:39**	**7/30/2016 12:39**	Silchar	DP, ZII, Y-E, 141.5 Kms.	Not Furnished	No	No	-	-	-	-	30-Jul-16	18:32	7/30/2016 18:32	5:53	No SPS	-		
							Imphal (PG)	DP, ZI, R-Y-B-E, 15.77 Kms.	Not Furnished	No	No												
74	132 kV Silchar - Imphal (PG) II	POWERGRID	**POWERGRID**	**30-Jul-16**	**12:39**	**7/30/2016 12:39**	Silchar	DP, ZII, B-E, 192.9 Kms.	Not Furnished	No	No	-	-	-	-	30-Jul-16	13:06	7/30/2016 13:06	0:27	No SPS	-		
							Imphal (PG)	No tripping	Not Furnished	No	No												
	Root Cause	Fault was in 132 kV Silchar - Imphal (PG) I line as the jumper opened in this line and touched the tower. Relays at Imphal (Mani) end should not have operated.																					
	Remedial Measures	POWERGRID to inform location of the fault in next PCC meeting.Mal-operation of Silchar end relays on Line-II to be further investigated by POWERGRID.																					
75	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**30-Jul-16**	**14:38**	**7/30/2016 14:38**	Khliehriat (PG)	DP, ZI, R-Y-B-E, 19.5 Kms.	Not applicable	No	No	-	-	-	-	30-Jul-16	14:44	7/30/2016 14:44	0:06	No SPS	-		
							Khliehriat(ME)	No tripping	Not applicable	No	No												
76	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**30-Jul-16**	**14:51**	**7/30/2016 14:51**	Khliehriat (PG)	DP, ZI, R-Y-B-E, 124 Kms.	Not applicable	No	No	-	-	-	-	30-Jul-16	15:18	7/30/2016 15:18	0:27	No SPS	-		
							Khliehriat(ME)	No tripping	Not applicable	No	No												
77	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**30-Jul-16**	**14:38**	**7/30/2016 14:38**	Khliehriat (PG)	DP, ZII, R-Y-B-E, 19.5 Kms.	Not applicable	No	No	-	-	-	-	30-Jul-16	14:44	7/30/2016 14:44	0:06	No SPS	-		
							Khliehriat(ME)	No tripping	Not applicable	No	No												
	Root Cause	To be discussed in the next PCC meeting.																					
	Remedial Measures	MePTCL to confirm whether Meghalaya has installed Numerical relays on their feeders in next PCC meeting. Installation of Numerical relays on 132 kV Khliehriat (PG) - Leshka (ME) I&II feeders could not be completed due to non-availability of shutdown of these feeders as Leshka generation is full at this time. Matter referred to PCC meeting.																					
88	220 kV Kopili - Misa III	POWERGRID	**NEEPCO & POWERGRID**	**17-Aug-16**	**12:54**	**8/17/2016 12:54**	Kopili	DP, ZI, Y-E, 58 Kms.	Not Furnished	No	No	-	-	-	-	17-Aug-16	13:21	8/17/2016 13:21	0:27	No SPS	-		
							Misa	DP, ZI, Y-E, 15 Kms.	Not Furnished	No	No												
	220 kV Kopili - Misa III	POWERGRID	**NEEPCO &**	**17-Aug-16**	**12:32**	**8/17/2016 12:32**	Kopili	DP, ZI, Y-E, 61.64 Kms.	Not Furnished	No	No	-	-	-	-	17-Aug-16	17:21	8/17/2016 17:21	3:59	No SPS	-		

89	220 kV Kopili - Misa III	POWERGRID	**POWERGRID**	**17-Aug-16**	**13:22**	**8/17/2016 13:22**	Misa	DP, ZI, Y-E, 14.7 Kms.	Not Furnished	No	No	-	-	-	-	17-Aug-16	17:21	8/17/2016 17:21	3:59	No SPS	-	
	Root Cause	Vegetation fault caused by miscreants at location No 178-179.																				
	Remedial Measures	Referred to PCCM.																				
90	400 kV Ranganadi-Biswanath Charali 1	POWERGRID	**NEEPCO & POWERGRID**	**18-Aug-16**	**20:58**	**8/18/2016 20:58**	Ranganadi	No tripping	Not applicable	No	No	-	-	-	-	18-Aug-16	21:21	8/18/2016 21:21	0:23	No SPS	-	
							Biswanath Charali	Over Voltage	Not applicable	No	No											
91	400 kV Balipara-Biswanath Charali I	POWERGRID	**POWERGRID**	**18-Aug-16**	**20:58**	**8/18/2016 20:58**	Balipara	Over Voltage	Not applicable	No	No	-	-	-	-	18-Aug-16	21:31	8/18/2016 21:31	0:33	No SPS	-	
							Biswanath Charali	Over Voltage	Not applicable	No	No											
	Root Cause	From PMU at Balipara,voltage was around 438 kV for 1 Minute.																				
	Remedial Measures	Over Voltage Relay settings of Biswanath Charali to be reviewed by POWERGRID.DR of BNC end to be submitted by POWERGRID.																				
98	220 kV BTPS - Salakati I	POWERGRID	**AEGCL & POWERGRID**	**31-Aug-16**	**17:45**	**8/31/2016 17:45**	BTPS	Tripped	Not Furnished	No	No	-	-	-	-	31-Aug-16	18:48	8/31/2016 18:48	1:03	No SPS	-	
							Salakati	No tripping	Not Furnished	No	No											
99	220 kV BTPS - Salakati II	POWERGRID	**AEGCL & POWERGRID**	**31-Aug-16**	**17:45**	**8/31/2016 17:45**	BTPS	Not Furnished	Not Furnished	No	No	-	-	-	-	31-Aug-16	19:01	8/31/2016 19:01	1:16	No SPS	-	
							Salakati	Due to tripping of Bus Coupler	Not Furnished	No	No											
100	220/132 kV, 50 MVA ICT I at Salakati	POWERGRID	POWERGRID	**31-Aug-16**	**17:45**	**8/31/2016 17:45**	Salakati	Earth Fault	Not applicable	No	No			-	-	31-Aug-16	19:22	8/31/2016 19:22	1:37	No SPS	-	
101	220 kV Birpara - Salakati I	POWERGRID	**POWERGRID**	**31-Aug-16**	**17:45**	**8/31/2016 17:45**	Birpara	Directional Earth Fault	Not applicable	No	No	-	-	-	-	31-Aug-16	19:15	8/31/2016 19:15	1:30	No SPS	-	
							Salakati	No tripping	Not applicable	No	No											
	Root Cause	220 kV BTPS - Salakati II jumper opened near substation.																				
	Remedial Measures	Jumper tightning to be done by POWERGRID.Tripping of 220 kV Birpara - Salakati I line to be investigated.																				
103	132 kV Balipara - Depota	AEGCL	**POWERGRID & AEGCL**	**5-Jul-16**	**22:04**	**7/5/2016 22:04**	Balipara	R phase Earth fault, 57.4 Kms.	Not applicable	No	No	-	-	-	-	5-Jul-16	23:08	7/5/2016 23:08	1:04	No SPS	-	
							Depota	No Indication	Not applicable	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
104	132 kV Balipara - Depota	AEGCL	**POWERGRID & AEGCL**	**6-Jul-16**	**12:41**	**7/6/2016 12:41**	Balipara	R phase Earth fault, 27.5 Kms.	Not applicable	No	No	-	-	-	-	6-Jul-16	12:55	7/6/2016 12:55	0:14	No SPS	-	
							Depota	No tripping	Not applicable	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
106	132 kV Dimapur - Bokajan	AEGCL	**POWERGRID & AEGCL**	**13-Jul-16**	**13:30**	**7/13/2016 13:30**	Dimapur	DPR, Z-I, B- E, 4.71 Kms.	Not Furnished	No	No	-	-	-	-	13-Jul-16	14:03	7/13/2016 14:03	0:33	No SPS	-	
							Bokajan	Not Furnished	Not Furnished	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
108	132 kV Balipara - Depota	AEGCL	**POWERGRID & AEGCL**	**15-Jul-16**	**0:17**	**7/15/2016 0:17**	Balipara	DPR, Z-III, B- E, 30.5 Kms.	Not applicable	No	No	-	-	-	-	15-Jul-16	0:55	7/15/2016 0:55	0:38	No SPS	-	
							Depota	No tripping	Not applicable	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized after next PCC meeting																				
112	132 kV Dimapur - Imphal	POWERGRID	**POWERGRID**	**30-Jul-16**	**8:28**	**7/30/2016 8:28**	Dimapur	DP, ZII, R-Y-E, 68.46 Kms.	Not Furnished	Yes	Yes	-	-	-	-	30-Jul-16	8:59	7/30/2016 8:59	0:31	No SPS	-	Not in Logsheet, from CPCC
							Imphal	DP, ZII, R-Y-E, 85.83 Kms.	Not Furnished	No	No											
No neutral current	**Root Cause**	Fault not involving ground as there no neutral current during the fault(from DR).Root cause could not be finalized.																				
	Remedial Measures	Remedial measure after finalizing the root cause.																				
118	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**3-Aug-16**	**17:21**	**8/3/2016 17:21**	Khliehriat (PG)	DP, ZI, R-Y-B-E, 101.5 Kms.	Not Furnished	No	No	-	-	-	-	3-Aug-16	17:38	8/3/2016 17:38	0:17	No SPS	-	
							Khliehriat(ME)	No tripping	Not Furnished	No	No											
	Root Cause	To be discussed in the next PCC meeting.																				
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).																				
121	132 kV Doyang - Mokokchung(NA)	DoP Nagaland	**NEEPCO & DoP,Nagaland**	**4-Aug-16**	**17:56**	**8/4/2016 17:56**	Doyang	Power Swing	Not applicable	No	No	-	-	-	-	4-Aug-16	19:30	8/4/2016 19:30	1:34	No SPS	-	
							Mokokchung(NA)	Not Furnished	Not applicable	No	No											
	Root Cause	Matter referred to next PCC meeting.																				
	Remedial Measures	To be finalized in next PCC meeting																				
123	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**8-Aug-16**	**23:25**	**8/8/2016 23:25**	Khliehriat (PG)	DP, ZI, R-Y-E, 15.85 Kms.	Not Furnished	No	No	-	-	-	-	8-Aug-16	23:43	8/8/2016 23:43	0:18	No SPS	-	
							Khliehriat(ME)	No tripping	Not Furnished	NA	NA											
	Root Cause	To be discussed in the next PCC meeting.																				
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).																				
136	132 kV Lumshnong - Panchgram	MePTCL & AEGCL	**MePTCL & AEGCL**	**15-Aug-16**	**22:15**	**8/15/2016 22:15**	Lumshnong	DP, ZI, Y-B-E, 34.8 Kms.	Not Furnished	No	No	-	-	-	-	15-Aug-16	23:12	8/15/2016 23:12	0:57	No SPS	-	
							Panchgram	DP, ZI, Y-B-E	Not Furnished	No	No											
	Root Cause	Due to vegetation fault in the line as both end relays operated in Zone I.																				

	Remedial Measures	Vegetation clearance to be done by MePTCL & AEGCL and status to be reported.																					
137	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**16-Aug-16**	**0:11**	**8/16/2016 0:11**	Khliehriat (PG)	DP, ZI, R-Y-B-E, 130.7 Kms.	Not Furnished	No	No	-	-	-	-	16-Aug-16	1:24	8/16/2016 1:24	1:13	No SPS	-	
							Khliehriat(ME)	No tripping	Not Furnished	No	No												
	Root Cause	To be discussed in the next PCC meeting.																					
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).																					
151	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**25-Aug-16**	**13:59**	**8/25/2016 13:59**	Khliehriat (PG)	DP, ZI, R-Y-B, 26.72 Kms.	Not Furnished	No	No	-	-	-	-	25-Aug-16	14:36	8/25/2016 14:36	0:37	No SPS	-	
							Khliehriat(ME)	No tripping	Not Furnished	No	No												
	Root Cause	To be discussed in the next PCC meeting.																					
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).																					
154	132 kV Loktak - Jiribam(PG)	POWERGRID	**NHPC & POWERGRID**	**25-Aug-16**	**15:43**	**8/25/2016 15:43**	Loktak	DP, ZII, B-E, 72.5 Kms.	Not Furnished	No	No	-	-	-	-	25-Aug-16	15:57	8/25/2016 15:57	0:14	No SPS	-	
							Jiribam(PG)	DP, ZI, B-E, 11.94 Kms.	Successful operation	Yes	No												
	Root Cause	Fault in the line.Root cause could not be concluded due to unavailability of DR outputs.																					
	Remedial Measures	PLCC link at Loktak to be checked.AR scheme at Loktak and Jiribam to be reviewed.																					
160	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**28-Aug-16**	**1:41**	**8/28/2016 1:41**	Khliehriat (PG)	DP, ZI, R-Y-B, 11 Kms.	Not Furnished	No	No	-	-	-	-	28-Aug-16	1:51	8/28/2016 1:51	0:10	No SPS	-	
							Khliehriat(ME)	No tripping	Not Furnished	No	No												
	Root Cause	To be discussed in the next PCC meeting.																					
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).																					
162	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**29-Aug-16**	**14:29**	**8/29/2016 14:29**	Khliehriat (PG)	DP, ZI, R-Y-B-E, 80.69 Kms.	Not Furnished	No	No	-	-	-	-	29-Aug-16	14:48	8/29/2016 14:48	0:19	No SPS	-	
							Khliehriat(ME)	No tripping	Not Furnished	No	No												
	Root Cause	To be discussed in the next PCC meeting.																					
	Remedial Measures	33 kV yard earthing yet to get completed as informed by MePTCL.Spare Numerical relay will be installed in 132 kV Khliehriat - NEIGRIHMS line before 21st September'16 as informed. Earthing status to be informed, Tower footing resistance to be measured and patrolling report to be furnished by MePTCL.POWERGID to furnish DR output of Khliehriat(PG).																					
163	132 kV Surjamaninagar-Palatana II	POWERGRID	**TSECL & OTPC**	**30-Aug-16**	**17:00**	**8/30/2016 17:00**	Surjamaninagar	DP, ZI, R-E,15.52 Kms.	Not Furnished	No	No	-	-	-	-	30-Aug-16	17:41	8/30/2016 17:41	0:41	No SPS	-	
							Palatana	DP, ZI, R-E,19.84 Kms.	Not Furnished	No	No												
	Root Cause	Due to fault in the line.Root cause could not be concluded due to unavailability of DR outputs.																					
	Remedial Measures	POWERGRID to furnish more details for further analysis.																					
164	132 kV Biswanath Charali-Pavoi I	POWERGRID	**POWERGRID & AEGCL**	**30-Aug-16**	**18:21**	**8/30/2016 18:21**	Biswanath Charali	DP, ZI, R-E, 2.8 Kms.	Not Furnished	Yes	No	-	-	-	-	30-Aug-16	18:48	8/30/2016 18:48	0:27	No SPS	-	
							Pavoi	DP, ZI, R-E, 7.719 Kms.	Not Furnished	No	No												
	Root Cause	Due to fault in the line.Root cause could not be concluded due to unavailability of DR outputs.																					
	Remedial Measures	POWERGRID to furnish DR of BNC end for further analysis.																					
166	132 kV AGTPP - Agartala II	POWERGRID	**NEEPCO & TSECL**	**31-Aug-16**	**8:01**	**8/31/2016 8:01**	AGTPP	No tripping	Not Furnished	No	No	-	-	-	-	31-Aug-16	14:46	8/31/2016 14:46	6:45	No SPS	-	
							Agartala	Not Furnished	Not Furnished	No	No												
	Root Cause	Root cause could not be concluded due to unavailability of DR outputs as well as proper relay indications.																					
	Remedial Measures	POWERGRID to furnish patrolling report for further analysis.Relay indications to be furnished by NEEPCO & SLDC,TSECL.																					