



भारत सरकार

Government of India
उत्तर पूर्वी क्षेत्रीय विद्युत समिति

North Eastern Regional Power Committee
MSHFC Society Ltd Bldg, Nongrim Hills
Shillong – 793 003

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No. 105/1/NERPC/PCC/2008/ 652 - 87

Date: 2nd May, 2008

To

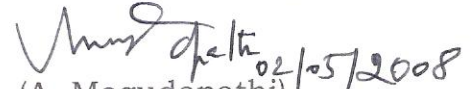
1. Member (Tech), Assam State Electricity Board, Bijuli Bhawan, Paltan Bazar, Guwahati-781 001
2. Member (Tech), MeSEB, Lumjingshai, Short Round Road, Shillong – 793 001
3. Chief Engineer (WE Zone), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791 111
4. Chief Engineer (EE Zone), Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791 111
5. Chief Engineer (P), Department of Power, Govt. of Nagaland, Kohima – 797 001
6. Chief Engineer (P), Electricity Department, Govt. of Manipur, Keishampat, Imphal – 795 001
7. Chief Engineer (P&E), Department of Power, Govt. of Mizoram, Aizawl – 796 001
8. General Manager, TSECL, Agartala – 799 001
9. GM, NERLDC, Dongtiah-Lower Nongrah, Lapalang, Shillong -793 006
10. ED, NERTS, PGCIL, Dongtiah-Lower Nongrah, Lapalang, Shillong -793 006
11. ED (O&M), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
12. ED (Commercial), NEEPCO Ltd., Brookland Compound, Lower New Colony, Shillong-793003
13. ED (O&M), NHPC, NHPC Office Complex, Sector-33, Faridabad, Haryana-121003
14. ED (Commercial), NHPC, NHPC Office Complex, Sector-33, Faridabad, Haryana-121003
15. Vice President, PTCIL, 2nd Floor, NBCC Tower, 15, Bhikaji Cama Place, New Delhi
16. AGM(BD), NVVN, Core5, 3rd Floor, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi
17. Member Secretary, ERPC, 14 Golf Club Road, Tollygunge, Kolkata-700033
18. Chief Engineer, GM Division, Central Electricity Authority, New Delhi – 110066

Sub: Minutes of the 2nd Protection Co-Ordination Committee meeting-regarding.

Sir,

Please find enclosed herewith the Minutes of 2nd Protection Co-Ordination Committee Meeting held at NERPC Conference Hall, Shillong on 9th April 2008 for your kind information and necessary action please.

भवदीय / Yours faithfully,


(A. Magudapathi) 02/05/2008

सदस्य सचिव / Member Secretary

Copy to:

1. SA to Member(GO&D), CEA, Sewa Bhawan, R.K. Puram, New Delhi – 110066
2. Chief Engineer, AEGCL, Bijuli Bhavan, Guwahati - 781001
3. Chief Engineer, APGCL, Bijuli Bhavan, Guwahati - 781001
4. MD, CA DISCOM, Bijuli Bhavan, Guwahati - 781001
5. MD, UA DISCOM, Bijuli Bhavan, Guwahati - 781001
6. MD, LA DISCOM, Bijuli Bhavan, Guwahati - 781001
7. CGM (LDC), SLDC Complex, AEGCL, Kahelipara, Guwahati-781019.
8. S.E. (Trans. & Dist), MeSEB Lumjingshai, Short Round Road, Shillong – 793 001
9. Head of SLDC, MeSEB, Lumjingshai, Short Round Road, Shillong – 793 001
10. Head of SLDC, Department of Power, Govt. of Arunachal Pradesh, Itanagar- 791 111
11. A.C.E. (Gen & Trans), Department of Power, Govt. of Nagaland, Kohima – 797 001
12. Head of SLDC, Department of Power, Dimapur, Nagaland
13. A.C.E. (Power-I), Electricity Department, Govt. of Manipur, Keishampat, Imphal – 795 001
14. Head of SLDC, Electricity Department, Govt. of Manipur, Keishampat, Imphal – 795 001
15. S.E. (Trans & Dist), Department of Power, Govt. of Mizoram, Aizawl – 796 001
16. Head of SLDC, Department of Power, Govt. of Mizoram, Aizawl – 796 001
17. Head of SLDC, TSECL, Agartala – 799 001
18. Chief Engineer(Elect), Loktak HEP, Vidyut Vihar, Kom Keirap, Manipur- 795124

North Eastern Regional Power Committee

Minutes of the 2nd Protection Co-Ordination Committee Meeting

Date: 09/04/2008

Venue: NERPC Conference Hall, Shillong

Member Secretary, NERPC welcomed all the participants of 2nd Protection Co-ordination Committee Meeting. The list of participants is given at Annexure-I

Then Agenda items were taken up.

1. Confirmation of minutes of 1st PCC meeting held on 07.12.2007 at Guwahati.

The minutes of 1st PCC meeting held on 07.12.2007 at Guwahati were confirmed without any modification.

2. Agenda items from NERLDC: -

2.1 *Submission of details of various protection schemes used in Shunt Reactor in addition to submission of other protection details asked by MS, NERPC.*

Member Secretary, NERPC requested all the constituents to submit various protection schemes used in different lines within their control. He further reiterated that the importance of the meetings should be felt by the constituent members. Awareness should be there amongst the constituents so that more members will attend the meetings. Members should take the meeting seriously whether the required data is available with them or not.

It was decided that the matter may be pursued with the respective organizations.

2.2 *Submission of details of various protection schemes used in Power plant.*

Member Secretary, NERPC informed all the members that NHPC has submitted the protection schemes used for Loktak power station. He requested other constituent members to send the protection schemes adopted in their systems.

2.3 *Report on disturbance within State Control Centre.*

It was decided that a report should be sent to NERLDC and NERPC for any disturbance within State Control Centre.

2.4 *Disturbance Recorder & Event Logger Report on any types of events.*

It was decided that a Disturbance Recorder should be available and Event Logger Report should be sent to NERLDC and NERPC on any type of events.

2.5 *Disturbance occurred on 7th Jan '08 due to non-operation of CB at Samaguri end.*

Discussed under item no.3.

2.6 *Disturbance occurred on 11th Dec '07 due to PT burst at Sarusajai end.*

Discussed under item no.3.

2.7 *Disturbance occurred on 4th Feb '08 due to failure of Y phase Insulator string of 220kV side of Misa end.*

Discussed under item no.3.

2.8 *Healthiness of intertripping.*

Not discussed.

2.9 *Non-operation of protection at Ningthoukhong at the time of tripping.*

Not discussed since Manipur was not represented.

3. Major grid disturbances during the previous months.

Member Secretary, NERPC requested representatives from NERLDC to brief the members about the latest status of the Protection schemes in operation within the region.

Representatives from NERLDC informed that no islanding scheme is in operation at present and under frequency relays (UFR) are installed in 4 locations viz.

- 1) R.C.Nagar end of R.C.Nagar - Kumarghat
- 2) Nirjuli end of Nirjuli – Gohpur
- 3) Samaguri end of Samaguri – Balipara
- 4) Ranganadi end of Ranganadi – Nirjuli

Member Secretary, NERPC inquired the status of the UFRs installed and asked how the maintenance of the relays is done.

Representatives from NERLDC informed that the UFRs were purchased by PGCIL for Kathalguri islanding scheme. Since the scheme was not implemented, the same UFR relays were installed at the above locations. The maintenance was not done by NERTS. There were no clear cut information about the status of the relays and the operating set point and quantum of load shedding at the above locations.

Representatives from AEGCL informed that O&M charges are being taken for UFR installed at Samaguri.

Representatives from NERTS clarified that 6 nos of UFR were purchased by PGCIL with the consent of the constituents and it was agreed to be paid from Reactive Pool Account. The UFRs are then installed in the above 4 locations. The relays were handed over to NEEPCO for R.C.Nagar and Ranganadi and to ASEB for Samaguri. The maintenance should have been done by the respective organizations to whom the relays were handed over.

Representatives from AEGCL informed that they are not aware of the existence of such relay.

Member Secretary, NERPC inquired whether the transfer of ownership of the relays were done based on a written document or not. If the ownership of the relays are not clear the maintenance of the relays are not possible.

Representatives from NERLDC informed that the relay at Ranganadi end is under NEEPCO and the status should be confirmed. The relay installed at Nirjuli end is under NERTS. R.C.Nagar end relay is in operation under NEEPCO. Samaguri end relay is under AEGCL and the status may be confirmed.

Members agreed that the ownership and status of the above relays may be conveyed to NERPC Secretariat.

There were 4 major grid disturbances observed within the last three months. The details of the disturbances were circulated amongst the members (Annexure-II) and the same were deliberated.

It was felt that in-depth studies of the disturbances should be carried out and appropriate action should be taken to prevent such occurrence in future. It was also agreed that NERLDC should send a copy of the grid disturbances report to NERPC by e-mail/ fax immediately after the incidence for further detailed studies and necessary actions.

4. Any other item.

The following points submitted by POWERGRID, NERTS (Annexure-III) were discussed.

- 4.1 Sharing of protection system information by all constituents. Information may be posted in NERPC or NERLDC website.*
- 4.2 For proper analysis of mal-operations (including non-operations) complete information of trippings in the system is required. A procedure is required to be developed for reporting of system disturbances and sharing of SCADA & disturbance recorder data for proper analysis.*
- 4.3 Primary protection on all 132 kV & above lines should be with distance relays. Healthiness & proper settings to be ensured. Status may be reviewed for further action.*
- 4.4 Requirement of Auto-reclosing scheme of EHV lines to enhance stability and reliability of system. Status may be reviewed for further action.*
- 4.5 Review of specific instances of protection system malfunctions. Refer to Annexure III(a) & III(b).*

5. Date and venue of next PCC.

Will be intimated separately.

List of participants in 2nd Protection Co-ordination Committee meeting:

Assam

1. R.L.Barua, DGM, MRT Circle
2. P.K.Medhi, Sr. Manager,
Protection Cell

NEEPCO

1. Bhaskar Goswami, Sr. Manager
2. M.K. Biswas, Dy. Manager

Meghalaya

1. W. Mawroh, SE
2. H. Shangpliang
3. A. Kharpan

NERLDC

1. T.S. Singh, D.G.M.
2. N. R. Paul, Chief Manager
3. A. Mallick, Chief Manager
4. R. Sutradhar, C.M (Comml)
5. S.K. Shadrudin, Dy. Manager
6. Ishrat Ali, Engineer

Mizoram

1. V. Rodingliana, EE, SLDC
2. H. Lalnunsanga, A.E

NERTS (POWERGRID)

1. A. Patir, AGM (O&M)
2. P. Kannungo, CM (OS)
3. Utpal Sharma, Chief Manager

Tripura

1. R.K. Sharma, Manager, SLDC
2. A.K. Bhowmi, Sr. Manager

NERPC

1. A. Magudapathi, Member Secretary
2. L.B. Muanthang, E.E
3. B. Lyngkhoi, Assistant Secretary
4. R.M. Rangarajan, E.E
5. Lalrinsanga, E.E
6. S. M. Aimol, A.E.E
7. G. Medhi, A.E

NORTH EASTERN REGIONAL LOAD DESPATCH CENTRE GRID INCIDENCE REPORT

TO: ED (SO), CC, NEW DELHI.

DATE OF OCCURANCE	11	12	2007	TIME OF OCCURANCE	02	38
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(A) PREFault CONDITION:

SYSTEM FREQUENCY	49.92	Hz	ER EXPORT	2	MW
GENERATION (MW) PRIOR TO INCIDENCE					
TRIPURA	70	KHANDONG	0	KOPI LI	49
ASEB	150	RCNAGAR	76	LOKTAK	61
MeSEB	90	K'GURI	204	DOYANG	0
NAGALAND	-	RANGANADI	0	KOPI LI STG # II	0

MAJOR LINE/MACHINE OUTAGE / OPEN

SL NO	NAME OF THE LINE/MACHINE	REMARKS
1	132 kV LOKTAK-JIRIBAM - I	FAULTY SINCE 0801 HRS ON 28.10.2002
2	132 kV PANCHGRAM - PAILAPOOL	FAULTY SINCE 1655 HRS ON 5.10.2000.
3	220KV MISA- DIMAPUR-II	OPEN SINCE 2133 HRS ON 10.12.07(HV)
4	220 KV MISA - MARIANI	OPEN SINCE 2131 HRS ON 10.12.07(HV)
5	400 KV BONGAIGAON-BALIPARA-I	OPEN SINCE 2152 HRS ON 10.12.07(HV)
6	220 KV AGIA - SARUSAJAI	FAULTY SINCE 25.11.07

(B) DESCRIPTION OF INCIDENCE:

NER SYSTEM WAS RUNNING IN SYNCHRONISATION WITH THE NEW GRID THROUGH 400 KV BONGAIGAON- NEW SILIGURI-I & 220 KV BIRPARA-SALAKATI D/C LINES (.) AT 0238 HRS 220 KV SAMAGURI -SARUSAJAI D/C LINE TRIPPED DUE TO BURST OF Y-PH BUS PT AT SARUSAJAI CAUSING HEAVY JERK AT THE SYSTEM . THIS CAUSED SIMULTANEOUS TRIPPING OF 220KV SAMAGURI-BALIPARA(AT SAMAGURI) , 220KV SAMAGURI - MARIANI(AT MARIANI) , 220 KV KOPI LI-MISA-I,II&III(AT MISA) ,220 KV MISA - KATHALGURI(AT KATHALGURI) AND 220 KV MISA - DIMAPUR- I . DUE TO THIS TRIPPING SYSTEM COMPRISING OF AGBPP,UPPER ASSAM , NAGALAND , MANIPUR & LOKTAK GOT ISOLATED FROM REST OF THE GRID (52.3 HZ) & THE REST 132 KV SYSTEM COMPRISING OF SOUTH ASSAM , MEGHALAYA & MIZORAM GOT COLLAPSED DUE TO LOAD GENERATION MISMATCH . TRIPURA SYSTEM SURVIVED ISOLATELY . GENERATION GOT REDUCED AT AGBPP ,AGTPP, ASSAM, TRIPURA AND MEGHALAYA .

SYSTEM PROGRESSIVELY RESTORED AT 0341 HOURS(.)

(C) STATES AFFECTED :		(D) POWER STATIONS AFFECTED(GENERATION LOSS)			
AR.PRADESH	NIL	KATHALGURI	170 MW	LOKTAK	NIL
ASSAM	PART	R.C. NAGAR	FULL (76 MW)	DOYANG	NIL
MANIPUR	NIL	KOPI LI	49 MW	MeSEB	90 MW)
MEGHALAYA	FULL	KHANDONG	NIL	KOPI LI STAGE # II	NIL
MIZORAM	FULL	ASEB	40 MW		
NAGALAND	NIL	RANGANADI	NIL		
TRIPURA	NIL	TRIPURA	20 MW		

**NORTH EASTERN REGIONAL LOAD DESPATCH CENTRE
GRID INCIDENCE REPORT**

TO: ED (SO), CC, NEW DELHI.

DATE OF OCCURANCE	07	01	2008	TIME OF OCCURANCE	13	39
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(A) PREFault CONDITION:

SYSTEM FREQUENCY	49.28	Hz	NER IMPORT	55	MW
GENERATION (MW) PRIOR TO INCIDENCE					
TRIPURA	73	KHANDONG	0	KOPILI	49
ASEB	120	RCNAGAR	76	LOKTAK	66
MeSEB	55	K'GURI	210	DOYANG	0
NAGALAND	-	RANGANADI	0	KOPILI STG # II	0

MAJOR LINE/MACHINE OUTAGE / OPEN

SL NO	NAME OF THE LINE/MACHINE	REMARKS
1	132 kV LOKTAK-JIRIBAM - I	FAULTY SINCE 0801 HRS ON 28.10.2002
2	132 kV PANCHGRAM - PAILAPOOL	FAULTY SINCE 1655 HRS ON 5.10.2000.
3	220KV MISA- DIMAPUR-II	OPEN SINCE 2248 HRS ON 06.01.08(H/T ON HV)
4	132 KVDIMAPUR - MARIANI	UNDER S/D SINCE 0810 HRS ON 07.01.08
5	400 KV BONGAIGAON-BALIPARA I	OPEN SINCE 2028 HRS ON 06.01.08(H/T ON HV)
6	400 KV BALIPARA- RHEP -I	OPEN SINCE 2200 HRS ON 06.12.07(H/T ON HV)

(B) DESCRIPTION OF INCIDENCE:

NER SYSTEM WAS RUNNING IN SYNCHRONISATION WITH THE NEW GRID THROUGH 400 KV BONGAIGAON- NEW SILIGURI-II & 220 KV BIRPARA-SALAKATI D/C LINES (.) AT 1339 HRS CB AT SAMAGURI END OF 220 KV SAMAGURI -MISA CKT II GOT STUCKED(as heavy smoke was observed from this CB and confirmed by subsequent enquiry/analysis) AND AS A RESULT THE ASSOCIATED RELAYS OF THIS CB AT SAMAGURI END OPERATED(INDICATION: R PH, E/F, 67 CX, DIR O/C, BUT IT IS APREHANDED THE CB ITSELF GOT STUCKED) AND AT MISA END CB TRIPPED ON DP(Indication: D/P, R PH, 186 A&B). THIS FURTHER CAUSED TRIPPING OF ALL 220KV OUT GOING FEEDERS FROM MISA AND SAMAGURI FOLLOWED BY DISTURBANCES IN THE REST SYSTEM COMPRISING OF SOUTH/CENTRAL ASSAM, MEGHALAYA & MIZORAM, MANIPUR, NAGALAND DUE TO LOAD GENERATION MISMATCH. HOWEVER TRIPURA AND UPPER ASSAM SYSTEM SURVIVED IN ISOLATION WITH AGTPP/AGBBP GENERATION(REduced LEVEL) RESPECTIVELY. GENERATION/STATES AFFECTED ARE AS BELOW:

SYSTEM PROGRESSIVELY RESTORED AT 1408 HOURS(.)

(C) STATES AFFECTED :		(D) POWER STATIONS AFFECTED(GENERATION LOSS)			
AR.PRADESH	NIL	KATHALGURI	160 MW	LOKTAK	66 MW
ASSAM	PART	R.C. NAGAR	40 MW	DOYANG	NO M/Cs
MANIPUR	FULL	KOPILI	49 MW	MeSEB	FULL (55MW)
MEGHALAYA	FULL	KHANDONG	NO M/Cs	KOPILI STAGE # II	NO M/Cs
MIZORAM	FULL	ASEB	50 MW		
NAGALAND	FULL	RANGANADI	NO M/Cs		
TRIPURA	NIL	TRIPURA	20 MW		

**NORTH EASTERN REGIONAL LOAD DESPATCH CENTRE
GRID INCIDENCE REPORT**

TO: ED (SO), CC, NEW DELHI.

DATE OF OCCURANCE	04	02	2008	TIME OF OCCURANCE	13	33
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(A) PREFault CONDITION:

SYSTEM FREQUENCY	49.48	Hz	NER EXPORT	67	MW
GENERATION (MW) PRIOR TO INCIDENCE					
TRIPURA	71	KHANDONG	0	KOPILI	99
ASEB	142	RCNAGAR	74	LOKTAK	66
MeSEB	50	K'GURI	216	DOYANG	0
NAGALAND	-	RANGANADI	0	KOPILI STG # II	0

MAJOR LINE/MACHINE OUTAGE / OPEN		
SL NO	NAME OF THE LINE/MACHINE	REMARKS
1	132 kV LOKTAK-JIRIBAM - I	FAULTY SINCE 0801 HRS ON 28.10.2002
2	132 kV PANCHGRAM - PAILAPOOL	FAULTY SINCE 1655 HRS ON 5.10.2000.
3	400 KV BALIPARA - MISA - I	OPEN
4	400 KV BALIPARA- RHEP - I	OPEN
5	220 KV MISA - DIMAPUR-II	OPEN SINCE 1148 HRS OF 4.02.08
6	KOPILI BUS COUPLER	OPEN
7	220 KV MISA-KOPILI-I	OPEN SINCE 1151 HRS OF 4.02.08
7	400 KV BONGAIGAON - NEW SILIGURI I	OUT SINCE 1055 HRS OF 14.01.08

(B) DESCRIPTION OF INCIDENCE:

NER SYSTEM WAS RUNNING IN SYNCHRONISATION WITH THE NEW GRID THROUGH 400 KV BONGAIGAON- NEW SILIGURI - II & 220 KV BIRPARA-SALAKATI D/C LINES (.) AT 1333 HRS FOLLOWING TRIPPINGS OCCURRED -

1. 400/220 KV MISA ICT (BUS B Y-PH INSULATOR STRING IN 220 KV ICT BAY FAILED CAUSING E/F)
2. ALL 220 KV LINES FROM MISA TRIPPED.
3. 220 KV SAMAGURI-MARIANI (AT MARIANI END) AND 132 KV LOKTAK-JIRIBAM (AT LOKTAK END: AR43,O/C 667, R&B PH, 86 MASTERTRIP) ALSO TRIPPED.

AS A RESULT OF THESE TRIPPINGS, AGBPP & LOKTAK GENERATION SEPERATED FROM THE MAIN GRID & INITIALLY SURVIVED WITH MANIPUR, NAGALAND & UPPER ASSAM (TINSUKIA) SYSTEM OF ASEB (.) DURING THE PROCESS OF SYNCHRONISATION, THIS GENERATION ALSO TRIPPED RESULTING IN POWER INTERRUPTION IN MANIPUR, NAGALAND & UPPER ASSAM (.) SYSTEM PROGRESSIVELY RESTORED AT 1538 HRS (.)

(C) STATES AFFECTED :		(D) POWER STATIONS AFFECTED(GENERATION LOSS)			
AR.PRADESH	NIL	KATHALGURI	FULL	LOKTAK	FULL
ASSAM	PART	R.C. NAGAR	NIL	DOYANG	NIL
MANIPUR	FULL	KOPILI	50 MW	MeSEB	NIL
MEGHALAYA	NIL	KHANDONG	NIL	KOPILI STAGE # II	NIL
MIZORAM	NIL	ASEB	NIL		
NAGALAND	FULL	RANGANADI	NIL		
TRIPURA	NIL	TRIPURA	NIL		

NORTH EASTERN REGIONAL LOAD DESPATCH CENTRE GRID INCIDENCE REPORT

TO: ED(SO), NEW DELHI

Copy to: NPSD, New Delhi.

DATE OF OCCURANCE	07	04	2008	TIME OF OCCURANCE	10	07
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(A) PRE-FAULT CONDITION:

SYSTEM FREQUENCY	49.56	Hz	NER IMPORT	-58	MW
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GENERATION (MW) PRIOR TO INCIDENCE					
TRIPURA	71	KHANDONG	0	KOPILI	0
ASEB	170	RCNAGAR	70	LOKTAK	30
MeSEB	6.7	K'GURI	200	DOYANG	0
NAGALAND	-	RANGANADI	0	KOPILI STG # II	0

MAJOR LINE/MACHINE OUTAGE / OPEN		
SL NO	NAME OF THE LINE/MACHINE	REMARKS
1	132 kV LOKTAK - JIRIBAM I	FAULTY SINCE 0801 HRS ON 28.10.2002
2	132 kV PANCHGRAM - PAILAPOOL	FAULTY SINCE 1655 HRS ON 5.10.2000.
3	400 kV BALIPARA - MISA II	●OPEN SINCE 2240 HRS ON 06.04.08 (H/T ON O/V)
4	400 kV BALIPARA - RHEP-I	●OPEN SINCE 2118 HRS ON 03.02.08 (H/T ON O/V)
5	400 kV BONGAIGAON - NEW SILIGURI I	●OPEN SINCE 2019 HRS ON 05.04.08 (H/T ON O/V)
6	132 kV KARONG - KOHIMA	FAULTY SINCE 1015 HRS ON 20.02.06
7	220 KV SARUSAJAI-KARBILANGPI D/C	FAULTY SINCE 0006 HRS OF 30.03.08
8	132 KV MARIANI - MOKOKCHUNG	Faulty since 1512 Hrs on 12.03.08
9	220 KV MISA-KOPILI-III	OPEN SINCE 1000 HRS OF 03.04.08 DUE TO BREAKER PROBLEM AT KOPILI END.

(B) DESCRIPTION OF INCIDENCE:

NER SYSTEM WAS RUNNING IN SYNCHRONISATION WITH THE NEW GRID THROUGH 400 kV BONGAIGAON - NEW SILIGURI II & 220 kV BIRPARA - SALAKATI D/C LINES (.)

AT 1007 HR, 220/ 132 KV 100 MVA ICT AT DIMAPUR HANDTRIPPED, AS SMOKE & FIRE WAS OBSERVED IN EARTH PIT OF THE TRANSFORMER R -PH (.) AT THE SAME TIME, DIMAPUR - MARIANI LINE ALSO TRIPPED (AT DIMAPUR DIS. PROTECTION, B -PH, ZONE -I, 186 A&B, ARLO AND AT MARIANI : DIRECTIONAL E/F) (.) THIS TRIPPING RESULTED INTO TRIPPING OF 132 KV KOPILI - KHANDONG LINE AND 132 KV KHLIERIAT (PG) - KHLIERIAT (MeSEB) D/C LINE ON OVERLOADING (.) THIS TRIPPINGS RESULTED INTO ISOLATION OF MANIPUR, NAGALAND, SOUTH ASSAM AND MIZORAM FROM THE MAIN GRID & POWER INTERRUPTION OCCURRED DUE TO LOAD - GENERATION MISMATCH (.) R C NAGAR MACHINE SURVIVED WITH TRIPURA SYSTEM (.) THE R C NAGAR / TRIPURA SYSTEM WAS SYNCHRONISED WITH THE MAIN GRID AT 1031 HRS AT BADAPUR S/S (.)

LOKTAK GENERATION, WHICH WAS RUNNING WITH MANIPUR AND NAGALAND WAS SYNCHRONISED WITH THE MAIN GRID THROUGH 132 KV LOKTAK -JIRIBAM-II LINE AT 1128 HRS (.)

(C) STATES AFFECTED :		(D) POWER STATIONS AFFECTED(GENERATION LOSS)			
AR.PRADESH	NIL	KATHALGURI	NIL	LOKTAK	30 MW
ASSAM	SOUTH ASSAM	R.C. NAGAR	50 MW	DOYANG	NIL
MANIPUR	FULL	KOPILI	NIL	MeSEB	NIL
MEGHALAYA	NIL	KHANDONG	NIL	KOPILI STAGE # II	NIL
MIZORAM	FULL	ASEB	NIL	NAGALAND	FULL
NAGALAND	FULL	RANGANADI	NIL		
TRIPURA	ISOLATED	TRIPURA	33 MW		

ASSAM STATE ELECTRICITY BOARD	
1	<p>Issue • Tripping of 220kV Misa - Samaguri - 1 & 2 lines at Misa for faults in ASEB System Refer annexure table no.- 1</p> <p>Action • Review of settings & coordination of Misa - Samaguri, Samaguri-Sarusajai and Samaguri-Misa protection.</p>
2	<p>Issue • Undesirable tripping of POWERGRID lines at 132kV Badarpur Sub Station due to fault in ASEB (South Assam) system. Refer annexure table no.- 2</p> <p>Action • Checking of protection system on Panchgram - Lumshnong line. Checking & coordination of backup protection at Badarpur & Panchgram including 132/33KV transformers.</p>
MEGHALAYA STATE ELECTRICITY BOARD	
1	<p>Issue • Tripping of POWERGRID lines at 132kV Badarpur and Khliehriat Sub Stations of POWERGRID due to fault in MeSEB system. Refer annexure table no.- 2</p> <p>Action • Checking of protective system & coordination with Khliehriat - NEHU / Lumshnong / Neigrihms lines.</p>
P&E DEPARTMENT, MIZORAM	
1	<p>Issue • Tripping of POWERGRID lines at 132kV Badarpur Sub Station for faults in Mizoram system beyond Kolasib. Refer annexure table no.- 3</p> <p>Action • Checking of protection & coordination of relays with feeders of Mizoram from Kolasib.</p>
2	<p>Issue • Tripping of 132kV Aizawl - Zemabawk / Luangmual for faults in State System. Refer annexure table no - 5.</p> <p>Action • Checking of protection & coordination of relays with feeders of Mizoram from Kolasib.</p>
3	<p>Issue • Due to unreliable 48 Volt DC Supply at Zemabawk S/S (Mizoram), the PLCC Panel at Zemabawk S/s often trips and so, normally kept in off position. Healthiness of this PLCC link is crucial for restoration of system following power interruption / grid disturbance.</p> <p>Action • Repair of 48V dc supply at Zemabawk by Mizoram.</p>
4	<p>Issue • During the restoration of auxiliary power supply at Kolasib S/S on 24-11-07 after 3 days of interruption, the power supply module of Siemens</p>

	<p>numerical relay (7SA513) of Aizawl feeder got damaged. This is likely due to high/surge dc voltage at that time. Both the Main protection DC fuse of Aizawl and Badarpur feeder and Supply input fuse of both the numerical relays also got blown / fused.</p> <p>Action ➤ Connection of DG set to the 110 battery charger of Kolasib S/S by Mizoram is essential. Presently, 7.5 kVA DG set connection is available for control room lightings and Compressor motor of 3 SF6 CBs.</p>
ELECTRICITY DEPARTMENT, MANIPUR	
1	<p>Issue ➤ Tripping of Imphal-Yurembam line due to faults beyond Yurembam s/s on 132KV & 33KV system. Refer annexure table no. - 4</p> <p>Action ➤ Protection at Yurembam which does not operate needs to be checked. This issue was discussed in an earlier OCC meeting where Manipur stated that this was due to breaker problems at their substation and that there was a plan for replacing with new breakers.</p>
DEPARTMENT OF POWER, NAGALAND	
1	<p>Issue ➤ Tripping of 132kV Dimapur (PG)–Dimapur (NG) line due to faults in Nagaland System. Refer annexure table no - 5.</p> <p>Action ➤ Checking & coordination of relays at Damapur (Nagaland)</p>
NORTH EASTERN ELECTRIC POWER CO. LTD.	
1	<p>Issue ➤ Restoration of Autoreclose scheme on Kopili-Misa lines.</p> <p>Action ➤ Due to continuous problem of 48V DC source at KHEP the PLCC link with Misa is out of service since long. Further, the Auto Reclosure Scheme also kept out of service because of the problem. The matter has already been referred to KHEP by Misa for corrective measures.</p>
2	<p>Issue ➤ The Distance Relay of Misa # III at KHEP did not operate on BN fault dated 26.11.2007 and the delayed Back up protection operation tripped Misa–Kopili Circuit # I & II undesirably. The Fault was within zone-I of Kopili. Refer annexure table no. – 6</p> <p>Action ➤ Checking of protection of Kopili-Misa line.</p>
3	<p>Issue ➤ Operations of instantaneous O/C relay at RHEP NDTL Line during fault in GITL line despite clearance of fault at Nirjuli by DPR. Refer annexure table no.- 9</p> <p>Action ➤ Existence of instantaneous O/C protection at line is to be reviewed. The fault current recorded was more than 2500A and O/C setting</p>

	<i>is 2000A for CTR 500/1 at RHEP.</i>
4	<p>Issue • <i>On several occasions, during single phase to earth fault in 132kV Dimapur-Doyang Line, the Auto Reclosure at Dimapur (PG) end operated successfully but, in none of the cases the Auto Reclosure Scheme at Doyang end operated / attempted.</i></p> <p>Action • <i>Checking of auto-reclose scheme on Dimapur-Doyang lines.</i></p>

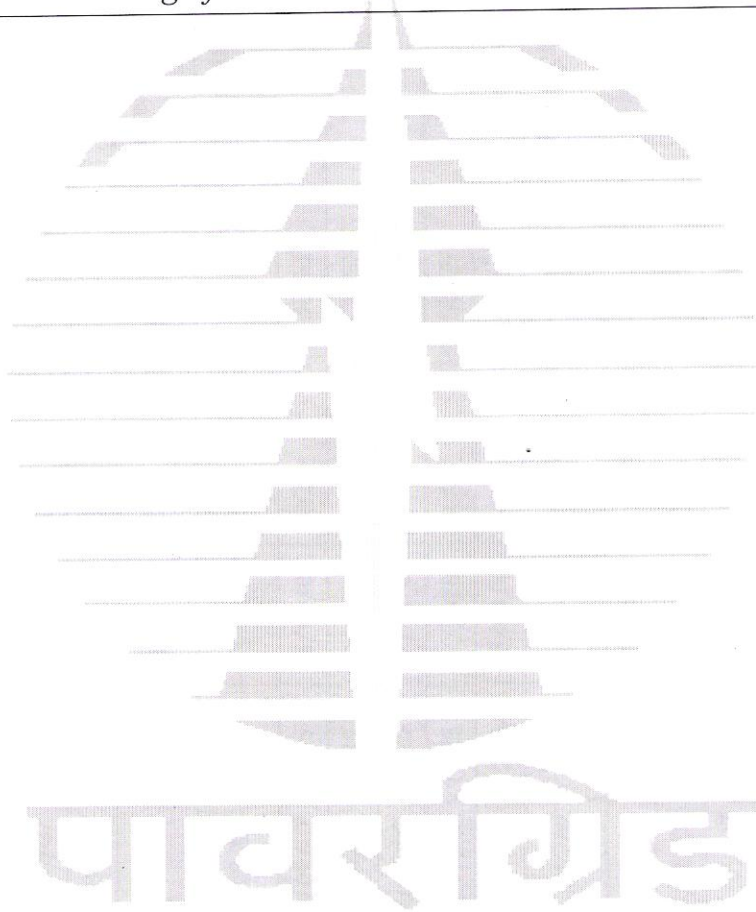


TABLE NO. - 1 (Assam)

SN	Name of line	Trip		Restoration		Relay flag Details	Remarks
		Date	Time	Date	Time		
1.0	Misa-Samaguri-1	28/06/07	12:01	28/06/07	12:06	PG: 21, RN, Z2	Reflected from ASEB line (Samaguri-Sarusajai)
2.0	Misa-Samaguri-2	28/06/07	12:01	28/06/07	12:07	PG: 21, RN, Z2	do
3.0	Misa-Samaguri-1	31/08/07	11:03	31/08/07	11:45	PG: BU EF	Do
4.0	Misa-Samaguri-2	31/08/07	11:04	31/08/07	12:12	PG: BU OC	Tripped on O/C due to tripping of ckt-1.
5.0	Misa-Samaguri-2	17/09/07	13:05	17/09/07	13:25	PG: BU EF	Reflected from ASEB line (Samaguri-Sarusajai)
6.0	Misa-Samaguri-1	18/09/07	09:45	18/09/07	10:24	PG: BU EF	Do
7.0	Misa-Samaguri-2	18/09/07	09:45	18/09/07	10:38	PG: BU EF	Do
8.0	Misa-Samaguri-1	07/10/07	14:25	07/10/07	14:35	PG: BU EF	Do
9.0	Misa-Samaguri-1	07/10/07	14:25	07/10/07	14:36	PG: BU EF	Do
10.0	Badarpur-Badarpur	07/04/07	23:54	08/04/07	00:15	PG: 21	Transient fault beyond ASEB SS
11.0	Badarpur-Badarpur	04/07/07	15:34	04/07/07	15:37	PG: BU EF	During tripping of transformer at ASEB
12.0	Badarpur-Badarpur	05/08/07	10:58	05/08/07	11:22	PG: BU EF	Fault in MeSEB-ASEB Line
13.0	Badarpur-Badarpur	05/08/07	12:33	05/08/07	12:39	PG: BU EF	Fault in MeSEB-ASEB Line
14.0	Badarpur-Badarpur	08/09/07	04:46	08/09/07	05:53	PG: BU EF	Fault in ASEB System

TABLE NO. - 2 (Meghalaya)

SN	Name of line	Trip		Restoration		Relay flag Details	Remarks
		Date	Time	Date	Time		
1.0	Badarpur-Khliehriat	07/10/07	08:51	07/10/07	09:01	PG: 21, YN, Z3	Fault beyond Khliehriat (SEB) SS
2.0	Khliehriat-Badarpur	06/08/07	06:45	06/08/07	06:52	PG: BU EF	E/F in Nehu-Khliehriat # II
3.0	Khliehriat-Khandong # I	06/08/07	06:45	06/08/07	06:52	PG: 21, YN, Z3	E/F in Nehu-Khliehriat # II

4.0	Khliehriat-Khandong # II	06/08/07	06:45	06/08/07	06:52	PG: 21, YN, Z3	E/F in Nehu-Khliehriat # II
5.0	Khliehriat-Khliehriat # I	06/08/07	22:35	07/08/07	01:31	PG: 21, YN, Z1	Rφ LA of Khliehriat- Nehu# II at Khliehriat (SEB) busted
6.0	Khliehriat-Khandong # I	07/08/07	08:51	07/08/07	09:06	PG: 21, YN, Z3	Snapping of conductor in Khliehriat-Neigrim Line
7.0	Khliehriat-Khandong # I	16/10/07	03:58	16/10/07	11:56	PG: 21, YN, Z1	Disc puncture at Khliehriat-Neigrim feeder at Neigrim end
9.0	Khliehriat-Khandong # I	16/11/07	22:13	16/11/07	22:42	PG: 21, YN, Z1	CT brusted at MeSEB Lumshnong

TABLE NO. - 3 (Mizoram)

SN	Name of line	Trip		Restoration		Relay flag Details	Remarks
		Date	Time	Date	Time		
1.0	Badarpur-Kolasib	18/09/07	13:48	18/09/07	13:58	PG: BU EF	Fault Mizoram System
2.0	Badarpur-Kolasib	18/09/07	14:24	18/09/07	15:10	PG: BU EF	Fault Mizoram System
3.0	Badarpur-Kolasib	19/09/07	16:54	19/09/07	17:09	PG: BU EF	Fault Mizoram System
4.0	Aizawl-Zemabawk/Luangmual	24/04/07	14:00	24/04/07	14:25	PG: BU EF	33/11kV Transformer at Luangmual SS Tripped
5.0	Aizawl-Zemabawk/Luangmual	06/05/07	15:15	06/05/07	15:41	PG: BU EF	132kV Zemabawk-Saitual feeder tripped at Zemabawk
6.0	Aizawl-Zemabawk/Luangmual	06/05/07	15:50	06/05/07	16:10	PG: BU EF	132kV Zemabawk-Saitual feeder tripped at Zemabawk during charging
7.0	Aizawl-Zemabawk/Luangmual	03/06/07	13:08	03/06/07	13:31	PG: BU OC	132kV Zemabawk-Serchip feeder tripped at Zemabawk
8.0	Aizawl-Zemabawk/Luangmual	17/09/07	15:59	17/09/07	16:09	PG: BU OC	132kV Zemabawk-Serchip feeder tripped at Zemabawk
9.0	Aizawl-Zemabawk/Luangmual	07/12/07	21:55	07/12/07	22:28	PG: BU OC	Aizawl-Serchip SEB Line Tripped

TABLE NO. - 4 (Manipur)

SN	Name of line	Trip		Restoration		Relay flag Details	Remarks
		Date	Time	Date	Time		
1.0	Imphal-Imphal	01/09/07	12:18	01/09/07	12:28	PG: BU EF	Due to tripping of Yurembam-Ningthoukhong 132 KV line (SLDC)
2.0	Imphal-Imphal	10/09/07	11:49	10/09/07	12:04	PG: BU EF	Due to tripping of Yurembam-Ningthoukhong 132 KV line (SLDC)
3.0	Imphal-Imphal	12/09/07	09:45	12/09/07	09:58	PG: BU EF	Due to tripping of Yurembam-Ningthoukhong 132 KV line (SLDC)
4.0	Imphal-Imphal	12/09/07	10:10	12/09/07	10:20	PG: BU EF	Due to tripping of Yurembam-Ningthoukhong 132 KV line (SLDC)
5.0	Imphal-Imphal	14/09/07	11:05	14/09/07	11:08	PG: BU EF	Due to Loktak(NHPC)-Ningthoukhong (SLDC) 132 KV line
6.0	Imphal-Imphal	14/09/07	12:12	14/09/07	12:19	PG: BU EF	Due to Loktak(NHPC)-Ningthoukhong (SLDC) 132 KV line
7.0	Imphal-Imphal	30/09/07	16:05	30/09/07	16:20	PG: BU EF	Due to 33 KV tripping of Iroisemba-Yurembam line (SLDC)
8.0	Imphal-Imphal	10/10/07	12:47	10/10/07	13:21	PG: BU EF	Due to Loktak(NHPC) generation failed
9.0	Dimapur-Imphal	23/02/08	12:25	23/02/08	12:38	DMR: 21Z2RY	Loktak-Ninthongum Line Tripped at same time
10.0	Dimapur-Imphal	03/03/08	15:55	03/03/08	16:05	DMR: 21Z2RY	Loktak-Ninthongum Line Tripped at same time
11.0	Imphal-Imphal	12/1/08	11:10	12/1/08	11:30	PG: BU EF	Imphal- Ninthongum MED Feeder Tripped
12.0	Imphal-Imphal	15/01/08	05:42	15/01/08	06:20	PG: BU EF	Imphal- Ninthongum MED Feeder Tripped
13.0	Imphal-Imphal	09/03/08	05:15	09/03/08	05:30	PG: BU EF	Imphal- Ninthongum MED Feeder Tripped

TABLE NO. - 5 (Nagaland)

SN	Name of line	Trip		Restoration		Relay flag Details	Remarks
		Date	Time	Date	Time		
1.0	Dimapur (PG)-Dimapur (State)	15/10/07	11:03	15/10/07	11:10	PG: BU O/C	Fault in 132kV Kohima-Kiphiri Feeder
2.0	Dimapur (PG)-Dimapur (State)	15/10/07	02:40	15/10/07	03:15	PG: BU O/C	Fault in 132kV Dimapur (N)-Kohima Feeder
3.0	Dimapur (PG)-Doyang # 1	04/11/07	10:50	04/11/07	10:55	PG: 21, BN, Z3	Fault in 132kV Kohima-Mukokchung Feeder

TABLE NO. - 6 (NEEPCO)

SN	Name of line	Trip		Restoration		Relay flag Details	Remarks
		Date	Time	Date	Time		
1.0	Misa-Kopili1	26/11/07	10:43	26/11/07	10:57	PG: BU EF	Fault was at Kopili-Misa # 3
2.0	Misa-Kopili-2	26/11/07	10:43	26/11/07	11:04	PG: BU EF	
3.0	Misa-Kopili-3	26/11/07	10:43	26/11/07	11:06	PG: 21, BN, Z1 NEEPCO: BU EF	
4.0	Khandong-Kopili	15/01/08	23:27	16/01/08	10:31.	KHD:21	Tripped due to relay problem at Khandong
5.0	Khandong-Kopili	31/01/08	06:14	31/01/08	11:08	KHD:21Z3	Tripped due to CB problem at Khandong
6.0	NDTL	02/08/07	10:15	02/08/07	10:30	RHEP : OC	Gohpur: DPR
7.0	NDTL	10/08/07	09:37	10/08/07	09:49	RHEP : OC	Gohpur: DPR