

North Eastern Regional Power Committee

Agenda

for

58th Protection Sub-Committee Meeting

Date : 14/03/2023 (Tuesday)

Time : 10:30 hrs

Venue : NERPC Conference Hall, Shillong

C O N F I R M A T I O N O F M I N U T E S
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1. **CONFIRMATION OF MINUTES OF THE 57th PROTECTION SUB-COMMITTEE MEETING OF NERPC.**

Minutes of the 57th PCC Meeting held on 15th February 2022 (Tuesday) at NERPC Conference Hall, Shillong was circulated vide no. No.: NERPC/SE (O)/PCC/2021/3288-3325 dated 25th March 2022.

The Sub-committee may confirm the minutes of 57th PCCM of NERPC as no comments/observations were received from the constituents.

B. ITEMS FOR DISCUSSION

B.1 Protection Audit of NER:

First phase of Third-Party protection Audit (2013-14) was completed in 2015 and in Second Stage of Protection Audit (2017-18) numerous stations were covered. However, few stations are yet to be audited. Status for second phase of Protection Audit:

Name of the state/utility	Name of the station(s)/Status
Arunachal Pradesh	132/33kV Along, 132/33kV Pasighat, 220/132/33kV Deomali, 132/33kV Daporizo, 132/33kV Lekhi, 132/33kV Tippi, 132/33kV Chimpu, 132/33kV Khupi.
Assam	Completed in Nov'21.
Manipur	Yet to be intimated, i.r.o some Substations
Meghalaya	400/220/132kV Byrnihat, 132kV Mawphlang, 132kV Mustem, 132kV Umiam
Mizoram	Yet to be intimated, i.r.o some Substations
Nagaland	132kV Wokha, 132kV Sanis, 132kV Kiphire
Tripura	Yet to be intimated, i.r.o some Substations

Status of the Implementation of Third Party Protection Audit recommendation in NER held in 2017-18:

Name of the Utility	No. of Stations covered	% of Recommendation completed as on 55 th PCC meeting 11-11-2020	Current Status
Ar. Pradesh	3	0	
Assam	16	38	
Manipur	4	40	
Meghalaya	10	11	
Mizoram	3	8	
Nagaland	3	81	
Tripura	11	0	

Utilities are requested to update the current status of implementation of the Third Party Protection Audit.

Members may please discuss.

B.2 Review of settings for Important elements:

- a. All 132kV feeders of DHEP along with Mokokchung(NAG), Sanis and Wokha – DoP Nagaland to implement relay settings as discussed in the 57th PCC meeting and implementing Carrier inter trip on the lines.
- b. Downstream co-ordination at 132kV Zuangtui(Zemabawk) completed. NERTS to revert to original zone timings at Melriat- Mizoram to submit relay settings for the lines and NERTS to revert back to original settings after verification of relay settings of Mizoram.
- c. Co-ordination of Tipaimukh relay settings with Aizawl and Jiribam- suggested settings to be presented in the meeting
- d. Review of Distance Protection settings at Ningthoukong for Churachandpur D/C - Implementation status of revised settings to be confirmed
- e. Review of zone 3 setting for Imphal-Ningthoukong line at Imphal end in and coordinating it with downstream lines.

Members may please discuss

B.3 Implementation of Auto-Reclosure on Z-I operation:

In the discussions of the Sub-group on 12-04-2021 the following points were noted:

- a. Auto-Reclosure is very much required for maintaining system stability, reliability and uninterrupted power supply.
- b. Presently it will take some time for the state utilities to implement the PLCC and establish carrier communication between stations.
- c. The operation of Auto-Reclosure on Z-I operation at the local end independent of carrier healthiness is required.

In the 57th and 56th PCC meeting the forum approved the implementation of Auto-Reclosure on Z-1 without carrier check for all lines except the lines with generating stations at both the ends and requested the utilities to implement the AR scheme at the earliest.

B.4 Analysis and Discussion on Major Grid Disturbances which occurred in NER grid w.e.f September 2022 to February 2023:

Items related to Arunachal Pradesh

SL NO.	DESCRIPTION OF EVENT	DISCUSSION POINTS	DELIBERATION OF SUB COMMITTEE
SEPTEMBER-2022			
1	Tripping of 132 kv Balipara-Tenga line on 07/09/2022	No DR available	
2	Tripping of 132 kv Along-Pasighat line on 10/09/2022	As per DR analysis, suspected LG fault at phase C. Fault current=238A, angle=-15.54 degrees. Cleared in 630ms	
3	Tripping of 132 kv Along-Daporijo line on 21/09/2022	No DR available	
4	Tripping of 132 kv Balipara-Tenga line on 22/09/2022	No DR available	
5	Tripping of 132 kv Along-Pasighat line on 24/09/2022	No DR available	
6	Tripping of 132 kv Balipara-Tenga line on 24/09/2022	No DR available	
OCTOBER-2022			
1	Tripping of 132 kv Balipara-Tenga line and Dikshi HEP unit 1 on 17/10/2022	No DR available	

2	Tripping of 132 kv Along-Pasighat line on 17/10/2022	As per DR analysis, suspected LG fault at phase C. Fault current=26.583A, angle=-12.795 degrees. Cleared in 50.8 ms. : Relay Indication from Along end:Main1- Earth Fault	
NOVEMBER-2022			
1	Tripping of 132 kv Ziro-Ranganadi line on 05/11/2022	As per DR analysis, suspected LL fault between phases B&C. Ib=2524A, Ic=2402A. : Relay Indication from Ranganadi end: Main1- DP,Z II,Y-B.	
DECEMBER-2022			
1	Tripping of 132 kv Balipara-Tenga line on 04/12/2022	As per DR analysis, suspected LG fault at phase B. Fault current=9668.46A, angle=-18.87 degrees. Cleared in 80 ms. Relay Indication from Balipara end:Main1- DP,ZI, Y-E, FD:0.33 km. Relay Indication from Tenga end:Main1- Undervoltage.	
2	Tripping of 132 kv Along-Pasighat line on 24/12/2022	No DR available	
FEBRUARY-2022			
1	Tripping of 132 kv Along-Daporijo line on 19/02/2023	No DR available	

Items related to Assam

SL NO.	DESCRIPTION OF EVENT	DISCUSSION POINTS	DELIBERATION OF SUB COMMITTEE
SEPTEMBER-2022			
1	Tripping of 132 kv Gohpur-BNC(Pavoi) D/C lines on 03/09/2022	As per DR analysis, suspected LLG fault at phase B &C. Ib=297A, Ic=213A,Vb=8 kv, Vc=5.089kv. Relay from gohpur end: Main1-	

		overcurrent relay Relay from Pavoi end: Main1-DP, ZI, R-Y, FD: 30.7 Kms	
2	Tripping of 132 kv LTPS-NTPS on 14/09/2022	No DR available	
3	Tripping of 132 kv LTPS-Sonari on 14/09/2022	No DR available	
4	Tripping of 132 kv LTPS-Moran on 14/09/2022	No DR available	
5	Tripping of 132 kv LTPS-Nazira D/C on 14/09/2022	No DR available	
6	Tripping of 132 kv Nazira-Teok on 14/09/2022	No DR available	
7	Tripping of 132 kv Sonabil-Depota on 22/09/2022	No DR available	
8	Tripping of 132 kv Sonabil-Ghoramari on 22/09/2022	No DR available	
9	Tripping of 132 kv Kahilipara-Sarusajai 2&4 on 23/09/2022	No DR available	
10	Tripping of 132 kv Sonabil-Depota on 23/09/2022	No DR available	
11	Tripping of 132 kv Sonabil-Ghoramari on 23/09/2022	No DR available	
12	Tripping of 132 kv Narengi-Sonapur on 27/09/2022	No DR available	

13	Tripping of 132 kv Sarusajai-Kamakhya on 28/09/2022	No DR available	
14	Tripping of 132 kv Jiribam-Pailapool on 29/09/2022	As per DR analysis, suspected LG fault at phase B. Fault current=2233.754A, angle=-55.802 degrees. Cleared in 133ms. Relay Indication from Jiribam end:Main1- DP, ZII, Y-E, FD: 31.6km	
15	Tripping of 132 kv Srikona-Pailapool on 29/09/2022	As per DR analysis, suspected LG fault at phase B. Fault current=1449A, angle=-166.468 degrees. Cleared in 352ms. Relay Indication from Pailapool end:Main1- Earth fault. Relay Indication from Srikona end: Main1- DP, ZII, Y-E, FD: 31.6km	
OCTOBER-2022			
1	Tripping of 220 kv Karbi Langpi- Sarusajai D/C line 1	As per DR analysis, suspected LG fault at phase Y. Fault current=1559.115A, angle=-56.820 degrees. Cleared in 50ms. Relay Indication from Sarusajai end: Main1- DP, ZI, Y-E	
2	Tripping of 220 kv Karbi Langpi- Sarusajai D/C line 2	As per DR analysis, suspected LG fault at phase Y. Fault current=1358.527A, angle=-64.579 degrees. Cleared in 60ms. Relay Indication from Sarusajai end: Main1- DP, ZI, Y-E.	
3	Tripping of 132 kv Pailapool-Srikona on 10/10/2022	As per DR analysis, suspected LG fault at phase C. Fault current=5.771A,	

		angle=-58.298 degrees. Cleared in 327ms. Relay Indication from Pailapool end:Main1- DP, ZI, B-E, FD:1.7km. Relay Indication from Srikona end: Main1- DP, ZII, B-E, FD:31km	
	Tripping of 132 kv Pailapool-Jiribam on 10/10/2022	As per DR analysis, suspected LG fault at phase C. Fault current=2117.424A, angle=-67.532 degrees. Cleared in 87ms. Relay Indication from Jiribam end: Main1- DP, ZI, B-E, FD:12.02 km	
NOVEMBER-2022			
1	Tripping of 220 kv BTPS-Rangia 1on 18/11/2022	As per DR analysis, suspected LG fault at phase R. Fault current=427.704A, angle=99.47degrees. Cleared in 550ms. Zone 4 picked up. : Relay Indication from Rangia end: Main1- DP,Z II, R-E. No tripping at BTPS end.	
2	Tripping of 220 kv BTPS-Rangia 2 on 18/11/2022	As per DR analysis, suspected LG fault at phase R. Fault current=438A, angle=75.84degrees. Cleared in 556ms. Zone 2 picked up. : Relay Indication from Rangia end:Main1- DP,Z II, B-E	
3	Tripping of 220 kv BTPS-Agia 1 on 18/11/2022	As per DR analysis, suspected LG fault at phase R. Fault current=1553.107A, angle=-80.22degrees. Cleared in 565ms. Zone 4 picked up. Relay Indicationfrom Agia end: Main1-	

		DP,Z II, RE. Relay Indication from BTPS end:Main1- DP,Z-IV, R-E,	
4	Tripping of 220 kv BTPS-Agia 2 on 18/11/2022	As per DR analysis, suspected LG fault at phase C. Fault current=2007A, angle=-69.152degrees Cleared in 690ms. Zone 2&3 picked up. Relay Indication from Agia end:Main1- DP,Z II, BE.	
5	Tripping of 220 kv BTPS-Salakati 2 on 18/11/2022	As per DR analysis, suspected LG fault at phase C. Fault current=7793.342A, angle=160.75degrees. Cleared in 355ms. Relay Indication from BTPS end: Main1- DP, Z-IV, B-E. Relay Indication from Salakati end: Main1- DP,Z II, B-E, FD:3.75 km	
6	Tripping of 315 MVA, 400/220/33 kv ICT 1 at BgTPP	No DR available	
7	Tripping of 315 MVA, 400/220/33 kv ICT 2 at BgTPP	No DR available	
8	Tripping of 220 kv BTPS Main Bus 1	No DR available	
9	Tripping of 220 kv BTPS Main Bus 2	No DR available	
FEBRUARY-2023			
1	Tripping of 132 KV Khandong-Khliehriatl on 08/02/2023	No DR available	
2	Tripping of 132 KV New Rangia-Rangia 1&2 on 09/02/2023	As per DR analysis, line collapse suspected. Loss of current in all phases. Voltage profile of all phases uniform and normal.	

3	Tripping of 132 KV Panchgram-Lumshong on 18/02/2023	As per DR analysis, suspected LG fault at phase A. Fault current=3.915KA, angle=-62.83 degrees. Cleared in 172 ms	
4	Tripping of 132 KV Panchgram-Hailakandi on 18/02/2023	No DR available	
5	Tripping of 132 KV Panchgram-Badarpur on 18/02/2023	As per DR analysis, suspected LG fault at phase A. Fault current=1129.767A, angle=-60.913 degrees. Cleared in 178 ms	

Items related to Meghalaya

SL NO.	DESCRIPTION OF EVENT	DISCUSSION POINTS	DELIBERATION OF SUB COMMITTEE
SEPTEMBER-2022			
1	Tripping of 132 kv Mynto Lekhsa-Khleirihrat D/C line on 04/09/2022	As per DR analysis, suspected LG fault at phase A. Fault current=474.6A, angle=34.632 degrees. Cleared in 79 ms. Relay Indication from Lehka end: Main1-DP, ZI, B-E, FD: 50.24 km Relay Indication Main1-DP, ZIII, B-E	
2	Tripping of 132 kv Mynto Lekhsa-Khleirihrat D/C line on 09/09/2022	As per DR analysis, suspected LLG fault between phases A & C. Ia=1910A, Ic=2892.63A, In=1777.765A Cleared in 90 ms Relay Indication from Khleirihrat end: Main1: DP, ZI, R-B-E, FD: 18.24 km	
3	Tripping of 132 kv	As per DR analysis, suspected LLG	

	Umiam stg 1-stg 3 line on 21/09/2022	<p>fault between phases A & B.</p> <p>Ia=3534.201A, Ib=3652.30A,Ic=4457.209A Cleared in 120 ms</p> <p>Relay Indication from Umiam stg 1 end: Main1-DP, ZI, R-Y-E, FD: 0.993 km</p> <p>Relay Indication from Umiam stg 3 end: Main1-DP, ZI, R-Y-E</p>	
4	Tripping of 132 kv Umiam stg 1-stg 2 line on 21/09/2022	No DR available	
5	Tripping of 132 kv Umiam stg 1-Mawphlang D/C line on 21/09/2022	<p>As per DR analysis, suspected LLLG fault Ia=332.562A, Ib=372.505A,Ic=349.667A .</p> <p>Low voltages in all phases.Cleared in 345 ms</p> <p>: Relay Indication from Mawphlang end: Main1-DP, ZII, R-Y-B, FD:49.36 km</p> <p>Relay Indication from Umium stg 1 end: Main1-DP, ZI, R-Y, FD:11.4 km</p>	
6	Tripping of 132 kv Umiam stg 1-Mawlai line on 21/09/2022	<p>As per DR analysis, suspected LLLG fault Ia=729A, Ib=752.97A,Ic=767.895A .</p> <p>Low voltages in all phases.Cleared in 480.64 ms</p> <p>Relay Indication from Mawlai end: Main1-DP, ZI, R-Y, FD:11.4 km</p>	
7	Tripping of 132 kv Umiam stg 1-Umiam line on 21/09/2022	As per DR analysis, low voltages and low currents observed in all phases throughout.	
8	Tripping of 132 kv Umiam -Nehu line on 21/09/2022	<p>As per DR analysis, suspected LLLG fault Ia=1341.325A, Ib=1410.410A,Ic=1449.714A .</p> <p>Low voltages in all phases.Cleared in</p>	

		496 ms Relay Indication from NEHU end: Main1-DP, ZIII, R-Y-B, FD: 15.57 km	
9	Tripping of 132 kv Nehu-NEIGRIHMS line on 21/09/2022	As per DR analysis, suspected LLLG fault Ia=1291.148A, Ib=1398.172A,Ic=1424.71A . Low voltages in all phases.Cleared in 484 ms Relay Indication from NEHU end: Main1-Over Current	
10	Tripping of 132 kv Nehu-Mawlai line on 21/09/2022	As per DR analysis, suspected LLLG fault Ia=668A, Ib=717.98A,Ic=714.531A . Low voltages in all phases.Cleared in 498 ms Relay Indication from NEHU end: Main1-DP, ZIII, R-Y-B, FD: 37.69 km	
11	Tripping of 132 kv Khliehrat-Mustam line on 21/09/2022	As per DR analysis, suspected LLLG fault Ia=1084.21A, Ib=1127.654A,Ic=1138.556A. Low voltages in all phases.Cleared in 243 ms. Relay Indication from Khliehrat end: Main1-DP, ZII, R-Y-B, FD: 81.7 km	
12	Tripping of 132 kv Khliehrat- NEIGRIHMS line on 21/09/2022	As per DR analysis, suspected LG fault at phase A. Fault current=8080.017A, angle=-37.40 degrees. Cleared in 161 ms. Relay Indication from Khliehrat end: Main1-DP, ZIII, R-Y-B, FD: 93.01 km	
13	Tripping of 132 kv Lekhsa- Khleirihrat(ME) D/C line on 25/09/2022	No DR available	

OCTOBER-2022

1	Tripping of 132 kv Lekhsa-Khleirihrat line 1 on 11/10/2022.	As per DR analysis, suspected LL fault between phases R&Y. Ir=4036.206A, Iy=4780.909A. : Relay Indication from Lekhsa end Main1- DP, ZI R-Y-E. Relay Indication from Khleirihrat end :Main1- DP, ZI R-Y-E, FD: 21.44 Kms.	
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Items related to Nagaland

SL NO.	DESCRIPTION OF EVENT	DISCUSSION POINTS	DELIBERATION OF SUB COMMITTEE
SEPTEMBER-2022			
1	Tripping of 132 kv Dimapur PG- Dimapur(DoP) line 1 on 22/09/2022.	As per DR analysis, no voltage data obtained. Current profile seems uniform. SF6 zone trip signal of bus compartment has resulted in tripping From Dimapur (DoP, Nagaland): Overloading of line as circuit -2 is out due to bus bar problem at PG end	
2	Tripping of 132 kv Dimapur PG- Dimapur(DoP) line 1 on 22/09/2022.	As per DR analysis, line collapse suspected. Voltage lost in all phases and current lost in all phases.	
3	Tripping of 132 kv Kohima-Chiephobozou line on 28/09/2022.	No DR available	
4	Tripping of 132 kv Kohima-Meluri line on 28/09/2022.	As per DR analysis, suspected LG fault at phase C. Fault current=165.618A, angle=-53.964 degrees. Cleared in 544ms. Relay Indication from Kohima end: Main1-Earth Fault	
5	Tripping of 132 kv Karong-Kohima line on	As per DR analysis, suspected LG fault at phase C. Fault	

	28/09/2022.	current=200.671A, angle=110 degrees. Cleared in 2500ms. Relay Indication from Kohima end: Main1-Earth Fault	
OCTOBER-2022			
1	Tripping of 132 kv Dimapur PG-Dimapur line on 07/10/2022.	No DR available	
2	Tripping of 132 kv Sanis- Wokha line on 07/10/2022.	No DR available	
3	Tripping of 132 kv Kohima-Chiephobozou line on 07/10/2022.	As per DR analysis, suspected LG fault at phase B. Fault current=587.939A, angle=-61.862 degrees. Cleared in 253 ms. Relay Indication from Kohima end: Main1- DP, ZIII, B-E, FD: 36.24 km	
4	Tripping of 132 kv Kohima-Meluri line on 07/10/2022.	No DR available	
5	Tripping of 132 kv Karong-Kohima line on 07/10/2022.	As per DR analysis, suspected LG fault at phase C. Fault current=952.594A, angle=-61.409 degrees. Cleared in 80 ms. Relay Indication from Kohima end: Main1- Earth Fault	
6	Tripping of 132 kv Doyang-Mokokchung line on 14/10/2022.	As per DR analysis, suspected earth fault. Fault current in neutral=221.85A. Rise in fault current is not sharp. Cleared in 613 ms. : Relay Indication from Doyang end: Main1- Over Current. Relay Indication from Mokokchung end:Main1- Earth Faul	
7	Tripping of 132 kv	As per DR analysis, suspected LG	

	Karong-Kohima line on 24/10/2022.	fault at phase A. Fault current=818A, angle=-61.863 degrees. Zone 1 picked up in 40.86ms. Relay Indication from Kohima end: Main1-DP, ZI, R-E	
8	Tripping of 132 kv Sanis-Wokha line on 24/10/2022.	No DR available	
9	Tripping of 132 kv Karong-Kohima line on 25/10/2022.	No DR available	
10	Tripping of 132 kv Kohima-Meluri line on 25/10/2022.	As per DR analysis, suspected LL fault between phases A&B. Ia=292A, Ib=243A. Zone 1 picked up. Cleared in 83.2 ms. Relay Indication from Kohima end:Main1- DP, ZI, R-Y, FD:20.46 km	
11	Tripping of Likhimro Unit 1 &2 on 25/10/2022	No DR available	
12	Tripping of 132 kv Karong-Kohima line on 26/10/2022.	As per FIR, tripping due to broken jumper at loc 302 between Karong-Maram. No DR available.	
13	Tripping of 132 kv Kohima-Meluri line on 26/10/2022.	As per DR analysis, suspected LG fault at phase A. Fault current=755A, angle=115.918 degrees. Cleared in 292.3 ms. Relay Indication from Kohima end: Main1- Over Current.	
14	Tripping of 132 kv Karong-Kohima line on 26/10/2022.	As per DR analysis, suspected LG fault at phase A at Karong end. Fault current=731.3A, angle=-65 degrees. Cleared in 281.55 ms. Relay Indication from Kohima end:Main1- Backup Earth Fault. No	

		tripping from Karong end.	
NOVEMBER-2022			
1	Tripping of 132 kv Dimapur-Kohima line on 02/11/2022.	No DR available	
2	Tripping of 132 kv Karong-Kohima line on 02/11/2022.	As per DR analysis, suspected LG fault at phase A. Fault current=241.2A, angle=160 degrees. Cleared in 578 ms. Relay Indication from Karong end:Main1- EF,R-E. Relay Indication from Kohima end:Main1- DP, ZI, R-E. As per DR, R-E Fault was in 132 kV Karong-Kohima Line at a distance 34.3 Kms from Kohima.DPR at Kohima detects fault in Z I, however CB fails to clear fault from the system. Due to non clearance of fault, fault was cleared from remote end i.e Dimapur on Z-III(800 msec) & Chimpubozou.	
3	Tripping of 132 kv Kohima-Chiephobozou line on 02/11/2022.	As per DR analysis, suspected LG fault at phase A. Fault current=678.37A, angle=-64.85 degrees. Cleared in 703 ms.	
4	Tripping of 132 kv Kohima-Meluri line on 26/10/2022.	As per DR analysis, suspected LG fault at phase A. Fault current=95A, angle=-74.37 degrees. Cleared in 340 ms. Relay Indication from Meluri end:Main1- Backup Earth Fault	

Items related to Manipur

SL NO.	DESCRIPTION OF EVENT	DISCUSSION POINTS	DELIBERATION OF SUB COMMITTEE
JANUARY-2023			
1	Tripping of 132 kv Loktak-Rengpa line on 20/01/2023.	As per DR analysis, suspected LG fault at phase C. Fault current=738A, Angle=-25.64 degrees. Cleared in 120 ms. Relay Indication from Loktak end: Main1- In>1 Trip. Relay Indication from Rengpa end: Main1- Any Start	
2	Tripping of 132 kv Imphal(PG)-Ningthoukhong line on 20/01/2023.	As per DR analysis, suspected LG fault at phase C. Fault current=1335.305A, Angle=-45.762 degrees. Cleared in 463 ms. Zone 3 picked up. Relay Indication from Imphal end: Main1- DP, ZI, R-E, FD:19.27 km	
3	Tripping of 132 kv Loktak-Imphal(PG) line on 20/01/2023.	As per DR analysis, suspected LG fault at phase C. Fault current=2.278KA, Angle=-41.714 degrees. Cleared in 519.53 ms. Zone 3&2 picked up. Relay Indication from Imphal end:Main1- DP, ZII, B-E, FD:33.6 Kms	

Items related to Mizoram

SL NO.	DESCRIPTION OF EVENT	DISCUSSION POINTS	DELIBERATION OF SUB COMMITTEE
SEPTEMBER-2022			
1	Tripping of 132 kv Aizawl-Melriat line on 10/09/2022.	As per DR analysis, suspected LG fault at phase B. Fault current=2039.324A, Angle=-27.216 degrees. Cleared in 81 ms. Relay Indication from Mizoram end:Main1: DP, ZI, Y-E, FD: 1.4 kms Relay Indication from Melriat end:Main1: DP, ZI, Y-E, FD:4.23 kms	
2	Tripping of 132 kv Zuangtui-Melriat line on 10/09/2022.	As per DR analysis, suspected LG fault at phase B. Fault current=1845.99A, Angle=-42.93 degrees. Cleared in 258ms. Relay Indication from Melriatend:Main1:Backup Earth Fault, Y-ph	
OCTOBER-2022			
1	Tripping of 132 kv Turiat-Kolasib line on 03/10/2022.	No DR available	
2	Tripping of 132 kv Turiat-Kolasib line on 17/10/2022.	No DR available	
DECEMBER-2022			
1	Tripping of 132 kv Turiat-Kolasib line on 24/12/2022.	No DR available	
2	Tripping of 132 kv Aizawl-Lungmual line on	As per FIR, three phase to earth fault in 33 KV cable. Y	

	29/12/2022.	phase of power transformer 2 punctured. No DR available.	
3	Tripping of 132 kv Aizawl-Lungmual line on 31/12/2022.	No DR available	

Items related to Tripura

SL NO.	DESCRIPTION OF EVENT	DISCUSSION POINTS	DELIBERATION OF SUB COMMITTEE
SEPTEMBER-2022			
1	Tripping of 132 kv Monarchak-Rokhia line on 05/09/2022	As per DR analysis, suspected LG fault at phase C. Fault current=1635.83A, angle=-62.587 degrees. Cleared in 426 ms. Zone 2,3 picked up. Relay Indication from Monarchak end:Main1: DP, ZII, B-E, FD: 26.12 km	
2	Tripping of 132 kv Rokhia-Agartala D/C line on 05/09/2022	As per DR analysis, suspected LG fault at phase B. Fault current=2078.476A, angle=-76.5 degrees. Cleared in 520 ms. Zone 2,3 picked up. Relay Indication from Agartala end:Main1: DP, ZII, Y-E, FD: 37.18 Kms	
3	Tripping of 132 kv Monarchak-Rokhia line on 08/09/2022	As per DR analysis, suspected LG fault at phase C. Fault current=1091.476A, angle=-11.314degrees. Cleared in 460 ms. Zone 2,3 picked up.	

		Relay Indication from Monarchak end:Main1: DP, ZII, B-E, FD:15.84 Kms	
4	Tripping of 132 kv PK Bari(ST)-Ambassa line on 15/09/2022	As per DR analysis, suspected LG fault at phase B. Fault current=1751.206A, angle=117.2degrees. Cleared in 530 ms. Relay Indication from PK Bari end:Main1-DP, ZIII, R-E, FD: 51.73 Km	
5	Tripping of 132 kv Ambassa-Kamalpur line on 15/09/2022	No DR available	
6	Tripping of 132 kv Ambassa-Gamaitilla line on 15/09/2022	No DR available	
7	Tripping of 132 kv Monarchak-Udaipur line on 27/09/2022	As per DR analysis, suspected LG fault at phase B. Fault current=1078.496A, angle=-40.33 degrees. Cleared in 105 ms. Relay Indication from Monarchak end:Main1-DP, ZI, Y-E	
8	Tripping of 132 kv Monarchak-Rokhia line on 27/09/2022	As per DR analysis, suspected LG fault at phase B. Fault current=1407A, angle=-39 degrees. Cleared in 78 ms. Relay Indication from Monarchak end:Main1-DP, ZI, Y-E, FD: 36 kms	

Members may please discuss.

AGENDA ITEMS FROM NERLDC

B.5. Status of submission of FIR and DR & EL outputs for the Grid Events

In line with regulation 12 (1) of CEA Grid Standards Regulations and IEGC provision under clause 5.2 (r), FIR and DR & EL Outputs for each grid events are required to be submitted by concerned utilities to NERLDC for detailed investigation and analysis.

Status of uploading of FIR, DR and EL outputs in Tripping Monitoring Portal for events in Dec'22- Feb'23 as on 05.03.23 is given below:

Name of Utility	Total FIR/DR/EL	Total FIR, DR & EL submitted			Total FIR, DR & EL submitted as NA (Not Applicable)			Total FIR, DR & EL submitted as NU (Not Available)			Total FIR, DR & EL not submitted		
		FIR	DR	EL	FIR	DR	EL	FIR	DR	EL	FIR	DR	EL
DoP, Arunachal Pradesh	19	10	6	6	0	5	5	0	0	0	9	8	8
AEGCL	56	44	26	22	0	17	17	0	4	6	12	9	11
MSPCL	16	7	4	4	0	4	4	0	2	2	9	6	6
MePTCL	15	1	7	7	0	2	2	0	0	0	14	6	6
MePGCL	2	0	0	0	0	2	2	0	0	0	2	0	0
P&ED, Mizoram	3	2	1	0	0	0	0	0	1	2	1	1	1
DoP, Nagaland	16	13	6	6	0	2	2	0	2	2	3	6	6
TSECL	3	0	1	1	0	1	1	0	0	0	3	1	1
POWERGRID	68	54	49	36	0	14	15	0	2	0	14	3	17
NEEPCO	60	29	18	19	0	22	21	0	4	0	31	16	20
NHPC	7	0	1	0	0	2	1	0	0	0	7	4	6
NTPC	0	0	0	0	0	0	0	0	0	0	0	0	0
OTPC	18	18	17	0	0	0	0	0	1	0	0	0	18
NTL	8	8	4	4	0	4	4	0	0	0	0	0	0
KMTL	1	1	1	1	0	0	0	0	0	0	0	0	0
DEPL	1	0	0	0	0	1	1	0	0	0	1	0	0

Concerned Utilities are requested to upload Disturbance Recorder (DR), Event Logger (EL) outputs for grid events along with a First Information Report (FIR) in Tripping Monitoring Portal (<https://103.7.131.234/Trippingnew/Account/Login.aspx>) for analysis purpose.

Members may please discuss

B.6. Non-operation of auto recloser in Important Grid Elements for transient faults w.e.f. Dec 2022:

Sl. No	Name of the Line	A/R Not Operated	Date and Time
1	400 kV Misa - Silchar 1 Line	Misa, POWERGRID	01-12-2022 at 13:15 Hrs
2	132 kV AGTCCPP - Kumarghat Line	AGTCCPP, NEEPCO	27-12-2022 at 06:45 Hrs
3	132 kV Pailapool - Srikona Line	Both ends, AEGCL	02-01-2023 at 15:45 Hrs
4	220 kV Sarusajai- Sonapur Line	Both ends, AEGCL	15-01-2023 at 02:48 Hrs
5	132 kV Dimapur - Imphal Line	Dimapur, POWERGRID	16-01-2023 at 05:43 Hrs
6	220 kV Sarusajai- Sonapur Line	Both ends, AEGCL	22-01-2023 at 05:33 Hrs
7	400 kV Misa - New Mariani 1 Line	Both ends, POWERGRID	30-01-2023 at 14:33 Hrs
8	132 kV Hailakandi - Panchgram Line	AEGCL	03-02-2023 at 18:50 Hrs
9	132 Loktak – Imphal Line	Carrier issue, Loktak	11-02-2023 at 14:19 Hrs
10	220 kV Byrnihat - Misa 1 Line	Both ends, POWERGRID & MePTCL	12-02-2023 at 02:25 Hrs & 03:16 Hrs

Concerned Utilities are requested to intimate the reason for non-operation of AR & details of corrective actions implemented.

Members may please discuss

B.7 Tripping of 132 kV Along – Pasighat line and 132 kV Along – Daporizo line resulting in Grid Disturbance

132 kV Along – Pasighat line tripped on 24th Dec'22 and 132 kV Along – Daporizo line tripped on 19th Feb'23 & 05 March'23 resulting in Black out of Along, Pasighat, Roing, Tezu and Namsai area of Arunachal Pradesh Power System.

Name	GD on	Load Loss	Observation
132 kV Along – Pasighat	24th Dec'22	14 MW	No FIR, DR and Uploaded. Violation of clause 5.2r of IEGC-2010

132 kV Along – Daporizo	19th Feb'23	22 MW	DR standardization required (In Analog channel, DR window duration etc.)
	05 March'23	14 MW	As per FIR, Accidental trip while carrying out maintenance work.

DoP, AP is requested to intimate the root cause of tripping on 24th Dec'22 and 05 March'23. Also, intimate remedial measures that has been taken to prevent re-occurrence.

Members may please discuss

B.8 Blackout of 220kV BTPS (AS) GSS:

Blackout of 220kV Salakati GSS on 18th of November, 2022. Complete blackout of the sub-station occurred due to insulation failure of the B-phase pole of 220KV CB (Make-Siemens) of 220KV Agia-II line. Although feeders were segregated in both the 220KV buses but due to non-availability of Bus-Bar protection, segregated tripping could not be achieved. Non availability of bus bar protection is the noncompliance of Part-III, cl 1 CEA connectivity regulation 2007.

As such, AEGCL is requested to update the latest status of the commissioning of the Bus Bar protection at 220 kV BTPS(Assam) S/S at earliest to prevent complete outage of S/S in case of bus fault.

Members may please discuss

B.9 Tripping of 400/132 kV ICT-1 at Kameng 13:13 Hrs :

At 13:13 Hrs of 28-11-2022, transient Ph to E fault occurred in 400 kV Balipara-Kameng-1 line and A/R operated successfully from both ends. At the same time, ICT-1 at Kameng HEP tripped on EF protection within 144 milliseconds.

As per DR analysis, prior to the fault Neutral current of 13.89A and unbalanced phase angle -19 degrees indicates there is some issue with the CT circuits to Protection relay. NERLDC vide mail dated 29-11-2022 had requested to take corrected action.

Kameng HEP requested to intimate the root cause and remedial measure that had been taken.

Members may please discuss

B.10 Blackout at Lungmual and radially connected area of Melriat (MI) of Mizoram System:

Grid disturbance occurred on 29th Dec'22 at 15:46 Hrs due to tripping of 132 kV Aizawl line for the Reverse fault at LV side of 12.5 MVA Transformer (Y-ph LV side cable punctured) which is the matter of serious concern. Since fault was in LV side of Transformer, Protection system of Transformer should act and clear the fault. NERLDC vide letter No NERLDC/SOII/14/4162 dated 02-01-2023 had requested to take following action-

- Non-operation of Transformer protection for LV side fault.
- Directionality of B/U protection of 132 kV Aizawl Line and its setting coordination with Transformer B/U Protection to prevent Unwanted tripping.

P&ED,Mizoram is requested to update the root cause and remedial measure that had been taken.

Members may please discuss

B.11 Frequent tripping of 132 kV Doyang-Sanis Line from Doyang end in the month of Jan'23 :

132 kV Doyang-Sanis Line repeatedly tripped three (3) times from Doyang end in the month of January 2023 on 16-01-2023 at 18:26 Hrs, 17-01-2023 at 17:37 Hrs and 21-01-2023 at 17:10 Hrs which is a cause of concern.

Proper analysis could not be done due to non-submission of the COMTRADE (.dat and .cfg) files for DR output and .evt files for EL output. Doyang HEP is requested to intimate the actual root cause and the remedial measures taken to this end.

Members may please discuss

B.12 Repeated Tripping of 400 kV P K Bari - Silchar 1&2 Lines :

400 kV P K Bari - Silchar 1&2 Lines and 420 kV 125 MVAR Bus Reactor-1&2 at PK Bari (ISTS) Substation tripped two (2) times at 07:29 Hrs and 07:57 on 06-Feb-2023 on Backup impedance relay. 400 kV Silchar-1 & 2 feeder was in dia with 125 MVAR BR-1 & 2 @ PK Bari Station After isolation of 400 kV Bus-I(PSD) by opening of Main CB of Silchar-1 & 2 Lines, said lines were connected with Tie CB through 400 kV Bus-II.

As per DR analysis, at 07:57 Hrs, both the Bus Reactors tripped on Z-2 operation within a time delay of 500 msec. At the time of event, R & B phase voltage drops to 142 kV from 246 kV. No change in current magnitude was recorded which implies no fault in BRs.

NTL is requested to update the root cause and share remedial measures taken to prevent re-occurrence.

Members may please discuss

B.13 Non-Availability of Bus Bar Protection at 220 kV Mariani(Assam) Substation :

The bus scheme at 220 kV Mariani(Assam) substation is Main I & Main II cum Transfer scheme. On the day of Main I Bus S/D on 3rd February'23, it has come to the notice of NERLDC that Bus Bar Protection is not commissioned at Mariani Substation (Non-availability of bus bar protection is the non-compliance of Part-III, cl 1 CEA connectivity regulation 2007).

As such, AEGCL is requested to implement the Bus bar protection at 220 kV Mariani (Assam) substation at earliest to prevent complete outage of S/S in cause of Bus Fault.

Members may please discuss

B.14 Frequent Tripping of 132 kV Aizawl- Tipaimukh on DT received at Aizawl end :

132 kV Aizawl -Tipaimukh Line tripped at Aizawl end only on received of spurious DT signal on 16th and 26th Feb'23 which is the matter of serious concern. As per PMU data, there was no fault on the system at the time of event. Presently, DT wiring at Aizawl has been removed by NERTS until the rectification of PLCC issues at Tipaimukh end by MSPCL. Therefore, MSPCL is requested to resolve the DT sent issue at Tipaimukh for 132 kV Aizawl Line at the earliest to prevent unwanted CB operation.

Members may please discuss

B.15 Frequent Tripping of 132 kV Loktak – Rengpang line & Rengpang – Jiribam Line:

132 kV Loktak- Rengpang tripped 4(Four) times from November'22 and 132 kV Jiribam- Rengpang tripped 5(Five) times from November'22. As per DR Analysis, root cause for most of the trippings are of mainly vegetation nature. MSPCL is currently not

submitting the DR /EL details of Main Protection Relay (DPR) for tripping at Rengpang SS.

MSPCL is requested to carry out the patrolling related activities as per CI. No. 23(2) (3) & (4) of CEA (Grid Standard) Regulation, 2010 on a regular basis so that measures may be identified and implemented at earliest in order to enhance reliability & resiliency of the NER grid.

Also, requested to submit the DR& EL of the Main Protection relay of the Jiribam SS for any tripping occurred at Jiribam end.

List of Trippings are as follows-

SL No	Element Name	Owner	Outage Date	Outage Time	Revival Date	Revival Time	Reasons	Indication Details (End1)	Indication Details (End2)
1	132 kV Loktak - Rengpang	MSPCL	01/Nov /2022	11:43	01/Nov /2022	12:06	Likely Vegetation Fault	Distance Protection, Z-1, 15.7 km, 2.04 kA, B-ph	EF, Z-3, B-ph
2		MSPCL	26/Nov /2022	18:07	27/Nov /2022	12:50	Likely Solid Fault	No tripping	EF, Zone 1, distance - 8.5 km
3		MSPCL	04/Mar /2023	13:03	04/Mar /2023	13:29	Not Analysis done due non submission of DR & EL	No tripping	OC
4		MSPCL	11/Feb /2023	14:20	11/Feb /2023	15:00	Likely Vegetation Fault	No tripping	Earth Fault, Over-Current

SL No.	Element Name	Owner	Outage Date	Outage Time	Revival Date	Revival Time	Reasons	Indication Details (End1)	Indication Details (End2)
1	132 kV Jiribam - Rengpang	MSPCL	01/Nov /2022	12:12	01/Nov /2022	12:35	Vegetation fault	Earth Fault	Earth Fault, OC
2		MSPCL	10/Nov /2022	07:34	10/Nov /2022	09:41	Vegetation fault	O/C, Z-3, Y-ph, 49.15 km	E/F, O/C
3		MSPCL	12/Nov /2022	11:51	12/Nov /2022	12:20	Vegetation fault	Earth Fault	Earth Fault
4		MSPCL	11/Feb /2023	14:19	11/Feb /2023	14:50	Vegetation fault	No indication	Over-Current

5		MSPCL	16/Feb/2023	13:04	16/Feb/2023	13:33	Not Analysis done due non submission of DR & EL	E/F, O/C	E/F, O/C
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Members may please discuss

B.16 Frequent Tripping of 132 kV Dimapur(PG)- Kohima line:

Sl. No.	Owner	Outage Date	Outage Time	Revival Date	Revival Time	Reasons	Indication Details (End1)	Indication Details (End2)
1	DoP, Nagaland	17/Dec/2022	01:31	17/Dec/2022	01:55	Earth fault	No tripping	Earth fault
2		26/Dec/2022	20:25	26/Dec/2022	20:51	Tripped on Distance Protection, Over Current	Z-1, B-ph, 16.22 kM, 2.829 kA	Over Current, B-ph, 44.2kM
3		07/Feb/2023	08:36	07/Feb/2023	14:39	Due to Distance protection	B-ph, Z-1, 35.19kM	B-ph, Z-1, 27.73 kM
4		23/Feb/2023	00:53	23/Feb/2023	01:27	Tripped on Distance protection	B-ph, Z-1, 35.06kM, 1.963kA	B-ph, Z-1, O/C
5		27/Feb/2023	12:54	27/Feb/2023	13:13	Tripped on Distance protection	B-ph, Z-1, 38.31 kM	OC, EF, B-ph, Z-1, 24.11 kM

132 kV Dimapur(PG) – Kohima tripped 5 (Five) times from 01-12-2022 to 05-03-2023. As per DR Analysis, root cause of all the tripping are of vegetation nature. This indicates that there is the requirement of proper maintenance of this transmission line by DoP Nagaland.

Frequent tripping of the above line impacts the ISTS network of Dimapur PG S/s. Hence, DoP Nagaland is requested to carry out the patrolling related activities as per CI. No. 23(2) (3) & (4) of CEA (Grid Standard) Regulation, 2010 on a regular basis so that measures may be identified and implemented at earliest in order to enhance reliability & resiliency of NER grid.

Members may please discuss

AGENDA ITEMS FROM MEGHALAYA

B.17 220 KV Bus Bar Protection Scheme being out of service.

At present the 220 KV Bus Bar Protection Scheme at 400/220/132 KV Killing SS is non-functional. The 220 KV bus with bus scheme 2MTB is consisting of 4 line bays, 4 transformer bays, 1 Transfer Bus Bay and the bus coupler bay.

Initially after commissioning of the 220/132 KV SS, the Bus Bar Protection Scheme (6 bays) was functioning as supported by relay test reports. With the extension of two additional transfer bays (LV side of 400/220/132 kv 315 MVA ICT's 3&4), the bus bar protection is out of service, looking from the condition at site the primary unit of these two bay has not been commissioned yet. The commissioning of Bus Bar Protection Scheme has not been taken up as view from HMI 500 software.

Recently, with the extension of two additional line bays Mawngap 1&2 it is learned that the I/O card of the REB 500 central unit is under faulty condition. Commissioning of the Bus Bar Protection Scheme for the two Mawngap 1&2 bays has been carried out successfully by disabling the defective I/O card of the central unit.

In the present scenario out of the ten numbers of bay, the primary unit of two bays has not been commissioned and the I/O card of the central unit is defective. The Bus Bar Protection Scheme of the 220 kv bus at 400/220/132 kv Killing SS has been taken out of service.

Members may please discuss

B.18 Fault locator of Siemens relay 7SA52

It has been observed that in case of carrier aided trip by 21M relay 7SA52, the fault locator could not give the exact fault location. Instead it gave the distance equivalent to 120% of line length. These relays are installed in 400 kv Silchar and 400kv Bongaigaon line.

Members may please discuss

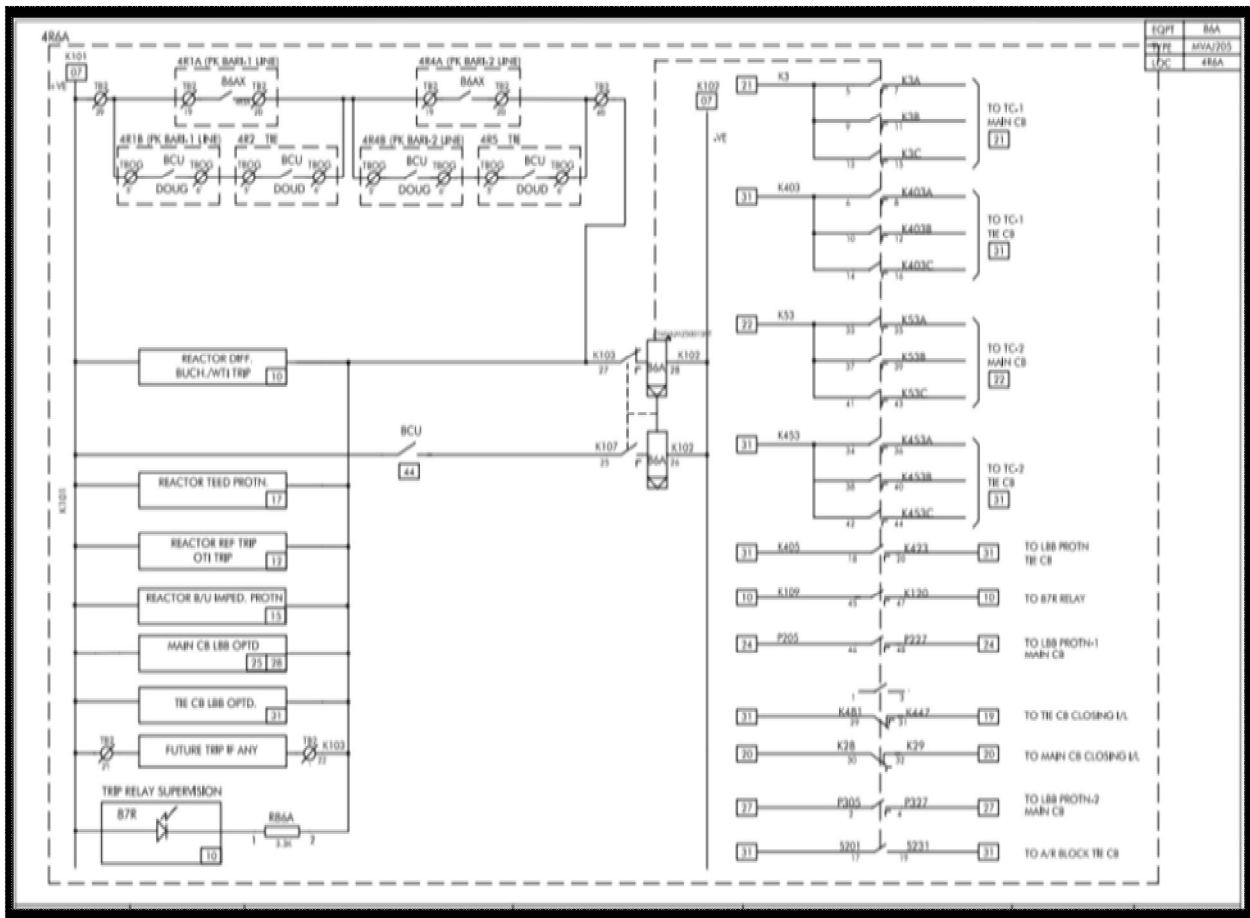
AGENDA ITEMS FROM INDI-GRID

B.19 NERSS SPS IMPLEMENTATION SCHEME:

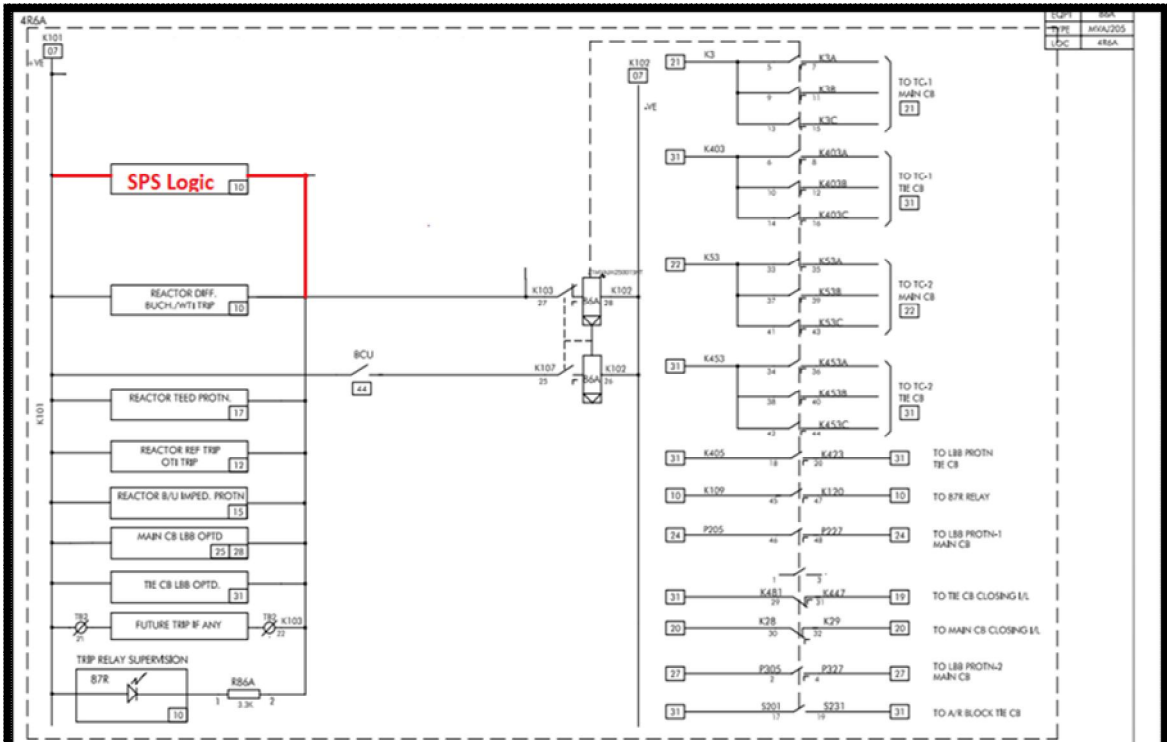
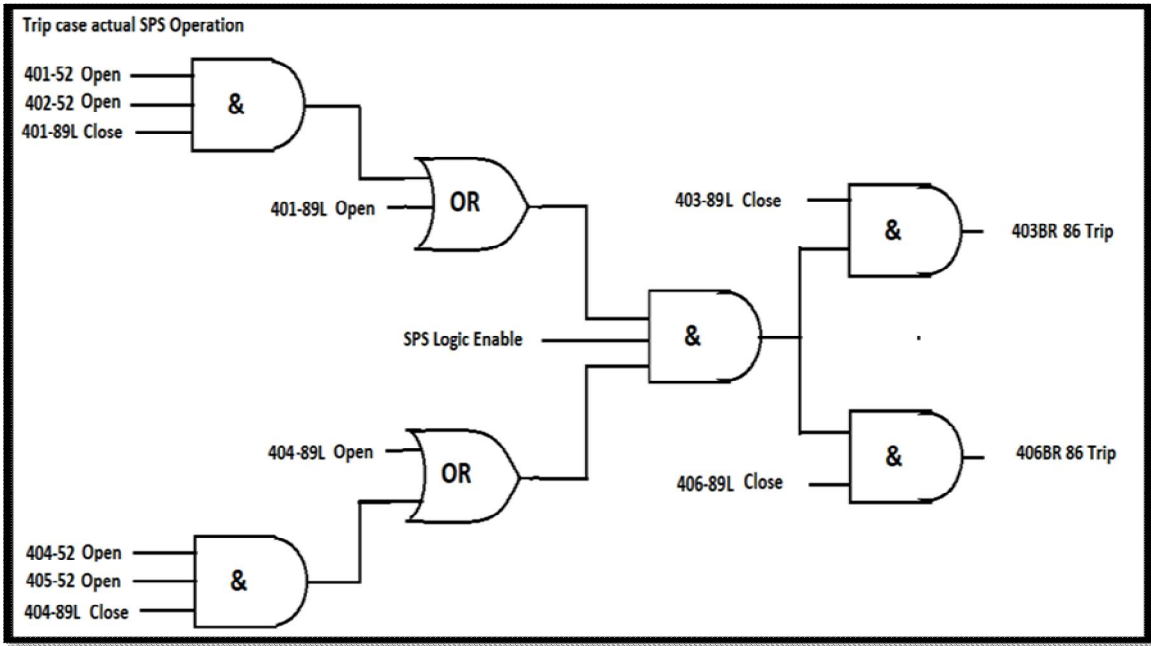
Classification: SPS related to under voltage condition

Operation: Disconnection of 2*125 MVAR Bus Reactor to prevent Under voltage situation at S M Nagar and nearby areas of Tripura power system.

As per the scheme,



NER-IITL Proposal - To avoid operation of bus reactor "Main CB", Isolator closing status needs to be provided in series with line either in outage or in trip condition. The same will need to be built in BCU soft logic which is proposed below.



DATE: 18.03.2021 PREPARED BY: JHE CHECKED BY: JHE APPROVED BY: SSS	REVISION: 28 DATE: 18.03.2021 SCALE: - DRG. NO.: CPO KXT4 SC06 SHT 18 OF 46
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OF REF: ENGG REF NO.: K374
 PROJECT: CPV + SAG PANELS, PK 5492
 P.O. NO.: LON PK 5492
 Date: 29.12.2017

GE T&D India Ltd.
 (Formerly Alstom TSD India Ltd)
 Grid Automation-Pallavaram India

SCHEMATIC DRAWING
 PANEL TYPE: 4R6A 4R6B
 TITLE: 400KV BUS REACTOR PROTECTION
 TRIP RELAY CIRCUIT - GROUP-A

LES ORDER: 3269046547

Members may please discuss

C. Items for Status Update

C.1 STATUS OF AUTO-RECLOSURE FOR IMPORTANT STATE GRID LINES:

Status of MePTCL lines

Name of the line	Status as updated in 56/57th PCC meeting	Latest Status
132 kV Agia - Mendipathar	PLCC works completed. AR operation configuration to commence from March'22. Latest Status to be intimated.	
132 kV EPIP II - Byrnihat D/C		
132 kV EPIP II - Umtru D/C		
132 kV Kahilipara - Umtru D/C		
132 kV Khliehriat - Mustem		
132 kV Mustem - NEHU line		
132 kV Khliehriat (MePTCL) - Khliehriat (PG) Ckt#II		
132 kV Khliehriat- NEIGRIHMS		
132 kV NEHU - Mawlai		
132 kV Mawlai - Umiam Stage I		
132 kV Mawphlang - Nongstoin		
132 kV Mawphlang - Umiam Stg I D/C		
132 kV Mawphlang- Mawlai		
132 kV Mendipathar – Nangalbibra		
132 kV Myntdu Leshka - Khliehriat D/C		
132 kV Nangalbibra – Nongstoin		

132 kV NEHU – NEIGRIHMS		
132 kV NEHU – Umiam		
132 kV Sarusajai - Umtru D/C		
132 kV Umiam - Umiam St I	By March'22	
132 kV Umiam St I - Umiam St II		
132 kV Umiam St I - Umiam St III D/C		
132 kV Umiam St III -Umiam St IV D/C		
132 kV Umiam St III - Umtru D/C		
132 kV Umtru - Umiam St IV D/C		

Other utilities are requested to furnish the target date for Implementation of Auto Reclosure Scheme and furnish the details as decided

For 132kV Dimapur-Kohima decision as per previous meeting: 3-ph A/R is to be implemented for 132kV Dimapur-Kohima, with dead line charging at Kohima and check sync at Dimapur.

Updated list of auto recloser is attached as **Annexure-C.1**.

Concerned utilities may please intimate the latest status.

C.2 Installation of line differential protection for short lines:

As per discussion in 56th PCC meeting and subsequent OCC/Sub-group meetings the status for different STUs are as follows:

Name of utility	Last updated status	Latest status
AEGCL	Lines identified. Under Preparation stage.	
MSPCL	Revised DPR for 132kV Imphal-Imphal-III to be submitted.	
MePTCL	Work completed but not commissioned. By Aug'21.	
P&ED Mizoram	Lines identified viz. 132kV Aizawl - Luangmual and 132kV Khamzawl - Khawiva. DPR submitted. PSDF approval awaited.	
DoP Nagaland	Lines identified under DPR preparation stage.	
TSECL	132kV 79Tilla-Budhjungnagar. DPR to be prepared	

Also, as per previous deliberation for the following important lines it was decided to implement LDP as early as possible:

Name of the line	Status of OPGW		Status of relay at both ends	
	Implementing utility	Latest status	Implementing utility	Latest status
132kV DHEP-Sanis	DoP Nagaland	NERTS to coordinate for fiber allocation	NEEPCO	LDP to be implemented. Relay under procurement

C.3 Implementation of carrier inter-trip for important grid lines

Decisions as per previous meeting(s):

- Carrier-intertrip to be immediately implemented for all Important grid elements in NER.
- Utilities are requested to update the Status

List of Important Grid Elements in NER is attached as **Annexure-C.3**

Concerned utilities may please update the status.

C.4 Status for SPS:

The latest status for suggested modifications to be updated:

SI No	SPS Details	Status as per 57th PCC meeting	Utility	Latest status/Discussion points
A. Existing				
1	SPS-5 (When reverse power flow greater than 60MW from LV to HV side of 400/132kV ICT at Azara, Trip both ICTs at Azara to prevent overloading of 220kV BTPS-Salakati D/C)	Similar scheme as before.	AEGCL	
2	SPS-6 (When 132kV Umiam Stg-I to Umiam Stg-III D/C line trips)	NERLDC informed that load shedding is required at Mawngap. MePTCL stated that 30MW load shedding at mawngap is possible, however s/d is required	MePTCL	.

		<p>to implement the scheme. It was decided that works would be completed after return of Khandon s/d. MePTCL to submit the SPS scheme to NERLDC/NERPC.</p> <p>Carrier communication established for 132kV Mawngap-Umiam Stg-I. Remaining for 132kV Umiam-Umiam Stg-I. By Jun'21.</p>		
3	<p>SPS-7 (When 220kV BTPS-Salakati D/C gets overloaded OR in case of outage of one circuit the other circuit gets overloaded (i.e loading greater than 600A) Signal to be sent from BTPS to Agia to trip 220kV Agia-Azara and 220kV Agia-Boko at Agia end.</p>	In operation.	AEGCL	

4	SPS- 10 (Tripping of both 400kV BgTPP – Bongaigaon D/C lines) SPS Action: If generation greater than 600MW at that instant, then generation to be reduced to 600MW in order for power evacuation via 400/220kV 2x315MVA ICTs	In service w.e.f. 15.10.2020. Schematic submitted to NERPC/NERLDC	NTPC	
5	SPS- 11(Tripping of 132kV Monarchak-Udaipur OR 132kV Monarchak-Rokhia line) SPS Action: If before tripping of either of the lines CC generation greater than 65MW, then STG at Monarchak will be tripped.	In-service w.e.f. 19.01.2022	NEEPCO	
6	SPS-12 (Outage of any one of the 400/132kV 2x360MVA ICTs at RHEP) SPS Action: Tripping of one unit of RHEP for ICT loading>130% for 2s, Tripping of one unit of RHEP+one unit of Pare HEP for ICT loading>145%	Under implementation. Overload relay to be procured. M/s GE yet to revert back.	NEEPCO	
SPS related to Bangladesh				
7	SPS-2(Outage of 400kV Palatana – SMNagar line charged at 132kV) SPS Action: Entire load disconnection of South Comilla by way of tripping of 132kV SMNagar-South Comilla D/C	In-service w.e.f. 08th Aug'2020. In-service w.e.f. 08th Aug'2020. Required till upgradation to HTLS of Tripura lines.	NERTS/ TSECL	
8	SPS-3(Outage of one circuit of 400kV SMNagar-South Comilla D/C(charged at 132kV) SPS Action: 30MW load disconnection at South Comilla area of	As per decision of 171st OCCM implementation kept in abeyance. To be reviewed based on the present load growth in Bangladesh supply. To be reviewed in next Operational meeting with Bangladesh	Bangladesh	

	Bangladesh followed by shifting of the load to main grid of Bangladesh			
9	SPS-4(Outage of both 400/132kV 2x125MVA ICTs at Palatana) SPS Action: Entire load disconnection of South Comilla by way of tripping of 132kV SMNagar-South Comilla D/C	In-service w.e.f. 08th Aug'2020. After commissioning of 400kV PalatanaSMNagar some load at Bangladesh may be catered even after tripping of both ICTs. It was decided that NERLDC would determine the quantum of shedding required and thereafter the SPS would be suitably modified.	NERTS/ TSECL	
New				
	Name of SPS	SPS Trigger/Action	Utility	Status/Discussion points
10	SPS related to secure & reliable operation of Leshka HEP	Upon tripping of one circuit of 132kV Leshka-Khliehriat D/C, Leshka generation to be reduced	MePGCL	MePGCL to determine the logic based on line loading OR generation quantum and prepare the schematic at the earliest.
11.	SPS related to prevention of cascading tripping in Assam power system	Upon tripping of either 22kV DC Misa-Samaguri or 220kV Azara-Sarusaji DC	AEGCL	AEGCL to identify the 33kV Lines for load cutting, then cost estimated will be prepared and Administrative approval will be taken

Concerned utilities may please update the status.

C.5 status against remedial actions for important grid events:

Details of the events(outage)	Remedial action suggested	Name of the utility	Latest status
132 kV Balipara-Tenga line in May and JUne	Carrier aided inter-tripping to be implemented for 132kV Balipara-TengaKhupi at the earliest	DoP, Aruncahl Pradesh	
132 kV Kakching - Churachandpur, 132 kV Kakching - Elangkangpokpi,	MSPCL to share B/U relay settings at New Thoubal SS to NERPC for better coordination of Kakching,	MSPCL	

400kV/132kV, 315MVA ICT New Thoubal and 132 kV New Thoubal - Kongba D/C lines on 05.03.2022	Churachandpur, Ningthoukhong and Thoubal.		
132 kV Ningthoukhong-Churachandpur D/C and 132 kV New Thoubal - Kakching lines on 15.04.2022	DP settings to be reviewed for 132kV Kakching - Churachandpur	MSPCL	
132 kV Kohima Karong& 132 kV Imphal - Karong lines on 05.04.2022	TMS at Kohima for 132kV Karong to be set at 0.1	DoP Nagaland	
132 kV Imphal (MSPCL) - Karong& 132 kV Karong - Kohima lines on 06.05.2022 and 2nd july	> DP settings to be reviewed at Karong, Yurembam & Kohima	MSPCL, DoP NAGaland	
132 kV Haflong - Jiribam line on 15.04.2022	AEGCL stated that AR will be successfully implemented in Umransho by 15th Oct 2022	AEGCL	
132 kV Dimapur (PG) - Dimapur (DoP, Nagaland) D/C lines on 15th , 19thjune 1st , 2ndjul	At present Bus Bar protection(at 132kV Nagrajan) has been disabled and shall be put into service after OEM visit.	DoP Nagaland	
132 kV Doyang Mokochung line 132 kV Mokochung - Mokochung (DoP, Nagaland) D/C lines on 30th July	> DP non-operation at Mokochung(NAG) to be investigated by DoP Nagaland ->Carrier inter-trip for 132kV DHEP-Mokochung to be implemented by DoP Nagaland	DoP Nagaland	
Leshka-Khleihriat DC multi[le trippings in April to Septmeber	TLSA installation along the line to be done by MePTCL	MePTCL	
Loktak Unit-1, Loktak Unit-2, 132 kV Loktak Jiribam(PG) line, 132 kV Loktak-Ningthoukhong line and 132 kV Loktak-Imphal(PG) line on	CB overhauling to be done by NHPC	NHPC	

30th March			
132 kV Loktak-Jiribam line, 132 kV Loktak-Imphal line, 132 kV Loktak-Ningthoukhong line, 132 kV Loktak-Rengpang line & Loktak Units 1,2 and 3 on 3rd Aug	> 5MVA TRAFO (Aux. Transformer) to be repaired ->5MVA Auxiliary TRAFO panel to be repaired by NHPC	NHPC	
132 kV Aizwal Lungmual line on 2, 14, 16, 17 and 18 June	P&ED Mizoram to revise the 132/33kV ICT at Lungmual settings to Pickup at 200% with IDMT TMS such that time delay =50ms	P&ED Mizoram	
multiple tripping of 132kV Lekhi-Pare and 132kV Pare-RHEP-2 on 23rd Aug'22	DoP Arunachal Pradesh is requested to check/reviewed the Z-1 reach setting of relay at Lekhi for Pare line urgently based on actual line impedance/line length and accordingly rectify	DoP Ar. Praadesh	
Blackout of Amguri Solar Station on 20th Sep'22	NERLDC requested AeGCL to check the Zone reach setting at NTPS for Amguri line immediately	AEGCL	
Grid disturbance of category GD-1 (Load loss: 13MW) occurred at Karong areas of Manipur Power System at 07:41 Hrs on 4th August'22	MSPCL to check the following 1. Protection setting at Karong along with circuit wirings from DPR to CB mechanism 2. Z-III setting at Imphal and its healthiness of correct operation by relay testing.	MSPCL	
PLCC & protection related issues at 132kV Tipaimukh S/S	MSPCL to ensure uninterrupted service of PLCC system at 132kV Tipaimukh S/S.	MSPCL	
Grid Disturbance at Loktak HEP on 03rd Aug'22	NHPC-Loktak informed that LBB has been included under R&U scheme and the same shall be commissioned by Mar'23	NHPC	
Multiple tripping occurred at PK Bari-PK Bari and PK Bari-Kumarghat Line on	-> Healthiness of Carrier aided POTT scheme needs to be ensured by TSECL -> LDP needs to be	TSECL, NTL	

4th July 2022.	implemented in 132 kV PK Bari-Kumarghat Transmission line. TSECL is requested to update the status of installation of LDP to this end -> Z-2 time delay of 132 kV PK bari(ISTS)-PK Bari line from PK Bari(ISTS) appears overlap with Z-2 time delay of short 132 kV PK Bari-Kumarghat Line at PK Bari. ->NTL is requested to check/review the Z-2 time setting at PK Bari(ISTS) and accordingly co-ordinate		
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DATE AND VENUE OF NEXT PROTECTION SUB- COMMITTEE MEETING

The next Protection Sub-Committee meeting will be held in the month of June 2023. The date and venue will be intimated separately.

Details of Auto Recloser of Lines in North Eastern Regional Grid

Sl No	Voltage Level	Name of Element (Emanating - Terminating)	Ckt ID	Tower Configuration (S/C or D/C)	Agency at End 1	Agency at End 2	Owner	AR Details (SPAR/3-Ph AR/Not Available/Information not Available)	Remarks
1	132 kV	132 kV South Comilla (Bangladesh) - Surajmani Nagar	1	D/C	PGCB	POWERGRID	POWERGRID	Information not Available	Information not Available
2	132 kV	132 kV South Comilla (Bangladesh) - Surajmani Nagar	2	D/C	PGCB	POWERGRID	POWERGRID	Information not Available	Information not Available
1	132 kV	132 kV Gelyphu (Bhutan) - Salakati	1	S/C	BPCL	POWERGRID	POWERGRID	3-ph AR in service at Salakati	
2	132 kV	132 kV Motonga (Bhutan) - Rangia	1	S/C	BPCL	AEGCL	POWERGRID & BPC	3-ph AR in service at Rangia	
1	400 kV	400 kV Azara - Bongaigaon	1	D/C	AEGCL	POWERGRID	NETC(1.8%) & AEGCL (98.2%)	SPAR in service	
2	400 kV	400 kV Azara - Silchar	1	D/C	AEGCL	POWERGRID	NETC(37.5%) & AEGCL(62.5%)	SPAR in service	
3	400 kV	400 kV Balipara - Biswanath Chariali	1	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
4	400 kV	400 kV Balipara - Biswanath Chariali	2	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
5	400 kV	400 kV Balipara - Biswanath Chariali	3	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
6	400 kV	400 kV Balipara - Biswanath Chariali	4	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
7	400 kV	400 kV Balipara - Bongaigaon	1	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
8	400 kV	400 kV Balipara - Bongaigaon	2	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
9	400 kV	400 kV Balipara - Bongaigaon	3	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
10	400 kV	400 kV Balipara - Bongaigaon	4	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
11	400 kV	400 kV Balipara - Misa	1	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
12	400 kV	400 kV Balipara - Misa	2	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
13	400 kV	400 kV Biswanath Chariali - Ranganadi	1	D/C	POWERGRID	NEEPCO	POWERGRID	SPAR in service	
14	400 kV	400 kV Biswanath Chariali - Ranganadi	2	D/C	POWERGRID	NEEPCO	POWERGRID	SPAR in service	
15	400 kV	400 kV Bongaigaon - Byrnihat	1	D/C	POWERGRID	MePTCL	NETC(97.91 %) & MePTCL(2.09%)	SPAR in service	
16	400 kV	400 kV Binaguri - Bongaigaon	1	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
17	400 kV	400 kV Binaguri - Bongaigaon	2	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
18	400 kV	400 kV Alipurduar - Bongaigaon	1	D/C	POWERGRID	POWERGRID	ENICL	SPAR in service	
19	400 kV	400 kV Alipurduar - Bongaigaon	2	D/C	POWERGRID	POWERGRID	ENICL	SPAR in service	
20	400 kV	400 kV BgTPP - Bongaigaon	1	D/C	NTPC	POWERGRID	POWERGRID	SPAR Available	Due to LDP, SPAR is not attempting

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21	400 kV	400 kV BgTTP - Bongaigaon	2	D/C	NTPC	POWERGRID	POWERGRID	SPAR Available	Due to LDP, SPAR is not attempting
22	400 kV	400 kV Byrnihat - Silchar	1	D/C	MePTCL	POWERGRID	NETC(98.06%)& MePTCL(1.94%)	SPAR in service	
23	400 kV	400 kV Pallatana - Silchar	1	D/C	OTPC	POWERGRID	NETC	SPAR in service	
24	400 kV	400 kV Pallatana - Silchar	2	D/C	OTPC	POWERGRID	NETC	SPAR in service	
1	220 kV	220 kV AGBPP - Mariani	1	S/C	NEEPCO	AEGCL	POWERGRID	Information not available	AGBPP-SPAR enabled, Mariani end- POWERGRID may intimate
2	220 kV	220 kV AGBPP - Mariani(PG)	1	S/C	NEEPCO	POWERGRID	POWERGRID	SPAR in service	
3	220 kV	220 kV Mariani - Misa	1	S/C	AEGCL	POWERGRID	POWERGRID	Information not available	POWERGRID may intimate the status
4	220 kV	220 kV Mariani (PG) - Misa	1	S/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
1	132 kV	132kV Imphal - Silchar	1	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
2	132 kV	132kV Imphal - Silchar	2	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
3	132 kV	132kV P K Bari - Silchar	1	D/C	TSECL	POWERGRID	POWERGRID	SPAR in service	LINE DISCONTINUED
4	132 kV	132kV P K Bari - Silchar	2	D/C	TSECL	POWERGRID	POWERGRID	SPAR in service	LINE DISCONTINUED
1	220 kV	220 kV AGBPP - Deomali	1	S/C	NEEPCO	DoP,Arunachal Pradesh	DoP, Arunachal Pradesh	Information not available	DoP AP may intimate the status
2	220 kV	220 kV AGBPP - Tinsukia	1	S/C	NEEPCO	AEGCL	AEGCL	SPAR not in service	SPAR available at both ends, but is not enabled at AGBPP as per Audit report
3	220 kV	220 kV AGBPP - Tinsukia	2	S/C	NEEPCO	AEGCL	AEGCL	SPAR not in service	SPAR available at both ends, but is not enabled at AGBPP as per Audit report
4	220 kV	220 kV Agia - Azara	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	SPAR available at Azara. At Agia by the end of January 2020.
5	220 kV	220 kV Agia - Boko	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	SPAR available at Azara. At Agia by the end of January 2020.
6	220 kV	220 kV Agia - BTPS	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	At BTPS SPAR completed. At Agia End testing of new panels are going on. Will be completed in two months time.
7	220 kV	220 kV Agia - BTPS	2	D/C	AEGCL	AEGCL	AEGCL	Not Available	At BTPS SPAR completed. At Agia End testing of new panels are going on. Will be completed in two months time.
8	220 kV	220 kV Azara - Boko	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	SPAR available at Azara. At Boko, the testing of the new panels are yet to be started. By March 2020.
9	220 kV	220 kV Azara - Sarusajai	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	SPAR available at Azara, other end will be done in R&M works

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10	220 kV	220 kV Azara - Sarusajai	2	D/C	AEGCL	AEGCL	AEGCL	Not Available	SPAR available at Azara, other end will be done in R&M works
11	220 kV	220 kV Balipara - Sonabil	1	S/C	POWERGRID	AEGCL	AEGCL	SPAR in service	AEGCL & POWERGRID may confirm
12	220 kV	220 kV Alipurduar - Salakati	1	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
13	220 kV	220 kV Alipurduar - Salakati	2	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
14	220 kV	220 kV BTPS - Salakati	1	D/C	AEGCL	POWERGRID	POWERGRID	Not Available	SPAR available at BTPS end. Carrier communication link is yet to be established. In the AR logic, AR is blocked if comm. Link is absent.
15	220 kV	220 kV BTPS - Salakati	2	D/C	AEGCL	POWERGRID	POWERGRID	Not Available	SPAR available at BTPS end. Carrier communication link is yet to be established. In the AR logic, AR is blocked if comm. Link is absent.
16	220 kV	220 kV Dimapur - Misa	1	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
17	220 kV	220 kV Dimapur - Misa	2	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
18	220 kV	220 kV Jawaharnagar - Samaguri	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	SPAR available at JawaharNagar, other end will be done in R&M works
19	220 kV	220 kV Jawaharnagar - Sarusajai	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	SPAR available at JawaharNagar, other end will be done in R&M works
20	220 kV	220 kV Karbi Langpi - Sarusajai	1	S/C	APGCL	AEGCL	AEGCL	Not Available	SPAR will be done in R&M works
21	220 kV	220 kV Karbi Langpi - Sarusajai	2	S/C	APGCL	AEGCL	AEGCL	Not Available	SPAR will be done in R&M works
22	220 kV	220 kV Byrnihat - Misa	1	S/C	MePTCL	POWERGRID	MePTCL	SPAR in service	
23	220 kV	220 kV Byrnihat - Misa	2	S/C	MePTCL	POWERGRID	MePTCL	SPAR in service	
24	220 kV	220 kV Kopili - Misa	1	D/C	NEEPCO	POWERGRID	POWERGRID	SPAR in service	
25	220 kV	220 kV Kopili - Misa	2	D/C	NEEPCO	POWERGRID	POWERGRID	SPAR in service	
26	220 kV	220 kV Kopili - Misa	3	S/C	NEEPCO	POWERGRID	POWERGRID	SPAR in service	
27	220 kV	220 kV Mariani (AEGCL) - Samaguri	1	S/C	AEGCL	AEGCL	AEGCL	Not Available	will be done in PSDF scheme
28	220 kV	220 kV Mariani (PG) - Mokokchung (PG)	1	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
29	220 kV	220 kV Mariani (PG) - Mokokchung (PG)	2	D/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
30	220 kV	220 kV Misa - Samaguri	1	D/C	POWERGRID	AEGCL	POWERGRID	Information not available	POWERGRID may intimate the status
31	220 kV	220 kV Misa - Samaguri	2	D/C	POWERGRID	AEGCL	POWERGRID	Information not available	POWERGRID may intimate the status
32	220 kV	220 kV NTPS - Tinsukia	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	will be done in PSDF scheme

Details of Auto Recloser of Lines in North Eastern Regional Grid

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33	220 kV	220 kV NTPS - Tinsukia	2	D/C	AEGCL	AEGCL	AEGCL	Not Available	will be done in PSDF scheme
34	220 kV	220 kV Samaguri - Sarusajai	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
35	220 kV	220 kV Samaguri - Sarusajai	2	D/C	AEGCL	AEGCL	AEGCL	Not Available	will be done in PSDF scheme
35	220 kV	220 kV Samaguri - Sonabil	1	S/C	AEGCL	AEGCL	AEGCL	Not Available	Due to problem at Samaguri end. Implemented in R&M scheme funded from PSDF
36	220 kV	220 kV Samaguri - Sonabil	2	S/C	AEGCL	AEGCL	AEGCL	Not Available	Due to problem at Samaguri end. Implemented in R&M scheme funded from PSDF
1	132 kV	132 kV Agartala - AGTCCPP	1	D/C	TSECL	NEEPCO	POWERGRID	Not Available	SPAR available at AGTCCPP, PLCC is not in service
2	132 kV	132 kV Agartala - AGTCCPP	2	D/C	TSECL	NEEPCO	POWERGRID	Not Available	SPAR available at AGTCCPP, PLCC is not in service
3	132 kV	132 kV Agartala - Bodhjungnagar	1	S/C	TSECL	TSECL	TSECL	Not Available	132 KV breaker are 3-ph. gang operated.
4	132 kV	132 kV Agartala - Dhalabil	1	S/C	TSECL	TSECL	TSECL	Not Available	132 KV breaker are 3-ph. gang operated.
5	132 kV	132 kV Agartala - Rokhia	1	D/C	TSECL	TPGL	TSECL	Not Available	132 KV breaker are 3-ph. gang operated.
6	132 kV	132 kV Agartala - Rokhia	2	D/C	TSECL	TPGL	TSECL	Not Available	132 KV breaker are 3-ph. gang operated.
7	132 kV	132 kV Agia - Mendipathar	1	S/C	AEGCL	MePTCL	MePTCL	Not Available	Agia end: 3-ph AR will be implemented under R&M works, Mendipathar- MePTCL will implement the 3 Ph AR in parallel with ongoing R&M works of PLCC &DPC by September 2019.
8	132 kV	132 kV AGTCCPP - Kumarghat	1	S/C	NEEPCO	POWERGRID	POWERGRID	SPAR/TPAR not in service	AGTCCPP: 1 AR facility available; Kumarghat: Gang Operated CBs
9	132 kV	132 kV Aizawl - Jiribam	1	S/C	POWERGRID	POWERGRID	POWERGRID	3-Ph AR in service	

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10	132 kV	132 kV Aizawl - Kolasib	1	S/C	POWERGRID	P&ED, Mizoram	POWERGRID	3-Ph AR in service	POWERGRID may confirm
11	132 kV	132 kV Aizawl - Kumarghat	1	S/C	POWERGRID	POWERGRID	POWERGRID	3-Ph AR in service	
12	132 kV	132 kV Aizawl - Luangmual	1	S/C	POWERGRID	P&ED, P&ED, Mizoram	P&ED, Mizoram	Not Available	
13	132 kV	132 kV Aizawl - Melriat(PG)	1	S/C	POWERGRID	POWERGRID	POWERGRID	Not Available	
14	132 kV	132 kV Ambasa - Gamaitila	1	S/C	TSECL	TSECL	TSECL	Not Available	132 KV breaker are 3-ph. gang operated.
15	132 kV	132 kV Ambasa - Kamalpur	1	S/C	TSECL	TSECL	TSECL	Not Available	132 KV breaker are 3-ph. gang operated.
16	132 kV	132 kV Ambasa - P K Bari	1	S/C	TSECL	TSECL	TSECL	Not Available	Line terminated at P.K.Bari(Sterlite ISTS) & Line Differential In Service between 132KV P.K. Bari(ISTS) to P.K.Bari(TSECL)
17	132 kV	132 kV Badarpur - Jiribam	1	S/C	POWERGRID	POWERGRID	POWERGRID	Information not available	POWERGRID may intimate the status
18	132 kV	132 kV Badarpur - Kolasib	1	S/C	POWERGRID	P&ED, Mizoram	POWERGRID	Information not available	POWERGRID may intimate the status
19	132 kV	132 kV Badarpur - Kumarghat	1	S/C	POWERGRID	POWERGRID	POWERGRID	3-Ph AR in service	
20	132 kV	132 kV Badarpur - Panchgram	1	S/C	POWERGRID	AEGCL	POWERGRID	Information not available	POWERGRID may intimate the status, Panchgram end: 3 ph AR will be implemented under R&M
21	132 kV	132 kV Badarpur - Silchar	1	D/C	POWERGRID	POWERGRID	POWERGRID	Information not available	Silchar end: AR in BCU available, AEGCL may intimate the status
22	132 kV	132 kV Badarpur - Silchar	2	D/C	POWERGRID	POWERGRID	POWERGRID	Information not available	Silchar end: 3-ph AR in BCU available, AEGCL may intimate the status
23	132 kV	132 kV Balipara - Bhalukpong	1	S/C	POWERGRID	DoP, Arunachal Pradesh	NEEPCO & DoP, Arunachal Pradesh	Not Available	
24	132 kV	132 kV Balipara - Depota	1	S/C	POWERGRID	AEGCL	AEGCL	Not Available	AEGCL&POWERGRID may intimate the plan of action

Details of Auto Recloser of Lines in North Eastern Regional Grid

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25	132 kV	132 kV Balipara - Sonabil	1	S/C	AEGCL	AEGCL	AEGCL	Information not available	Sonabil end: 3-ph AR available, Balipara end: POWERGRID may intimate
26	132 kV	132 kV Baramura - Gamaitilla	1	S/C	TPGL	TSECL	TSECL	Not Available	132 KV breaker are 3-ph. gang operated.
27	132 kV	132 kV Baramura - Jirania	1	S/C	TPGL	TSECL	TSECL	Not Available	132 KV breaker are 3-ph. gang operated.
28	132 kV	132 kV Bhalukpong - Khupi	1	S/C	DoP, Arunachal Pradesh	NEEPCO	NEEPCO & DoP, Arunachal Pradesh	Not Available	
29	132 kV	132 kV Biswanath Chariali - Pavo	1	D/C	POWERGRID	AEGCL	POWERGRID	Not Available	Pavoid end- 3-ph AR will be implemented, BNC: POWERGRID may intimate the status
30	132 kV	132 kV Biswanath Chariali - Pavo	2	D/C	POWERGRID	AEGCL	POWERGRID	Not Available	Pavoid end- 3-ph AR will be implemented, BNC: POWERGRID may intimate the status
31	132 kV	132 kV Pavo - Sonabil	1	S/C	AEGCL	AEGCL	AEGCL	Not available	TPAR is available both at Pavo and Sonabil. Carr. Comm. Is yet to be established.
32	132 kV	132 kV Bodhjannagar - Jirania	1	S/C	TSECL	TSECL	TSECL	Not Available	132 KV breaker are 3-ph. gang operated.
33	132 kV	132 kV Bokajan - Dimapur	1	S/C	AEGCL	POWERGRID	AEGCL	Not available	
34	132 kV	132 kV Bokajan - Golaghat	1	S/C	AEGCL	AEGCL	AEGCL	Not available	AEGCL may intimate the plan of action
35	132 kV	132 kV BTPS - Dhaligaon	1	D/C	AEGCL	AEGCL	AEGCL	Not available	3-ph AR under R&M
36	132 kV	132 kV BTPS - Dhaligaon	2	D/C	AEGCL	AEGCL	AEGCL	Not available	3-ph AR under R&M
37	132 kV	132 kV BTPS-Kokrajhar	1	S/C	AEGCL	AEGCL	AEGCL	Not available	AEGCL may intimate the plan of action
38	132 kV	132 kV Bilashipara-Kokrajhar	1	S/C	AEGCL	AEGCL	AEGCL	Not available	AEGCL may intimate the plan of action
39	132 kV	132 kV Bilashipara-Gauripur	1	S/C	AEGCL	AEGCL	AEGCL	Not available	AEGCL may intimate the plan of action

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40	132 kV	132 kV Bornagar - Dhaligaon	1	S/C	AEGCL	AEGCL	AEGCL	Not available	AEGCL may intimate the plan of action
41	132 kV	132 kV Bornagar - Rangia	1	S/C	AEGCL	AEGCL	AEGCL	Not available	AEGCL may intimate the plan of action
42	132 kV	132 kV Budhjangnagar - Surjamaninagar	1	S/C	TSECL	TSECL	TSECL	Not available	132 KV breaker are 3-ph. gang operated.
43	132 kV	132 kV Budhjangnagar - Surjamaninagar	2	S/C	TSECL	TSECL	TSECL	Not available	Line terminated at S.M.Nagar(Sterlite ISTS) & Distance relay in Service between 132KV S.M.Nagar(Sterlite ISTS) to S.M.Nagar(TSECL)
44	132 kV	132 kV Dhalabil - Kamalpur	1	S/C	TSECL	TSECL	TSECL	Not available	132 KV breaker are 3-ph. gang operated.
45	132 kV	132 kV Dhaligaon-Gossaigaon	1	S/C	AEGCL	AEGCL	AEGCL	Not available	AEGCL may intimate the plan of action
46	132 kV	132 kV Dharmanagar - Dullavcherra	1	S/C	TSECL	AEGCL	AEGCL	Not available	AEGCL&TSECL may intimate the plan of action
47	132 kV	132 kV Dullavcherra - Hailakandi	1	S/C	AEGCL	AEGCL	AEGCL	Not available	AEGCL may intimate the plan of action
48	132 kV	132 kV Dharmanagar - P K Bari	1	S/C	TSECL	TSECL	TSECL	Not available	132 KV breaker are 3-ph. gang operated.
49	132 kV	132 kV Dimapur - Doyang	1	D/C	POWERGRID	NEEPCO	POWERGRID	SPAR in service	
50	132 kV	132 kV Dimapur - Doyang	2	D/C	POWERGRID	NEEPCO	POWERGRID	SPAR in service	
51	132 kV	132 kV Dimapur - Imphal	1	S/C	POWERGRID	POWERGRID	POWERGRID	SPAR in service	
52	132 kV	132 kV Dimapur (PG) - Dimapur (DoP, Nagaland)	1	S/C	POWERGRID	ED, DoP, Nagaland	DoP, Nagaland	Not Available	DoP Nagaland may please intimate the plan of action
53	132 kV	132 kV Dimapur (PG) - Dimapur (DoP, Nagaland)	2	S/C	POWERGRID	ED, DoP, Nagaland	DoP, Nagaland	Not Available	DoP Nagaland may please intimate the plan of action
54	132 kV	132 kV Dimapur (PG) - Kohima	1	S/C	POWERGRID	ED, DoP, Nagaland	DoP, Nagaland	Not Available	3-ph AR available at Dimapur(PG). DoP Nagaland may please intimate the plan of action
55	132 kV	132 kV Doyang - Mokokchung (DoP, Nagaland)	1	S/C	NEEPCO	ED, DoP, Nagaland	DoP, Nagaland	Not Available	
56	132 kV	132 kV Doyang - Sanis	1	S/C	NEEPCO	DoP, Nagaland	DoP, Nagaland	Not Available	

Details of Auto Recloser of Lines in North Eastern Regional Grid

Sl No	Voltage Level	Name of Element (Emanating - Terminating)	Ckt ID	Tower Configuration (S/C or D/C)	Agency at End 1	Agency at End 2	Owner	AR Details (SPAR/3-Ph AR/Not Available/Information not Available)	Remarks
57	132 kV	132 kV EPIP II - Byrnihat	1	D/C	MePTCL	MePTCL	MePTCL	Not Available	MePTCL will implement the 3 Ph AR in parallel with ongoing R&M works of PLCC &DPC by September 2019.
58	132 kV	132 kV EPIP II - Byrnihat	2	D/C	MePTCL	MePTCL	MePTCL	Not Available	MePTCL will implement the 3 Ph AR in parallel with ongoing R&M works of PLCC &DPC by September 2019.
59	132 kV	132 kV EPIP II - Umtru	1	D/C	MePTCL	MePTCL	MePTCL	Not Available	MePTCL will implement the 3 Ph AR in parallel with ongoing R&M works of PLCC &DPC by November 2019.
60	132 kV	132 kV EPIP II - Umtru	2	D/C	MePTCL	MePTCL	MePTCL	Not Available	MePTCL will implement the 3 Ph AR in parallel with ongoing R&M works of PLCC &DPC by November 2019.
61	132 kV	132 kV Gauripur-Gossaigaon	1	S/C	AEGCL	AEGCL	AEGCL	Not available	AEGCL may intimate the plan of action
62	132 kV	132 kV Gohpur - Pavoi	1	S/C	AEGCL	AEGCL	AEGCL	Not available	AEGCL may intimate the plan of action
63	132 kV	132 kV Gohpur - Nirjuli	1	S/C	AEGCL	POWERGRID	POWERGRID	Not available	AEGCL may intimate the plan of action
64	132 kV	132 kV Golaghat - Mariani (AEGCL)	1	S/C	AEGCL	AEGCL	AEGCL	Not available	AEGCL may intimate the plan of action
65	132 kV	132 kV Haflong - Jiribam	1	S/C	POWERGRID	POWERGRID	POWERGRID	Not available	AEGCL may intimate the plan of action
66	132 kV	132 kV Haflong - Umranshu	1	S/C	AEGCL	POWERGRID	AEGCL	Not available	AEGCL may intimate the plan of action
67	132 kV	132 kV Imphal (MSPCL) - Imphal (PG)	1	S/C	MSPCL	POWERGRID	POWERGRID	Not available	AEGCL may intimate the plan of action
68	132 kV	132 kV Imphal (MSPCL) - Imphal (PG)	2	S/C	MSPCL	POWERGRID	POWERGRID & MSPCL	Not available	AEGCL may intimate the plan of action
69	132 kV	132 kV Imphal (MSPCL) - Karong	1	S/C	MSPCL	MSPCL	MSPCL	Not Available	AEGCL may intimate the plan of action
70	132 kV	132 kV Imphal (PG) - Ningthoukong	1	S/C	POWERGRID	MSPCL	MSPCL	Not Available	AEGCL may intimate the plan of action
71	132 kV	132 kV Imphal (PG) - Loktak	1	S/C	POWERGRID	NHPC	POWERGRID	SPAR in service	
72	132 kV	132 kV Jiribam - Loktak	2	S/C	POWERGRID	NHPC	POWERGRID	SPAR in service	
73	132 kV	132 kV Jiribam - Pailapool	1	S/C	POWERGRID	AEGCL	AEGCL/ MSPCL	Not Available	POWERGRID & AEGCL may intimate the plan of action

Details of Auto Recloser of Lines in North Eastern Regional Grid

Sl No	Voltage Level	Name of Element (Emanating - Terminating)	Ckt ID	Tower Configuration (S/C or D/C)	Agency at End 1	Agency at End 2	Owner	AR Details (SPAR/3-Ph AR/Not Available/Information not Available)	Remarks
74	132 kV	132 kV Jiribam(PG) - Jiribam(MA)	1	S/C	POWERGRID	MSPCL	MSPCL	Not available	AEGCL may intimate the plan of action
75	132 kV	132 kV Jorhat - Mariani	1	S/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
76	132 kV	132 kV Jorhat - Mariani	2	S/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
77	132 kV	132 kV Jorhat - Nazira	1	S/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
78	132 kV	132 kV Kahilipara - Kamalpur	1	S/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
79	132 kV	132 kV Kamalpur - Rangia	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
80	132 kV	132 kV Kamalpur - Rangia	2	D/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
81	132 kV	132 kV Kahilipara - Sarusajai	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
82	132 kV	132 kV Kahilipara - Sarusajai	2	D/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
83	132 kV	132 kV Kahilipara - Sarusajai	3	D/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
84	132 kV	132 kV Sarusajai - Sishugram	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
85	132 kV	132 kV Kamalpur - Sishugram	1	S/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
86	132 kV	132 kV Kahilipara - Umtru	1	D/C	AEGCL	MePTCL	MePTCL	Not Available	MePTCL will implement the 3 Ph AR in paralell with ongoing R&M works of PLCC &DPC by Deceber 2019
87	132 kV	132 kV Kahilipara - Umtru	2	D/C	AEGCL	MePTCL	MePTCL	Not Available	MePTCL will implement the 3 Ph AR in paralell with ongoing R&M works of PLCC &DPC by Deceber 2019
88	132 kV	132 kV Kamalpur - P K Bari	1	S/C	TSECL	TSECL	TSECL	Not available	132 KV breaker are 3-ph. gang operated.
89	132 kV	132 kV Karong - Kohima	1	S/C	DoP, Nagaland	MSPCL	MSPCL(65.3%) / DoP, Nagaland(34.7%)	Not Available	
90	132 kV	132 kV Khandong - Khliehriat	1	S/C	NEEPCO	POWERGRID	POWERGRID	SPAR in service	
91	132 kV	132 kV Khandong - Khliehriat	2	S/C	NEEPCO	POWERGRID	POWERGRID	Information not available	POWERGRID may intimate the status

Details of Auto Recloser of Lines in North Eastern Regional Grid

Sl No	Voltage Level	Name of Element (Emanating - Terminating)	Ckt ID	Tower Configuration (S/C or D/C)	Agency at End 1	Agency at End 2	Owner	AR Details (SPAR/3-Ph AR/Not Available/Information not Available)	Remarks
92	132 kV	132 kV Khandong - Kopili	1	S/C	NEEPCO	NEEPCO	POWERGRID	SPAR kept in non-auto mode	(SPAR facility available)
93	132 kV	132 kV Khandong - Kopili	2	S/C	NEEPCO	NEEPCO	POWERGRID	AR kept in non-auto mode	Gang operated CB at Kopili end (Owner:POWERGRID)
94	132 kV	132 kV Khandong - Umranshu	1	S/C	NEEPCO	AEGCL	POWERGRID & AEGCL	Not Available	Due to problem at Umrangshu end, Single pole CB, AR relay available at Khandong end
95	132 kV	132 kV Khliehriat - Badarpur	1	S/C	POWERGRID	POWERGRID	POWERGRID	3-Ph AR in service	
96	132 kV	132 kV Khliehriat - Mustem	1	S/C	MePTCL	MePTCL	MePTCL	Not available	MePTCL will implement the 3 Ph AR in parallell with ongoing R&M works of PLCC &DPC by January 2020.
97	132 kV	132 kV Mustem - NEHU line	1	S/C	MePTCL	MePTCL	MePTCL	Not available	MePTCL will implement the 3 Ph AR in parallell with ongoing R&M works of PLCC &DPC by January 2020.
98	132 kV	132 kV Khliehriat (MePTCL) - Khliehriat (PG)	1	S/C	MePTCL	POWERGRID	POWERGRID	Not available	
99	132 kV	132 kV Khliehriat (MePTCL) - Khliehriat (PG)	2	S/C	MePTCL	POWERGRID	MePTCL	Not available	MePTCL will implement the 3 Ph AR in parallell with ongoing R&M works of PLCC &DPC by January 2020.
100	132 kV	132 kV Khliehriat- NEIGRIHMS	1	S/C	MePTCL	POWERGRID	MePTCL	Not available	MePTCL will implement the 3 Ph AR in parallell with ongoing R&M works of PLCC &DPC by January 2020.
101	132 kV	132 kV Kumarghat - P K Bari	1	S/C	POWERGRID	TSECL	TSECL	Not Available	Scheme not available at PK Bari end; PLCC not available
102	132 kV	132 kV Lekhi - Nirjuli	1	S/C	DoP, Arunachal Pradesh	POWERGRID	DoP, Arunachal Pradesh & POWERGRID	Information not available	DoP, Arunachal Pradesh & POWERGRID may please intimate the status
103	132 kV	132 kV Pare - Ranganadi	1	S/C	DoP, Arunachal Pradesh	NEEPCO	DoP, Arunachal Pradesh & POWERGRID	AR kept in non-auto mode	
104	132 kV	132 kV Loktak - Ningthoukhong	1	S/C	NHPC	MSPCL	MSPCL	Not Available	
105	132 kV	132 kV Loktak - Rengpang	1	S/C	NHPC	MSPCL	MSPCL	Not Available	
106	132 kV	132 kV LTPS - Mariani	1	S/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action

Details of Auto Recloser of Lines in North Eastern Regional Grid

<i>Sl No</i>	<i>Voltage Level</i>	<i>Name of Element (Emanating - Terminating)</i>	<i>Ckt ID</i>	Tower Configuration (S/C or D/C)	Agency at End 1	Agency at End 2	Owner	AR Details (SPAR/3-Ph AR/Not Available/Information not Available)	Remarks
107	132 kV	132 kV LTPS - Moran	1	S/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
108	132 kV	132 kV LTPS - Nazira	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
109	132 kV	132 kV LTPS - Nazira	2	D/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
110	132 kV	132 kV LTPS - NTPS	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
111	132 kV	132 kV LTPS - Sonari	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
112	132 kV	132 kV Mariani (AEGCL) - Mokokchung (DoP, Nagaland)	1	S/C	AEGCL	ED, DoP, Nagaland	AEGCL(40%)/ DoP, Nagaland(60%)	Not Available	
113	132 kV	132 kV NEHU - Mawlai	1	S/C	MePTCL	MePTCL	MePTCL	Not available	MePTCL will implement the 3 Ph AR in paralell with ongoing R&M works of PLCC &DPC by January 2020.
114	132 kV	132 kV Mawlai - Umiam Stage I	2	S/C	MePTCL	MePTCL	MePTCL	Not available	MePTCL will implement the 3 Ph AR in paralell with ongoing R&M works of PLCC &DPC by January 2021.
115	132 kV	132 kV Mawphlang - Nongstoin	1	S/C	MePTCL	MePTCL	MePTCL	Not available	MePTCL will implement the 3 Ph AR in paralell with ongoing R&M works of PLCC &DPC by March 2020.
116	132 kV	132 kV Mawphlang - Umiam Stg I	1	D/C	MePTCL	MePTCL	MePTCL	Not available	MePTCL will implement the 3 Ph AR in paralell with ongoing R&M works of PLCC &DPC by March 2020.
117	132 kV	132 kV Mawphlang - Umiam Stg I	2	D/C	MePTCL	MePTCL	MePTCL	Not available	MePTCL will implement the 3 Ph AR in paralell with ongoing R&M works of PLCC &DPC by March 2020.
118	132 kV	132 kV Mawphlang- Mawlai	1	S/C	MePTCL	MePTCL	MePTCL	Not available	MePTCL will implement the 3 Ph AR in paralell with ongoing R&M works of PLCC &DPC by January 2021.
119	132 kV	132 kV Melriat(PG) - Zuangtui	1	S/C	POWERGRID	P&ED, Mizoram	POWERGRID	Not Available	POWERGRID may intimate the status
120	132 kV	132 kV Mendipathar - Nangalbibra	1	S/C	MePTCL	MePTCL	MePTCL	Not available	MePTCL will implement the 3 Ph AR in paralell with ongoing R&M works of PLCC &DPC by Septemeber 2019.

Details of Auto Recloser of Lines in North Eastern Regional Grid

Sl No	Voltage Level	Name of Element (Emanating - Terminating)	Ckt ID	Tower Configuration (S/C or D/C)	Agency at End 1	Agency at End 2	Owner	AR Details (SPAR/3-Ph AR/Not Available/Information not Available)	Remarks
121	132 kV	132 kV Mokochung (PG) - Mokochung (DoP, Nagaland)	1	D/C	POWERGRID	DoP,Nagaland	POWERGRID	Information not available	
122	132 kV	132 kV Mokochung (PG) - Mokochung (DoP, Nagaland)	2	D/C	POWERGRID	DoP,Nagaland	POWERGRID	Information not available	
123	132 kV	132 kV Monarchak - Rokhia	1	S/C	NEEPCO	TPGL	TSECL	Not available	132 KV breaker are 3-ph. gang operated.
124	132 kV	132 kV Monarchak - Udaipur	1	S/C	NEEPCO	TSECL	TSECL	Not available	132 KV breaker are 3-ph. gang operated.
125	132 kV	132 kV Myntdu Leshka - Khleihriat	1	D/C	MePTCL	MePTCL	MePTCL	Not available	MePTCL will implement the 3 Ph AR in parallell with ongoing R&M works of PLCC &DPC by April 2020.
126	132 kV	132 kV Myntdu Leshka - Khleihriat	2	D/C	MePTCL	MePTCL	MePTCL	Not available	MePTCL will implement the 3 Ph AR in parallell with ongoing R&M works of PLCC &DPC by April 2020.
127	132 kV	132 kV Nangalbibra - Nongstoin	1	S/C	MePTCL	MePTCL	MePTCL	Not available	MePTCL will implement the 3 Ph AR in parallell with ongoing R&M works of PLCC &DPC by November 2019.
128	132 kV	132 kV NEHU - NEIGRIHMS	1	S/C	MePTCL	MePTCL	MePTCL	Not available	MePTCL will implement the 3 Ph AR in parallell with ongoing R&M works of PLCC &DPC by May 2020.
129	132 kV	132 kV NEHU - Umiam	1	D/C	MePTCL	MePTCL	MePTCL	Not available	MePTCL will implement the 3 Ph AR in parallell with ongoing R&M works of PLCC &DPC by June 2020.
130	132 kV	132 kV NTPS - Tinsukia	1	S/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
131	132 kV	132 kV NTPS - Sonari	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
132	132 kV	132 kV Pailapool - Srikona	1	D/C	AEGCL	AEGCL	AEGCL	Not Available	AEGCL may intimate the plan of action
133	132 kV	132 kV Palatana - Surjamaninagar	1	D/C	OTPC	POWERGRID	POWERGRID	Not Available	Gang operated CB at Palatana end
134	132 kV	132 kV Palatana - Udaipur	1	S/C	OTPC	TSECL	TSECL	Not Available	132 KV breaker are 3-ph. gang operated.
135	132 kV	132 kV Hailakandi - Silchar	1	S/C	AEGCL	POWERGRID	POWERGRID	Information not available	Silchar end: AR in BCU available, AEGCL may intimate the status
136	132 kV	132 kV Panchgram - Srikona	1	S/C	AEGCL	AEGCL	AEGCL	Not Available	Will be implemented under R&M works funded from PSDF

Details of Auto Recloser of Lines in North Eastern Regional Grid

Sl No	Voltage Level	Name of Element (Emanating - Terminating)	Ckt ID	Tower Configuration (S/C or D/C)	Agency at End 1	Agency at End 2	Owner	AR Details (SPAR/3-Ph AR/Not Available/Information not Available)	Remarks
137	132 kV	132 kV Ranganadi - Ziro	1	S/C	NEEPCO	POWERGRID	POWERGRID	SPAR in service	
138	132 kV	132 kV Roing - Pasighat	1	S/C	POWERGRID	POWERGRID	POWERGRID	Information not available	POWERGRID may intimate the status
139	132 kV	132 kV Roing - Tezu	1	S/C	POWERGRID	POWERGRID	POWERGRID	Information not available	POWERGRID may intimate the status
140	132 kV	132 kV Sarusajai - Umtru	1	D/C	AEGCL	MePTCL	MePTCL	Not Available	MePTCL will implement the 3 Ph AR in parallel with ongoing R&M works of PLCC &DPC by May 2020.
141	132 kV	132 kV Sarusajai - Umtru	2	D/C	AEGCL	MePTCL	MePTCL	Not Available	MePTCL will implement the 3 Ph AR in parallel with ongoing R&M works of PLCC &DPC by May 2020.
142	132 kV	132 kV Silchar - Srikona	1	D/C	POWERGRID	AEGCL	POWERGRID	Information not available	Silchar end: AR in BCU available, AEGCL may intimate the status
143	132 kV	132 kV Silchar - Srikona	2	D/C	POWERGRID	AEGCL	POWERGRID	Information not available	Silchar end: AR in BCU available, AEGCL may intimate the status
144	132 kV	132 kV Umiam - Umiam St I	1	S/C	MePTCL	MePTCL	MePTCL	Not Available	MePGCL may intimate the plan of action
145	132 kV	132 kV Umiam St I - Umiam St II	1	S/C	MePTCL	MePTCL	MePTCL	Not Available	MePGCL may intimate the plan of action
146	132 kV	132 kV Umiam St I - Umiam St III	1	D/C	MePTCL	MePTCL	MePTCL	Not Available	MePGCL may intimate the plan of action
147	132 kV	132 kV Umiam St I - Umiam St III	2	D/C	MePTCL	MePTCL	MePTCL	Not Available	MePGCL may intimate the plan of action
148	132 kV	132 kV Umiam St III - Umiam St IV	1	D/C	MePTCL	MePTCL	MePTCL	Not Available	MePGCL may intimate the plan of action
149	132 kV	132 kV Umiam St III – Umiam St IV	2	D/C	MePTCL	MePTCL	MePTCL	Not Available	MePGCL may intimate the plan of action
150	132 kV	132 kV Umiam St III - Umtru	1	D/C	MePTCL	MePTCL	MePTCL	Not Available	MePGCL may intimate the plan of action
151	132 kV	132 kV Umiam St III - Umtru	2	D/C	MePTCL	MePTCL	MePTCL	Not Available	MePGCL may intimate the plan of action
152	132 kV	132 kV Umtru - Umiam St IV	1	D/C	MePTCL	MePTCL	MePTCL	Not Available	MePGCL may intimate the plan of action

Details of Auto Recloser of Lines in North Eastern Regional Grid

<i>Sl No</i>	<i>Voltage Level</i>	<i>Name of Element (Emanating - Terminating)</i>	<i>Ckt ID</i>	Tower Configuration (S/C or D/C)	Agency at End 1	Agency at End 2	Owner	AR Details (SPAR/3-Ph AR/Not Available/Information not Available)	Remarks
153	132 kV	132 kV Umtru - Umiam St IV	2	D/C	MePTCL	MePTCL	MePTCL	Not Available	MePGCL may intimate the plan of action
154	132 kV	132 kV Pare - Lekhi	1	S/C	NEEPCO	DoP, Arunachal Pradesh	NEEPCO, DoP, Arunachal Pradesh & POWERGRID	Not Available	
155	132 kV	132 kV Ranganadi - Itananar	1	S/C	NEEPCO	DoP, Arunachal Pradesh	NEEPCO & DoP, Arunachal Pradesh	Information not available	

List of Lines in North Eastern Regional Grid

Annexure-C.4

Sl No	Name of Element (Emanating - Terminating)	Ckt ID	Agency at End 1	Agency at End 2	Name of Owners	TLSA	Megger /off line Fault locator	Controlled Switching Device (CSD)	Line Differential Protection Availability	OPGW Availability	PLCC Availability	Carrier Aided Protection Availability (Yes/No)
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A. International Lines**a. 400 kV Lines (Charged at 132 kV)**

1	South Comilla (Bangladesh) - Surajmani Nagar	1	PGCB	TSECL	POWERGRID & PGCB	NA				Available		
2	South Comilla (Bangladesh) - Surajmani Nagar	2	PGCB	TSECL	POWERGRID & PGCB	NA				NA		

b. 132 kV Line

1	Gelyphu (Bhutan) - Salakati	1	BPCL	POWERGRID	POWERGRID				Not Available	Available		
2	Motonga (Bhutan) - Rangia	1	BPCL	AEGCL	POWERGRID							

c. 11 kV Line

1	Moreh - Tamu (Myanmar)	1	MSPCL	ESE, Myanmar	MSPDCL & ESE, Myanmar							
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B. +/- 800 kV HVDC Lines

1	Agra - Biswanath Chariali	Pole 1	POWERGRID	POWERGRID	POWERGRID							
2	Agra - Biswanath Chariali	Pole 2	POWERGRID	POWERGRID	POWERGRID							

C. 400 kV Lines

1	Azara - Bongaigaon	1	AEGCL	POWERGRID	NETC(1.8%) & AEGCL (98.2%)				No			
2	Azara - Silchar	1	AEGCL	POWERGRID	NETC(37.5%) & AEGCL(62.5%)				No			
3	Balipara - Biswanath Chariali	1	POWERGRID	POWERGRID	POWERGRID							
4	Balipara - Biswanath Chariali	2	POWERGRID	POWERGRID	POWERGRID							
5	Balipara - Biswanath Chariali	3	POWERGRID	POWERGRID	POWERGRID							
6	Balipara - Biswanath Chariali	4	POWERGRID	POWERGRID	POWERGRID							
7	Balipara - Bongaigaon	1	POWERGRID	POWERGRID	POWERGRID			Not Installed	Not Available			
8	Balipara - Bongaigaon	2	POWERGRID	POWERGRID	POWERGRID			Not Installed	Not Available			
9	Balipara - Bongaigaon	3	POWERGRID	POWERGRID	POWERGRID			Not Installed	Not Available			
10	Balipara - Bongaigaon	4	POWERGRID	POWERGRID	POWERGRID			Not Installed	Not Available			

C. 400 kV Lines

11	Balipara - Misa	1	POWERGRID	POWERGRID	POWERGRID	NA		No	NA	YES		
12	Balipara - Misa	2	POWERGRID	POWERGRID	POWERGRID	NA		No	NA	YES		
13	Biswanath Chariali - Ranganadi	1	POWERGRID	NEEPCO	POWERGRID							
14	Biswanath Chariali - Ranganadi	2	POWERGRID	NEEPCO	POWERGRID							

List of Lines in North Eastern Regional Grid

Annexure-C.4

Sl No	Name of Element (Emanating - Terminating)	Ckt ID	Agency at End 1	Agency at End 2	Name of Owners	TLSA	Megger /off line Fault locator	Controlled Switching Device (CSD)	Line Differential Protection Availability	OPGW Availability	PLCC Availability	Carrier Aided Protection Availability (Yes/No)
15	Bongaigaon - Byrnihat	1	POWERGRID	MePTCL	NETC(97.91 %) & MePTCL(2.09%)							
16	New Siliguri - Bongaigaon	1	POWERGRID	POWERGRID	POWERGRID							
17	New Siliguri - Bongaigaon	2	POWERGRID	POWERGRID	POWERGRID							
18	Alipurduar - Bongaigaon	1	POWERGRID	POWERGRID	ENICL							
19	Alipurduar - Bongaigaon	2	POWERGRID	POWERGRID	ENICL							
20	BgTPP - Bongaigaon	1	NTPC	POWERGRID	POWERGRID			Not Installed	Available			
21	BgTPP - Bongaigaon	2	NTPC	POWERGRID	POWERGRID			Not Installed	Available			
22	Byrnihat - Silchar	1	MePTCL	POWERGRID	NETC(98.06%) & MePTCL(1.94%)							
23	Pallatana - Silchar	1	OTPC	POWERGRID	NETC							
24	Pallatana - Silchar	2	OTPC	POWERGRID	NETC							
25	Imphal - Silchar	1	POWERGRID	POWERGRID	POWERGRID	No		NA				
26	Imphal - Silchar	2	POWERGRID	POWERGRID	POWERGRID	No		NA				
27	Balipara - Kameng	1	POWERGRID	NEEPCO	POWERGRID							
28	Balipara - Kameng	2	POWERGRID	NEEPCO	POWERGRID							

D. 400 kV Lines (Charged at 220 kV)

1	AGBPP - Mariani	1	POWERGRID	POWERGRID	POWERGRID	Nil	1 Off Line Fault Locator/2 Megger	No		Available		
2	AGBPP - Mariani(PG)	2	POWERGRID	POWERGRID	POWERGRID	Nil		No		Available		
3	Mariani - Misa	1	AEGL	POWERGRID	POWERGRID	NA			NA			
4	Mariani (PG) - Misa	1	POWERGRID	POWERGRID	POWERGRID	NA			NA			

E. 400 kV Lines (Charged at 132 kV)

1	Silchar-Melriat	1	POWERGRID	POWERGRID	POWERGRID	NA			NIL	YES		
2	Silchar-Melriat	2	POWERGRID	POWERGRID	POWERGRID	NA			NIL	NO		
3	P K Bari - Silchar	1	TSECL	POWERGRID	POWERGRID							
4	P K Bari - Silchar	2	TSECL	POWERGRID	POWERGRID							
5	Palatana - Surjamaninagar	1	OTPC	TSECL	POWERGRID	NA				NA		

F. 220 kV Lines

1	AGBPP - Deomali	1	NEEPCO	DoP, Arunachal Pradesh	DoP, Arunachal Pradesh							
2	AGBPP - Tinsukia	1	NEEPCO	AEGL	AEGL							
3	AGBPP - Tinsukia	2	NEEPCO	AEGL	AEGL							
4	Agia - Azara	1	AEGL	AEGL	AEGL							
5	Agia - Boko	1	AEGL	AEGL	AEGL							
6	Agia - BTPS	1	AEGL	AEGL	AEGL							
7	Agia - BTPS	2	AEGL	AEGL	AEGL							
8	Azara - Boko	1	AEGL	AEGL	AEGL							
9	Azara - Sarusajai	1	AEGL	AEGL	AEGL							
10	Azara - Sarusajai	2	AEGL	AEGL	AEGL							

F. 220 kV Lines

11	Alipurduar - Salakati	1	POWERGRID	POWERGRID	POWERGRID							
12	Alipurduar - Salakati	2	POWERGRID	POWERGRID	POWERGRID							
13	Balipara - Sonabil	1	POWERGRID	AEGL	AEGL							

List of Lines in North Eastern Regional Grid

Annexure-C.4

Sl No	Name of Element (Emanating - Terminating)	Ckt ID	Agency at End 1	Agency at End 2	Name of Owners	TLSA	Megger /off line Fault locator	Controlled Switching Device (CSD)	Line Differential Protection Availability	OPGW Availability	PLCC Availability	Carrier Aided Protection Availability (Yes/No)
14	Bongaigaon-Salakati	1	POWERGRID	POWERGRID	POWERGRID			Not Installed	Available	Available		
15	Bongaigaon-Salakati	2	POWERGRID	POWERGRID	POWERGRID			Not Installed	Available	Available		
16	BTPS - Salakati	1	AEGCL	POWERGRID	POWERGRID			Not Installed	Not Available	Available		
17	BTPS - Salakati	2	AEGCL	POWERGRID	POWERGRID			Not Installed	Not Available	Available		
18	Dimapur - Misa	1	POWERGRID	POWERGRID	POWERGRID				NA			
19	Dimapur - Misa	2	POWERGRID	POWERGRID	POWERGRID				NA			
20	Jawaharnagar - Samaguri	1	AEGCL	AEGCL	AEGCL							
21	Jawaharnagar - Sarusajai	1	AEGCL	AEGCL	AEGCL							
22	Karbi Langpi - Sarusajai	1	APGCL	AEGCL	AEGCL							
23	Karbi Langpi - Sarusajai	2	APGCL	AEGCL	AEGCL							
24	Bymihat - Misa	1	MePTCL	POWERGRID	MePTCL							
25	Bymihat - Misa	2	MePTCL	POWERGRID	MePTCL							
26	Kopili - Misa	1	NEEPCO	POWERGRID	POWERGRID				NA			
27	Kopili - Misa	2	NEEPCO	POWERGRID	POWERGRID				NA			
28	Kopili - Misa	3	NEEPCO	POWERGRID	POWERGRID				NA			
29	Mariani (AEGCL) - Samaguri	1	AEGCL	AEGCL	AEGCL							
30	Mariani (PG) - Mokochung (PG)	1	POWERGRID	POWERGRID	POWERGRID							
31	Mariani (PG) - Mokochung (PG)	2	POWERGRID	POWERGRID	POWERGRID							
32	Misa - Samaguri	1	POWERGRID	AEGCL	POWERGRID				NA			
33	Misa - Samaguri	2	POWERGRID	AEGCL	POWERGRID				NA			

F. 220 kV Lines

34	NTPS - Tinsukia	1	AEGCL	AEGCL	AEGCL							
35	NTPS - Tinsukia	2	AEGCL	AEGCL	AEGCL							
36	Samaguri - Sonapur	1	AEGCL	AEGCL	AEGCL							
37	Sarusajai-Sonapur	1	AEGCL	AEGCL	AEGCL							
38	Samaguri - Sonabil	1	AEGCL	AEGCL	AEGCL							
39	Samaguri - Sonabil	2	AEGCL	AEGCL	AEGCL							

G. 132 kV Lines

1	Agartala - AGTCCPP	1	TSECL	NEEPCO	POWERGRID	NA						
2	Agartala - AGTCCPP	2	TSECL	NEEPCO	POWERGRID	NA						

List of Lines in North Eastern Regional Grid

Annexure-C.4

Sl No	Name of Element (Emanating - Terminating)	Ckt ID	Agency at End 1	Agency at End 2	Name of Owners	TLSA	Megger /off line Fault locator	Controlled Switching Device (CSD)	Line Differential Protection Availability	OPGW Availability	PLCC Availability	Carrier Aided Protection Availability (Yes/No)
3	Agartala - Bodhjungnagar	1	TSECL	TSECL	TSECL	NA	Megger available	NA	NA	NA	NA	No
4	Agartala - Dhalabil	1	TSECL	TSECL	TSECL	NA	Megger available	NA	NA	Available	NA	No
5	Agartala - Rokhia	1	TSECL	TSECL	TSECL	NA	Megger available	NA	NA	NA	Available	No
6	Agartala - Rokhia		TSECL	TSECL	TSECL	NA	Megger available	NA	NA	NA	Available	No
7	Agia - Mendipathar	1	AEGCL	MePTCL	MePTCL							
8	AGTCCPP - Kumarghat	1	NEEPCO	POWERGRID	POWERGRID							
9	Aizawl - Tipaimukh	1	POWERGRID	MSPCL	POWERGRID	37 nos. of TLSA, Make-Oblum	1.0	-	NO	NO		
10	Aizawl - Kolasib	1	POWERGRID	P&ED, Mizoram	POWERGRID	09 nos. of TLSA, Make-Oblum		-	NO	Yes		
11	Aizawl - Kumarghat	1	POWERGRID	POWERGRID	POWERGRID	30 nos. of TLSA, Make-Oblum		-	NO	Yes		
12	Aizawl - Luangmual	1	POWERGRID	P&ED, Mizoram	P&ED, Mizoram	0.0		-	NO	NO		
13	Aizawl - Melriat(PG)	1	POWERGRID	POWERGRID	POWERGRID				NIL			
14	Ambasa - Gamaitila	1	TSECL	TSECL	TSECL	NA	Megger available	NA	NA	NA	NA	No
15	Ambasa - Kamalpur	1	TSECL	TSECL	TSECL	NA	Megger available	NA	NA	NA	NA	No
16	Ambasa - P K Bari	1	TSECL	TSECL	TSECL	NA	Megger available	NA	Line Differential Protection available between P.K. Bari(Sterlite) to P.K. Bari(TSECL)	Available	NA	No
G. 132 kV Lines												
17	Badarpur - Jiribam	1	POWERGRID	POWERGRID	POWERGRID				NO			

List of Lines in North Eastern Regional Grid

Annexure-C.4

Sl No	Name of Element (Emanating - Terminating)	Ckt ID	Agency at End 1	Agency at End 2	Name of Owners	TLSA	Megger /off line Fault locator	Controlled Switching Device (CSD)	Line Differential Protection Availability	OPGW Availability	PLCC Availability	Carrier Aided Protection Availability (Yes/No)
18	Badarpur - Kolasib	1	POWERGRID	P&ED, Mizoram	POWERGRID							
19	Badarpur - Kumarghat	1	POWERGRID	POWERGRID	POWERGRID							
20	Badarpur - Panchgram	1	POWERGRID	AEGCL	POWERGRID							
21	Badarpur - Silchar	1	POWERGRID	POWERGRID	POWERGRID							
22	Badarpur - Silchar	2	POWERGRID	POWERGRID	POWERGRID							
23	Balipara - Bhalukpong	1	POWERGRID	DoP, Arunachal Pradesh	NEEPCO & DoP, Arunachal Pradesh							
24	Balipara - Ghoramari	1	POWERGRID	AEGCL	AEGCL							
25	Balipara - Sonabil	1	AEGCL	AEGCL	AEGCL							
26	Baramura - Gamaitilla	1	TSECL	TSECL	TSECL	NA	Megger available	NA	NA	Available	NA	No
27	Baramura - Jirania	1	TSECL	TSECL	TSECL	NA	Megger available	NA	NA	Available	NA	No
28	Bhalukpong - Khupi	1	DoP, Arunachal Pradesh	NEEPCO	NEEPCO & DoP, Arunachal Pradesh							
29	Biswanath Chariali - Pavo	1	POWERGRID	AEGCL	POWERGRID							
30	Biswanath Chariali - Pavo	2	POWERGRID	AEGCL	POWERGRID							
31	Pavo - Sonabil	1	AEGCL	AEGCL	AEGCL							
32	Bodhjannagar - Jirania	1	TSECL	TSECL	TSECL	NA	Megger available	NA	NA	Available	NA	No
33	Bokajan - Dimapur	1	AEGCL	POWERGRID	AEGCL							
34	Bokajan - Golaghat	1	AEGCL	AEGCL	AEGCL							
G. 132 kV Lines												
35	BTPS - Dhaligaon	1	AEGCL	AEGCL	AEGCL							
36	BTPS - Dhaligaon	2	AEGCL	AEGCL	AEGCL							
37	Budhjannagar - Surjamaninagar	1	TSECL	TSECL	TSECL	NA	Megger available	NA	NA	Available	NA	No

List of Lines in North Eastern Regional Grid

Annexure-C.4

Sl No	Name of Element (Emanating - Terminating)	Ckt ID	Agency at End 1	Agency at End 2	Name of Owners	TLSA	Megger /off line Fault locator	Controlled Switching Device (CSD)	Line Differential Protection Availability	OPGW Availability	PLCC Availability	Carrier Aided Protection Availability (Yes/No)
38	Budhjangnagar - Surjamaninagar	2	TSECL	TSECL	TSECL	NA	Megger available	NA	NA	Available	Available (Between Bodhjungnagar to S.M.Nagar(Sterlite) and S.M.Nagar(Sterlite) to S.M.Nagar(TSECL)	No
39	Dhalabil - Kamalpur	1	TSECL	TSECL	TSECL	NA	Megger available	NA	NA	Available	NA	No
40	Dharmanagar - Dullavcherra	1	TSECL	AEGCL	AEGCL	NA	Megger available	NA	NA	NA	NA	No
41	Dullavcherra - Hailakandi	1	AEGCL	AEGCL	AEGCL							
42	Dharmanagar - P K Bari	1	TSECL	TSECL	TSECL	NA	Megger available	NA	NA	NA	NA	No
43	Dimapur - Doyang	1	POWERGRID	NEEPCO	POWERGRID				No	Yes		
44	Dimapur - Doyang	2	POWERGRID	NEEPCO	POWERGRID				No	Yes		
45	Dimapur - Imphal	1	POWERGRID	POWERGRID	POWERGRID				No	Yes		
46	Dimapur (PG) - Dimapur (DoP, Nagaland)	1	POWERGRID	DoP, Nagaland	DoP, Nagaland							
47	Dimapur (PG) - Dimapur (DoP, Nagaland)	2	POWERGRID	DoP, Nagaland	DoP, Nagaland							
48	Dimapur (PG) - Kohima	1	POWERGRID	DoP, Nagaland	DoP, Nagaland							
49	Doyang - Mokokchung (DoP, Nagaland)	1	NEEPCO	DoP, Nagaland	DoP, Nagaland							
50	Doyang-Sanis	1	NEEPCO	DoP, Nagaland	DoP, Nagaland							
G. 132 kV Lines												
51	Hailakandi - Silchar	1	AEGCL	POWERGRID	POWERGRID							
52	Hailakandi - Silchar	2	AEGCL	POWERGRID	POWERGRID							
53	EPIP II - Byrnihat	1	MePTCL	MePTCL	MePTCL							
54	EPIP II - Byrnihat	2	MePTCL	MePTCL	MePTCL							
55	EPIP II - Umtru	1	MePTCL	MePTCL	MePTCL							
56	EPIP II - Umtru	2	MePTCL	MePTCL	MePTCL							
57	Gohpur - Pavoi	1	AEGCL	AEGCL	AEGCL							
58	Gohpur - Nirjuli	1	AEGCL	POWERGRID	POWERGRID	Not Installed	YES	NA	Not Used	Available		
59	Golaghat - Mariani (AEGCL)	1	AEGCL	AEGCL	AEGCL							
60	Haflong - Jiribam	1	POWERGRID	POWERGRID	POWERGRID	No	Yes	NA	NO	YES(some part)		
61	Haflong - Umranshu	1	AEGCL	POWERGRID	AEGCL							
62	Imphal (MSPCL) - Imphal (PG)	1	MSPCL	POWERGRID	POWERGRID							
63	Imphal (MSPCL) - Imphal (PG)	2	MSPCL	POWERGRID	POWERGRID & MSPCL							
64	Imphal (MSPCL) - Karong	1	MSPCL	MSPCL	MSPCL							
65	Imphal (PG) - Ningthoukong	1	POWERGRID	MSPCL	MSPCL							

List of Lines in North Eastern Regional Grid

Annexure-C.4

Sl No	Name of Element (Emanating - Terminating)	Ckt ID	Agency at End 1	Agency at End 2	Name of Owners	TLSA	Megger /off line Fault locator	Controlled Switching Device (CSD)	Line Differential Protection Availability	OPGW Availability	PLCC Availability	Carrier Aided Protection Availability (Yes/No)
66	Imphal (PG) - Loktak	1	POWERGRID	NHPC	POWERGRID							
67	Jiribam - Loktak	2	POWERGRID	NHPC	POWERGRID	No	Yes	NA	NO	No		
68	Jiribam - Pailapool	1	POWERGRID	AEGCL	AEGCL/ MSPCL							
69	Jiribam(PG) - Jiribam(MA)	1	POWERGRID	MSPCL	MSPCL							
70	Jiribam-Tipaimukh	1	POWERGRID	MSPCL	POWERGRID	No	Yes	NA	NO	NO		
71	Jorhat - Mariani	1	AEGCL	AEGCL	AEGCL							
72	Jorhat - Mariani	2	AEGCL	AEGCL	AEGCL							
73	Jorhat - Nazira	1	AEGCL	AEGCL	AEGCL							

G. 132 kV Lines

74	Kahilipara - Kamalpur	1	AEGCL	AEGCL	AEGCL							
75	Kahilipara - Sarusajai	1	AEGCL	AEGCL	AEGCL							
76	Kahilipara - Sarusajai	2	AEGCL	AEGCL	AEGCL							
77	Kahilipara - Sarusajai	3	AEGCL	AEGCL	AEGCL							
78	Kamakhya-Sarusajai	1	AEGCL	AEGCL	AEGCL							
79	Kamakhya-Sishugram	1	AEGCL	AEGCL	AEGCL							
80	Kahilipara - Umtru	1	AEGCL	MePTCL	MePTCL							
81	Kahilipara - Umtru	2	AEGCL	MePTCL	MePTCL							
82	Kamalpur - P K Bari	1	TSECL	TSECL	TSECL	NA	Megger available	NA	NA	Available	NA	No
83	Karong - Kohima	1	DoP, Nagaland	MSPCL	MSPCL (65.3%) / DoP, Nagaland (34.7%)							
84	Khandong - Khliehriat	1	NEEPCO	POWERGRID	POWERGRID	in 16 towers				No		
85	Khandong - Khliehriat	2	NEEPCO	POWERGRID	POWERGRID	100% TOWERS (Make-Obalum & Raychem)				Yes		
86	Khandong - Kopili	1	NEEPCO	NEEPCO	POWERGRID	NIL				No		
87	Khandong - Kopili	2	NEEPCO	NEEPCO	POWERGRID	NIL				Yes		
88	Khandong - Umranshu	1	NEEPCO	AEGCL	POWERGRID & AEGCL							
89	Khliehriat - Badarpur	1	POWERGRID	POWERGRID	POWERGRID	in 12 towers				Yes		
90	Khliehriat - Mustem	1	MePTCL	MePTCL	MePTCL							
91	Mustem - NEHU line	1	MePTCL	MePTCL	MePTCL							
92	Khliehriat (MePTCL) - Khliehriat (PG)	1	MePTCL	POWERGRID	POWERGRID	NIL				Yes		
93	Khliehriat (MePTCL) - Khliehriat (PG)	2	MePTCL	POWERGRID	MePTCL							
94	Khliehriat- NEIGRIHMS	1	MePTCL	POWERGRID	MePTCL							
95	Kumarghat - P K Bari	1	POWERGRID	TSECL	TSECL	NA	Megger available	NA	NA	NA	NA	No

List of Lines in North Eastern Regional Grid

Annexure-C.4

Sl No	Name of Element (Emanating - Terminating)	Ckt ID	Agency at End 1	Agency at End 2	Name of Owners	TLSA	Megger /off line Fault locator	Controlled Switching Device (CSD)	Line Differential Protection Availability	OPGW Availability	PLCC Availability	Carrier Aided Protection Availability (Yes/No)
96	Lekhi - Nirjuli	1	DoP, Arunachal Pradesh	POWERGRID	DoP, Arunachal Pradesh & POWERGRID	Not Installed	Yes	NA	Not Available	Yes		
97	Lekhi - Pare	1	DoP, Arunachal Pradesh	NEEPCO	DoP, Arunachal Pradesh & POWERGRID	Not Installed	Yes	NA	Not Available	Yes		
G. 132 kV Lines												
98	Loktak - Ningthoukhong	1	NHPC	MSPCL	MSPCL							
99	Loktak - Renggang	1	NHPC	MSPCL	MSPCL							
100	LTPS - Mariani	1	AEGCL	AEGCL	AEGCL							
101	LTPS - Moran	1	AEGCL	AEGCL	AEGCL							
102	LTPS - Nazira	1	AEGCL	AEGCL	AEGCL							
103	LTPS - Nazira	2	AEGCL	AEGCL	AEGCL							
104	LTPS - NTPS	1	AEGCL	AEGCL	AEGCL							
105	LTPS - Sonari	1	AEGCL	AEGCL	AEGCL							
106	Mariani (AEGCL) - Mokokchung (DoP, Nagaland)	1	AEGCL	ED, DoP, Nagaland	AEGCL(40%)/ DoP, Nagaland(60%)							
107	NEHU - Mawlai	1	MePTCL	MePTCL	MePTCL							
108	Mawlai - Umiam Stage I	2	MePTCL	MePTCL	MePTCL							
109	Mawphlang - Nongstoin	1	MePTCL	AEGCL	MePTCL							
110	Mawphlang - Umiam Stg I	1	MePTCL	MePTCL	MePTCL							
111	Mawphlang - Umiam Stg I	2	MePTCL	MePTCL	MePTCL							
112	Mawphlang- Mawlai	1	MePTCL	MePTCL	MePTCL							
113	Melriat(PG) - Zuangtui	1	POWERGRID	P&ED, Mizoram	POWERGRID				NIL			
114	Mendipathar - Nangalbibra	1	MePTCL	MePTCL	MePTCL							
115	Mokokchung (PG) - Mokokchung (DoP, Nagaland)	1	POWERGRID	DoP,Nagaland	POWERGRID	Nil	yes	No	Yes, Micom Schneider	Available		
116	Mokokchung (PG) - Mokokchung (DoP, Nagaland)	2	POWERGRID	DoP,Nagaland	POWERGRID	Nil	Yes	No	Yes, Micom Schneider	Available		
117	Monarchak - Rokhia	1	NEEPCO	TSECL	TSECL	NA	Megger available	No	NA	NA	NA	No
118	Monarchak - Udaipur	1	NEEPCO	TSECL	TSECL	NA	Megger available	No	NA	NA	NA	No
119	Myntdu Leshka - Khleihriat	1	MePTCL	MePTCL	MePTCL							
120	Myntdu Leshka - Khleihriat	2	MePTCL	MePTCL	MePTCL							
121	Namsai-Tezu	1	POWERGRID	POWERGRID	POWERGRID	NO	Megger available	NA	NO	NO		
122	Nangalbibra - Nongstoin	1	MePTCL	MePTCL	MePTCL							
123	NEHU - NEIGRIHMS	1	MePTCL	MePTCL	MePTCL							
124	NEHU - Umiam	1	MePTCL	MePTCL	MePTCL							

G. 132 kV Lines

List of Lines in North Eastern Regional Grid

Annexure-C.4

Sl No	Name of Element (Emanating - Terminating)	Ckt ID	Agency at End 1	Agency at End 2	Name of Owners	TLSA	Megger /off line Fault locator	Controlled Switching Device (CSD)	Line Differential Protection Availability	OPGW Availability	PLCC Availability	Carrier Aided Protection Availability (Yes/No)
125	NTPS - Tinsukia	1	AEGCL	AEGCL	AEGCL							
126	NTPS - Sonari	1	AEGCL	AEGCL	AEGCL							
127	Pailapool - Srikona	1	AEGCL	AEGCL	AEGCL							
128	Palatana - Udaipur	1	TSECL	TSECL	TSECL	NA	Megger available	NA	NA	Available	NA	No
129	Panchgram - Srikona	1	AEGCL	AEGCL	AEGCL							
130	Pare- Itanagar	1	NEEPCO	DoP, Arunachal Pradesh	DoP, Arunachal Pradesh & NEEPCO							
131	Ranganadi- Itanagar I	1	POWERGRID	DoP, Arunachal Pradesh	DoP, Arunachal Pradesh							
132	Ranganadi - Pare	1	NEEPCO	NEEPCO	POWERGRID	Not Installed	Yes	NA				
133	Ranganadi - Pare	2	NEEPCO	NEEPCO	DoP, Arunachal Pradesh & NEEPCO							
134	Ranganadi - Ziro	1	NEEPCO	POWERGRID	POWERGRID	03 nos, make: OBLUM	1.0			Yes		
135	Roing - Pasighat	1	POWERGRID	POWERGRID	POWERGRID	NO	1.0		NO	NO		
136	Roing - Tezu	1	POWERGRID	POWERGRID	POWERGRID	NO	1.0		NO	NO		
137	Sarusajai - Umtru	1	AEGCL	MePTCL	MePTCL							
138	Sarusajai - Umtru	2	AEGCL	MePTCL	MePTCL							
139	Silchar - Srikona	1	POWERGRID	AEGCL	POWERGRID							
140	Silchar - Srikona	2	POWERGRID	AEGCL	POWERGRID							
141	Umiam - Umiam St I	1	MePTCL	MePTCL	MePTCL							
142	Umiam St I - Umiam St II	1	MePTCL	MePTCL	MePTCL							
143	Umiam St I - Umiam St III	1	MePTCL	MePTCL	MePTCL							
144	Umiam St I - Umiam St III	2	MePTCL	MePTCL	MePTCL							
145	Umiam St III - Umiam St IV	1	MePTCL	MePTCL	MePTCL							
146	Umiam St III - Umiam St IV	2	MePTCL	MePTCL	MePTCL							
147	Umiam St III - Umtru	1	MePTCL	MePTCL	MePTCL							
148	Umiam St III - Umtru	2	MePTCL	MePTCL	MePTCL							
149	Umtru - Umiam St IV	1	MePTCL	MePTCL	MePTCL							
150	Umtru - Umiam St IV	2	MePTCL	MePTCL	MePTCL							

Lines expected to be commissioned during 2019-20 (After commissioning of these elements, they will be considered as important elements of NER)

B. 220 kV Lines

1	BTPS - Rangia	1	AEGCL	AEGCL	AEGCL							
2	BTPS - Rangia	2	AEGCL	AEGCL	AEGCL							

C. 132 kV Lines

List of Lines in North Eastern Regional Grid

Annexure-C.4

Sl No	Name of Element (Emanating - Terminating)	Ckt ID	Agency at End 1	Agency at End 2	Name of Owners	TLSA	Megger /off line Fault locator	Controlled Switching Device (CSD)	Line Differential Protection Availability	OPGW Availability	PLCC Availability	Carrier Aided Protection Availability (Yes/No)
1	Palatana- Surajmaninagar	2	OTPC	TSECL	POWERGRID							
2	Monarchak - Surajmaninagar	1	NEEPCO	TSECL	TSECL							
3	Monarchak - Surajmaninagar	2	NEEPCO	TSECL	TSECL							