भारत सरकार Government of India
विद्युत मंत्रालय Ministry of Power
उत्तर पूर्वी क्षेत्रीय विद्युत समिति
North Eastern Regional Power Committee
एन ई आर पी सी कॉम्प्लेक्स, डोंग पारमाओ, लापालाङ, शिल्लोंग-७९३००६, मेघालय
NERPC Complex, Dong Parmaw, Lapalang, Shillong - 793006, Meghalaya

ISO 9001:2008

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No. NERPC/SE/PCC/2016/ Dated: November 1, 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,

Kindly find enclosed herewith **the minutes of NERPC Sub-Group Committee (PCC) on protection related issues** held in **NERLDC Conference Hall**, **NERLDC, Shillong** on **24.10.2016 (Monday)** for your kind perusal and compliance.

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भवदीय / Yours faithfully,

01/11/16

(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.

07/11/16

निदेशक / **Director/ SE**

North Eastern Regional Power Committee

MINUTES OF THE PCC SUBGROUP MEETING

Date : 24/10/2016 (Monday)

Time : 11:00 Hrs

Venue : "NERLDC Conference Hall", Shillong.

The List of Participants in the PCC Subgroup meeting is attached at **Annexure – I**

Shri L. B. Muanthang, Superintending Engineer, NERPC welcomed all the participants to the Committee. He expressed concern about non-participation of several states in PCC forum in spite of several reminders and assurances given by their authorities. He then asked the committee to take up the agenda items for discussion.

1. Pending Data related to third party audit to be submitted

DOP, Arunachal Pradesh, TSECL, AEGCL and AGTPP not yet submitted complete data as per CEA task force format.

- Compilation of data received
- Audit work to be taken up by the subgroup
- Finalize activities that are to be carried during protection audit.

Deliberation in the meeting

Dy. Manager, AEGCL– informed the forum about the difficulty faced in sending data in CEA Task Force format. The remaining data to be sent by the end of Oct16.

The forum noted that DoP, Arunachal Pradesh and TSECL has not yet furnished the data as per CEA Task Force. NEEPCO confirmed that they would send the complete data shortly.

The forum also decided that the Protection audit of Agartala, Surjamaninagar & Udaipur sub-stations of TSECL are required to be taken up urgently. In line with discussions of 44th PCC, DGM SO-II (NERLDC) suggested that nominee from each constituent should be finalized for purpose of conducting the audit.

Accordingly, the forum decided as follows:

For the upcoming protection audit of Agartala, Surjamaninagar & Udaipur sub-stations of TSECL from 7th to 9th November 2016, following members were nominated by the respective constituents:

1) AEGCL- Ashutosh Bhattacharya, Dy. Manager (9435332928)

2) NERTS- Deva Prasad Pal, Sr. Engineer (9435382360)

3) NERPC- Abhijeet Agrawal, AEE (9871266951)

4) NEEPCO- Prosenjit Sen, Sr. Manager (9436167999)

5) OTPC- Smruti Ranjan Das, Manager (9612400784)

6) Tripura- Mrinal Paul, Manager (9436137022)

Dy.Manager (AEGCL) also requested NERPC to write a letter to DGM (Protection), AEGCL for sending representative for protection audit. The forum requested NERPC to write a letter formally to state authorities so that the above nominated representatives are released for this purpose by respective organizations.

The Sub-Group noted as above.

Action: NERPC, AEGCL, TSECL, OTPC, NEEPCO, NERTS

2. Identification of short lines to install line differential protection.

NERLDC informed the forum that for purpose of installation of differential protection on Short lines, the identification exercise has been completed for all Substations of NER Grid. The same has also been mailed by NERLDC to all constituents for review. All constituents were requested to give any comments prior to finalization.

Dy. Manager, AEGCL informed that as per different vendors line differential is preferred for distance less than 5 Km. Line differential is feasible only with OPGW connectivity. It is to be installed along with distance protection in order to maintain selectivity. DGM(SO-II), NERLDC informed that in SRPC line differential is being implemented for line distances less than 35 Km. Sr. Engr (SO-II), NERLDC stated that as per literature, the definition of short line depends upon operational voltage level. For 150-400 kV range lines up to 40 kms, and for >400 kV range lines up to 20 kms length are considered as short line.

Considering non-availability of OGPW links in several short lines, the forum decided that OPGW communication needs to be established wherever necessary in the interest of the Grid. Accordingly identification of lines having OPGW of length 35 km. to be carried out. As the 1st stage, differential protection is to be installed on important short lines like 400 kV BgTPP – Bongaigaon D/C, 132 kV Silchar – Srikona D/C, 132 kV Imphal(PG) – Imphal(MSPCL) D/C etc. The list of lines for implementation will be further discussed in PCC forum.

The Sub-Group noted as above.

3. Preparation of Draft model maintenance procedures that are to be followed by utilities.

Deliberation in the meeting

The forum noted comments of Manager(NERTS) that all utilities have separate maintenance procedures and it may be put upon utility concerned for the maintenance aspect. Several utilities may have restrictions in available manpower for the purpose of maintenance activity.

Sr.Engr, NERLDC suggested that it will be prudent to consider the bare minimum routine activities that needs to be followed by all utilities in a particular periodicity. Since this will serve as a Model Procedure, adoption of the guidelines as per procedure will not be compulsory, but merely serve as the best practices to be adopted.

NERTS and AEGCL have already submitted their maintenance manual to NERLDC.

SE(P), NERPC suggested that PGCIL, NERLDC and AEGCL together will prepare the guidelines for common minimum maintenance procedure for transmission systems for all utilities. All constituents are requested to give their suggestions and feedback to them. Once the guidelines are ready it will be scrutinized and approved in next PCC meeting. Sh. H. Talukdar, PGCIL, Sh. Jerin Jacob (Eng.NERLDC)/Rahul Chakrabarti, (Sr. Engr, NERLDC) and Sh. Ashutosh Bhattacharjee, DM, AEGCL are nominated to draft the guideline within 30th November 2016. The nominated members can call on utilities whenever needed.

The Sub-Group noted as above.

Action: AEGCL, NERLDC & NERTS.

4. Calculation of Relay Setting as per recommendation of V. Ramakrishna task Force.

Deliberation in the meeting

The relay settings details as formulated by NERTS in line with recommendations of V.Ramakrishna Task Force on Power system contingencies, had been circulated to all constituents for comments by NERLDC.

Manager (AM), NERTS explained to the forum the relay settings as per the document. After thorough discussion, it was agreed that the same can be implemented at the earliest for uniformity in protection systems.

The forum also noted recommendations by Manager (NERTS) / D.M. (AEGCL) that high-set is preferably disabled in relays (ref. 6.3 of PGCIL relay setting recommendations).

DGM(SO-II), NERLDC suggested to place the same before PCC forum to take up implementation. The forum agreed.

The Sub-Group noted as above.

Action: All Constituents.

5. Review of Zone II & Zone III setting.

Deliberation in the meeting

The matter has already been discussed and Zone-II / Zone-III setting changes are to be done as per Relay setting calculations of POWERGRID in line with V.Ramakrishna Task force report.

The Sub-Group noted as above.

6. Draft Manual for protection systems.

Deliberation in the meeting

Manager(AM), NERTS informed that draft manual for protection system already exist. The recommendations of V. Ramakrishna Task Force Report is to be used by the utilities for all purposes. Sr. Engr, NERLDC stated that CBIP has brought out an updated manual as of 2016 that contains detailed guidelines for Transmission line protection. The forum decided that the constituents may refer to it as guidelines for Protection systems for transmission. NERLDC will circulate the copy of the CBIP Protection Manual to all the constituents.

The Sub-Group noted as above.

Action: All Constituents.

7. Review of relay settings- Substation wise(including downstream state substation).

Deliberation in the meeting

DGM(SO-II), NERLDC informed that due to ill-coordination in relay settings between State systems and ISTS, frequent tripping of elements are happening. Most of the Grid disturbances in NER Grid are due to this.

P&E Dept., Mizoram and DoP, Nagaland will have to co-ordinate their relay settings with ISTS systems and implement as has been suggested by NERTS. He also requested SE(P), NERPC to write a letter to respective constituent in this regard.

The Sub-Group noted as above.

Action: NERPC

8. Details of PSS installed and activated in all Hydro stations.

Deliberation in the meeting

DGM(SO-II), NERLDC requested all power stations to provide details where PSS is installed. He also requested them to activate existing PSS after tuning and inform the same through mail.

Manager, NEEPCO informed that all hydro station of NEEPCO has PSS installed and activated. He will send mail along with details to NERLDC.

Manager, NHPC also informed that he will send detail about Loktak hydro station in mail.

The forum noted that enabling of PSS in July'16 by Doyang HEP (NEEPCO) and tuning of this PSS helped in damping out inter-plant oscillations in NER Grid. NERLDC requested NEEPCO to furnish details of Tuned frequency range etc. of existing PSS.

The Sub-Committee noted as above.

Action: NEEPCO, NHPC, All state utilities.

8. Review of Recommendations of Empowered Committee for Analysis of GD-V and GD-IV in NER.

Deliberation in the meeting

- DGM(SO-II), NERLDC indicated that TSECL had intimated to NERLDC that SPAR (Single Phase Auto Reclosure) is not available in 132 kV AGTPP – Agartala D/C lines, which was resulting in multiple tripping of this line on transient fault.

  Sr.Manager, NEEPCO confirmed that at AGTPP, their end CB is single phase.

  NERTS to take up for changing of A/R scheme to SPAR.

  It was decided that utilities should identify those transmission lines which have no SPAR scheme for implementation of the same.

  It was noted that most of trippings of transmission lines in NER Grid occur either on account of lightning strikes or due to vegetation infringement problem. It was decided that all utilities will identify the lightning prone areas and conduct check of high tower footing resistance in transmission lines in these areas. Since tripping of line on lightning occurs due to Arcing, to prevent that it is required to either maintain low value of tower footing resistance or go for installation of lightning arrester for the particular towers having consistent high footing resistance.

  It was noted that except for Arunachal Pradesh, Assam, Mizoram & Nagaland, other constituents are not submitting UFR reports to NERPC/NERLDC on regular basis. It is reiterated that the same to be submitted at the earliest. Even for the Grid Disturbance of Category-V in NER on 16th April 2016, reports of UFR operation were received only from Assam, Tripura and Mizoram. In absence of requisite information, analysis of Grid Disturbances are often inconclusive.

NERPC/NERLDC requested all constituents to furnish the data of UFR operation on regular basis.

It was also noted that while self-certification of UFRs have been done by utilities, periodic inspection of installed UFRs are to be carried out for checking healthiness

- For purpose of information regarding furnishing of communication outage during Grid disturbance of Category-V in NER, NERLDC had circulated a format as finalized by NLDC. However, no information had been received.

  NERLDC would once again mail all utilities for the requisite information. AEGCL/ MePTCL agreed to furnish the relevant data.

The Sub-Committee noted as above.

Action: NERPC, NEEPCO, PGCIL, AEGCL, MePTCL, TSECL, other state utilities.

10. **Analysis of GD, GI and element tripping in the month of Sep' 16.**

Deliberation in the meeting

The sub-committee analysed the Grid Disturbances, Grid Incidences, Element tripping and Unit trippings of NER Grid for the month of September'16. Details as per Annexure.

During the tripping analysis, NERPC/NERLDC observed that participants are attending the meeting without complete information, which is hindering the process of analysis. NERLDC is communicating to all constituents of NER the Weekly Event reports for information of utilities as well as for furnishing the requisite information for analysis of the events. EE(P), NERPC requested all constituents to come prepared to meetings of tripping analysis, as well furnish all information on time to NERLDC / NERPC.

There were numerous tripping of 132 kV Balipara – Khupi line, even after vegetation clearance works were completed by NEEPCO after availing shutdown of this line. Sr.Manager(NEEPCO) also informed that getting information from Doyang HEP was difficult, which is hindering process of analysis of trippings from Doyang HEP. NERPC may take up separately with NEEPCO for resolving these issues.

The Sub- Committee noted as above.

The meeting ended with thanks to the Chair.

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Annexure-I

List of Participants in the PCC Sub Comittee meeting held on 24/10/2016

SNo	Name & Designation	Organization	Contact No.
1.	Sh. Amaresh Mallick, DGM (SO-II)	NERLDC	09436302720
2.	Sh. Rahul Chakrabarti, Sr. Engr (SO-II)	NERLDC	09402507543
3.	Sh. Subhash Kumar, Engineer (SO-II)	NERLDC	09485185844
4.	Sh. N. R. Paul, AGM SO-I)	NERLDC	09436302723
5.	Sh. Ankit Jain, Sr. Engr. (SO-I)	NERLDC	09436335381
6.	Sh. Nadeem Altaf, Sr.Engr (SO-I)	NERLDC	09436335373
7.	Sh. H. Talukdar, Chief Manager, AM	PGCIL	09436335237
8.	Sh. Mukut Nath, AGM	AEGCL	08761028185
9.	Sh. Ashutosh Bhattacharya, D. M.	AEGCL	09435332928
10.	Sh. Joypal Roy, Sr. Manager (E)	NEEPCO	09435577726
11.	Sh. B. Nikhla, EE, SP	MePTCL	09436314163
12.	Sh. A.G. Thom, AEE, MRT	MePTCL	09774664034
13.	Sh. Jaydeep Das, Sr. Executive	OTPC	08731081454
14.	Sh. R.C. Singh, Mgr (E)	NHPC	09436894889
15.	Sh. L. B. Muanthang, SE	NERPC	09436731488
16.	Sh. P. N. Sarkar, EE	NERPC	09830027523
17.	Sh. S. Imam, AEE	NERPC	07421806242
18.	Sh. Abhijit Agrawal, AEE	NERPC	09871266951

Disturbance in Arunachal Pradesh System

Ziro area of Arunachal Pradesh was connected with rest of NER Grid through 132 kV Ranganadi-Ziro line. At Hr on , 132 kV Ranganadi-Ziro line tripped. Due to tripping of this element, Ziro area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Capital area of Arunachal Pradesh and Gohpur Area of Assam were connected with rest of NER Grid through 132 kV Lekhi-Nirjuli line (132 kV Balipara-Gohpur line & Bus Coupler CB of Gohpur kept open for system requirement). At Hr on , 132 kV Lekhi-Nirjuli line tripped. Due to tripping of this element, Capital area & Gohpur area were separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Khupi area of Arunachal Pradesh was connected with rest of NER Grid through 132 kV Balipara- Khupi line. At Hr on , 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.

Deomali area of Arunachal Pradesh was connected with rest of NER Grid through 220 kV AGBPP-Deomali line. At Hr on , 220 kV AGBPP-Deomali line tripped. Due to tripping of this element, Deomali area was separated from rest of NER Grid and subsequently collapsed due to no source in this area

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 (132 kV Balipara-Gohpur line & Bus Coupler CB of Gohpur kept open for system requirement). At Hr on ,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.

Lekhi area & Capital area of Arunachal Pradesh were connected with rest of NER Grid through 132 kV Ranganadi-Lekhi line (132 kV Gohpur-Nirjuli line was under outage). At Hr on ,132 kV Ranganadi-Lekhi line tripped. Due to tripping of this element, Lekhi area & Capital area were separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Disturbance in Assam System

Depota area of Assam was connected with rest of NER Grid through 132 kV Balipara -Depota line (132 kV Rangia-Sipajhar line, 132 kV Rangia-Rowta line & 132 kV Samaguri-Depota line kept open for system requirement). At Hr on , 132 kV Balipara -Depota line tripped. Due to tripping of this element, Depota area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Capital area of Assam was connected with rest of NER Grid through 220 kV Samaguri-Azara I & II lines, 220 kV Sarusajai-Samaguri line, 220 kV Samaguri-Jawhar Nagar line & 132 kV Rangia-Motonga line. (132 kV Kahilipara-Umtru I & II lines, 132 kV Sarusajai-Umtru I & II lines, 132 kV Rangia-Bornagar line, 132 kV Rangia-Nalbari line, 132kV Rangia -Sipajhar & 132 kV Rangia- Rowta lines kept open for system requirement). At Hr on ,220 kV Samaguri-Azara I & II lines, 220 kV Sarusajai-Samaguri line, 220 kV Samaguri-Jawhar Nagar line & 132 kV Rangia-Motonga line tripped. Due to tripping of these elements, Capital area of Assam was separated from rest of NER Grid and subsequently collapsed due to no source/load generation mismatch in this area.

Upper Assam area was connected with rest of NER Grid through 220 kV Mariani(AS)-Misa, 220 kV Mariani(AS)-Samaguri I line & 132 kV Bokajan -Dimapur line. (220 kV Mariani(AS)-Samaguri II line & 132 Mariani(AS)-Mokokchung line kept open for system requirement). At Hr on ,220 kV Mariani(AS)-Misa, 220 kV Mariani(AS)-Samaguri I line & 132 kV Bokajan -Dimapur line tripped. Due to tripping of these elements, Upper Assam area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch in this area.

South Assam area was connected with rest of NER Grid through 132 kV Panchgram-Badarpur line, 132 kV Silchar-Srikona I & II lines & 132 kV Silchar-Panchgram line (132 kV Panchgram-Lumshnong line & 132 kV Pailapool-Jiribam line kept open for system requirement). At Hr on ,132 kV Panchgram-Badarpur line, 132 kV Silchar-Srikona I & II lines & 132 kV Silchar-Panchgram line tripped. Due to tripping of these elements, South Assam area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Samaguri area of Assam was connected with rest of NER Grid through 220/132 kV, 3x50 MVA ICTs (CB at Depota of 132 kV Samaguri-Depota line, 66 kV Bokajan-Diphu & Bus Coupler CB at Gohpur kept open due to system requirement).At Hr on , 220/132 kV, 3x50 MVA ICTs tripped. Due to tripping of these elements, Samaguri area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Umrangso area of Assam was connected with rest of NER Grid through 132 kV Khandong-Umrangsho line & 132 kV Haflong-Umrangsho line .At Hr on , 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.

Haflong area of Assam was connected with rest of NER Grid through 132kV Haflong (AS)-Haflong(PG) line. At Hr on ,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.

Dullavcherra area of Assam was connected with rest of NER Grid through 132 kV Dullavcherra-Dharmanagar line & 132 kV Silchar-Dullavcherra line. At Hr on , 132 kV Dullavcherra-Dharmanagar line & 132 kV Silchar- Dullavcherra line tripped. Due to tripping of these elements, Dullavcherra area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Agia-Boko area of Assam & Nangalbibra area of Meghalaya was connected with rest of NER Grid through 220 kV Boko-Azara line, 220 kV Agia-Azara line & 220 kV BTPS-Agia I & II lines (132 kV Nangalbibra-Nongstoin line kept open for system requirement). At Hr on ,220 kV Boko-Azara line, 220 kV Agia-Azara line & 220 kV BTPS-Agia I & II lines tripped. Due to tripping of these elements, Agia-Boko area of Assam & Nangalbibra area of Meghalaya were separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Dhaligaon area of Assam was connected with rest of NER Grid through 132 kV Dhaligaon-BTPS I & II lines (132 kV Rangia-Bornagar line & 132 kV Rangia-Nalbari line kept open for system requirement). At Hr on ,132 kV Dhaligaon-BTPS I & II lines tripped. Due to tripping of these elements, Dhaligaon area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Pavoi area of Assam was connected with rest of NER Grid through 132 kV Biswanath Charali-Pavoi I&II lines (132 kV Pavoi-Depota line and 132 kV Pavoi-Samaguri line kept open for system requirement). At Hrs on , 132 kV Biswanath Charali-Pavoi I&II lines tripped. Due to tripping of these elements, Pavoi area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Khupi area of Arunachal Pradesh and Depota area of Assam were connected with rest of NER Grid through 220/132 kV,50 MVA ICT I&II at Balipara (132 kV Rangia-Sipajhar line, 132 kV Rangia-Rowta line & 132 kV Samaguri-Depota line kept open for system requirement). At 18:45 Hrs on 25.01.2015 ,220/132 kV,50 MVA ICT I&II at Balipara tripped. Due to tripping of these elements, Khupi area and Depota area were separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Disturbance in Manipur System

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 Hr on ,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.

Capital area & Karong Area of Manipur was connected with rest of NER Grid through 132 kV Imphal-Imphal I & II lines & 132 kV Karong - Kohima line (132 kV Kakching-Kongba line kept open for system requirement). At Hr on ,132 kV Imphal-Imphal I & II lines & 132 kV Karong - 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.

Jiribam area of Manipur was connected with rest of NER Grid through 132 kV Jiribam(PG)-Jiribam (MA) line (132 kV Jiribam(MA)-Rengpang line is under long outage). At Hr on ,132 kV Jiribam(PG)-Jiribma (MA) line tripped. Due to tripping of this element, Jiribam area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Karong area of Manipur was connected with rest of NER Grid through 132 kV Karong-Kohima line & 132 kV Karong-Imphal(MA) line. At Hr on , 132 kV Karong-Kohima line & 132 kV Karong-Imphal (MA) line tripped. Due to tripping of these elements, Karong area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Rengpang area of Manipur was connected with rest of NER Grid through 132 kV Loktak-Rengpang line (132 kV Rengpang-Jiribam(MA) line is under long outage). At Hr on ,132 kV Loktak-Rengpang line tripped. Due to tripping of this element,Rengpang area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Ningthoukhong area of Manipur was connected with rest of NER Grid through 132 kV Loktak-Ningthoukhong line & 132 kV Imphal(PG)-Ningthoukhong line (132 kV kakching-Kongba line kept open for system constraint). At Hr on , 132 kV Loktak-Ningthoukhong line & 132 kV Imphal(PG)-Ningthoukhong line tripped. Due to tripping of these elements, Ningthoukhong area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Imphal area of Manipur was connected with rest of NER Grid through 132/33 kV, 2x50 MVA ICTs. At Hr on , 132/33 kV, 2x50 MVA ICTs tripped. Due to tripping of these elements, Imphal area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Disturbance in Meghalaya System

Khliehriat area of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines. (132 kV Panchgram-Lumnsnong line,132 kV NEHU-Umiam line & 132 kV NEHU-Mawlai line were kept open for system requirement). At Hrs on ,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 load generation mismatch/no source in this area.

Khliehriat area of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines and 2 x 160 MVA, 220/132 kV ICT I&II at Byrnihat (132 kV Khliehriat-Lumnsnong line,132 kV Sarusajai-Umtru I&II lines and 132 kV Kahilipara-Umtru I&II lines kept open for system requirement). At Hrs on ,132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines132 kV Mustem-Khliehriat & 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/no source in this area.

Agia-Boko area of Assam & Nangalbibra area of Meghalaya was connected with rest of NER Grid through 220 kV Boko-Azara line, 220 kV Agia-Azara line & 220 kV BTPS-Agia I & II lines (132 kV Nangalbibra-Nongstoin line kept open for system requirement). At Hr on ,220 kV Boko-Azara line, 220 kV Agia-Azara line & 220 kV BTPS-Agia I & II lines tripped. Due to tripping of these elements, Agia-Boko area of Assam & Nangalbibra area of Meghalaya were separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Byrnihat area of Meghalaya was connected with rest of NER Grid throug 132 kV EPIP II-Byrnihat I & II lines (132 kV Kahilipara-Umtru I & II lines, 132 kV Sarusajai-Umtru I & II lines, 132 kV Nangalbibra-Nongstoin line, 132 kV NEHU-Umiam line & 132 kV NEHU-Mawlai line kept open for System requirement). At Hr on ,132 kV EPIP II-Byrnihat I & II lines tripped. Due to tripping of this element, Byrnihat area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

h 132 kV Agia - Medipathar line. At Hrs on ,132 kV Agia - Medipathar line tripped. Due to tripping of this element, Nangalbibra area w

Disturbance in Mizoram System

Zuangtui area of Mizoram was connected with rest of NER Grid through 132 kV Aizawl- Zuangtui line. At Hrs on , 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.

Luangmual area of Mizoram was connected with rest of NER Grid through 132 kV Aizawl-Luangmual line. At Hrs on , 132 kV Aizawl- Luangmual line tripped. Due to tripping of this element, Luangmual area was separated from rest of NER Grid and subsequent collapsed due to no source in this area.

Kolasib area of Mizoram was connected with rest of NER Grid through 132 kV Kolasib-Badarpur line & 132 kV Kolasib-Aizwal line. At Hr on , 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 no source in this area/due to load generation mismatch.

Disturbance in Nagaland System

Dimapur area of Nagaland was connected with rest of NER Grid through 132 kV Dimapur (PG)-Dimapur (NA) I & II lines. At Hr on ,132 kV Dimapur (PG)-Dimapur (NA) I & II lines tripped. Due to tripping of these elements, Dimapur area was separated from rest of NER Grid and subsequently collapsed due to no source in this area

Mokokchung area of Nagaland was connected with rest of NER Grid through 132 kV Doyang-Mokokchung (NA), 132 kV Mokokchung (NA)-Mokokchung (PG) I & II lines. (132 kV Mokokchung(NA)-Marianai(AS) is under long outage & 66 kV Tuengsang-Likimro line kept open for system requirement). At Hr on ,132 kV Doyang-Mokokchung (NA), 132 kV Mokokchung (NA)-Mokokchung (PG) I & II lines tripped. Due to tripping of these elements, Mokokchung area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

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 Hr on ,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/due to load generation mismatch.

Disturbance in Tripura System

Tripura System was connected with rest of NER Grid through 132 kV AGTPP-Agartala I & II lines, 132 kV P K Bari-Kumarghat line, 132 kV Dharmanagar-Dullavcherra line, 132 kV Palatana-Udaipur line & 132 kV Palatana-Surjamaninagar line. At Hr on ,132 kV AGTPP-Agartala I & II lines, 132 kV P K Bari-Kumarghat line, 132 kV Dharmanagar-Dullavcherra line, 132 kV Palatana-Udaipur line & 132 kV Palatana-Surjamaninagar line tripped. Due to tripping of these elements, Tripura System was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.

Udaipur area of Tripura was connected with rest of NER Grid through 132 kV Udaipur-Palatana line & 132 kV Monarchak-Udaipur line (66 kV Gakulnagar-Udaipur line & 66 kV Belonia-Bagafa line kept open for system requirement). At Hr on ,132 kV Udaipur-Palatana line & 132 kV Monarchak-Udaipur line tripped. Due to tripping of these elements, Udaipur area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.

Disturbance in AGBPP Power Station

AGBPP Power Station was connected with rest of NER Grid through 220 kV AGBPP-Mariani(AS) line, 220 kV AGBPP-Mariani(PG) line & 220 kV AGBPP- Tinsukia I & II lines. At Hr on , 220 kV AGBPP-Mariani (AS) line, 220 kV AGBPP-Mariani(PG) & 220 kV AGBPP- Tinsukia I & II lines tripped. Due to evacuation problem, AGBPP was blacked out.

Disturbance in AGTPP Power Station

AGTPP Power Station was connected with rest of NER Grid through 132 kV AGTPP-Agartala I & II lines & 132 kV AGTPP-Kumarghat line.At Hr on , 132 kV AGTPP-Agartala I & II lines & 132 kV AGTPP-Kumarghat line tripped. Due to evacuation problem, AGTPP was blacked out.

Disturbance in Ranganadi Power Station

Ranganadi Power Station was connected with rest of NER Grid through 400 kV Ranganadi-Balipara I & II lines (132 kV Balipara-Gohpur line & Bus Coupler CB of Gohpur kept open for system requirement).At Hr on , 400 kV Ranganadi-Balipara I & II lines tripped. Due to evacuation problem, Ranganadi Power Station was blacked out.

Disturbance in Kopili Power Station

Kopili Power Station was connected with rest of NER Grid through 220 kV Kopili-Misa I, II & III lines & 132 kV Kopili-Khandong I & II lines. At Hr on , 220 kV Kopili-Misa I, II & III lines, 132 kV Kopili-Khandong I & II lines tripped. Due to evacuation problem, Kopili Power Station was blacked out.

Disturbance in Khandong Power Station

Khandong Power Station was connected with rest of NER Grid through 132 kV Kopili-Khandong I & II lines, 132 kV Khandong-Umrangso line & 132 kV Khandong-Khliehriat(PG) I & II lines.At Hr on , 132 kV Kopili-Khandong I & II lines & 132 kV Khandong-Umrangso line & 132 kV Khandong-Khliehriat(PG) I & II lines tripped. Due to evacuation problem, Khandong Power Station was blacked out.

Disturbance in Doyang Power Station

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 Hr on , 132 kV Doyang- Dimapur I & II lines & 132 kV Doyang-Mokokchung(NA) line tripped. Due to evacuation problem, Doyang Power Station was blacked out.

Disturbance in Loktak Power Station

Loktak Power Station was connected with rest of NER Grid through 132 kV Loktak-Imphal(PG) line, 132 kV Loktak-Jiribam line & 132 Loktak-Ningthoukhong line(132 kV Rengpang - Jiribam(MA) is under long outage). At Hr on , 132 kV Loktak-Imphal(PG) line, 132 kV Loktak-Jiribam line & 132 Loktak-Ningthoukhong line tripped. Due to evacuation problem, Loktak Power

Disturbance in Palatana Power Station

Palatana Power Station was connected with rest of NER Grid through 400 kV Palatana-Silchar I & II lines, 132 kV Palatana-Surjamaninagar line & 132 kV Palatana-Udaipur line. At Hr on , 400 kV Palatana-Silchar I & II lines, 132 kV Palatana-Surjamaninagar line & 132 kV Palatana-Udaipur line tripped. Due to evacuation problem, Palatana Power Station was blacked out.

Disturbance in Bongaigaon Thermal Power Station

Bongaigaon Thermal Power Station was connected with rest of NER Grid through 400 kV Bongaigaon-BgTPP(NTPC) I & II lines. At Hr on , 400 kV Bongaigaon-BgTPP(NTPC) I & II lines tripped. Due to evacuation problem, BgTPP was blacked out.

Sl. No.	Name of tripping element/ Description	Owner	Data to be furnished by	Name of Node	Name of Node
	400 kV Balipara - Bongaigaon I	POWERGRID	POWERGRID	Balipara	Bongaigaon
	400 kV Balipara - Bongaigaon II	POWERGRID	POWERGRID	Balipara	Bongaigaon
	400 kV Balipara - Bongaigaon III	POWERGRID	POWERGRID	Balipara	Bongaigaon
	400 kV Balipara - Bongaigaon IV	POWERGRID	POWERGRID	Balipara	Bongaigaon
	400 kV Balipara - Ranganadi I	POWERGRID	POWERGRID & NEEPCO	Balipara	Ranganadi
	400 kV Balipara - Ranganadi II	POWERGRID	POWERGRID & NEEPCO	Balipara	Ranganadi
	400 kV Bongaigaon - New Siliguri I	POWERGRID	POWERGRID	Bongaigaon	New Siliguri
	400 kV Bongaigaon - New Siliguri II	POWERGRID	POWERGRID	Bongaigaon	New Siliguri
	400 kV Bongaigaon - New Siliguri III	ENICL	POWERGRID	Bongaigaon	New Siliguri
	400 kV Bongaigaon - New Siliguri IV	ENICL	POWERGRID	Bongaigaon	New Siliguri
	400 kV BgTPP - Bongaigaon I	POWERGRID	NTPC & POWERGRID	BgTPP	Bongaigaon
	400 kV BgTPP - Bongaigaon II	POWERGRID	NTPC & POWERGRID	BgTPP	Bongaigaon
	400 kV Misa - Balipara I	POWERGRID	POWERGRID	Misa	Balipara
	400 kV Misa -Balipara II	POWERGRID	POWERGRID	Misa	Balipara
	400 kV Palatana - Silchar I	NETC	OTPC & POWERGRID	Palatana	Silchar
	400 kV Palatana - Silchar II	NETC	OTPC & POWERGRID	Palatana	Silchar
	400 kV Silchar - Azara	NETC & AEGCL	POWERGRID & AEGCL	Silchar	Azara
	400 kV Silchar - Byrnihat	NETC & MePTCL	POWERGRID & MePTCL	Silchar	Byrnihat
	400 kV Balipara-Biswanath Charali I	POWERGRID	POWERGRID	Balipara	Biswanath Charali
	400 kV Balipara-Biswanath Charali II	POWERGRID	POWERGRID	Balipara	Biswanath Charali
	400 kV Balipara-Biswanath Charali III	POWERGRID	POWERGRID	Balipara	Biswanath Charali
	400 kV Balipara-Biswanath Charali 1V	POWERGRID	POWERGRID	Balipara	Biswanath Charali
	400 kV Ranganadi-Biswanath Charali 1	POWERGRID	NEEPCO & POWERGRID	Ranganadi	Biswanath Charali
	400 kV Ranganadi-Biswanath Charali 1I	POWERGRID	NEEPCO & POWERGRID	Ranganadi	Biswanath Charali
	400 kV Bongaigaon - Byrnihat	NETC & MePTCL	POWERGRID & MePTCL	Bongaigaon	Byrnihat
	400 kV Bongaigaon - Azara	NETC & AEGCL	POWERGRID & AEGCL	Bongaigaon	Azara
	220 kV AGBPP - Mariani(PG)	POWERGRID	NEEPCO & POWERGRID	AGBPP	Mariani (PG)
	220 kV AGBPP - Tinsukia I	AEGCL	NEEPCO & AEGCL	AGBPP	Tinsukia
	220 kV AGBPP - Tinsukia II	AEGCL	NEEPCO & AEGCL	AGBPP	Tinsukia
	220 kV AGBPP - Deomali	DoP, AP	NEEPCO & DoP, AP	AGBPP	Deomali
	220 kV Agia - Boko	AEGCL	AEGCL	Agia	Boko
	220 kV Agia -Azara	AEGCL	AEGCL	Agia	Azara
	220 kV Azara - Sarusajai I	AEGCL	AEGCL	Azara	Sarusajai
	220 kV Azara - Sarusajai II	AEGCL	AEGCL	Azara	Sarusajai
	220 kV Balipara - Samaguri	AEGCL & POWERGRID	POWERGRID & AEGCL	Balipara	Samaguri
	220 kV Birpara - Salakati I	POWERGRID	POWERGRID	Birpara	Salakati
	220 kV Birpara - Salakati II	POWERGRID	POWERGRID	Birpara	Salakati
	220 kV Boko -Azara	AEGCL	AEGCL	Boko	Azara
	220 kV BTPS - Agia I	AEGCL	AEGCL	BTPS	Agia
	220 kV BTPS - Agia II	AEGCL	AEGCL	BTPS	Agia
	220 kV BTPS - Salakati I	POWERGRID	AEGCL & POWERGRID	BTPS	Salakati
	220 kV BTPS - Salakati II	POWERGRID	AEGCL & POWERGRID	BTPS	Salakati
	220 kV Kopili - Misa I	POWERGRID	NEEPCO & POWERGRID	Kopili	Misa
	220 kV Kopili - Misa II	POWERGRID	NEEPCO & POWERGRID	Kopili	Misa
	220 kV Kopili - Misa III	POWERGRID	NEEPCO & POWERGRID	Kopili	Misa
	220 kV Mariani(AS) - AGBPP	POWERGRID	AEGCL &NEEPCO	Mariani(AS)	AGBPP
	220 kV Misa - Dimapur I	POWERGRID	POWERGRID	Misa	Dimapur
	220 kV Misa - Dimapur II	POWERGRID	POWERGRID	Misa	Dimapur
	220 kV Misa - Byrnihat I	MePTCL	POWERGRID & MePTCL	Misa	Byrnihat
	220 kV Misa - Byrnihat II	MePTCL	POWERGRID & MePTCL	Misa	Byrnihat
	220 kV Misa - Mariani(AS)	POWERGRID	POWERGRID & AEGCL	Misa	Mariani (AS)
	220 kV Misa - Mariani(PG)	POWERGRID	POWERGRID	Misa	Mariani (PG)
	220 kV Misa - Samaguri I	POWERGRID	POWERGRID & AEGCL	Misa	Samaguri
	220 kV Misa - Samaguri II	POWERGRID	POWERGRID & AEGCL	Misa	Samaguri
	220 kV NTPS - Tinsukia I	AEGCL	AEGCL	NTPS	Tinsukia
	220 kV NTPS - Tinsukia II	AEGCL	AEGCL	NTPS	Tinsukia
	220 kV Samaguri - Jawaharnagar	AEGCL	AEGCL	Samaguri	Jawaharnagar
	220 kV Samaguri - Mariani I	AEGCL	AEGCL	Samaguri	Mariani
	220 kV Samaguri - Mariani II	AEGCL	AEGCL	Samaguri	Mariani
	220 kV Samaguri - Sarusajai	AEGCL	AEGCL	Samaguri	Sarusajai
	220 kV Sarusajai - Jawaharnagar	AEGCL	AEGCL	Sarusajai	Jawaharnagar
	220 kV Sarusajai - Langpi I	AEGCL	AEGCL	Sarusajai	Langpi
	220 kV Sarusajai - Langpi II	AEGCL	AEGCL	Sarusajai	Langpi
	220 kV Mokokchung-Mokokchung I	POWERGRID	POWERGRID	Mokokchung(PG)	Mokokchung(NA)
	220 kV Mokokchung-Mokokchung II	POWERGRID	POWERGRID	Mokokchung(PG)	Mokokchung(NA)
	132 kV Agartala - Bodhjungnagar	TSECL	TSECL	Agartala	Bodhjungnagar
	132 kV Agartala - Dhalabil (Khowai)	TSECL	TSECL	Agartala	Dhalabil
	132 kV Agartala - Rokhia I	TSECL	TSECL	Agartala	Rokhia
	132 kV Agartala - Rokhia II	TSECL	TSECL	Agartala	Rokhia
	132 kV Agia - Medipathar	MePTCL	AEGCL & MePTCL	Agia	Medipathar
	132 kV AGTPP - Agartala I	POWERGRID	NEEPCO & TSECL	AGTPP	Agartala
	132 kV AGTPP - Agartala II	POWERGRID	NEEPCO & TSECL	AGTPP	Agartala
	132 kV AGTPP - Kumarghat	POWERGRID	NEEPCO & POWERGRID	AGTPP	Kumarghat
	132 kV Aizwal - Kolasib	POWERGRID	POWERGRID & P&ED, Mizoram	Aizawl	Kolasib
	132 kV Aizwal - Kumarghat	POWERGRID	POWERGRID	Aizawl	Kumarghat
	132 kV Aizwal - Longmual	P & ED Mizoram	POWERGRID & P&ED, Mizoram	Aizawl	Longmual
	132 kV Aizwal - Zuangtui	POWERGRID	POWERGRID & P&ED, Mizoram	Aizawl	Zuangtui
	132 kV Ambasa - Kamalpur	TSECL	TSECL	Ambassa	Kamalpur
	132 kV Ambasa - P K Bari	TSECL	TSECL	Ambassa	PK Bari
	132 kV Badarpur - Jiribam	POWERGRID	POWERGRID	Badarpur	Jiribam
	132 kV Badarpur - Kolasib	POWERGRID	POWERGRID & P&ED, Mizoram	Badarpur	Kolasib
	132 kV Badarpur - Kumarghat	POWERGRID	POWERGRID	Badarpur	Kumarghat
	132 kV Badarpur - Panchgram	POWERGRID	POWERGRID & AEGCL	Badarpur	Panchgram
	132 kV Balipara - Depota	AEGCL	POWERGRID & AEGCL	Balipara	Depota
	132 kV Balipara - Gohpur	AEGCL	POWERGRID & AEGCL	Balipara	Gohpur
	132 kV Balipara - Khupi	NEEPCO	POWERGRID & NEEPCO	Balipara	Khupi
	132 kV Baramura - Gamaitilla	TSECL	TSECL	Baramura	Gamaitilla
	132 kV Bodhjungnagar - Jirania	TSECL	TSECL	Bodhjungnagar	Jirania
	132 kV Bokajan - Golaghat	AEGCL	AEGCL	Bokajan	Golaghat
	132 kV BTPS - Dhaligaon I	AEGCL	AEGCL	BTPS	Dhaligaon
	132 kV BTPS - Dhaligaon II	AEGCL	AEGCL	BTPS	Dhaligaon
	132 kV CTPS - Dispur	AEGCL	AEGCL	CTPS	Dispur
	132 kV Dhalabil - Kamalpur	TSECL	TSECL	Dhalabil	Kamalpur
	132 kV Dhaligaon – Barnagar	AEGCL	AEGCL	Dhaligaon	Barnagar
	132 kV Dhaligaon - Nalbari	AEGCL	AEGCL	Dhaligaon	Nalbari
	132 kV Dibrugarh – Behiating	AEGCL	AEGCL	Dibrugarh	Behiating
	132 kV Moran – Behiating	AEGCL	AEGCL	Moran	Behiating
	132 kV Dimapur - Bokajan	AEGCL	POWERGRID & AEGCL	Dimapur	Bokajan
	132 kV Dimapur - Doyang I	POWERGRID	POWERGRID & NEEPCO	Dimapur	Doyang
	132 kV Dimapur - Doyang II	POWERGRID	POWERGRID & NEEPCO	Dimapur	Doyang
	132 kV Dimapur - Imphal	POWERGRID	POWERGRID	Dimapur	Imphal
	132 kV Dimapur (PG) - Dimapur (Nagaland) I	DoP Nagaland	POWERGRID & DoP,Nagaland	Dimapur (PG)	Dimapur
	132 kV Dimapur (PG) - Dimapur (Nagaland) II	POWERGRID & DoP Nagaland	POWERGRID & DoP,Nagaland	Dimapur (PG)	Dimapur
	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	POWERGRID & DoP,Nagaland	Dimapur (PG)	Kohima
	132 kV Doyang - Mokokchung(NA)	DoP Nagaland	NEEPCO & DoP,Nagaland	Doyang	Mokokchung(NA)
	132 kV Dullavcherra - Dharmanagar	AEGCL & TSECL	AEGCL & TSECL	Dullavcherra	Dharmanagar
	132 kV EPIP II - Byrnihat I	MePTCL	MePTCL	EPIP II	Byrnihat
	132 kV EPIP II - Byrnihat II	MePTCL	MePTCL	EPIP II	Byrnihat
	132 kV EPIP II - Umtru I	MePTCL	MePTCL	EPIP II	Umtru
	132 kV EPIP II - Umtru II	MePTCL	MePTCL	EPIP II	Umtru
	132 kV Gamaitila - Ambasa	TSECL	TSECL	Gamaitilla	Ambassa
	132 kV Gohpur - Nirjuli	POWERGRID	AEGCL & POWERGRID	Gohpur	Nirjuli
	132 kV Haflong(PG) - Jiribam	POWERGRID	POWERGRID	Haflong(PG)	Jiribam
	132 kV Imphal (MA)- Karong	MSPCL	MSPCL	Imphal(MA)	Karong
	132 kV Imphal (PG) - Imphal (MA) I	POWERGRID	POWERGRID & MSPCL	Imphal (PG)	Imphal
	132 kV Imphal (PG) - Imphal (MA) II	POWERGRID/MSPCL	POWERGRID & MSPCL	Imphal (PG)	Imphal
	132 kV Jirania - Baramura	TSECL	TSECL	Jirania	Baramura
	132 kV Jiribam - Aizwal	POWERGRID	POWERGRID	Jiribam	Aizawl
	132 kV Jiribam - Pailapool	AEGCL	POWERGRID & AEGCL	Jiribam	Pailapool
	132 kV Kahilipara - Umtru I	AEGCL & MePTCL	AEGCL & MePTCL	Kahilipara	Umtru
	132 kV Kahilipara - Umtru II	AEGCL & MePTCL	AEGCL & MePTCL	Kahilipara	Umtru
	132 kV Kamalpur - P K Bari	TSECL	TSECL	Kamalpur	PK Bari
	132 kV Khandong - Umrangso	POWERGRID & AEGCL	NEEPCO & AEGCL	Khandong	Umrangso
	132 kV Haflong- Umrangso	POWERGRID & AEGCL	POWERGRID & AEGCL	Haflong	Umrangso
	132 kV Khandong - Khliehriat(PG) I	POWERGRID	NEEPCO & POWERGRID	Khandong	Khliehriat(PG)
	132 kV Khandong - Khliehriat(PG) II	POWERGRID	NEEPCO & POWERGRID	Khandong	Khliehriat(PG)
	132 kV Khliehriat (PG)-Badarpur	POWERGRID	POWERGRID	Khliehriat(PG)	Badarpur
	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	POWERGRID & MePTCL	Khliehriat (PG)	Khliehriat(ME)
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	POWERGRID & MePTCL	Khliehriat (PG)	Khliehriat(ME)
	132 kV Kohima - Karong	MSPCL & DoP Nagaland	DoP Nagaland & MSPCL	Kohima	Karong
	132 kV Kopili - Khandong I	POWEGRID	NEEPCO	Kopili	Khandong
	132 kV Kopili - Khandong II	POWEGRID	NEEPCO	Kopili	Khandong
	132 kV Lanka - Diphu	AEGCL	AEGCL	Lanka	Diphu
	132 kV Lekhi - Nirjuli	DoP AP & POWERGRID	DoP AP & POWERGRID	Lekhi	Nirjuli
	132 kV Loktak - Imphal (PG)	POWERGRID	NHPC & POWERGRID	Loktak	Imphal (PG)
	132 kV Loktak - Jiribam(PG)	POWERGRID	NHPC & POWERGRID	Loktak	Jiribam(PG)
	132 kV Loktak - Ningthoukhong	MSPCL	NHPC & MSPCL	Loktak	Ningthoukhong
	132 kV Loktak - Rengpang	MSPCL	NHPC & MSPCL	Loktak	Rengpang
	132 kV LTPS – Mariani(AS)	AEGCL	AEGCL	LTPS	Mariani.(AS)
	132 kV LTPS – Moran	AEGCL	AEGCL	LTPS	Moran
	132 kV LTPS – Sonari	AEGCL	AEGCL	LTPS	Sonari
	132 kV NTPS – Sonari	AEGCL	AEGCL	NTPS	Sonari
	132 kV LTPS – NTPS	AEGCL	AEGCL	LTPS	NTPS
	132 kV Lumshnong - Khliehriat(ME)	MePTCL	MePTCL	Lumshnong	Khliehriat
	132 kV Lumshnong - Panchgram	MePTCL & AEGCL	MePTCL & AEGCL	Lumshnong	Panchgram
	132 kV Mariani(AS) - Golaghat	AEGCL	AEGCL	Mariani(AS)	Golaghat
	132 kV Mariani(AS) - Mokokchang(NA)	AEGCL & DoP Nagaland	AEGCL & DoP Nagaland	Mariani(AS)	Mokokchung(NA)
	132 kV Mawlai - NEHU	MePTCL	MePTCL	Mawlai	NEHU
	132 kV Leshka - Khleihriat (ME) I	MePTCL	MePTCL	Leshka	Khliehriat (ME)
	132 kV Leshka - Khleihriat (ME) II	MePTCL	MePTCL	Leshka	Khliehriat (ME)
	132 kV NEHU - Khliehriat (ME)	MePTCL	MePTCL	NEHU	Khliehriat (ME)
	132 kV NEHU - NEIGRIHMS	MePTCL	MePTCL	NEHU	NEIGRIHMS
	132 kV NEIGRIHMS - Khliehriat (ME)	MePTCL	MePTCL	NEIGRIHMS	Khliehriat
	132 kV Ningthoukong - Imphal(PG)	MSPCL & POWERGRID	MSPCL & POWERGRID	Ningthoukhong	Imphal (PG)
	132 kV P K Bari - Dharmanagar	TSECL	TSECL	PK Bari	Dharmanagar
	132 kV P K Bari - Kumarghat	TSECL	TSECL & POWERGRID	PK Bari	Kumarghat
	132 kV Palatana-Udaipur	TSECL	OTPC & TSECL	Palatana	Udaipur
	132 kV Panchgram - Dullavcherra	AEGCL	AEGCL	Panchgram	Dullavcherre
	132 kV Ranganadi - Lekhi	POWERGRID & DoP AP	NEEPCO & DoP AP	Ranganadi	Lekhi
	132 kV Ranganadi - Ziro	POWERGRID	NEEPCO & POWERGRID	Ranganadi	Ziro
	132 kV Rangia - Barnagar	AEGCL	AEGCL	Rangia	Barnagar
	132 kV Rangia - Kahilipara	AEGCL	AEGCL	Rangia	Kahilipara
	132 kV Rangia - Motonga	BPC	AEGCL & BPC	Rangia	Motonga
	132 kV Rangia - Nalbari	AEGCL	AEGCL	Rangia	Nalbari
	132 kV Rangia - Sipajhar	AEGCL	AEGCL	Rangia	sipajhar
	132 kV Rangia – Sishugram	AEGCL	AEGCL	Rangia	Sishugram
	132 kV Rengpang - Jiribam (MA)	MSPCL	MSPCL	Rengpang	Jiribam(MA)
	132 kV Rokhia-Udaipur	TSECL	TSECL	Rokhia	Udaipur
	132 kV Salakati- Gelephu	POWERGRID	POWERGRID & BPC	Salakati	Gelephu
	132 kV Sarusajai – Kahilipara I	AEGCL	AEGCL	Sarusajai	Kahilipara
	132 kV Sarusajai – Kahilipara II	AEGCL	AEGCL	Sarusajai	Kahilipara
	132 kV Sarusajai – Kahilipara III	AEGCL	AEGCL	Sarusajai	Kahilipara
	132 kV Sarusajai – Kahilipara IV	AEGCL	AEGCL	Sarusajai	Kahilipara
	132 kV Sarusajai - Umtru I	MePTCL	AEGCL & MePTCL	Sarusajai	Umtru
	132 kV Sarusajai - Umtru II	MePTCL	AEGCL & MePTCL	Sarusajai	Umtru
	132 kV Silchar - Badarpur I	POWERGRID	POWERGRID	Silchar	Badarpur
	132 kV Silchar - Badarpur II	POWERGRID	POWERGRID	Silchar	Badarpur
	132 kV Silchar - Dullavcherra	POWERGRID & AEGCL	POWERGRID & AEGCL	Silchar	Dullavcherra
	132 kV Silchar - Panchgram	POWERGRID & AEGCL	POWERGRID & AEGCL	Silchar	Panchgram
	132 kV Silchar - Srikona I	POWERGRID	POWERGRID & AEGCL	Silchar	Srikona
	132 kV Silchar - Srikona II	POWERGRID	POWERGRID & AEGCL	Silchar	Srikona
	132 kV Sishugram – Kahilipara	AEGCL	AEGCL	Sishugram	Kahilipara
	132 kV Srikona - Pailapool	AEGCL	AEGCL	Srikona	Pailapool
	132 kV Srikona - Panchgram	AEGCL	AEGCL	Srikona	Panchgram
	132 kV Surjamaninagar-Budhjangnagar I	TSECL	TSECL	Surjamaninagar	Bodhjungnagar
	132 kV Surjamaninagar-Budhjangnagar II	TSECL	TSECL	Surjamaninagar	Bodhjungnagar
	132 kV Surjamaninagar-Palatana I	POWERGRID	TSECL & OTPC	Surjamaninagar	Palatana
	132 kV Surjamaninagar-Palatana II	POWERGRID	TSECL & OTPC	Surjamaninagar	Palatana
	132 kV Tinsukia - NTPS	AEGCL	AEGCL	Tinsukia	NTPS
	132 kV Tinsukia – Dibrugarh	AEGCL	AEGCL	Tinsukia	Dibrugarh
	132 kV Udaipur - Palatana	TSECL	TSECL & OTPC	Udaipur	Palatana
	132 kV Umiam - NEHU	MePTCL	MePTCL	Umiam	NEHU
	132 kV Umiam St I - Mawlai	MePTCL	MePTCL	Umiam	Mawlai
	132 kV Umiam St I - Umiam	MePTCL	MePTCL	Umiam	Umiam
	132 kV Umiam St I - Umiam St III I	MePTCL	MePTCL	Umiam St I	Umiam St III
	132 kV Umiam St I - Umiam St III II	MePTCL	MePTCL	Umiam St I	Umiam St III
	132 kV Umiam St III – Umiam St IV I	MePTCL	MePTCL	Umiam	Umiam
	132 kV Umiam St III – Umiam St IV II	MePTCL	MePTCL	Umiam	Umiam
	132 kV Umiam St III - Umtru I	MePTCL	MePTCL	Umiam	Umtru
	132 kV Umiam St III - Umtru II	MePTCL	MePTCL	Umiam	Umtru
	132 kV Umtru - Umiam St IV I	MePTCL	MePTCL	Umtru	Umiam
	132 kV Umtru - Umiam St IV II	MePTCL	MePTCL	Umtru	Umiam
	132 kV Silchar - Imphal (PG) I	POWERGRID	POWERGRID	Silchar	Imphal (PG)
	132 kV Silchar - Imphal (PG) II	POWERGRID	POWERGRID	Silchar	Imphal (PG)
	132 kV Silchar-P K Bari I	POWERGRID	POWERGRID & TSECL	Silchar	PK Bari
	132 kV Silchar-P K Bari II	POWERGRID	POWERGRID & TSECL	Silchar	PK Bari
	132 kV Mokokchung(NA)-Mokokchung (PG) I	POWERGRID	DoP Nagaland & POWERGRID	Mokokchung	Mokokchung
	132 kV Mokokchung(NA)-Mokokchung (PG) II	POWERGRID	DoP Nagaland & POWERGRID	Mokokchung	Mokokchung
	132 kV Silchar- Melriat I	POWERGRID	POWERGRID	Silchar	Melriat
	132 kV Silchar- Melriat II	POWERGRID	POWERGRID	Silchar	Melriat
	132 kV Udaipur-Monarchak	TSECL	TSECL	Udaipur	Monarchak
	132 kV Rokhia-Monarchak	TSECL	TSECL	Rokhia	Monarchak
	132 kV Biswanath Charali-Pavoi I	POWERGRID	POWERGRID & AEGCL	Biswanath Charali	Pavoi
	132 kV Biswanath Charali-Pavoi II	POWERGRID	POWERGRID & AEGCL	Biswanath Charali	Pavoi
	132 kV Mustem-Khliehriat	MePTCL	MePTCL	Mustem	Khliehriat
	132 kV Mustem-NEHU	MePTCL	MePTCL	Mustem	NEHU
	132 kV Azara-Azara I	AEGCL	AEGCL	Azara	Azara
	132 kV Azara-Azara II	AEGCL	AEGCL	Azara	Azara
	+/- 800 kV Biswanath Charali-Agra I	POWERGRID	POWERGRID	Biswanath Charali	Agra
	+/- 800 kV Biswanath Charali-Agra II	POWERGRID	POWERGRID	Biswanath Charali	Agra
	220 kV Mariani(PG)-Mokokchung (PG) I	POWERGRID	POWERGRID	Mariani(PG)	Mokokchung(PG)
	220 kV Mariani(PG)-Mokokchung (PG) II	POWERGRID	POWERGRID	Mariani(PG)	Mokokchung(PG)
	132 kV Haflong(PG) - Haflong	AEGCL	POWERGRID & AEGCL	Haflong(PG)	Haflong
	132 kV Nangalbibra - Mendipathar	MePTCL	MePTCL	Nangalbibra	Mendipathar
	132 kV Surjamaninagar-Comilla I	POWERGRID & PGCB	POWERGRID & PGCB	Surjamaninagar	Comilla
	132 kV Surjamaninagar-Comilla II	POWERGRID & PGCB	POWERGRID & PGCB	Surjamaninagar	Comilla
	220 kV Balipara - Sonabil	POWERGRID & AEGCL	POWERGRID & AEGCL	Balipara	Sonabil
	132 kV Depota - Sonabil	AEGCL	AEGCL	Depota	Sonabil

Name of Generating Units	Owner	Node
AGBPP U 1	NEEPCO	AGBPP
AGBPP U 2	NEEPCO	AGBPP
AGBPP U 3	NEEPCO	AGBPP
AGBPP U 4	NEEPCO	AGBPP
AGBPP U 5	NEEPCO	AGBPP
AGBPP U 6	NEEPCO	AGBPP
AGBPP U 7	NEEPCO	AGBPP
AGBPP U 8	NEEPCO	AGBPP
AGBPP U 9	NEEPCO	AGBPP
AGTPP U 1	NEEPCO	AGTPP
AGTPP U 2	NEEPCO	AGTPP
AGTPP U 3	NEEPCO	AGTPP
AGTPP U 4	NEEPCO	AGTPP
AGTPP STG I	NEEPCO	AGTPP
AGTPP STG II	NEEPCO	AGTPP
Doyang U 1	NEEPCO	Doyang
Doyang U 2	NEEPCO	Doyang
Doyang U 3	NEEPCO	Doyang
Khandong U 1	NEEPCO	Khandong
Khandong U 2	NEEPCO	Khandong
Kopili Stg II	NEEPCO	Khandong
Kopili U 1	NEEPCO	Kopili
Kopili U 2	NEEPCO	Kopili
Kopili U 3	NEEPCO	Kopili
Kopili U 4	NEEPCO	Kopili
Loktak U 1	NHPC	Loktak
Loktak U 2	NHPC	Loktak
Loktak U 3	NHPC	Loktak
Palatana GTG I	OTPC	Palatana
Palatana GTG II	OTPC	Palatana
Palatana STG I	OTPC	Palatana
Palatana STG II	OTPC	Palatana
Palatana STG I	OTPC	Palatana
Ranganadi U 1	NEEPCO	Ranganadi
Ranganadi U 2	NEEPCO	Ranganadi
Ranganadi U 3	NEEPCO	Ranganadi
Bairabi U 1	P & ED Mizoram	Bairabi
Bairabi U 2	P & ED Mizoram	Bairabi
Bairabi U 3	P & ED Mizoram	Bairabi
Bairabi U 4	P & ED Mizoram	Bairabi
Baramura U 1	TSECL	Baramura
Baramura U 2	TSECL	Baramura
Baramura U 3	TSECL	Baramura
Baramura U 4	TSECL	Baramura
Baramura U 5	TSECL	Baramura
Gumti U 1	TSECL	Gumti
Gumti U 2	TSECL	Gumti
Gumti U 3	TSECL	Gumti
Langpi U 1	APGCL	Langpi
Langpi U 2	APGCL	Langpi
Likimro U 1	DoP Nagaland	Likimro
Likimro U 2	DoP Nagaland	Likimro
Likimro U 3	DoP Nagaland	Likimro
LTPS GTG U 1	APGCL	LTPS
LTPS GTG U 2	APGCL	LTPS
LTPS GTG U 3	APGCL	LTPS
LTPS GTG U 4	APGCL	LTPS
LTPS GTG U 5	APGCL	LTPS
LTPS GTG U 6	APGCL	LTPS
LTPS GTG U 7	APGCL	LTPS
LTPS STG U 8	APGCL	LTPS
Leshka U 1	MePGCL	Leshka
Leshka U 2	MePGCL	Leshka
Leshka U 3	MePGCL	Leshka
NTPS GTG U 1	APGCL	NTPS
NTPS GTG U 2	APGCL	NTPS
NTPS GTG U 3	APGCL	NTPS
NTPS GTG U 4	APGCL	NTPS
NTPS GTG U 5	APGCL	NTPS
NTPS GTG U 6	APGCL	NTPS
Rokhia U 1	TSECL	Rokhia
Rokhia U 2	TSECL	Rokhia
Rokhia U 3	TSECL	Rokhia
Rokhia U 4	TSECL	Rokhia
Rokhia U 5	TSECL	Rokhia
Rokhia U 6	TSECL	Rokhia
Rokhia U 7	TSECL	Rokhia
Rokhia U 8	TSECL	Rokhia
Rokhia U 9	TSECL	Rokhia
Serlui B U 1	P & ED Mizoram	Serlui B
Serlui B U 2	P & ED Mizoram	Serlui B
Serlui B U 3	P & ED Mizoram	Serlui B
Umiam Stg I U 1	MePGCL	Umiam Stg I
Umiam Stg I U 2	MePGCL	Umiam Stg I
Umiam Stg I U 3	MePGCL	Umiam Stg I
Umiam Stg I U 4	MePGCL	Umiam Stg I
Umiam Stg II U 1	MePGCL	Umiam Stg II
Umiam Stg II U 2	MePGCL	Umiam Stg II
Umiam Stg III U 1	MePGCL	Umiam Stg III
Umiam Stg III U 2	MePGCL	Umiam Stg III
Umiam Stg IV U 1	MePGCL	Umiam Stg IV
Umiam Stg IV U 2	MePGCL	Umiam Stg IV
Umtru U 1	MePGCL	Umtru
Umtru U 2	MePGCL	Umtru
	MePGCL	Umtru
Umtru U 3	MePGCL	Umtru
Umtru U 4	MePGCL	Umtru
Monarchak GTG	NEEPCO	Monarchak
Monarchak STG	NEEPCO	Monarchak
BgTPP U 1	NTPC	BgTPP

Operation of Auto Reclose	Relay indications provided by CR operator	Effect (Loss of Load & Generation in MW)	Category as per CEA Grid Standards	Date and time or restoration provided by CR operator	Details of SPS Operation	Quantum of TTC of NER-ER corridor reduced in MW	DR output furnished within 24 hours (Y/N)	EL output furnished within 24 hours (Y/N)	Violation of Regulation/ Standard	Date & Time of Event from SOE of SCADA	Date & Time of Event from DR	Details of operation of Main I / Main Relay	Details of operation of Main II / Back up Relay	Whether the element tripped due to UFR/ ROCOF	Details of Fault locator	Date and time or restoration from SOE of SCADA	Date and time or restoration from DR	Output of Data Acquisation System (Y/N)	Fault Clearance time (from DR & nearest PMU)	Issues with the Sub-station confirguration as per CEA standard	Protection Mal-operation	Non availability of LBB/ Bus Bar Protection	Non Availability of DR	Non availability of Event logger	Non-availability of SCADA /SOE at RLDC	System is not safe after N-1 Contingency
Not Furnished	No tripping		GD-I		SPS 1 operated		Yes	Yes						UFR				Yes								
Lockout	Not Furnished		GD-II		SPS 2 operated		No	No						ROCOF				No								
Successful operation	Hand Tripped		GD-III		SPS 3 operated																					
Not operated	Tripped		GD-IV		SPS 4 operated																					
Not applicable	DP, ZI, R-E		GD-V		No SPS																					
	DP, ZI, Y-E		GI-I		SPS not operated																					
	DP, ZI, B-E		GI-II																							
	DP, ZII, R-E		-																							
	DP, ZII, Y-E																									
	DP, ZII, B-E																									
	DP, ZIII, R-E																									
	DP, ZIII, Y-E																									
	DP, ZIII, B-E																									
	DP, ZI, R-Y-E																									
	DP, ZI, R-B-E																									
	DP, ZI, Y-B-E																									
	DP, ZII, R-Y-E																									
	DP, ZII, R-B-E																									
	DP, ZII, Y-B-E																									
	DP, ZIII, R-Y-E																									
	DP, ZIII, R-B-E																									
	DP, ZIII, Y-B-E																									
	DP, ZI, R-Y-B																									
	DP, ZII, R-Y-B																									
	DP, ZIII, R-Y-B																									
	Over current																									
	Directional Earth Fault																									
	Back Up Earth Fault																									
	Earth Fault																									
	Earth Fault, R-ph																									
	Earth Fault, Y-ph																									
	Earth Fault, Y-ph																									
	Earth Fault, B-ph																									
	Over Voltage																									
	Over Voltage Stg I																									
	Over Voltage Stg II																									
	Direct Trip received																									
	Loss of Voltage																									
	Earth Fault, R,Y,B-Ph																									
	General Trip																									
	Busbar Protection																									

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
A. ग्रिड डिसटरबेनसेज / Grid Disturbance																		
1	220 kV Agia - Boko	AEGCL	**AEGCL**	**9/1/2016 13:02**	Agia	DP, ZI, R-E	Not applicable	No	No	17	0	Loss of Load: 17	GD-I	9/1/2016 13:35	No SPS	0.009	0.009	
					Boko	Over current	Not applicable	No	No									
	220 kV Boko - Azara	AEGCL	**AEGCL**		Boko	Not Furnished	Not applicable	No	No					9/2/2016 20:10	No SPS			
					Azara	Over current	Not applicable	No	No									
	FIR by the constituent	No																
	Brief Description of the Incident	Boko area of Assam was connected with rest of NER Grid through 220 kV Agia - Boko line & 220 kV Boko -Azara line. At 13:02 Hrs on 01.09.16,220 kV Agia - Boko line & 220 kV Boko -Azara line tripped. Due to tripping of these elements, Boko 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 : 1911 MW , Antecedent Load : 1657 MW)**																
	Root Cause	AEGCL said fault in Agia - Boko line. Agia end DP, Z-1 operated. O/C relay should not have operated at Azara / Boko. There could be problem with time co-ordination of O/C relays. (Boko should have cleared first). AEGCL to check																
	Remedial Measures	AEGCL to check and co-ordinate relay settings to prevent unwanted operation																
2	132 kV EPIP II - Byrnihat I	MePTCL	**MePTCL**	**9/3/2016 14:09**	EPIP II	No tripping	Not applicable	No	No	43		Loss of Load: 43	GD-I	9/3/2016 14:27	No SPS	0.013	0.013	
					Byrnihat	DP, ZIII, B-E	Not applicable	No	No									
	132 kV EPIP II - Byrnihat II	MePTCL	**MePTCL**		EPIP II	No tripping	Not applicable	No	No					9/3/2016 14:33	No SPS			
					Byrnihat	DP, ZIII, B-E	Not applicable	No	No									
	132 kV EPIP II - Umtru I	MePTCL	**MePTCL**		EPIP II	Over current	Not applicable	No	No					9/3/2016 14:36	No SPS			
					Umtru	No tripping	Not applicable	No	No									

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
	Umiam Stg IV U 2	MePGCL	MePGCL	**9/3/2016 14:09**	Umiam Stg IV	Excitation Over Current	Not applicable	No	No		24	Loss of Generation: 24	GD-I	9/3/2016 14:51	No SPS	0.017	0.017	
	FIR by the constituent	Yes(Meghalaya)																
	Brief Description of the Incident	Byrnihat area (EPIP I,EPIP II,Umiam Stage III,Umiam Stage IV & Umtru Stations) of Meghalaya was connected with rest of NER Grid throug 132 kV EPIP II-Byrnihat I & II lines (132 kV Kahilipara-Umtru I & II lines, 132 kV Sarusajai-Umtru I & II lines & 132 kV Umium Stage I - Umium Stage III 1&2 lines kept open for System requirement). At 14:09 Hrs on 03.09.16, 132 kV EPIP II-Byrnihat I & II lines tripped. Due to tripping of these elements, Byrnihat area was separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.															
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1763 MW , Antecedent Load : 1731 MW)**																
	Root Cause	Transient fault within Meghalaya system. MePTCL will inform further about exact location and cause																
	Remedial Measures																	
3	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**POWERGRID & DoP,Nagaland**	**9/6/2016 14:30**	Dimapur (PG)	DP, ZI, B-E,Distance not furnished	Not Furnished	No	No	20	24	Loss of Load: 20& Loss of Generation: 24	GD-I	9/6/2016 14:56	No SPS	0.008	0.008	
					Kohima	No tripping	Not Furnished	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 14:30 Hrs on 06.09.16, 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 : 1841 MW , Antecedent Load : 1857 MW)**																
	Root Cause	Downstram fault in DoP, Naglaand system that was not cleared on time.																
	Remedial Measures	DoP,Nagaland to restore the condition of 132kV Dimapur-Kohima line to original and co-ordinate downstream relay settings with NERTS to prevent unwanted line trippings																
4	132 kV Lekhi - Nirjuli	DoP AP & POWERGRID	**DoP AP & POWERGRID**	**9/8/2016 19:50**	Lekhi	Earth Fault	Not applicable	No	No	33	0	Loss of Load: 33	GD-I	9/8/2016 20:17	No SPS	0.015	0.015	
					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 Nirjuli-Lekhi line (Bus Coupler CB of Gohpur kept open for system requirement). At 19:50 Hrs on 08.09.16, 132 kV Ranganadi-Lekhi line tripped. Due to tripping of this element, Nirjuli area & Gohpur area were separated from rest of NER Grid and subsequently collapsed due to no source in these areas.															
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2282 MW , Antecedent Load : 2474 MW)**																
	Root Cause	Problem may be in Arunachal Pradesh section of Lekhi - Nirjuli line. Manager (NERTS) said infringment problem was there in Arunachal Pradesh section.																
	Remedial Measures	NERPC to take up with Arunachal Pradesh seperately for resolving this problem.																

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
5	132 kV Balipara - Khupi	NEEPCO	**POWERGRID & NEEPCO**	**9/11/2016 0:21**	Balipara	Over Current, R-Y-B phase	Not applicable	NA	NA	17	0	Loss of Load: 17	GD-I	9/11/2016 0:34	No SPS	0.008	0.008	
					Khupi	Not Furnished	Not applicable	NA	NA									
	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 00:21 Hrs on 11.09.16, 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 : 1873 MW , Antecedent Load : 1857 MW)**																
	Root Cause	As per preliminary information from NEEPCO, line might have tripped on vegetation infringement																
	Remedial Measures	NEEPCO to take up vegetation clerance and ensure that line section is healthy																
6	132 kV Doyang - Mokokchung(NA)	DoP Nagaland	**NEEPCO & DoP,Nagaland**	**9/11/2016 11:30**	Doyang	Over current	Not applicable	No	No	15	0	Loss of Load: 15	GD-I	9/11/2016 12:04	No SPS	0.008	0.008	
					Mokokchung(NA)	No tripping	Not applicable	No	No									
	220 kV Mariani(PG)-Mokokchung (PG) I	POWERGRID	**POWERGRID**		Mariani(PG)	Earth Fault, Y-ph	Not applicable	No	No					9/11/2016 12:02	No SPS			
					Mokokchung(PG)	No tripping	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)and 220 kV Mariani(PG)-Mokokchung (PG) I line. (132 kV Mokokchung(NA)-Marianai(AS) is under long outage, 220 kV Mariani(PG)-Mokokchung (PG) II line is out of service since 12.07.16 & 66 kV Tuengsang-Likimro line kept open for system requirement). At 11:30 Hrs on 11.09.16, 132 kV Doyang-Mokokchung (NA)and 220 kV Mariani(PG)-Mokokchung (PG) I line tripped. Due to tripping of these elements, 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 : 1783 MW , Antecedent Load : 1482 MW)**																
	Root Cause	DoP, Nagaland to give further details. NEEPCO to confirm later after getting details from Doyang HEP																
	Remedial Measures	As per NERTS, Instantaenous element at Mariani disabled so that tripping of Mariani - Mokokchung along with Doyang - Mokokchung does not occur. DoP, Nagaland to co-ordinate downstream relay settings with NERTS in order to prevent unwanted tripping of EHV elements																
7	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**POWERGRID & MePTCL**	**9/12/2016 14:42**	Khliehriat (PG)	DP, ZI, R-Y-B,50.88 Kms.	Not applicable	No	No	31		Loss of Load: 31		9/12/2016 15:04	No SPS	0.003	0.003	
					Khliehriat(ME)	No tripping	Not applicable	NA	NA									
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**		Khliehriat (PG)	DP, ZI, R-Y-B,80.14 Kms.	Not applicable	No	No					9/12/2016 15:11	No SPS			
					Khliehriat(ME)	No tripping	Not applicable	NA	NA									
	132 kV NEHU - NEIGRIHMS	MePTCL	**MePTCL**		NEHU	Distance protection	Not applicable	No	No					9/12/2016 14:46	No SPS			

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
7	NEIGRIHMS				NEIGRIHMS	No tripping	Not applicable	NA	NA									
	132 kV Mustem-NEHU	MePTCL	**MePTCL**		Mustem	Distance protection	Not applicable	No	No					9/12/2016 14:47	No SPS			
					NEHU	Tripped	Not applicable	No	No									
	Leshka U 1	MePGCL	MePGCL	**9/12/2016 14:42**	Leshka	86B, 86FT	Not applicable	No	No		70	Loss of Generation: 70		9/12/2016 15:25	No SPS	0.033	0.033	
	Leshka U 2	MePGCL	MePGCL		Leshka		Not applicable	No	No					9/12/2016 15:10	No SPS			
	FIR by the constituent	Yes(Meghalaya)																
	Brief Description of the Incident	Khliehriat area (Khliehriat,NEIGRIHMS,Mustem and Leshka stations) of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines,132 kV Mustem-NEHU line and 132 kV NEHU - NEIGRIHMS line (132 kV Khliehriat-Lumnsnong line,132 kV Sarusajai-Umtru I&II lines and 132 kV Kahilipara-Umtru I&II lines kept open for system requirement). At 14:42 Hrs on 12.09.16,132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines,132 kV Mustem-NEHU 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 : 1834 MW , Antecedent Load : 1767 MW)**																
	Root Cause	Trippings in Khliehriat side are not possible to analyse properly due to absence of numerical relays.																
	Remedial Measures	Meghalayal to review relay co-ordination within their own system. MePTCL to install Numerical relays on all feeders from Khliehriat(MePTCL) on urgent basis. It is to be further co-ordinate with NERTS for upstream. By December, relays will be installed (MePTCl confirmed). Numerical relays now present only on Neigrihms and leshka feeders from Khlehriat. NERPC also mentioned poor manpower at Byrnihat / Khliehriat substations, and requested MePTCl to take up for improvement																
8	132 kV Lumshnong - Panchgram	MePTCL & AEGCL	**MePTCL & AEGCL**	**9/12/2016 19:45**	Lumshnong	Not Furnished	Not Furnished	No	No	30	0	Loss of Load: 30	GD-I	9/18/2016 0:34	No SPS	0.59	0.59	
					Panchgram	DP, ZI, R-Y-B,41.1 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 was kept open for system requirement). At 19:45 Hrs on 12.09.16 ,132 kV Lumshnong - Panchgram line tripped. Due to tripping of this element, Lumshnong 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 : 2203 MW , Antecedent Load : 2310 MW)**																
	Root Cause	Tripping likely on account of vegetation infringement.																
	Remedial Measures	Lumshnong to at least report the relay details properly to NERLDC. Vegetation clearance to be done																
9	132 kV Loktak - Rengpang	MSPCL	**NHPC & MSPCL**	**9/12/2016 13:51**	Loktak	DP, ZI, B-E,11.21 Kms.	Not Furnished	Yes	No	2	0	Loss of Load: 2	GD-I	9/12/2016 14:53	No SPS	0.002	0.002	
					Rengpang	Not Furnished	Not Furnished	No	No									
	FIR by the constituent	Yes(Loktak)																
	Brief Description of the Incident	Rengpang area of Manipur was connected with rest of NER Grid through 132 kV Loktak-Rengpang line (132 kV Rengpang-Jiribam(MA) line is under long outage). At 13:51 Hrs on 12.09.16, 132 kV Loktak-Rengpang line tripped. Due to tripping of this element,Rengpang area was separated from rest of NER Grid and subsequently collapsed due to no source in this area.																

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1833 MW , Antecedent Load : 1707 MW)**																
	Root Cause	Likely vegetation problem (Heavy jungle). Also possible that fault in downstream getting cleared. Manipur to furnish details																
	Remedial Measures	Vegetation clearance to be done in line sections. In forested areas, adequate manpower to be employed																
10	132 kV Loktak - Rengpang	MSPCL	**NHPC & MSPCL**	**9/13/2016 11:27**	Loktak	DP, ZI, B-E,11.03 Kms.	Not Furnished	Yes	No	2	0	Loss of Load: 2	GD-I	9/13/2016 12:45	No SPS	0.003	0.003	
					Rengpang	Not Furnished	Not Furnished	No	No									
	FIR by the constituent	Yes(Loktak)																
	Brief Description of the Incident	Rengpang area of Manipur was connected with rest of NER Grid through 132 kV Loktak-Rengpang line (132 kV Rengpang-Jiribam(MA) line is under long outage). At 11:27 Hrs on 13.09.16, 132 kV Loktak-Rengpang line tripped. Due to tripping of this element,Rengpang 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 : 1866 MW , Antecedent Load : 1633 MW)**																
	Root Cause	Likely vegetation problem (Heavy jungle). Also possible that fault in downstream getting cleared. Manipur to furnish details																
	Remedial Measures	Vegetation clearance to be done in line sections. In forested areas, adequate manpower to be employed																
11	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**POWERGRID & DoP,Nagaland**	**9/13/2016 15:55**	Dimapur (PG)	DP, ZI, R-E,Distance not furnished	Not Furnished	No	No	28	0	Loss of Load: 28	GD-I	9/14/2016 15:10	No SPS	0.06	0.06	
					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 15:55 Hrs on 13.09.16, 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 : 1812 MW , Antecedent Load : 1715 MW)**																
	Root Cause	Downstram fault in DoP, Naglaand system that was not cleared on time.																
	Remedial Measures	DoP,Nagaland to restore the condition of 132kV Dimapur-Kohima line to original and co-ordinate downstream relay settings with NERTS to prevent unwanted line trippings																
12	132 kV Aizwal - Zuangtui	POWERGRID	**POWERGRID & P&ED, Mizoram**	**9/13/2016 15:40**	Aizawl	Over current	Not applicable	Yes	No	36	0	Loss of Load: 36	GD-I	9/13/2016 15:56	No SPS	0.013	0.013	
					Zuangtui	No tripping	Not applicable	NA	NA									
	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 15:40 Hrs on 13.09.16 , 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.																

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1821 MW , Antecedent Load : 1758 MW)**																
	Root Cause	Relay co-ordination not yet down by Mizoram. P&E Dept, Mizoram not agreed to implement																
	Remedial Measures	NERPC to take up with P&E Dept., Mizoram to ensure Mizoram does co-ordination of it's protection system with NERTS so that unwnated tripping of EHV lines does not occur																
13	132 kV Imphal (PG) - Imphal (MA) I	POWERGRID	**POWERGRID & MSPCL**	**9/14/2016 10:55**	Imphal (PG)	Earth Fault	Not applicable	No	No	44	0	Loss of Load: 44	GD-I	9/14/2016 11:24	No SPS	0.031	0.031	
					Imphal	Over current	Not applicable	No	No									
	132 kV Imphal (PG) - Imphal (MA) II	POWERGRID/ MSPCL	**POWERGRID & MSPCL**		Imphal (PG)	Earth Fault	Not applicable	No	No					9/14/2016 11:30	No SPS			
					Imphal	Over current	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 10:55 Hrs on 14.09.16, 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 : 1801 MW , Antecedent Load : 1758 MW)**																
	Root Cause	Fault in state end ; No autoreclose operated at Imphal (PG) end. As per NERTS, problem in Karong feeder from Imphal																
	Remedial Measures	MSPCL to investigate the cause of tripping and intimate the forum.																
14	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**POWERGRID & MePTCL**	**9/15/2016 13:56**	Khliehriat (PG)	DP, ZI, R-Y-B,107.6 Kms.	Not applicable	No	No	49		Loss of Load: 49	GD-I	9/15/2016 14:14	No SPS	0.002	0.002	
					Khliehriat(ME)	No tripping	Not applicable	NA	NA									
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**		Khliehriat (PG)	DP, ZI, R-Y-B,107.6 Kms.	Not applicable	No	No					9/15/2016 14:15	No SPS			
					Khliehriat(ME)	No tripping	Not applicable	NA	NA									
	132 kV Mustem-Khliehriat	MePTCL	**MePTCL**	**9/15/2016 13:56**	Mustem	No tripping	Not applicable	NA	NA					9/15/2016 14:11	No SPS			
					Khliehriat	DP, ZI, R-Y-B,29.49 Kms.	Not applicable	No	No									
	132 kV Mustem-NEHU	MePTCL	**MePTCL**		Mustem	Over current	Not applicable	No	No					9/15/2016 14:10	No SPS			
					NEHU	No tripping	Not applicable	NA	NA									
	Leshka U 1	MePGCL	MePGCL		Leshka	86A, 86B, 86FT	Not applicable	No	No		70	Loss of Generation: 70	GD-I	9/15/2016 14:37	No SPS	0.063	0.063	
	Leshka U 2	MePGCL	MePGCL		Leshka		Not applicable	No	No					9/15/2016 14:27	No SPS			

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
	Leshka U 3	MePGCL	MePGCL		Leshka		Not applicable	No	No					9/15/2016 14:26	No SPS			
	FIR by the constituent	Yes(Meghalaya)																
	Brief Description of the Incident	Khliehriat area (Khliehriat, NEHU,NEIGRIHMS,Mustem, Leshka & Umiam stations) of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines (132 kV Panchgram-Lumnsnong line,132 kV Umiam-Umiam Stg I line & 132 kV NEHU-Mawlai line were kept open for system requirement). At 13:56 Hrs on 15.09.16, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines, 132 kV Mustem-Khliehriat 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 : 1794 MW , Antecedent Load : 1761 MW)**																
	Root Cause	Trippings in Khliehriat side are not possible to analyse properly due to absence of numerical relays. PGCIL said setting of DP,Z-1 at Khliehriat(PG) is around 70 kms. NERTS to clarify why the distance shown by relay is more than setting distance.																
	Remedial Measures	Meghalayal to review relay co-ordination within their own system. MePTCL to install Numerical relays on all feeders from Khliehriat(MePTCL) on urgent basis. It is to be further co-ordinate with NERTS for upstream. By December, relays will be installed (MePTCl confirmed). Numerical relays now present only on Neigrihms and leshka feeders from Khlehriat. NERPC also mentioned poor manpower at Byrnihat / Khliehriat substations, and requested MePTCl to take up for improvement																
15	132 kV Aizwal - Zuangtui	POWERGRID	**POWERGRID & P&ED, Mizoram**	**9/16/2016 23:36**	Aizawl	Over current	Not applicable	No	No	14	0	Loss of Load: 14	GD-I	9/16/2016 23:47	No SPS	0.003	0.003	
					Zuangtui	No tripping	Not applicable	NA	NA									
	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 23:36 Hrs on 16.09.16 , 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 : 1683 MW , Antecedent Load : 1791 MW)**																
	Root Cause	Relay co-ordination not yet down by Mizoram. P&E Dept, Mizoram not agreed to implement																
	Remedial Measures	NERPC to take up with P&E Dept., Mizoram to ensure Mizoram does co-ordination of it's protection system with NERTS so that unwnated tripping of EHV lines does not occur																
16	220 kV BTPS - Salakati I	POWERGRID	**AEGCL & POWERGRID**	**9/16/2016 18:00**	BTPS	Not Furnished	Not Furnished	No	No	32		Loss of Load: 32 (Gelephu area)	GD-I	9/16/2016 18:58	No SPS	-	-	
					Salakati	No tripping	Not Furnished	No	No									
	220 kV BTPS - Salakati II	POWERGRID	**AEGCL & POWERGRID**		BTPS	Earth Fault	Not applicable	No	No					9/17/2016 4:32	No SPS			
					Salakati	DP, ZII, R-Y-B,3.84 Kms.	Not applicable	No	No									
	220 kV Birpara - Salakati I	POWERGRID	**POWERGRID**		Birpara	Not Furnished	Not Furnished	No	No					9/16/2016 19:13	No SPS			
					Salakati	No tripping	Not Furnished	No	No									
	132 kV Salakati-Gelyphu	POWERGRID	**POWERGRID &BPC**		Salakati	Hand Tripped	Not applicable	No	No					9/16/2016 19:17	No SPS			
					Gelyphu	No tripping	Not applicable	No	No									
	220 kV Birpara -	POWERGRID	**POWERGRID**		Birpara	Not Furnished	Not Furnished	No	No					9/17/2016 18:00	No SPS			

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
	Salakati II	POWERGRID	**POWERGRID**	**9/16/2016 18:00**	Salakati	DP, ZI, R-E	Not Furnished	Yes	No			Loss of Load: 32 (Gelephu area)	GD-I	9/17/2016 18:09	No SPS	-	-	
	400/220 kV 315 MVA ICT I at Bongaigaon	POWERGRID	POWERGRID		Bongaigaon	Tripped,Indications not furnished	Not applicable	No	No					9/16/2016 18:47	No SPS			
	220/132 kV 50 MVA ICT I at Salakati	POWERGRID	POWERGRID		Salakati	Backup Over current on LV side	Not applicable	No	No					9/16/2016 19:16	No SPS			
	220/132 kV 50 MVA ICT II at Salakati	POWERGRID	POWERGRID		Salakati	Backup Over current on LV side	Not applicable	No	No					9/16/2016 18:57	No SPS			
	FIR by the constituent	No																
	Brief Description of the Incident	Salakati station was connected with rest of NER Grid through 400/220 kV 315 MVA ICT at Bongaigaon, 220 kV Birpara-Salakati I & II lines, 220 kV BTPS - Salakati I & II lines and 132 kV Salakati - Gelephu line. At 18:00 Hrs on 16.09.16, 400/220 kV 315 MVA ICT at Bongaigaon, 220 kV Birpara-Salakati I & II lines, 220 kV BTPS - Salakati I & II lines and 132 kV Salakati - Gelephu line tripped. Due to tripping of these elements, Salakati station was separated from rest of NER Grid and blacked out.Part of Eastern Bhutan was connected with Indian Grid through 132 kV Salakati - Gelephu line (some of the internal lines of Bhutan kept open for system requirement). At 18:00 Hrs on 16.09.16, 132 kV Salakati - Gelephu line tripped. Due to tripping of this element, Eastern Bhutan was separated from rest of NER Grid and subsequently collapsed due to no source in this area.																
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2024 MW , Antecedent Load : 2132 MW)**																
	Root Cause	On Salakati - BTPS II jumper failure occurred on R-ph. Rectified by PG. (Line-1 tripped only at BTPS end). SPS operated at Dhaligaon. PG rectified fault current (seen as 9 kA in DR). After 9 mins, there was also jumper failure on Birpara - Salakati I line due to overload																
	Remedial Measures	POWERGRID to ensure healthiness of line sections through proper maintenance activities.																
17	220 kV BTPS - Salakati I	POWERGRID	**AEGCL & POWERGRID**	**9/16/2016 21:07**	BTPS	Not Furnished	Not Furnished	No	No	204	0	Loss of Load: 204	GD-I	9/16/2016 21:57	No SPS	0.258	0.258	
					Salakati	No tripping	Not Furnished	No	No									
	220 kV Birpara - Salakati I	POWERGRID	**POWERGRID**		Birpara	Not Furnished	Not Furnished	No	No					9/16/2016 21:25	No SPS			
					Salakati	No tripping	Not Furnished	No	No									
	132 kV Salakati-Gelyphu	POWERGRID	**POWERGRID &BPC**		Salakati	Hand Tripped	Not applicable	No	No					9/16/2016 22:12	No SPS			
					Gelyphu	No tripping	Not applicable	No	No									
	220/132 kV 50 MVA ICT I at Salakati	POWERGRID	POWERGRID		Salakati	Backup Over current on LV side	Not applicable	No	No					9/16/2016 21:46	No SPS			
	220/132 kV 50 MVA ICT II at Salakati	POWERGRID	POWERGRID		Salakati	Backup Over current on LV side	Not applicable	No	No					9/16/2016 21:53	No SPS			
	FIR by the constituent	No																
	Brief Description of the Incident	Dhaligaon area of Assam was connected with rest of NER Grid through 220 kV BTPS - Salakati I line (220 kV BTPS - Salakati I line was not restored after tripping at 18:00 Hrs on 16.09.16 & 220 kV BTPS - Agia I & II lines handtripped at 19:10 Hrs on 16.09.16 to reduce the loading of 220 kV BTPS-salakati I line). At 21:07 Hrs on 16.09.16, 220 kV BTPS - Salakati I line tripped. Due to tripping of this element, Dhaligaon area was separated from rest of NER Grid and collapsed due to no source in this area. Part of Eastern Bhutan was connected with Indian Grid through 132 kV Salakati - Gelephu line (some of the internal lines of Bhutan kept open for system requirement). At 21:07 Hrs on 16.09.16, 132 kV Salakati - Gelephu line tripped. Due to tripping of this element, Eastern Bhutan was separated from rest of NER Grid and subsequently collapsed due to no source in this area.																

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 2086 MW , Antecedent Load : 2244 MW)**																
	Root Cause	Busbar prot. Operated. In Bus-bar zone-1, PG line is present, and on Zone-2 PG line-II is present. In zone-1, it found open isolator on line-1 of PG (incorrectly).																
	Remedial Measures	Rectified by AEGCL																
18	132 kV Doyang - Mokokchung(NA)	DoP Nagaland	**NEEPCO & DoP,Nagaland**	**9/17/2016 14:24**	Doyang	DP, ZI, B-E	Not Furnished	No	No	16	0	Loss of Load: 16	GD-I	9/17/2016 15:16	No SPS	0.014	0.014	
					Mokokchung(NA)	No tripping	Not Furnished	No	No									
	220 kV Mariani(PG)-Mokokchung (PG) I	POWERGRID	**POWERGRID**		Mariani(PG)	DP, ZI, R-E	Not Furnished	No	No					9/17/2016 15:12	No SPS			
					Mokokchung(PG)	Not Furnished	Not Furnished	No	No									
	FIR by the constituent																	
	Brief Description of the Incident	Mokokchung area of Nagaland was connected with rest of NER Grid through 132 kV Doyang-Mokokchung (NA) line and 220 kV Mariani(PG)-Mokokchung (PG) I line. (132 kV Mokokchung(NA)-Marianai(AS) line is under long outage, 220 kV Mariani(PG)-Mokokchung (PG) II line is out of service since 12.07.16 & 66 kV Tuengsang-Likimro line kept open for system requirement). At 14:24 Hrs on 17.09.16, 132 kV Doyang-Mokokchung (NA)and 220 kV Mariani(PG)-Mokokchung (PG) I line tripped. Due to tripping of these elements, 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 : 1710 MW , Antecedent Load : 1833 MW)**																
	Root Cause	DoP, Nagaland to give further details. NEEPCO to confirm later after getting details from Doyang HEP																
	Remedial Measures	As per NERTS, Instantaenous element at Mariani disabled so that tripping of Mariani - Mokokchung along with Doyang - Mokokchung does not occur. DoP, Nagaland to co-ordinate downstream relay settings with NERTS in order to prevent unwanted tripping of EHV elements																
19	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**POWERGRID & DoP,Nagaland**	**9/17/2016 21:14**	Dimapur (PG)	DP, ZI, B-E	Not Furnished	No	No	24	21	Loss of Load: 24& Loss of Generation: 21	GD-I	9/17/2016 21:23	No SPS	0.007	0.007	
					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 21:14 Hrs on 17.09.16, 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 : 2166 MW , Antecedent Load : 2277 MW)**																
	Root Cause	Downstram fault in DoP, Naglaand system that was not cleared on time.																
	Remedial Measures	DoP,Nagaland to restore the condition of 132kV Dimapur-Kohima line to original and co-ordinate downstream relay settings with NERTS to prevent unwanted line trippings																
20	132 kV Loktak - Ningthoukhong	MSPCL	**NHPC & MSPCL**	**9/18/2016 13:21**	Loktak	Over current	Not applicable	Yes	No	15	0	Loss of Load: 15	GD-I	9/18/2016 13:56	No SPS	0.002	0.002	
					Ningthoukhong	Not Furnished	Not applicable	No	No									

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
	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 kept open for system constraint & 132 kV Imphal(PG)-Ningthoukhong line was in open condition). At 13:21 Hrs on 18.09.16, 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 : 1796 MW , Antecedent Load : 1581 MW)**																
	Root Cause	As per relay indication and DR at Loktak end, feeder tripped due to overcurrent in phase A,B,C. The exact reason for O/C may be confirmed by MSPCL.																
	Remedial Measures	Load restriction or change of network configuration to be taken up by MSPCL to prevent tripping on overcurrent																
21	132 kV Loktak - Ningthoukhong	MSPCL	**NHPC & MSPCL**	**9/18/2016 14:12**	Loktak	Over current	Not applicable	Yes	No	13	0	Loss of Load: 13	GD-I	9/18/2016 14:47	No SPS	0.001	0.001	
					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 kept open for system constraint & 132 kV Imphal(PG)-Ningthoukhong line was in open condition). At 14:12 Hrs on 18.09.16, 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 : 1817 MW , Antecedent Load : 1617 MW)**																
	Root Cause	As per relay indication and DR at Loktak end, feeder tripped due to overcurrent in phase A,B,C. The exact reason for O/C may be confirmed by MSPCL.																
	Remedial Measures	Load restriction or change of network configuration to be taken up by MSPCL to prevent tripping on overcurrent																
22	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**POWERGRID & DoP,Nagaland**	**9/19/2016 17:17**	Dimapur (PG)	DP, ZI, R-E	Not Furnished	No	No	30	24	Loss of Load: 30& Loss of Generation: 24	GD-I	9/19/2016 18:10	No SPS	0.029	0.029	
					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 17:17 Hrs on 19.09.16, 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 : 1832 MW , Antecedent Load : 1871 MW)**																
	Root Cause	Downstram fault in DoP, Naglaand system that was not cleared on time.																
	Remedial Measures	DoP,Nagaland to restore the condition of 132kV Dimapur-Kohima line to original and co-ordinate downstream relay settings with NERTS to prevent unwanted line trippings																
23	132 kV Dimapur (PG) - Dimapur	DoP Nagaland	**POWERGRID &**	**9/19/2016 17:48**	Dimapur (PG)	Earth Fault	Not applicable	No	No	52	0	Loss of Load:	GD-I	9/19/2016 18:15	No SPS	0.067	0.067	

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
23	(PG) - Dimapur (Nagaland) I	DoP Nagaland	& DoP,Nagaland	9/19/2016 17:48	Dimapur	No tripping	Not applicable	No	No	52	0	52	GD-I	9/19/2016 18:15	No SPS	0.067	0.067	
	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 17:48 Hrs on 19.09.16,132 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 : 1833 MW , Antecedent Load : 2012 MW)**																
	Root Cause	Downstram fault in DoP, Naglaand system that was not cleared on time.																
	Remedial Measures	DoP,Nagaland to co-ordinate downstream relay settings with NERTS to prevent unwanted line trippings																
24	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**POWERGRID & MePTCL**	**9/20/2016 13:39**	Khliehriat (PG)	DP, ZI, Y-B-E,88.47 Kms.	Not applicable	No	No	70		Loss of Load: 70	GD-I	9/20/2016 14:03	No SPS	0.016	0.016	
					Khliehriat(ME)	No tripping	Not applicable	No	No									
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**		Khliehriat (PG)	DP, ZI, Y-B-E,90.42 Kms.	Not applicable	No	No					9/20/2016 14:06	No SPS			
					Khliehriat(ME)	No tripping	Not applicable	No	No									
	132 kV EPIP II - Byrnihat I	MePTCL	**MePTCL**		EPIP II	No tripping	Not applicable	No	No				GD-I	9/20/2016 13:59	No SPS			
					Byrnihat	Earth Fault	Not applicable	No	No									
	132 kV EPIP II - Killing(Byrnihat) II	MePTCL	**MePTCL**		EPIP II	No tripping	Not applicable	No	No					9/20/2016 13:59	No SPS			
					Byrnihat	Earth Fault	Not applicable	No	No									
	Umiam Stg IV U 1	MePGCL	MePGCL	**9/20/2016 13:39**	Umiam Stg IV	68FT, Excitation O/C	Not applicable	No	No	0	50	Loss of Generation: 50	GD-I	9/20/2016 14:19	No SPS	0.031	0.031	
	Umiam Stg IV U 2	MePGCL	MePGCL	**9/20/2016 13:39**	Umiam Stg IV		Not applicable	No	No					9/20/2016 15:22	No SPS			
	Leshka U 2	MePGCL	MePGCL	**9/20/2016 13:39**	Leshka	Current imbalance & voltage control O/C protection operated	Not applicable	No	No	0	6	Loss of Generation: 6		9/20/2016 14:12	No SPS			
	FIR by the constituent	Yes(Meghalaya)																
	Brief Description of the Incident	Khliehriat (NEIGRIHMS, NEHU and Mustem) area and Byrnihat area of Meghalaya were connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines and 132 kV EPIP II - Killing(Byrnihat) I&II lines (132 kV Khliehriat-Lumnsnong line, 132 kV Sarusajai-Umtru I&II lines ,132 kV Kahilipara-Umtru I&II lines and Nangalbibra-Nongstoin line kept open for system requirement). At 13:39 Hrs on 20.09.16, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines and 132 kV EPIP II - Killing(Byrnihat) I&II lines tripped. Due to tripping of these elements, Khliehriat area and Byrnihat area were separated from rest of NER Grid and subsequently collapsed due to load generation mismatch.																
	Antecedent Conditions of NER Grid	**(Antecedent Generation : 1893 MW , Antecedent Load : 1702 MW)**																

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
	Root Cause	Trippings in Khliehriat side are not possible to analyse properly due to absence of numerical relays. Complete information was not available with representatives from MePTCL in this meeting. MePTCL to confirm later																
	Remedial Measures	Meghalayal to review relay co-ordination within their own system. MePTCL to install Numerical relays on all feeders from Khliehriat(MePTCL) on urgent basis. It is to be further co-ordinate with NERTS for upstream. By December, relays will be installed (MePTCl confirmed). Numerical relays now present only on Neigrihms and leshka feeders from Khlehriat. NERPC also mentioned poor manpower at Byrnihat / Khliehriat substations, and requested MePTCl to take up for improvement																
25	132 kV Loktak - Ningthoukhong	MSPCL	**NHPC & MSPCL**	**9/22/2016 16:46**	Loktak	Over current	Not applicable	Yes	No	38	0	Loss of Load: 38	GD-I	9/22/2016 17:42	No SPS	0.002	0.002	
					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 kept open for system constraint & 132 kV Imphal(PG)-Ningthoukhong line was in open condition). At 16:46 Hrs on 22.09.16, 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 : 2144 MW , Antecedent Load : 1832 MW)**																
	Root Cause	As per relay indication and DR at Loktak end, feeder tripped due to overcurrent in phase A,B,C. The exact reason for O/C may be confirmed by MSPCL.																
	Remedial Measures	Load restriction or change of network configuration to be taken up by MSPCL to prevent tripping on overcurrent																
26	132 kV Balipara - Khupi	NEEPCO	**POWERGRID & NEEPCO**	**9/22/2016 23:33**	Balipara	DP, ZII, R-Y-E,61.28 Kms.	Not applicable	No	No	23	0	Loss of Load: 23	GD-I	9/25/2016 14:04	No SPS	0.433	0.433	
					Khupi	Not Furnished	Not applicable	NA	NA									
	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 23:33 Hrs on 22.09.16, 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 : 2200 MW , Antecedent Load : 1887 MW)**																
	Root Cause	`Likely vegetation clearance issue.																
	Remedial Measures	Shutdown taken from 23rd Sept for vegetation clearance. Completed.																

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
27	132 kV Ranganadi - Lekhi	POWERGRID & DoP AP	**NEEPCO & DoP AP**	**9/23/2016 4:01**	Ranganadi	No tripping	Not applicable	NA	NA	40	0	Loss of Load: 40	GD-I	9/23/2016 4:22	No SPS	0.015	0.015	
					Lekhi	Earth Fault	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 04:01 Hrs on 23.09.16, 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 : 2100 MW , Antecedent Load : 1551 MW)**																
	Root Cause	Lekhi directional feature in E/F relay absent resulting in spurious tripping.																
	Remedial Measures	NERPC take up directly with Lekhi (DoP, Arunachal Pradesh) to solve this																
28	132 kV Loktak - Ningthoukhong	MSPCL	**NHPC & MSPCL**	**9/27/2016 15:39**	Loktak	DP, ZI, B-E , 9.61 Kms.	Not applicable	Yes	No	23	0	Loss of Load: 23	GD-I	9/27/2016 16:30	No SPS	0.005	0.005	
					Ningthoukhong	Earth Fault	Not applicable	No	No									
	FIR by the constituent	Yes(Loktak)																
	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 kept open for system constraint & 132 kV Imphal(PG)-Ningthoukhong line was in open condition). At 15:39 Hrs on 27.09.16, 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 : 1810 MW , Antecedent Load : 1658 MW)**																
	Root Cause	Fault existed in the line section.																
	Remedial Measures	Vegetation clearance to be done in line sections. In forested areas, adequate manpower to be employed																
29	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**POWERGRID & DoP,Nagaland**	**9/27/2016 16:09**	Dimapur (PG)	General Trip	Not Furnished	No	No	26	24	Loss of Load: 26& Loss of Generation: 24	GD-I	9/27/2016 16:34	No SPS	0.013	0.013	
					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 16:09 Hrs on 27.09.16, 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 : 1809 MW , Antecedent Load : 1656 MW)**																
	Root Cause	Downstram fault in DoP, Naglaand system that was not cleared on time.																
	Remedial Measures	DoP,Nagaland to co-ordinate downstream relay settings with NERTS to prevent unwanted line trippings																

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
30	132 kV Balipara - Khupi	NEEPCO	**POWERGRID & NEEPCO**	**9/28/2016 10:17**	Balipara	DP, ZI, B-E, 54.5 Kms.	Not Furnished	No	No	21	0	Loss of Load: 21	GD-I	9/28/2016 10:44	No SPS	0.014	0.014	
					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 10:17 Hrs on 28.09.16, 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 : 1757 MW , Antecedent Load : 1656 MW)**															
	Root Cause	As per NEEPCO, fault could be due to lightning problem. NEEPCO to investigate further.															
	Remedial Measures	Vegetation clearanc in line section was already completed by NEEPCO after availing shutdown on 23rd September. NEEPCO to get accurate information pertaining to line trippings and inform back to forum															
31	132 kV Loktak - Rengpang	MSPCL	**NHPC & MSPCL**	**9/28/2016 10:39**	Loktak	DP, ZI, B-E, 10.35 Kms.	Not Furnished	Yes	No	2	0	Loss of Load: 2	GD-I	9/28/2016 11:48	No SPS	0.002	0.002	
					Rengpang	Not Furnished	Not Furnished	No	No									
	FIR by the constituent	Yes(Loktak)																
	Brief Description of the Incident	Rengpang area of Manipur was connected with rest of NER Grid through 132 kV Loktak-Rengpang line (132 kV Rengpang-Jiribam(MA) line is under long outage). At 10:39 Hrs on 28.09.16, 132 kV Loktak-Rengpang line tripped. Due to tripping of this element,Rengpang 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 : 1741 MW , Antecedent Load : 1533 MW)**															
	Root Cause	Fault in state system															
	Remedial Measures	Co-ordination of Distirbution side protection along with EHV side protection on this feeder section to be done be MSPCL / NERTS															
32	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**POWERGRID & DoP,Nagaland**	**9/28/2016 14:30**	Dimapur (PG)	Earth Fault	Not applicable	No	No	20	21	Loss of Load: 20& Loss of Generation: 21	GD-I	9/28/2016 14:40	No SPS	0.004	0.004	
					Kohima	No tripping	Not applicable	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 14:30 Hrs on 28.09.16, 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 : 1722 MW , Antecedent Load : 1834 MW)**															
	Root Cause	Downstram fault in DoP, Naglaand system that was not cleared on time.															
	Remedial Measures	DoP,Nagaland to co-ordinate downstream relay settings with NERTS to prevent unwanted line trippings															

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
33	132 kV Lumshnong - Panchgram	MePTCL & AEGCL	**MePTCL & AEGCL**	**9/28/2016 23:55**	Lumshnong	DP, ZI, B-E, 31.36 Kms.	Not Furnished	No	No	15	0	Loss of Load: 15	GD-I	9/29/2016 0:32	No SPS	0.009	0.009	
					Panchgram	No tripping	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 was kept open for system requirement). At 23:55 Hrs on 28.09.16 ,132 kV Lumshnong - Panchgram line tripped. Due to tripping of this element, Lumshnong 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 : 1932 MW , Antecedent Load : 1896 MW)**																
	Root Cause	Tripping likely on account of vegetation infringement.																
	Remedial Measures	Lumshnong to at least report the relay details properly to NERLDC. Vegetation clearance to be done																

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
34	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**POWERGRID & MePTCL**	**9/29/2016 1:54**	Khliehriat (PG)	DP, ZI, R-Y-B, 35 Kms.	Not Furnished	No	No	22		Loss of Load: 22	GD-I	9/29/2016 2:09	No SPS	0.001	0.001	
					Khliehriat(ME)	No tripping	Not Furnished	NA	NA									
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**		Khliehriat (PG)	DP, ZI, R-Y-B, 21.2 Kms.	Not Furnished	No	No					9/29/2016 2:09	No SPS			
					Khliehriat(ME)	No tripping	Not Furnished	NA	NA									
	132 kV NEHU - NEIGRIHMS	MePTCL	**MePTCL**		NEHU	Master Trip relay operated	Not Furnished	No	No					9/29/2016 1:58	No SPS			
					NEIGRIHMS	No tripping	Not Furnished	NA	NA									
	132 kV Mustem-NEHU	MePTCL	**MePTCL**		Mustem	Master Trip relay operated	Not Furnished	No	No					9/29/2016 2:00	No SPS			
					NEHU	No tripping	Not Furnished	NA	NA									
	Leshka U 1	MePGCL	MePGCL		Leshka	Not Furnished	Not applicable	No	No	0	42	Loss of Generation: 42		9/29/2016 2:00	No SPS	0.004	0.004	
	FIR by the constituent	Yes(Meghalaya)																
	Brief Description of the Incident	Khliehriat area (NEIGRIHMS,Mustem,Leshka and Khliehriat substations) of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines,132 kV NEHU - NEIGRIHMS line & 132 kV Mustem-NEHU line. (132 kV Khliehriat - Lumsnong line kept open for system requirement). At 01:54 Hrs on 29.09.16, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines,132 kV NEHU - NEIGRIHMS line & 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 : 1859 MW , Antecedent Load : 1858 MW)**																
	Root Cause	Trippings in Khliehriat side are not possible to analyse properly due to absence of numerical relays. Complete information was not available with representatives from MePTCL in this meeting. MePTCL to confirm later																
	Remedial Measures	Meghalayal to review relay co-ordination within their own system. MePTCL to install Numerical relays on all feeders from Khliehriat(MePTCL) on urgent basis. It is to be further co-ordinate with NERTS for upstream. By December, relays will be installed (MePTCl confirmed). Numerical relays now present only on Neigrihms and leshka feeders from Khlehriat. NERPC also mentioned poor manpower at Byrnihat / Khliehriat substations, and requested MePTCl to take up for improvement																
35	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**POWERGRID & DoP,Nagaland**	**9/30/2016 11:20**	Dimapur (PG)	Earth Fault	Not applicable	No	No	16	24	Loss of Load: 16& Loss of Generation: 24	GD-I	9/30/2016 11:30	No SPS	0.006	0.006	
					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 11:20 Hrs on 30.09.16, 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 : 1826 MW)**																
	Root Cause	Downstram fault in DoP, Naglaand system that was not cleared on time.																
	Remedial Measures	DoP,Nagaland to co-ordinate downstream relay settings with NERTS to prevent unwanted line trippings																
36	132 kV	MePTCL &	**MePTCL &**		Lumshnong	DP, ZI, R-E, 4.81 Kms.	Not Furnished	No	No			Loss of Load:						

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
36	Lumshnong - Panchgram	AEGCL	**AEGCL**	**9/30/2016 14:45**	Panchgram	DP, ZI, R-E, 28.6 Kms.	Not Furnished	No	No	15	0	15	GD-I	9/30/2016 15:25	No SPS	0.01	0.01	
	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 was kept open for system requirement). At 14:45 Hrs on 30.09.16 ,132 kV Lumshnong - Panchgram line tripped. Due to tripping of this element, Lumshnong 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 : 1936 MW , Antecedent Load : 1854 MW)**															
	Root Cause	Tripping likely on account of vegetation infringement.															
	Remedial Measures	Lumshnong to at least report the relay details properly to NERLDC. Vegetation clearance to be done in line section															
F. बस दोष / Bus Fault																	
1	220 kV BTPS - Salakati I	POWERGRID	**AEGCL & POWERGRID**	**9/19/2016 17:25**	BTPS	Tripped	Not applicable	No	No	-	-	-	-	9/19/2016 17:58	No SPS	-	-	
					Salakati	Busbar I protection	Not applicable	No	No									
2	220 kV BTPS - Salakati II	POWERGRID	**AEGCL & POWERGRID**	**9/19/2016 17:25**	BTPS	No Tripping	Not applicable	No	No	-	-	-	-	9/19/2016 19:49	No SPS	-	-	
					Salakati	Busbar I protection	Not applicable	No	No									
3	220 kV Birpara - Salakati I	POWERGRID	**POWERGRID**	**9/19/2016 17:25**	Birpara	No Tripping	Not applicable	No	No	-	-	-	-	9/19/2016 19:47	No SPS	-	-	
					Salakati	Busbar I protection	Not applicable	No	No									
4	220/132 kV 50 MVA ICT I at Salakati	POWERGRID	POWERGRID	**9/19/2016 17:25**	Salakati	Busbar I protection	Not applicable	No	No	-	-	-	-	9/19/2016 19:23	No SPS	-	-	
	Root Cause	Busbar prot. Operated. In Bus-bar zone-1, PG line is present, and on Zone-2 PG line-II is present. In zone-1, it found open isolator on line-1 of PG (incorrectly).															
	Remedial Measures	Rectified by AEGCL															
1	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**POWERGRID & DoP,Nagaland**	**10/1/2016 23:24**	Dimapur (PG)	Earth Fault	Not applicable	No	No	17	24	Loss of Load: 17& Loss of Generation: 24	GD-I	10/1/2016 23:33	No SPS	0.003	0.003	
					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 23:24 Hrs on 01.10.16, 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 : 2058 MW , Antecedent Load : 2178 MW)**															

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
	Root Cause	Downstram fault in DoP, Naglaand system that was not cleared on time.															
	Remedial Measures	DoP,Nagaland to co-ordinate downstream relay settings with NERTS to prevent unwanted line trippings															
2	132 kV Dimapur (PG) - Kohima	POWERGRID & DoP Nagaland	**POWERGRID & DoP,Nagaland**	**10/1/2016 23:44**	Dimapur (PG)	Earth Fault	Not applicable	No	No	15	8	Loss of Load: 15& Loss of Generation: 8	GD-I	10/1/2016 23:56	No SPS	0.005	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 23:44 Hrs on 01.10.16, 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 : 2057 MW , Antecedent Load : 2141 MW)**															
	Root Cause	Downstram fault in DoP, Naglaand system that was not cleared on time.															
	Remedial Measures	DoP,Nagaland to co-ordinate downstream relay settings with NERTS to prevent unwanted line trippings															
3	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**POWERGRID & MePTCL**	**10/2/2016 12:38**	Khliehriat (PG)	Not Furnished	Not Furnished	Yes	No	70	0	Loss of Load: 70	GD-I	10/2/2016 13:03	No SPS	0.033	0.033	
					Khliehriat(ME)	No tripping	Not Furnished	No	No									
	FIR by the constituent	Yes(Meghalaya)															
	Brief Description of the Incident	Khliehriat area Khliehriat, Mustem, NEIGRIHMS, NEHU, Umiam, Mawlai, Mawphlang, Nongstoin, Nangalbibra, Rongkhon, Umiam-Stg-I HEP & Stg-II HEP substations) of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I line(132 kV Khliehriat - Lumnsnong line, Umiam Stg I - Umiam Stg III 1&2 lines kept open for system requirement, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) II line was not restored after tripping at 12:28 Hrs on 02.10.16). At 12:38 Hrs on 02.10.16, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I line tripped. Due to tripping of this element, 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 : 1914 MW , Antecedent Load : 1709 MW)**															
	Root Cause	Trippings in Khliehriat side are not possible to analyse properly due to absence of numerical relays.															
	Remedial Measures	Meghalayal to review relay co-ordination within their own system. MePTCL to install Numerical relays on all feeders from Khliehriat(MePTCL) on urgent basis. It is to be further co-ordinate with NERTS for upstream. By December, relays will be installed (MePTCl confirmed). Numerical relays now present only on Neigrihms and leshka feeders from Khlehriat. NERPC also mentioned poor manpower at Byrnihat / Khliehriat substations, and requested MePTCl to take up for improvement															
	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**POWERGRID & MePTCL**	**10/2/2016 16:17**	Khliehriat (PG)	DP, ZI, R-Y-B, 94.9 Kms.	Not Furnished	Yes	No	91		Loss of Load: 91		10/2/2016 16:50	No SPS	0.006	0.006	
					Khliehriat(ME)	No tripping	Not Furnished	No	No									
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**10/2/2016 16:17**	Khliehriat (PG)	DP, ZI, R-Y-B, 81.73 Kms.	Not Furnished	Yes	No					10/2/2016 16:48	No SPS			
					Khliehriat(ME)	No tripping	Not Furnished	No	No									
	132 kV NEHU - NEIGRIHMS	MePTCL	**MePTCL**	**10/2/2016 16:17**	NEHU	DP, No other Info. Available	Not Furnished	No	No					10/2/2016 16:23	No SPS			

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 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 / 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms	नियमन / मानक का उल्लंघन / Violation of Regulation/ Standard
4	NEIGRIHMS				NEIGRIHMS	No tripping	Not Furnished	NA	NA				GD-I					
	132 kV Mustem-NEHU	MePTCL	**MePTCL**	**10/2/2016 16:17**	Mustem	DP, No other Info. Available	Not Furnished	No	No					10/2/2016 16:21	No SPS			
					NEHU	No tripping	Not Furnished	NA	NA									
	Leshka U 1	MePGCL	MePGCL	**10/2/2016 16:17**	Leshka	Over Frequency	Not applicable	No	No	0	70	Loss of Generation: 70		10/2/2016 16:50	No SPS	0.036	0.036	
	Leshka U 1	MePGCL	MePGCL	**10/2/2016 16:17**	Leshka	Over Frequency	Not applicable	No	No					10/2/2016 16:48	No SPS			
	FIR by the constituent	Yes(Meghalaya)																
	Brief Description of the Incident	Khliehriat area (NEIGRIHMS,Mustem,Leshka and Khliehriat substations) of Meghalaya was connected with rest of NER Grid through 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines,132 kV NEHU - NEIGRIHMS line & 132 kV Mustem-NEHU line. (132 kV Khliehriat - Lumnsnong line kept open for system requirement). At 16:17 Hrs on 02.10.16, 132 kV Khliehriat (PG)-Khliehriat (MePTCL) I & II lines,132 kV NEHU - NEIGRIHMS line & 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 : 1915 MW , Antecedent Load : 1794 MW)**																
	Root Cause	Trippings in Khliehriat side are not possible to analyse properly due to absence of numerical relays.																
	Remedial Measures	Meghalayal to review relay co-ordination within their own system. MePTCL to install Numerical relays on all feeders from Khliehriat(MePTCL) on urgent basis. It is to be further co-ordinate with NERTS for upstream. By December, relays will be installed (MePTCl confirmed). Numerical relays now present only on Neigrihms and leshka feeders from Khlehriat. NERPC also mentioned poor manpower at Byrnihat / Khliehriat substations, and requested MePTCl to take up for improvement																

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
1	220 kV Birpara - Salakati I	POWERGRID	**POWERGRID**	**8/29/2016 4:27**	Birpara	DP, ZI, R-E	Successful operation	No	No	-	-	8/29/2016 4:53	No SPS	-	
					Salakati	DP, ZI, R-E, 121 Kms.	Not Furnished	No	No						
	Root Cause	NERTS to inform later after gathering details from ERTS													
	Remedial Measures														
2	400 kV Ranganadi-Biswanath Charali 1I	POWERGRID	**NEEPCO & POWERGRID**	**8/29/2016 21:04**	Ranganadi	DP, ZI, B-E, 7.61 Kms.	Not Furnished	No	No	-	-	8/29/2016 21:16	No SPS	-	
					Biswanath Charali	DP, ZII, B-E, 131 Kms.	Successful operation	Yes	No						
	Root Cause	NERTS to inform later													
	Remedial Measures														
3	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**8/29/2016 14:29**	Khliehriat (PG)	DP, ZI, R-Y-B-E, 80.69 Kms.	Not Furnished	No	No	-	-	8/29/2016 14:48	No SPS	-	
					Khliehriat(ME)	No tripping	Not Furnished	No	No						
	Root Cause	NERTS to inform later													
	Remedial Measures														
4	220 kV Misa - Mariani(AS)	POWERGRID	**POWERGRID & AEGCL**	**8/30/2016 1:30**	Misa	DP, ZI, R-E, 142.6 Kms.	Not Furnished	No	No	-	-	8/30/2016 3:04	No SPS	-	
					Mariani (AS)	DP, ZI, R-E, 15.71 Kms.	Not Furnished	No	No						
	Root Cause	NERTS to inform later													
	Remedial Measures														
5	220 kV Mariani(PG)-Mokokchung (PG) I	POWERGRID	**POWERGRID**	**8/30/2016 3:03**	Mariani(PG)	Direct Trip received	Not applicable	No	No	-	-	8/30/2016 13:47	No SPS	-	
					Mokokchung(PG)	Over Voltage	Not applicable	No	No						
	Root Cause	NERTS to inform later													

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
	Remedial Measures														
6	132 kV Silchar - Srikona I	POWERGRID	**POWERGRID & AEGCL**	**8/30/2016 14:39**	Silchar	SPS I operated	Not applicable	Yes	No	-	-	8/30/2016 14:49	SPS 1 operated	-	
					Srikona		Not applicable	No	No						
7	132 kV Silchar - Srikona II	POWERGRID	**POWERGRID & AEGCL**	**8/30/2016 14:39**	Silchar		Not applicable	Yes	No	-	-	8/30/2016 15:36	SPS 1 operated	-	
					Srikona		Not applicable	No	No						
8	132 kV Silchar - Panchgram	POWERGRID & AEGCL	**POWERGRID & AEGCL**	**8/30/2016 14:39**	Silchar		Not applicable	No	No	-	-	8/30/2016 15:02	SPS 1 operated	-	
					Panchgram		Not applicable	No	No						
9	132 kV Badarpur - Panchgram	POWERGRID	**POWERGRID & AEGCL**	**8/30/2016 14:39**	Badarpur		Not applicable	No	No	-	-	8/30/2016 15:07	SPS 1 operated	-	
					Panchgram		Not applicable	No	No						
	Root Cause	Operation of SPS													
	Remedial Measures														

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
10	132 kV Surjamaninagar-Palatana II	POWERGRID	**TSECL & OTPC**	**8/30/2016 17:00**	Surjamaninagar	DP, ZI, R-E,15.52 Kms.	Not Furnished	No	No	-	-	8/30/2016 17:41	No SPS	-	
					Palatana	DP, ZI, R-E,19.84 Kms.	Not Furnished	No	No						
	Root Cause	NERTS to inform later													
	Remedial Measures														
11	132 kV Biswanath Charali-Pavoi I	POWERGRID	**POWERGRID & AEGCL**	**8/30/2016 18:21**	Biswanath Charali	DP, ZI, R-E, 2.8 Kms.	Not Furnished	Yes	No	-	-	8/30/2016 18:48	No SPS	-	
					Pavoi	DP, ZI, R-E, 7.719 Kms.	Not Furnished	No	No						
	Root Cause	NERTS to inform later													
	Remedial Measures														
12	220 kV BTPS - Salakati I	POWERGRID	**AEGCL & POWERGRID**	**8/31/2016 17:45**	BTPS	Tripped	Not Furnished	No	No	-	-	8/31/2016 18:48	No SPS	-	
					Salakati	No tripping	Not Furnished	No	No						
13	220 kV BTPS - Salakati II	POWERGRID	**AEGCL & POWERGRID**	**8/31/2016 17:45**	BTPS	Not Furnished	Not Furnished	No	No	-	-	8/31/2016 19:01	No SPS	-	
					Salakati	Due to tripping of Bus Coupler	Not Furnished	No	No						
14	220/132 kV, 50 MVA ICT I at Salakati	POWERGRID	POWERGRID	**8/31/2016 17:45**	Salakati	Earth Fault	Not applicable	No	No	-	-	8/31/2016 19:22	No SPS	-	
	Root Cause	AEGCL / NERTS to inform later													
	Remedial Measures														
15	132 kV AGTPP - Agartala II	POWERGRID	**NEEPCO & TSECL**	**8/31/2016 8:01**	AGTPP	No tripping	Not Furnished	No	No	-	-	8/31/2016 14:46	No SPS	-	
					Agartala	Not Furnished	Not Furnished	No	No						
	Root Cause	NEEPCO to check further. How fault cleared is not apparent from available details													
	Remedial Measures														

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
16	132 kV AGTPP - Agartala II	POWERGRID	**NEEPCO & TSECL**	**8/31/2016 23:44**	AGTPP	DP, ZI, Y-B-E, 2.124 Kms.	Not Furnished	No	No	-	-	9/1/2016 11:50	No SPS	-	
					Agartala	Not Furnished	Not Furnished	No	No						
	Root Cause	Y-ph jumper opened at location no.15. Agartala end also tripped													
	Remedial Measures														
17	220 kV Birpara - Salakati I	POWERGRID	**POWERGRID**	**8/31/2016 17:45**	Birpara	Directional Earth Fault	Not applicable	No	No	-	-	8/31/2016 19:15	No SPS	-	
					Salakati	No tripping	Not applicable	No	No						
	Root Cause	NERTS to inform later after gathering details from ERTS													
	Remedial Measures														
18	132 kV Jiribam - Aizwal	POWERGRID	**POWERGRID**	**8/31/2016 0:01**	Jiribam	DP, ZI, R-Y-B-E, 34.78 Kms.	Not Furnished	Yes	No	-	-	8/31/2016 0:19	No SPS	-	
					Aizawl	DP, ZI, R-Y-B-E, 132.9 Kms.	Not Furnished	No	No						
	Root Cause	NERTS to inform later													
	Remedial Measures														
19	220 kV Birpara - Salakati I	POWERGRID	**POWERGRID**	**9/1/2016 23:22**	Birpara	Not Furnished	Not Furnished	No	No	-	-	9/2/2016 0:17	No SPS	-	
					Salakati	DP, ZI, R-E, 83.66 Kms.	Not Furnished	Yes	No						

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
20	220 kV Birpara - Salakati II	POWERGRID	**POWERGRID**	**9/1/2016 23:22**	Birpara	Not Furnished	Not Furnished	No	No	-	-	9/2/2016 1:03	No SPS	-	
					Salakati	DP, ZI, R-Y-E, 49.59 Kms.	Not Furnished	Yes	No						
	Root Cause	Fault due to lightning. Simulataneous lightning strike at 2 different locations.													
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
21	132 kV Aizwal - Kumarghat	POWERGRID	**POWERGRID**	**9/3/2016 12:40**	Aizawl	DP, ZI, Y-E, 21 Kms.	Successful operation	Yes	No	-	-	9/3/2016 12:45	No SPS	-	
					Kumarghat	DP, ZII, Y-E, 105 Kms.	Not Furnished	Yes	No						
	Root Cause	Iy lags Vy by 15 degree. Banana tree touched line. Banana trees slided from uphill side and touched circuit between loc 53-54													
	Remedial Measures	Vegetation clearance in vulnerable areas to be done by POWERGRID													
22	132 kV Haflong(PG) - Jiribam	POWERGRID	**POWERGRID**	**9/3/2016 22:28**	Haflong(PG)	DP, ZI, R-Y-B-E, 70.03 Kms.	Not Furnished	Yes	No	-	-	Not Yet Restored	No SPS	-	
					Jiribam	DP, ZI, R-Y-B-E, 21.75 Kms.	Not Furnished	Yes	No						
	Root Cause	Ir lags Vy lags by 70 deg. At Loc No. 241 Y-ph insulator damaged and decapped, location flooded. Likely strike of lightning on insulator.													
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
23	132 kV Rangia - Motonga	BPC	**AEGCL & BPC**	**9/4/2016 22:58**	Rangia	No tripping	Not Furnished	No	No	-	-	9/4/2016 23:33	No SPS	-	
					Motonga	Distance Protection	Not Furnished	No	No						
	Root Cause	AEGCL confirmed that Rangia was being fed from Motonga, and that fault was within their system. Exact location of fault could not be gathered due to absence of proper relay indications.													
	Remedial Measures	AEGCL to do proper maintenance of their line section and also take up with BPC, Bhutan for the same in respective line section.													
24	220 kV Misa - Mariani(PG)	POWERGRID	**POWERGRID**	**9/5/2016 22:06**	Misa	DP, ZI, Y-E,88.5 Kms.	Successful operation	Yes	No	-	-	9/5/2016 23:15	No SPS	-	
					Mariani (PG)	DP, ZI, Y-E,99.5 Kms.	Not Furnished	No	No						
	Root Cause	Iy lags Vy by 72 deg Lightning fault. Flahover marks found at Loc 800-801 due to lightning.													

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
25	132 kV Silchar-P K Bari II	POWERGRID	**POWERGRID & TSECL**	**9/5/2016 20:33**	Silchar	DP, ZI, R-E,71.07 Kms.	Not Furnished	Yes	No	-	-	9/5/2016 21:00	No SPS	-	
					PK Bari	DP, ZI, R-E,91.74 Kms.	Not Furnished	No	No						
	Root Cause	Fault current in faulty phase around 1.57 kA ; Angle b/w V & I in faulty phase around 70 degree ; Likely tripping due to lightning strike													
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
26	220 kV Misa - Mariani(PG)	POWERGRID	**POWERGRID**	**9/6/2016 15:31**	Misa	Over Voltage	Not applicable	Yes	No	-	-	9/6/2016 15:46	No SPS	-	
					Mariani (PG)	Direct Trip received	Not applicable	No	No						
	Root Cause	DR indicates maximum Ph. Voltage of around 137 kV (viz. 237 kV). No overvoltage is present. Likely maloperation of protection.													
	Remedial Measures	NERTS to check and intimate to PCC forum													
27	132 kV Salakati-Gelephu	POWERGRID	**POWERGRID & BPC**	**9/6/2016 4:28**	Salakati	DP, ZIII, R-Y-B-E,63 Kms.	Not applicable	Yes	No	-	-	9/6/2016 4:52	No SPS	-	
					Gelephu	No tripping	Not applicable	No	No						
	Root Cause	Fault in Bhutan system as found from Relay indications													
	Remedial Measures	NERTS to co-ordinate with BPC, Bhutan to maintain healthiness of line													
28	132 kV Rangia - Motonga	BPC	**AEGCL & BPC**	**9/6/2016 13:30**	Rangia	No tripping	Not Furnished	No	No	-	-	9/6/2016 22:32	No SPS	-	
					Motonga	Not Furnished	Not Furnished	No	No						
	Root Cause	AEGCL confirmed that Rangia was being fed from Motonga, and that fault was within their system. Exact location of fault could not be gathered due to absence of proper relay indications.													
	Remedial Measures	AEGCL to do proper maintenance of their line section and also take up with BPC, Bhutan for the same in respective line section.													
29	132 kV Doyang - Mokokchung(NA)	DoP Nagaland	**NEEPCO & DoP,Nagaland**	**9/7/2016 9:52**	Doyang	Over Current,B-Phase	Not applicable	No	No	-	-	9/7/2016 10:40	No SPS	-	
					Mokokchung(NA)	No tripping	Not applicable	No	No						

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
	Root Cause	NEEPCO to check and confirm. As intimated by Sh.Joypal Roy, Sr.Manager (NEEPCO), details from Doyang HEP could not be gathered.													
	Remedial Measures	Matter may be raised in PCC forum and take up individually with Doyang HEP regarding non-furnishing of informtion													
30	400 kV Palatana - Silchar I	NETC	**OTPC & POWERGRID**	**9/8/2016 11:17**	Palatana	DP, ZI, R-E,196.1 Kms.	Not Furnished	No	No	-	-	9/8/2016 11:34	No SPS	-	
					Silchar	DP, ZI, R-E,39.11 Kms.	Lockout	No	No						
	Root Cause	NETC has indicated that tripping was on account of vegetation infringement. It is also mentioned that Routine maintenance of this is suspended due to objection of line owner, and that 3 cases are pending in this regard before District Judge, Hailakandi.													
	Remedial Measures	Matter is serious considering this 400 kV D/C Palatana - Silchar lines serve as the evacuation path of Palatana. NERPC may take up with relevant authorities for resolution													
31	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**POWERGRID & MePTCL**	**9/9/2016 1:43**	Khliehriat (PG)	DP, ZI, R-Y-B-E,67.78 Kms.	Not operated	No	No	Loss of Generation: 126	-	9/9/2016 2:09	No SPS	-	
					Khliehriat(ME)	No tripping	Not operated	No	No						
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**		Khliehriat (PG)	DP, ZI, R-Y-B-E,41.41 Kms.	Not Furnished	No	No			9/9/2016 2:12	No SPS		
					Khliehriat(ME)	No tripping	Not Furnished	No	No						
	Root Cause	Khl-Khl I: Ir lags Vr by 75 deg. Likely tripping on account of lightning strike. MePTCL to further investigate as to the location of the lightning strike and identify lightning prone areas for remedial measures like reduction of Tower footing resistance or Installation of Line LAs.													
	Remedial Measures	MePTCL to further investigate as to the location of the lightning strike and identify lightning prone areas for remedial measures like reduction of Tower footing resistance or Installation of Line LAs. MePTCL to install Numerical relays on all outgoing feeders from Khliehriat(MePTCL) s/s and co-ordinate with NERTS for review of the protection system after relay installation													
32	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**9/10/2016 15:10**	Khliehriat (PG)	Earth Fault	Not applicable	No	No	-	-	9/10/2016 15:38	No SPS	-	
					Khliehriat(ME)	No tripping	Not applicable	No	No						
	Root Cause	Problem in Meghalaya state system that was not cleared by relays at Khliehriat (MePTCL)													
	Remedial Measures	MePTCL to further investigate as to the location of the lightning strike and identify lightning prone areas for remedial measures like reduction of Tower footing resistance or Installation of Line LAs. MePTCL to install Numerical relays on all outgoing feeders from Khliehriat(MePTCL) s/s and co-ordinate with NERTS for review of the protection system after relay installation													
33	132 kV Doyang - Mokokchung(NA)	DoP Nagaland	**NEEPCO & DoP,Nagaland**	**9/11/2016 9:55**	Doyang	Over current	Not applicable	No	No	-	-	9/11/2016 10:55	No SPS	-	
					Mokokchung(NA)	No tripping	Not applicable	No	No						
	Root Cause	NEEPCO to check and confirm. As intimated by Sh.Joypal Roy, Sr.Manager (NEEPCO), details from Doyang HEP could not be gathered.													

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
	Remedial Measures	Matter may be raised in PCC forum and take up individually with Doyang HEP regarding non-furnishing of informtion													
34	132 kV Doyang - Mokokchung(NA)	DoP Nagaland	**NEEPCO & DoP,Nagaland**	**9/12/2016 10:05**	Doyang	Over current	Not applicable	NA	NA	-	-	9/12/2016 12:49	No SPS	-	
					Mokokchung(NA)	Not Furnished	Not applicable	NA	NA						
	Root Cause	NEEPCO to check and confirm. As intimated by Sh.Joypal Roy, Sr.Manager (NEEPCO), details from Doyang HEP could not be gathered.													
	Remedial Measures	Matter may be raised in PCC forum and take up individually with Doyang HEP regarding non-furnishing of informtion													
35	132 kV Haflong(PG) - Jiribam	POWERGRID	**POWERGRID**	**9/13/2016 20:04**	Haflong(PG)	DP, ZI, R-Y-E,58.73 Kms.	Not operated	No	No	-	-	9/13/2016 20:25	No SPS	-	
					Jiribam	DP, ZI, R-Y-E,33.85 Kms.	Not operated	Yes	No						
	Root Cause	Iy lags Vy by 80 Deg in faulty phase. Tripping on account of lightning.													
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
36	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**9/14/2016 14:44**	Khliehriat (PG)	DP, ZI, R-Y-B	Not applicable	No	No	-	-	9/14/2016 15:02	No SPS	-	
					Khliehriat(ME)	No tripping	Not applicable	No	No						
	Root Cause	Iy lags Vy by 80 deg Lightening fault. FAULT BEYOND LINE LENGTH.													
	Remedial Measures	MePTCL to further investigate as to the location of the lightning strike and identify lightning prone areas for remedial measures like reduction of Tower footing resistance or Installation of Line LAs. MePTCL to install Numerical relays on all outgoing feeders from Khliehriat(MePTCL) s/s and co-ordinate with NERTS for review of the protection system after relay installation													
37	132 kV Salakati-Gelephu	POWERGRID	**POWERGRID & BPC**	**9/15/2016 22:49**	Salakati	DP, ZII, R-Y-B,59.54 Kms.	Not applicable	No	No	-	-	9/15/2016 23:07	No SPS	-	
					Gelephu	No Trip Bus Dead	Not applicable	No	No						
	Root Cause	Fault in Bhutan system as found from Relay indications													
	Remedial Measures	NERTS to co-ordinate with BPC, Bhutan to maintain healthiness of line													
38	132 kV Rangia - Motonga	BPC	**AEGCL & BPC**	**9/15/2016 22:31**	Rangia	Not Furnished	Not Furnished	No	No	-	-	9/15/2016 23:51	No SPS	-	
					Motonga	Not Furnished	Not Furnished	No	No						

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
	Root Cause	AEGCL confirmed that Rangia was being fed from Motonga, and that fault was within their system. Exact location of fault could not be gathered due to absence of proper relay indications.														
	Remedial Measures	AEGCL to do proper maintenance of their line section and also take up with BPC, Bhutan for the same in respective line section.														
39	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**9/16/2016 14:54**	Khliehriat (PG)	No tripping	Not applicable	No	No	-		-	9/16/2016 15:21	No SPS	-	
					Khliehriat(ME)	Earth Fault	Not applicable	No	No							
40	132 kV Khandong - Khliehriat(PG) I	POWERGRID	**NEEPCO & POWERGRID**	**9/16/2016 14:54**	Khandong	O/C	Successful operation	No	No	-		-	9/16/2016 15:08	No SPS	-	
					Khliehriat(PG)	DP, ZI, R-Y-B, 32.78 Kms.	Successful operation	No	No							
41	132 kV Khandong - Khliehriat(PG) II	POWERGRID	**NEEPCO & POWERGRID**	**9/16/2016 14:54**	Khandong	Earth Fault	Not operated	No	No	-		-	9/16/2016 15:25	No SPS	-	
					Khliehriat(PG)	DP, ZII, R-Y-B,36 Kms.	Not operated	No	No							
	Root Cause	Kha-Khl I: Ib lags Vb by 65 deg Lightening fault. Khan-Khl II: Iy lags Vy by 75 deg Lightening fault.														
	Remedial Measures	NEEPCO to co-ordinate relay settings with NERTS so that 132 kV Khandong - Khliehriat D/C line does not trip on unwanted relay operation. MePTCL to install Numerical relays on all outgoing feeders from Khliehriat(MePTCL) s/s and co-ordinate with NERTS for review of the protection system after relay installation														
42	132 kV Rangia - Motonga	BPC	**AEGCL & BPC**	**9/16/2016 0:11**	Rangia	Not Furnished	Not Furnished	No	No	-		-	9/16/2016 2:05	No SPS	-	
					Motonga	Not Furnished	Not Furnished	No	No							
	Root Cause	AEGCL confirmed that Rangia was being fed from Motonga, and that fault was within their system. Exact location of fault could not be gathered due to absence of proper relay indications.														
	Remedial Measures	AEGCL to do proper maintenance of their line section and also take up with BPC, Bhutan for the same in respective line section.														
43	132 kV Rangia - Motonga	BPC	**AEGCL & BPC**	**9/16/2016 11:02**	Rangia	No tripping	Not Furnished	No	No	-		-	9/16/2016 11:17	No SPS	-	
					Motonga	Not Furnished	Not Furnished	No	No							
	Root Cause	AEGCL confirmed that Rangia was being fed from Motonga, and that fault was within their system. Exact location of fault could not be gathered due to absence of proper relay indications.														
	Remedial Measures	AEGCL to do proper maintenance of their line section and also take up with BPC, Bhutan for the same in respective line section.														
44	132 kV Rangia - Motonga	BPC	**AEGCL & BPC**	**9/16/2016 17:46**	Rangia	No tripping	Not Furnished	No	No	-		-	9/16/2016 19:15	No SPS	-	
					Motonga	Not Furnished	Not Furnished	No	No							

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
	Root Cause	AEGCL confirmed that Rangia was being fed from Motonga, and that fault was within their system. Exact location of fault could not be gathered due to absence of proper relay indications.													
	Remedial Measures	AEGCL to do proper maintenance of their line section and also take up with BPC, Bhutan for the same in respective line section.													
45	132 kV Loktak - Imphal (PG)	POWERGRID	**NHPC & POWERGRID**	**9/16/2016 11:19**	Loktak	DP, ZI, R-B-E,9.32 Kms.	Not Furnished	Yes	No	-	-	9/16/2016 11:28	No SPS	-	
					Imphal (PG)	DP, ZII, B-E,34.26 Kms.	Successful operation	Yes	No						
	Root Cause	Ib lags Vb by 26 deg . Brioken tree from uphill side was found very near to B-ph conductor at Loc 23-24													
	Remedial Measures	Vegetation clearance in vulnerable areas in line sections to be done by POWERGRID													
46	132 kV Jiribam - Aizwal	POWERGRID	**POWERGRID**	**9/17/2016 1:08**	Jiribam	DP, ZI, R-E,136.3 Kms.	Not Furnished	No	No	-	-	9/17/2016 1:22	No SPS	-	
					Aizawl	DP, ZI, R-E,8.376 Kms.	Successful operation	Yes	No						
	Root Cause	Ir lags Vr by 65 Deg. Suspected vegetation fault.													
	Remedial Measures	Vegetation clearance in vulnerable areas in line sections to be done by POWERGRID													
47	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**9/17/2016 13:38**	Khliehriat (PG)	DP, ZI, R-Y-B,119.9 Kms.	Successful operation	No	No	-	-	9/17/2016 14:00	No SPS	-	
					Khliehriat(ME)	No tripping	Successful operation	No	No						
	Root Cause	Problem in Meghalaya state system that was not cleared by relays at Khliehriat (MePTCL)													
	Remedial Measures	MePTCL to further investigate as to the location of the lightning strike and identify lightning prone areas for remedial measures like reduction of Tower footing resistance or Installation of Line LAs. MePTCL to install Numerical relays on all outgoing feeders from Khliehriat(MePTCL) s/s and co-ordinate with NERTS for review of the protection system after relay installation													
48	132 kV Khandong - Khliehriat(PG) II	POWERGRID	**NEEPCO & POWERGRID**	**9/17/2016 14:22**	Khandong	DP, ZI, R-E	Not Furnished	No	No	-	-	9/17/2016 14:37	No SPS	-	
					Khliehriat(PG)	DP, ZI, R-E,27.01 Kms.	Successful operation	No	No						
	Root Cause	Ir lags Vr by 75 deg in faulty phase. Likely tripping on account of Lightening strike. For 1-phase fault, A/R should have operated succesfully, but did not at Khandong end													
	Remedial Measures	Cause of Non-operation of Auto-reclose at Khandong end to be investigated by NEEPCO. Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
49	400 kV Silchar - Byrnihat	NETC & MePTCL	**POWERGRID & MePTCL**	**9/17/2016 14:34**	Silchar	DP, ZI, R-E,148 Kms.	Not Furnished	Yes	No	-	-	9/17/2016 15:13	No SPS	-	
					Byrnihat	DP, ZI, R-E	Not Furnished	No	No						

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
	Root Cause	Ir lags Vr by 52 deg Suspected fault due to vegetation infringement.													
	Remedial Measures	Vegetation clearance in vulnerable areas in line sections to be done by NETC													
50	400 kV Balipara-Biswanath Charali II	POWERGRID	**POWERGRID**	**9/18/2016 7:00**	Balipara	Over Voltage	Successful operation	Yes	Yes	-	-	9/19/2016 12:04	No SPS	-	
					Biswanath Charali	Direct Trip received	Successful operation	No	No						
	Root Cause	Overvoltage could not be seen from DR (238 kV Phase volt viz. 412 kV L-L). From PMU, maximum voltage seen at Balipara and Bongaigaon respectively were 416 kV andd 409 kV. Relay mal-operation suspected.													
	Remedial Measures	NERTS to check Overvoltage relay settings on this line													
51	132 kV Khandong - Khliehriat(PG) I	POWERGRID	**NEEPCO & POWERGRID**	**9/18/2016 10:56**	Khandong	DP, ZI, R-Y-B,22.72 Kms.	Not Furnished	No	No	-	-	9/18/2016 11:05	No SPS	-	
					Khliehriat(PG)	DP, ZI, R-Y-B,22.16 Kms.	Successful operation	No	No						
	Root Cause	Tripped due to lightning. 3.6 kA in all 3 phases, Iy lags Vy by 67 deg. Likely tripping on account off lightning strike													
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
52	220/132 kV 50 MVA ICT II at Balipara	AEGCL	POWERGRID	**9/18/2016 6:57**	Balipara	Buchholz relay operated	Not applicable	No	No	-	-	Not Yet Restored	No SPS	-	
	Root Cause	Transformer damaged due to internal fault.													
	Remedial Measures	Already replaced by NEEPCO. Maintenance of transformers to be done properly by NEEPCO.													
53	400 kV Bongaigaon - Azara	NETC & AEGCL	**POWERGRID & AEGCL**	**9/19/2016 1:21**	Bongaigaon	DP, ZI, R-E,160.79 Kms.	Successful operation	Yes	No	-	-	9/19/2016 1:51	No SPS	-	
					Azara	DP, ZI, R-E,145.4 Kms.	Not Furnished	No	No						
54	400 kV Balipara - Bongaigaon II	POWERGRID	**POWERGRID**	**9/19/2016 1:21**	Balipara	No tripping	Not applicable	No	No	-	-	9/19/2016 1:39	No SPS	-	
					Bongaigaon	Power Swing	Not applicable	Yes	No						
	Root Cause	Bon-Azara: Ir Lags Vr by 65 Deg, Lightening fault. Bali-Bong II: Tripped due to powerswing at Bongaigaon end													

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
55	132 kV Doyang - Mokokchung(NA)	DoP Nagaland	**NEEPCO & DoP,Nagaland**	**9/19/2016 17:17**	Doyang	Over current	Not applicable	No	No	-	-	9/19/2016 17:50	No SPS	-	
					Mokokchung(NA)	Not Furnished	Not applicable	No	No						
	Root Cause	NEEPCO to check and confirm. As intimated by Sh.Joypal Roy, Sr.Manager (NEEPCO), details from Doyang HEP could not be gathered.													
	Remedial Measures	Matter may be raised in PCC forum and take up individually with Doyang HEP regarding non-furnishing of informtion													
56	220 kV Misa - Byrnihat II	MePTCL	**POWERGRID & MePTCL**	**9/20/2016 13:43**	Misa	No tripping	Not Furnished	No	No	-	-	9/21/2016 16:44	No SPS	-	
					Byrnihat	DP, ZI, B-E,32.69 Kms.	Not Furnished	No	No						
	Root Cause	MePTCL and NERTS to give further details in respect of this tripping													
	Remedial Measures														
57	132 kV AGTPP - Kumarghat	POWERGRID	**NEEPCO & POWERGRID**	**9/20/2016 4:04**	AGTPP	DP, ZI, B-E,61.35 Kms.	Not operated	No	No	Loss of Generation: 20	-	9/20/2016 4:32	SPS 6 operated	-	
					Kumarghat	DP, ZI, R-Y-E,37.5 Kms.	Not operated	Yes	No						
	Root Cause	Ir lags Vr by 75 deg.Flashover marks found on insulator, Flashover marks at loc 213. Likely tripping on account of lightning													
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
58	132 kV Doyang - Mokokchung(NA)	DoP Nagaland	**NEEPCO & DoP,Nagaland**	**9/20/2016 5:50**	Doyang	Over current	Not applicable	No	No	-	-	9/20/2016 6:50	No SPS	-	
					Mokokchung(NA)	No tripping	Not applicable	No	No						
	Root Cause	NEEPCO to check and confirm. As intimated by Sh.Joypal Roy, Sr.Manager (NEEPCO), details from Doyang HEP could not be gathered.													
	Remedial Measures	Matter may be raised in PCC forum and take up individually with Doyang HEP regarding non-furnishing of informtion													
59	132 kV Badarpur - Jiribam	POWERGRID	**POWERGRID**	**9/20/2016 8:25**	Badarpur	DP, ZI, R-E,17.97 Kms.	Lockout	No	No	-	-	9/20/2016 8:40	No SPS	-	
					Jiribam	DP, ZI, R-E	Lockout	No	No						

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
	Root Cause	Ir Lags Vr by 70 deg. Flash over marks observed in R-ph of Loc 66. Likely tripping on account of lightning													
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
60	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**9/20/2016 12:45**	Khliehriat (PG)	DP, ZI, R-Y-B-E,85.7 Kms. IR-1.28KA,IB-1.18KA,IC-	Successful operation	No	No	-	-	9/20/2016 13:02	No SPS	-	
					Khliehriat(ME)	No tripping	Not applicable	NA	NA						
	Root Cause	Fault within Meghalaya system that was cleared by remote end relays at Khliehriat(PG) substation, due to absence of relays at Khliehriat(MePTCL) end													
	Remedial Measures	MePTCL to install Numerical relays on all outgoing feeders from Khliehriat(MePTCL) s/s and co-ordinate with NERTS for review of the protection system after relay installation													
61	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**9/21/2016 10:36**	Khliehriat (PG)	DP, ZI, R-Y-B,103.2 Kms.	Not applicable	No	No	-	-	9/21/2016 10:50	No SPS	-	
					Khliehriat(ME)	No tripping	Not applicable	NA	NA						
	Root Cause	Ib lags Vb by 60 deg. Low fault current. Suspected vegetation fault.													
	Remedial Measures	MePTCL to ensure vegetation clearance in line sections. MePTCL to install Numerical relays on all outgoing feeders from Khliehriat(MePTCL) s/s and co-ordinate with NERTS for review of the protection system after relay installation													
62	132 kV Badarpur - Kolasib	POWERGRID	**POWERGRID & P&ED, Mizoram**	**9/21/2016 18:30**	Badarpur	DP, ZI, R-Y-B,35.4 Kms.	Not operated	Yes	No	-	-	9/21/2016 19:26	No SPS	-	
					Kolasib	DP, ZIII, R-Y-B,68.2 Kms.	Not operated	No	No						
	Root Cause	Ib lags Vb by 74 deg. Jumper strand demaged at LOC 124 due to lightening. Likely fault on account of lightning strike													
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
63	220 kV Misa - Byrnihat I	MePTCL	**POWERGRID & MePTCL**	**9/21/2016 9:55**	Misa	DP, ZI, B-E,85.9 Kms.	Not Furnished	No	No	-	-	9/21/2016 10:17	No SPS	-	
					Byrnihat	Not Furnished	Not Furnished	No	No						
	Root Cause	MePTCL and NERTS to give further details in respect of this tripping.													
	Remedial Measures														
64	132 kV Haflong-Umrangso	POWERGRID & AEGCL	**POWERGRID & AEGCL**	**9/22/2016 13:07**	Haflong	E/F, B-Ph O/C	Not operated	No	No	-	-	9/22/2016 13:55	No SPS	-	
					Umrangso	DP, ZIII, R-Y-B,10.5 Kms.	Not operated	No	No						
	Root Cause	Ib lags Vb by 65 deg. Flash over marks found in B-ph insulator of Loc 63. Likely tripping on account of lightning.													

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
65	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**9/23/2016 11:13**	Khliehriat (PG)	DP, ZI, R-Y-B, 86.42 Kms.	Not applicable	No	No	-	-	9/23/2016 12:42	No SPS	-	
					Khliehriat(ME)	No tripping	Not applicable	No	No						
	Root Cause	Fault within Meghalaya system that was cleared by remote end relays at Khliehriat(PG) substation, due to absence of relays at Khliehriat(MePTCL) end													
	Remedial Measures	MePTCL to install Numerical relays on all outgoing feeders from Khliehriat(MePTCL) s/s and co-ordinate with NERTS for review of the protection system after relay installation.													
66	132 kV Aizwal - Kumarghat	POWERGRID	**POWERGRID**	**9/23/2016 12:31**	Aizawl	Earth Fault	Not applicable	Yes	No	-	-	9/23/2016 12:42	No SPS	-	
					Kumarghat	DP, ZI, Y-E,102.4 Kms.	Not applicable	Yes	No						
	Root Cause	Iy lags Vy by 30 deg, Suspected vegetation fault. Insulator flash over mark at Y-ph in LOC 33.													
	Remedial Measures	Vegetation clearance in line sections in forested areas / bamboo grass areas to be done on regular basis by NERTS													
67	132 kV Aizwal - Kumarghat	POWERGRID	**POWERGRID**	**9/23/2016 17:14**	Aizawl	DP, ZI, Y-E,109.2 Kms.	Successful operation	Yes	No	-	-	9/23/2016 17:29	No SPS	-	
					Kumarghat	DP, ZI, Y-E,11.56 Kms.	Successful operation	Yes	No						
	Root Cause	Fault current growing gradually. Angle b/w V & I in faulty phase max. 19 deg. Tripping likely due to vegetation infringment.													
	Remedial Measures	Vegetation clearance in line sections in forested areas / bamboo grass areas to be done on regular basis by NERTS													
68	132 kV Biswanath Charali-Pavoi I	POWERGRID	**POWERGRID & AEGCL**	**9/23/2016 0:15**	Biswanath Charali	DP, ZI, R-Y-E,3.61 Kms.	Not operated	Yes	No	-	-	9/23/2016 1:10	No SPS	-	
					Pavoi	Not Furnished	Not operated	No	No						
69	132 kV Biswanath Charali-Pavoi II	POWERGRID	**POWERGRID & AEGCL**	**9/23/2016 0:15**	Biswanath Charali	DP, ZI, R-Y-E,4.43 Kms.	Not operated	Yes	No	-	-	9/23/2016 1:10	No SPS	-	
					Pavoi	Not Furnished	Not operated	No	No						
	Root Cause	BNC-Pavoi: Ir lags Vr by 76 deg Lightening fault. BNC-Pavoi II: Iy lags Vy by 72 deg Lightening fault.													
	Remedial Measures	AEGCL to furnish relay details in respect of every tripping. Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
70	400 kV Ranganadi-Biswanath Charali 1	POWERGRID	**NEEPCO & POWERGRID**	**9/23/2016 16:10**	Ranganadi	Over Voltage	Not Furnished	No	No	-	-	9/23/2016 16:25	No SPS	-	
					Biswanath Charali	DP, ZI, B-E,45.82 Kms.	Successful operation	No	No						
	Root Cause	Heavy lightening has been reported. DR from either end is not available. Snaps of Accuweather do not prove fault on account on lightning. NERTS to provide further details in respect of this tripping													
	Remedial Measures														
71	400 kV Bongaigaon - New Siliguri I	POWERGRID	**POWERGRID**	**9/24/2016 23:29**	Bongaigaon	DP, ZI, R-B-E,50.32 Kms.	Not Furnished	Yes	No	-	-	9/25/2016 0:03	No SPS	-	
					New Siliguri	DP, ZI, R-B-E,190.52 Kms.	Not Furnished	No	No						
72	400 kV Bongaigaon - New Siliguri II	POWERGRID	**POWERGRID**	**9/24/2016 23:29**	Bongaigaon	DP, ZI, R-B-E,56.11 Kms.	Not Furnished	Yes	No	-	-	9/24/2016 23:58	No SPS	-	
					New Siliguri	DP, ZI, R-B-E,190.52 Kms.	Not Furnished	No	No						
	Root Cause	NERTS to confirm the details after collecting relevant information.													
	Remedial Measures														
73	220 kV Kopili - Misa I	POWERGRID	**NEEPCO & POWERGRID**	**9/24/2016 10:07**	Kopili	DP, ZI, B-E, 5.365 kms	Successful operation	No	No	-	-	9/24/2016 10:50	No SPS	-	
					Misa	DP, ZI, B-E,67 Kms.	Not Furnished	Yes	No						
	Root Cause	Bamboo came down from uphill location and touched line ; due to heavy rain. Ib = 2.26 KA. Fault on account of vegetation infringement													
	Remedial Measures	Vegetation clearance in line sections in forested areas / bamboo grass areas to be done on regular basis by NERTS													
74	132 kV Loktak -	POWERGRID	**NHPC &**	**9/25/2016 1:26**	Loktak	DP, ZII, R-Y-B,82.58 Kms.	Not applicable	No	No	-	-	9/25/2016 1:54	No SPS	-	

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
74	Jiribam(PG)	POWERGRID	**POWERGRID**	**9/25/2016 1:26**	Jiribam(PG)	DP, ZI, B-E,11.2 Kms.	Successful operation	Yes	No	-	-	9/25/2016 1:54	No SPS	-	
	Root Cause	Ib lags Vb by 65 Deg. Ib = 2.719 KA. Likely tripping on account of lightning strike													
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
75	132 kV Badarpur - Jiribam	POWERGRID	**POWERGRID**	**9/25/2016 1:59**	Badarpur	DP, ZII, R-E,64.24 Kms.	Not operated	Yes	No	-	-	9/25/2016 2:20	No SPS	-	
					Jiribam	DP, ZI, R-E,12.7 Kms.	Not operated	No	No						
	Root Cause	Ir Lags Vr by 68 Deg. Flash over marks observed in R-ph of Loc 189. Likely tripping on account of lightning strike													
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
76	132 kV Khandong - Khliehriat(PG) I	POWERGRID	**NEEPCO & POWERGRID**	**9/26/2016 13:13**	Khandong	DP, ZI, R-Y-B, 17.1 Kms.	Not Furnished	Yes	No	-	-	9/26/2016 13:21	No SPS	-	
					Khliehriat(PG)	DP, ZI, R-Y-E, 30.22 Kms.	Successful operation	No	No						
	Root Cause	Khlt A/R successfully. Ir by Vr by 86 deg. High fault current. Likely tripping on account of lightning strike													
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
77	132 kV Khandong - Khliehriat(PG) I	POWERGRID	**NEEPCO & POWERGRID**	**9/26/2016 13:47**	Khandong	DP, ZI, R-Y-B, 17.06 Kms.	Not Furnished	No	No	-	-	9/26/2016 13:53	No SPS	-	
					Khliehriat(PG)	DP, ZI, R-Y-E, 36.71 Kms.	Successful operation	No	No						
	Root Cause	All phase currents around 2.3 kA. Iy lags Vy by 74 deg. Likely tripping on account of lightning strike													
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
78	220 kV BTPS - Agia II	AEGCL	**AEGCL**	**9/26/2016 13:57**	BTPS	Not Furnished	Not applicable	No	No	-	-	9/26/2016 15:18	No SPS	-	
					Agia	Not Furnished	Not applicable	No	No						
	Root Cause	Details to be furnished by AEGCL in respect of this tripping													
	Remedial Measures														
79	**220/132 kV 80 MVA ICT at BTPS**	AEGCL	AEGCL	**9/26/2016 13:57**	BTPS	Not Furnished	Not applicable	No	No	-		9/26/2016 15:11	No SPS	-	
	Root Cause	3 phase trip, DP as recorded by relays at both ends of 220 kV BTPS - Agia II line. ICT E/F on HV side. Protection interfacing exists in ICT and hence LV side E/F would also have operated. Jumper snapped on BTPS-Agia line as mentioned by AEGCL to be reason of fault													
	Remedial Measures	Maintenance of line sections to be done appropriately to maintain healthiness of line.													
80	132 kV Doyang - Mokokchung(NA)	DoP Nagaland	**NEEPCO & DoP,Nagaland**	**9/26/2016 10:54**	Doyang	Not Furnished	Not Furnished	No	No	-	-	9/26/2016 11:05	No SPS	-	
					Mokokchung(NA)	No tripping	Not Furnished	No	No						
	Root Cause	NEEPCO to check and confirm. As intimated by Sh.Joypal Roy, Sr.Manager (NEEPCO), details from Doyang HEP could not be gathered.													
	Remedial Measures	Matter may be raised in PCC forum and take up individually with Doyang HEP regarding non-furnishing of informtion													
81	132 kV Silchar-PK Bari II	POWERGRID	**POWERGRID & TSECL**	**9/26/2016 17:46**	Silchar	Mal-operated during SAS testing	Not applicable	No	No	-	-	9/26/2016 17:58	No SPS	-	
					PK Bari	No tripping	Not applicable	No	No						
	Root Cause	Maloperation at Silchar(PG) end during SAS testing.													
	Remedial Measures	Rectified by NERTS													
82	132 kV Khandong - Khliehriat(PG) I	POWERGRID	**NEEPCO & POWERGRID**	**9/27/2016 14:17**	Khandong	DP, ZII, R-Y-B, 35.7 Kms.	Not Furnished	Yes	No	-	-	9/27/2016 23:43	No SPS	-	
					Khliehriat(PG)	DP, ZI, Y-E, 12.9 Kms.	Successful operation	No	No						
	Root Cause	Iy lags Vy by 46 deg. AT Loc 39 Y ph insulator Decapped and conductor grounded due to lightening. Tripping on account of lightning strike													

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
82	**Remedial Measures**	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**9/27/2016 14:17**	Khliehriat (PG)	No tripping	Not applicable	NA	NA	-	-	9/27/2016 14:42	No SPS	-	
					Khliehriat(ME)	Earth Fault	Not applicable	No	No						
	Root Cause	Iy lags Vy by 46 deg. Y-phase insulator decapped at loc. 39. Tripping on account of lightning													
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
83	132 kV Khliehriat (PG) - Khliehriat (ME) I	POWERGRID	**POWERGRID & MePTCL**	**9/28/2016 11:07**	Khliehriat (PG)	DP, ZI, Y-E, 16.88 Kms.	Not operated	No	No	-	-	9/28/2016 11:31	No SPS	-	
					Khliehriat(ME)	No tripping	Not operated	NA	NA						
84	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**		Khliehriat (PG)	DP, ZI, Y-E, 2.279 Kms.	Not Furnished	No	No			9/28/2016 11:37	No SPS		
					Khliehriat(ME)	No tripping	Not Furnished	NA	NA						
	Root Cause	For Khl-Khl I: Internal fault of Mehgalya, Iy lags Vy by 62 deg. Meghalaya to intimate the root cause. Likely tripping on account of lightning													
	Remedial Measures	MePTCL to install numerical relays on all outgoing feeders from Khliehriat(MePTCL) substation and further co-ordinate with NERTS for protection relay settings.													
85	132 kV Badarpur - Panchgram	POWERGRID	**POWERGRID & AEGCL**	**9/28/2016 23:52**	Badarpur	DP, ZIII, R-E, 25.6 Kms.	Not applicable	Yes	No	-	-	9/29/2016 0:19	No SPS	-	
					Panchgram	Earth Fault	Not applicable	No	No						
	Root Cause	Fault within AEGCL system that was not cleared on time													
	Remedial Measures	AEGCL to co-ordinate relay settings with that of NERTS to ensure unwanted tripping does not occur													
86	132 kV Silchar - Panchgram	POWERGRID & AEGCL	**POWERGRID & AEGCL**	**9/28/2016 23:48**	Silchar	Earth Fault	Not applicable	Yes	No	-	-	9/29/2016 0:17	No SPS	-	
					Panchgram	No tripping	Not applicable	No	No						
	Root Cause	Likely fault in downstream of AEGCL system. AEGCL to confirm.													
	Remedial Measures	AEGCL to co-ordinate relay settings with that of NERTS to ensure unwanted tripping does not occur													

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
87	400 kV Bongaigaon - New Siliguri III	ENICL	**POWERGRID**	**9/28/2016 17:27**	Bongaigaon	DP, ZI, B-Y-E, 54.4 Kms.	Not Furnished	Yes	No	-	-	9/29/2016 15:25	No SPS	-	
					New Siliguri	DP, ZI, Y-B-E	Not Furnished	No	No						
	Root Cause	NERTS to confirm the details after collecting relevant information.													
	Remedial Measures														
88	220 kV Mariani(PG)-Mokokchung (PG) I	POWERGRID	**POWERGRID**	**9/28/2016 3:50**	Mariani(PG)	DP, ZI, Y-E,	Not operated	No	No	-	-	9/28/2016 4:16	No SPS	-	
					Mokokchung(PG)	Over Voltage	Not operated	No	No						
	Root Cause	Tripped due to over voltage. From DR, Maximum voltage of 141 kV (L-G) viz. 244 kV L-L was observed. Maximum band of O/V permitted by IEGC is 245 kV for 220 kV level. This relay should not have operated to cause tripping even before the IEGC band was breached.													
	Remedial Measures	NERTS to rectify relay settings so that unwanted tripping does not occur													
89	132 kV Dimapur - Imphal	POWERGRID	**POWERGRID**	**9/28/2016 10:36**	Dimapur	DP, ZII, R-E, 91.85 Kms.	Successful operation	Yes	No	-	-	9/28/2016 10:57	No SPS	-	
					Imphal	DP, ZI, R-E, 59.43 Kms.	Successful operation	Yes	No						
	Root Cause	Ir lags Vr by 31 deg. Fault due to vegetation infringment. AR attempted at both end.													
	Remedial Measures	Vegetation clearance in line sections in forested areas / bamboo grass areas to be done on regular basis by NERTS													
90	132 kV Jiribam - Aizwal	POWERGRID	**POWERGRID**	**9/28/2016 23:36**	Jiribam	DP, ZI, R-Y-E, 54 Kms.	Not Furnished	Yes	No	-	-	9/29/2016 0:04	No SPS	-	
					Aizawl	DP, ZI, R-Y-B, 33.94 Kms.	Successful operation	Yes	No						
	Root Cause	Patrolling report indicates broken insulator. Cause of tripping is not on account of any natural calamity or reasons beyond control of Transmission Licensee. Also, it is not clear how broken insulator disk was repaired in 30 minutes and line restored. NERTS to clarify the cause of this tripping													
	Remedial Measures	Proper maintenance activites are to be done by NERTS using trained manpower in forested areas													
91	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**9/28/2016 23:53**	Khliehriat (PG)	No tripping	Not applicable	NA	NA	-	-	9/29/2016 0:03	No SPS	-	
					Khliehriat(ME)	Earth Fault	Not applicable	No	No						
	Root Cause	Ir lags Vr by 20 deg. Vegetation fault, Disc insulator found broken in R-ph Loc 185.													

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
	Remedial Measures	Vegetation clearance in line sections in forested areas / bamboo grass areas to be done on regular basis by MePTCL.													
92	220 kV Azara - Sarusajai I	AEGCL	**AEGCL**	**9/29/2016 8:45**	Azara	Not Furnished	Not Furnished	No	No	-	-	9/29/2016 12:59	No SPS	-	
					Sarusajai	General Trip	Not Furnished	No	No						
	Root Cause	Fault on line section as confirmed by AEGCL. Transient fault. Not much vegetation exists in line section. Exact reason of fault could not be determined due to absence of complete information													
	Remedial Measures	AEGCL to maintain healthiness of line, and do patrolling after trippings to get reason for fault. Transient faults are usually due to vegetation infringment or lightning strikes. AEGCL to check the line section is clear of vegetation, and in case indication about line tripping on account of lightning strike is obtained, corrective measures are to be taken													
93	132 kV Silchar-P K Bari II	POWERGRID	**POWERGRID & TSECL**	**9/29/2016 1:33**	Silchar	DP, ZI, B-E, 84 Kms.	Not Furnished	Yes	No	-	-	9/29/2016 1:54	No SPS	-	
					PK Bari	Not Furnished	Not Furnished	No	No						
	Root Cause	NERTS / TSECL to provide further details. Root cause in Not clear													
	Remedial Measures														
94	132 kV Silchar - Panchgram	POWERGRID & AEGCL	**POWERGRID & AEGCL**	**9/29/2016 17:30**	Silchar	DP, ZIII, Y-E, 53.67 Kms.	Not applicable	No	No	-	-	9/29/2016 18:22	No SPS	-	
					Panchgram	Not Furnished	Not applicable	No	No						
	Root Cause	Likely fault in downstream of AEGCL system. AEGCL to confirm.													
	Remedial Measures	AEGCL to co-ordinate relay settings with that of NERTS to ensure unwanted tripping does not occur													
95	132 kV Haflong(PG) - Jiribam	POWERGRID	**POWERGRID**	**9/30/2016 12:32**	Haflong(PG)	DP, ZII, Y-E, 87.63 Kms.	Not Furnished	Yes	No	-	-	9/30/2016 12:47	No SPS	-	
					Jiribam	DP, ZI, Y-E, 12.57 Kms.	Not Furnished	No	No						
	Root Cause	Iy lags Vy by 9 deg High resistive fault, Bamboo cut by miscrients at Loc 275-276 fell on Y-ph.													
	Remedial Measures	Vegetation clearance in line sections in forested areas / bamboo grass areas to be done on regular basis by NERTS													
96	132 kV Aizwal - Kolasib	POWERGRID	**POWERGRID & P&ED, Mizoram**	**9/30/2016 12:51**	Aizawl	DP, ZI, R-E, 19.39 Kms.	Not Furnished	No	No	-	-	9/30/2016 13:11	No SPS	-	
					Kolasib	DP, ZI, R-E, 28.6 Kms.	Not Furnished	No	No						

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
	Root Cause	T&P Slipped and fell on conductor													
	Remedial Measures	Rectified by NERTS													
97	132 kV Khandong - Khliehriat(PG) I	POWERGRID	**NEEPCO & POWERGRID**	**9/30/2016 13:54**	Khandong	DP, ZI, R-Y-B, 25.9 Kms.	Not Furnished	No	No	-	-	9/30/2016 14:05	No SPS	-	
					Khliehriat(PG)	DP, ZI, R-Y-B, 17.7 Kms.	Successful operation	Yes	No						
	Root Cause	Ib lags Vb by 62 deg, Ib = 4.24 KA. Likely fault on account of Lightning strike													
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
98	132 kV Khliehriat (PG) - Khliehriat (ME) II	MePTCL	**POWERGRID & MePTCL**	**9/30/2016 15:25**	Khliehriat (PG)	DP, ZI, R-Y-B, 88.08 Kms.	Not Furnished	No	No	-	-	9/30/2016 15:46	No SPS	-	
					Khliehriat(ME)	No tripping	Not Furnished	No	No						
	Root Cause	Fault within Meghalaya system that was cleared by remote end relays at Khliehriat(PG) substation, due to absence of relays at Khliehriat(MePTCL) end													
	Remedial Measures	MePTCL to install numerical relays on all outgoing feeders from Khliehriat at the earliest and co-ordinate with NERTS.													
99	132 kV AGTPP - Kumarghat	POWERGRID	**NEEPCO & POWERGRID**	**9/30/2016 23:59**	AGTPP	DP, ZI, R-B-E, 7.356 Kms.	Not Furnished	No	No	-	-	10/1/2016 0:21	SPS-6 operated	-	
					Kumarghat	DP, ZII, R-B-E, 100.6 Kms.	Not Furnished	Yes	No						
	Root Cause	As seen from DR, Ir lags Vr by 75 deg. Attached photographs show flashover marks on insulator. Tripped due to lightning strike													
	Remedial Measures	Vulnerable areas to lightning to be identified, Checking of Tower footing resistances to be done, and if necessary, then Line LA are to be installed													
100	+/- 800 kV Biswanath Charali-Agra I	POWERGRID	**POWERGRID**	**9/30/2016 11:01**	Biswanath Charali	Mal-operation of emulsifier system	Not applicable	No	No	-	-	9/30/2016 14:06	No SPS	-	
					Agra		Not applicable	No	No						
101	+/- 800 kV Biswanath Charali-Agra II	POWERGRID	**POWERGRID**	**9/30/2016 11:01**	Biswanath Charali	Mal-operation of emulsifier system	Not applicable	No	No	-	-	9/30/2016 14:06	No SPS	-	
					Agra		Not applicable	No	No						
	Root Cause	Mal-operation of emulsifier system													
	Remedial Measures	Rectified 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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU	फॉल्ट क्लीरिंग अवधि/ Fault clearing time in ms
102	220 kV Misa - Dimapur I	POWERGRID	**POWERGRID**	**10/1/2016 4:38**	Misa	Earth Fault	Not applicable	Yes	No	-	-	10/1/2016 5:25	No SPS	-	
					Dimapur	DP, ZI, R-E, 43.32 Kms.	Not applicable	No	No						
	Root Cause	Details to be furnished by NERTS in respect of this tripping													
	Remedial Measures														
103	132 kV Aizwal - Kolasib	POWERGRID	**POWERGRID & P&ED, Mizoram**	**10/2/2016 9:38**	Aizawl	DP, ZI, B-E, 17.8 Kms.	Not Furnished	No	No	-	-	10/2/2016 10:28	No SPS	-	
					Kolasib	DP, ZI, B-E	Not Furnished	No	No						
	Root Cause	Details to be furnished by NERTS in respect of this tripping													
	Remedial Measures														
103.0															

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU
F. यूनिट ट्रिपिंग / Unit tripping														
1	Palatana GTG I	OTPC	OTPC	**8/30/2016 14:39**	Palatana	Due to Gas Boost compressor problem	Not applicable	No	No	Loss of Generation: 153	GI-II	8/30/2016 16:54	SPS 1 operated	0.467
2	Palatana GTG II	OTPC	OTPC	**8/30/2016 14:39**	Palatana		Not applicable	No	No	Loss of Generation: 184		8/30/2016 16:08	SPS 1 operated	
3	Palatana STG I	OTPC	OTPC	**8/30/2016 14:39**	Palatana		Not applicable	No	No	Loss of Generation: 100		8/30/2016 17:54	SPS 1 operated	
4	Palatana STG II	OTPC	OTPC	**8/30/2016 14:39**	Palatana		Not applicable	No	No	Loss of Generation: 112		8/30/2016 17:44	SPS 1 operated	
	Root Cause	OTPC to intimate the details												
	Remedial Measures													
5	Kopili Stg II	NEEPCO	NEEPCO	**8/31/2016 15:51**	Khandong	Due to Voltage Jerk	Not applicable	Yes	Yes	Loss of Generation: 24	GI-I	8/31/2016 16:28	No SPS	0.010
	Root Cause	NEEPCO to intimate the details												
	Remedial Measures													
6	AGTPP U 4	NEEPCO	NEEPCO	**8/31/2016 8:02**	AGTPP	Due to Voltage Jerk	Not applicable	No	No	Loss of Generation: 20	GI-I	8/31/2016 8:14	No SPS	0.009
7	AGTPP STG II	NEEPCO	NEEPCO	**8/31/2016 8:02**	AGTPP	Due to Voltage Jerk	Not applicable	No	No	Loss of Generation: 22		8/31/2016 15:38	No SPS	
	Root Cause	As reported by NEEPCO, voltage jerk in the system resulted in tripping												
	Remedial Measures													
8	AGTPP STG I	NEEPCO	NEEPCO	**8/31/2016 9:03**	AGTPP	Due to Voltage Jerk	Not applicable	No	No	Loss of Generation: 10	GI-I	8/31/2016 15:15	No SPS	0.002
	Root Cause													

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU
	Remedial Measures													
9	Palatana GTG I	OTPC	OTPC	**9/4/2016 17:26**	Palatana	Tripped due to loss of fuel	Not applicable	No	No	Loss of Generation: 119	GI-II	9/4/2016 22:48	No SPS	0.114
10	Palatana STG I	OTPC	OTPC	**9/4/2016 17:26**	Palatana		Not applicable	No	No	Loss of Generation: 83		9/5/2016 0:07	No SPS	
	Root Cause	Problem in Auxiliary stop valve. Due to this fuel supply disrupted.												
	Remedial Measures	Rectified by OTPC.												
11	AGBPP U 1	NEEPCO	NEEPCO	**9/5/2016 11:25**	AGBPP	Due to tripping of GC # 3	Not applicable	No	No	Loss of Generation: 20	GI-II	9/5/2016 17:37	No SPS	0.012
	Root Cause	Unit desynchronised due to tripping of GC												
	Remedial Measures	NEEPCO to investigate into repeated tripping of Gas Compresssor at AGBPP												
12	AGTPP U 2	NEEPCO	NEEPCO	**9/8/2016 1:35**	AGTPP	Due to problem in control system	Not applicable	No	No	Loss of Generation: 20	GI-I	9/8/2016 13:16	No SPS	0.013
	Root Cause	Due to problem in machine control system												
	Remedial Measures	Rectified by NEEPCO												
13	Khandong U 1	NEEPCO	NEEPCO	**9/9/2016 11:11**	Khandong	Due to governor and control system problem	Not applicable	No	No	Loss of Generation: 18	GI-I	9/9/2016 18:44	No SPS	0.017
	Root Cause	Problem in ESV (Emergency shutdown valve												
	Remedial Measures	Recitifed by NEEPCO												
14	AGTPP STG I	NEEPCO	NEEPCO	**9/10/2016 11:55**	AGTPP	Due to drain valve damage	Not applicable	No	No	Loss of Generation: 14	GI-I	9/17/2016 17:32	No SPS	0.040

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU
	Root Cause	Due to drain valve damage												
	Remedial Measures	Rectified by NEEPCO												
15	Doyang U 2	NEEPCO	NEEPCO	**9/11/2016 11:30**	Doyang	Unit overspeed,Gen X-mer HV Side BU prot. Optd.	Not applicable	No	No	Loss of Generation: 40	-	9/11/2016 11:50	No SPS	0.013
	Doyang U 3	NEEPCO	NEEPCO	**9/11/2016 11:30**	Doyang		Not applicable	No	No			9/11/2016 13:15	No SPS	
	Root Cause	Gen X-mer HV Side BU prot. Optd. NEEPCO to confirm further												
	Remedial Measures													
16	Doyang U 1	NEEPCO	NEEPCO	**9/12/2016 10:05**	Doyang	Over Speed	Not applicable	No	No	Loss of Generation: 72	-	9/12/2016 10:43	No SPS	0.030
17	Doyang U 2	NEEPCO	NEEPCO		Doyang		Not applicable	No	No			9/12/2016 10:37	No SPS	
18	Doyang U 3	NEEPCO	NEEPCO		Doyang		Not applicable	No	No			9/12/2016 10:30	No SPS	
	Root Cause	NEEPCO to confirm further												
	Remedial Measures													
19	Kopili U 3	NEEPCO	NEEPCO	**9/13/2016 12:15**	Kopili	Due to Rotor Earth Fault	Not applicable	No	No	Loss of Generation: 49	GI-II	9/13/2016 14:53	No SPS	0.037
	Root Cause	Due to Rotor Earth Fault												
	Remedial Measures	NEEPCO to do proper maitenance of generating units												
20	Khandong U 2	NEEPCO	NEEPCO	**9/18/2016 18:12**	Khandong	Due to high thrust bearing temparature	Not applicable	No	No	Loss of Generation: 18	-	9/18/2016 19:12	No SPS	0.018
	Root Cause	Due to high thrust bearing temparature.												

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 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 / 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 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 दिनांक और रेस्टॉरेशन की समय / Date and time of restoration provided by CR operator	एस.पी.एस संचालन के विवरण / Details of SPS Operation	एमयू में कमी/ Loss in MU
	Remedial Measures	Operational problem ; Has been rectiifed by NEEPCO.												
21	Kopili U 1	NEEPCO	NEEPCO	**9/20/2016 12:09**	Kopili	B-Ph GT buchholtz operated	Not applicable	No	No	Loss of Generation: 50	GI-II	9/20/2016 15:40	No SPS	0.055
	Root Cause	B-Ph GT buchholtz operated. GT failed.												
	Remedial Measures	GT has been Replaced												
22	Palatana GTG II	OTPC	OTPC	**9/23/2016 14:53**	Palatana	Due to high exhaust spread	Not applicable	No	No	Loss of Generation: 131	GI-II	9/25/2016 4:03	No SPS	0.201
	Palatana STG II	OTPC	OTPC	**9/23/2016 14:53**	Palatana		Not applicable	No	No	Loss of Generation: 101		9/25/2016 6:48	No SPS	
	Root Cause	Gas intervalve pressure low. Leakage was there in gas valve.												
	Remedial Measures	Rectified by OTPC.												
23	Palatana STG II	OTPC	OTPC	**9/25/2016 6:53**	Palatana	Due to high vaccum	Not applicable	No	No	Loss of Generation: 32	-	9/25/2016 7:18	No SPS	0.013
	Root Cause	Tripping just after synchronisation due to instability.												
	Remedial Measures	Operational problem												
1	AGTPP U 3	NEEPCO	NEEPCO	**9/30/2016 23:59**	AGTPP	SPS-6 operated	Not applicable	No	No	Loss of Generation: 20	-	10/1/2016 0:27	SPS-6 operated	-
2	AGTPP STG II	NEEPCO	NEEPCO	**9/30/2016 23:59**	AGTPP	Due to tripping of GTG-III	Not applicable	No	No	Loss of Generation: 10	-	10/1/2016 5:34	No SPS	-
3	Doyang U 3	NEEPCO	NEEPCO	**10/1/2016 7:04**	Doyang	Tripped due to excitation problem	Not applicable	No	No	Loss of Generation: 24	GI-I	10/1/2016 15:15	No SPS	0.022
	Root Cause	Problem in CPU card at Doyang gave Excitation problem trip												
	Remedial Measures	Rectified by NEEPCO												

A. Control area-wise

Sl. No.	Control Area	Total Counts	
		Grid Incidents (GI)	Grid Disturbances (GD)
1	Palatana	3	0
2	AGBPP	1	0
3	AGTPP	4	0
4	Ranganadi	0	0
5	Kopili	2	0
6	Khandong	2	0
7	Doyang	0	0
8	Loktak	0	0
9	BgTPP	0	0
10	Arunachal Pradesh	0	5
	Ziro	0	0
	Deomali	0	0
	Khupi	0	3
	Capital	0	2
10	Assam	0	4
	Dhaligaon	0	1
	Capital	0	1
	Pavoi	0	0
	Gohpur	0	2
	Samaguri	0	0
	Depota	0	0
	Upper Assam	0	0
	South Assam	0	0
11	Manipur	0	5
	Ningthoukhong	0	4
	Capital	0	1

	Rengpang	0	0
	Jiribam	0	0
12	Meghalaya	0	8
	Khliehriat	0	7
	Mendipathar	0	0
	Byrnihart	0	2
13	Mizoram	0	2
	Zuangtui	0	2
	Luangmual	0	0
	Kolasib	0	0
14	Nagaland	0	10
	Capital	0	7
	Dimapur	0	1
	Mokokchung	0	2
15	Tripura	0	0
	Dharmanagar	0	0
	Tripura South Commilla	0	0
16	Station Blackout	0	1
	Salakati	0	1

B. As per CEA Grid Standards

Sl. No.	Category of GD	Total Counts
1	GI 1	6
2	GI 2	6
3	GD 1	33
4	GD 2	0
5	GD 3	0
6	GD 4	0
7	GD 5	0