

North Eastern Regional Power Committee

Agenda For

57th PCC Sub-Committee Meeting

Time of meeting : 10:30 Hrs.

Date of meeting : 15th February, 2021 (Tuesday)

Venue : “NERPC Conference Hall”, Shillong.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 56th MEETING OF PROTECTION SUB-COMMITTEE OF NERPC.

The minutes of 56th meeting of Protection Sub-committee held on 21st April, 2021 at NERPC Conference Hall were circulated vide letter No. NERPC/SE (O)/PCC/2020/2175-2212 dated 29th May, 2021.

The Sub-committee may confirm the minutes of 56th 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 Aalo, 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. Audit Report under preparation.
Manipur	Yet to be intimated
Meghalaya	400/220/132kV Byrnihat, 132kV Mawphlang, 132kV Mustem, 132kV Umiam
Mizoram	Yet to be intimated
Nagaland	132kV Wokha, 132kV Sanis, 132kV Kiphire
Tripura	Yet to be intimated

Members may please discuss.

B.2 Review of Settings for Important elements:

As per discussions in the 56th PCC meeting the following settings are to be reviewed:

- a. All 132kV feeders of DHEP alongwith Mokokchung(NAG), Sanis and Wokha – *suggested settings to be presented in the meeting*
- b. Downstream co-ordination at 132kV Zuangtui(Zemabawk) completed. NERTS to revert back to original zone timings at Melriat.
- c. 32kV Dimapur-Dimapur D/C with downstream of Dimapur(Nagarjan)- *Implementation status of revised settings to be confirmed*
- d. Co-ordination of Tipaimukh relay settings with Aizawl and Jiribam- *suggested settings to be presented in the meeting*
- e. Review of Distance Protection settings at Ningthoukong for Churachandpur D/C – *Implementation status of revised settings to be confirmed*

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:

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

In the 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.

All utilities may please inform the status.

B.4. Frequent tripping of 132 kV Balipara – Tenga line.

132 kV Balipara – Tenga line tripped 4 times since Jan'21. The root cause of frequent tripping could be concluded due to unavailability of DR, EL output and FIR.

DoP, AP is requested to intimate the root cause of tripping and also submit DR and EL output along with FIR for proper analysis of the event.

In 56th PCC meeting EE(Trans.), DoP Ar. Pradesh informed that majority of the trippings were on E/F protection operation due to infringement on the line. Further, he intimated the following:

- The maintenance of the line is being done by M/s Megha Electricals (as before) after taking over by DoP Ar. Pradesh. M/s Megha Electricals is being pursued for regular patrolling and vegetation clearance of the line.
- Tenga LILO portion is being maintained by M/s DEVI Energies Ltd. and they have been sensitized for regular submission of DR/EL.

NERLDC/DoP Ar. Pradesh may please intimate the status.

B.5. Review of Settings of 132kV Surjamaninagar-Comilla D/C.

Deliberations in the 9th OCM between India and Bangladesh

Many incidences of non-clearance of faults from downstream of Cumilla have been observed which were cleared by operation of zone 2/zone 3 distance protection at Surjyamaninagar end. PMU plots for some of these trippings were shared, which show faults persisting upto 1 second. These are resulting into unintended tripping of both circuits and supply interruption. It was discussed to maintain the fault clearing time of 33KV feeders as per Bangladesh Grid Code and share the same for harmonization of protection settings. It was agreed by all that clearly finding out the protection issues and protection coordination with the downstream network in Cumilla are of utmost importance. Bangladesh side shared the protection philosophy for 132/33 kV system and stated that tripping could be due to protection coordination issues between India and Bangladesh end. Bangladesh side stated that they would share the SLD and protection settings of Cumilla substation with Indian side in 2 days. It was also stated that as teleprotection has not yet been established between Cumilla and Surjyamaninagar, its establishment would be helpful.

It was agreed that NERPC would convene a meeting with NERLDC, NLDC, TSECL, Powergrid India, and PGCB Cumilla to discuss protection coordination issues after protection settings from Cumilla are received.

Members may please discuss.

B.6. Updation of PDMS.

Protection Database Management System was GoLive on 14.02.2020. For the FY 21-22 updation of the same is under AMC to M/s PRDC. The status for the works under AMC completed for FY 21-22 will be elaborated by NERPC.

NERPC may please deliberate.

B.7. Load loss in NER for the Period July'21 to Jan'22.

Month	Load Loss(in MU)	
		Corresponding month Previous Year
Jan 22	0.389	0.1553
Dec'21	0.0069	0
Nov'21	0.0452	0
Oct'21	0.8229	0.231
Sep'21	0.495	0.9077
Aug'21	0.515	0.623
Jul'21	0.2376	0.123

Members may please discuss.

B.8. Analysis & Discussion on Major Grid Disturbances which occurred in NER grid w.e.f. July'21 to Jan'22.

Items related to DoP, Arunachal Pradesh

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the PCC
1.	Tripping of 132 kV Balipara - Tenga line on 19.08.21 and 29.08.21			19.08.21 -> As per FIR, R phase jumper torn out and fell on Y phase insulator at Location-09. No DR from both ends. 29.08.21 ->No DR from both ends.	
2.	Tripping of 132 kV Along - Pasighat Line on 09.08.21			->As per FIR from Along end, E/F relay operated (Distance protection not working). ->No DR from both ends.	
3.	Tripping of 132 kV Along - Daporijo Line on 14.08.21 and 29.08.21			29.08.21 ->As per FIR from Along, three phase to earth fault. ->Submitted DR does not contain pre-fault data. DR not time synchronized.	
4.	Tripping of 132 kV Along-Pasighat line on 03.09.21, 04.09.21, 11.09.21, 12.09.21, 27.09.21 and 28.09.21.		->DR/FIR to be submitted regularly. ->Infringement clearance to be done and patrolling report to be submitted to NERPC and NERLDC	03.09.21 ->DR submitted is not time synchronized and does not contain pre-fault data. 04.09.21 ->As per FIR from Along, vegetation related transient fault. DR submitted from Along is not time synchronized and does not contain pre-fault data. 11.09.21 ->As per FIR, vegetation related transient fault. No DR from both ends. 12.09.21 -> As per FIR, recurring fault. No	

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				DR from both ends. 27.09.21 ->As per FIR from Along, due to low SF6 in the 132kV main bus breaker, main bus breaker tripped. 28.09.21 ->No DR/FIR from both ends.	
5.	Tripping of 132 kV Balipara - Tenga line on 03.09.21 (twice), 06.09.21 and 14.09.21 (twice)			->No DR from both ends.	
6.	Tripping of 132 kV Along - Daporijo Line on 03.10.21, 11.10.21		->DR/FIR to be submitted regularly. ->Infringement clearance to be done and patrolling report to be submitted to NERPC and NERLDC	->Submitted DR not standardized.	
7.	Tripping of 132 kV Balipara – Tenga Line on 04.10.21			->No DR/FIR.	
8.	Tripping of 132 kV Along – Pasighat Line on 08.10.21, 16.10.21			08.10.21 ->No DR/FIR 16.10.21 ->Y-N fault cleared on Z2 at Along end in 460 msec. No DR from Pasighat.	
9.	Tripping of 132 kV Daporijo – Ziro on 16.10.21			->No DR/FIR.	
10	Tripping of 132 kV Along – Pasighat Line on 07.11.21, 11.11.21		->DR/FIR to be submitted regularly. ->Infringement clearance to be done and patrolling report to be submitted to NERPC and NERLDC	07.11.21 ->Y-E fault in the line. Z1 operated at Along end. ->No DR from Pasighat end.	
				11.11.21 ->No DR/FIR from both ends.	
11	Tripping of 132kV Along-Pasighat on 25.01.2022.			->No DR/FIR from both ends.	

Items related to OTPC and TSECL

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
12.	Tripping of 132 kV Palatana - Udaipur Line and Monarchak Unit GT on 14.07.21		->400/132kV ICTs at Palatana & 132kV Palatana-Udaipur reviewed settings to be Implemented.	->Suspected Single line to ground(Y-N) Fault in 132kV Palatana-Udaipur line. Z1 protection operated at both end. ->Monarchak GT tripped on F>1.	
13.	Tripping of 132 kV Palatana - Udaipur Line and 132 kV Monarchak - Udaipur on 18.08.21			->Suspected Y-N fault in 132 kV Palatana - Udaipur Line. Z1 operated at Palatana end. ->Z2 operated at Monarchak end. ->No DR/FIR from Udaipur end. ->Relay non-operation at Udaipur may be checked.	

Items related to NEEPCO, DoP Nagaland and Powergrid

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
14.	Tripping of 132 kV Mokochung (PG) - Mokochung (DoP, Nagaland) D/C Lines, 132 kV Doyang - Mokochung (DoP, Nagaland) Line and Doyang Unit 1 and 3 on 20.07.21			->Suspected Single line to ground fault(B-N) in 132kV Doyang - Mokochung(DoP, Nagaland) line. ->132 kV Mokochung (PG) - Mokochung (DoP, Nagaland) D/C Lines tripped from Mokochung(PG) end within 1.2 sec on IN>1. ->Fault was cleared after delay of 2.4 sec from Mokochung (DoP, Nagaland) end on IN>1.	

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15.	Tripping of 132 kV Mokochung (PG) - Mokochung (DoP, Nagaland) D/C Lines, 132 kV Doyang - Mokochung (DoP, Nagaland) Line on 26.07.21			->Suspected Single line to ground fault(B-N) in 132kV Doyang - Mokochung(DoP, Nagaland) line. ->132 kV Mokochung (PG) - Mokochung (DoP, Nagaland) D/C Lines tripped from Mokochung(PG) end within 550 ms on IN>1.	
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Items related to P&ED Mizoram

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
16.	Tripping of 132 kV Melriat(PG) - Zuangtui Line on 22.07.21 (twice) and 30.07.21 (twice)		->Z-2/3 time settings at Melriat to be reverted to original after revised implemented settings at Zuangtui are submitted.	16:54Hrs 22.07.21 B-N fault. ->No DR from Melriat end. ->DR from Zuangtui inconclusive.	
				18:07Hrs 22.07.21 B-N fault. ->At Melriat end, IN>1 protection cleared the fault in 470 msec.	
				10:18Hrs 30.07.21 ->No DR from Melriat end. ->DR from Zuangtui inconclusive.	
				10:46Hrs 30.07.21 B-N fault. ->No DR from Melriat end. ->DR from Zuangtui inconclusive.	
16.	Tripping of 132 kV Melriat(PG) - Zuangtui Line on 02.08.21 (twice)			->Suspected R-N fault. ->As per FIR, no tripping at Melriat end. No DR from Melriat. ->As per DR from Zuangtui, fault cleared in 1.1 sec on operation of Relay 1. ->DR to be standardized at Zuangtui.	

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17.	Tripping of 132kV Melriat-Zuangtui on 31.01.2022.			->No DR/FIR from both ends.	
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Items related to AEGCL and NEEPCO

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
18.	Tripping of 132 kV Khandong - Umranshu Line on 23.07.21			->Single line to ground fault(B-N). Z1 operated at both ends.	

Items related to DoP Nagaland and Powergrid

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
19.	Tripping of 132 kV Dimapur(DoP, Nagaland)- Dimapur(PG) D/C line on 15.09.21			->Line-2 tripped from Dimapur(PG) end on SOTF trip. ->Subsequently, Line 1 tripped from Dimapur(DoP, Nagaland) end on OC. ->Root cause of tripping from Dimapur(PG) end for Line 2 may be intimated.	
20.	Tripping of 132 kV Doyang-Mokokchung, 132kV Mokokchung(DoP,NG) -Mokokchung(PG) line on 18.09.21 and 28.09.21.			18.09.21 ->Suspected B-N fault in 132kV Doyang-Mokokchung line. ->From Mokokchung(DoP), Z2 cleared the fault in 460 msec. ->At Mokokchung(PG) end, EF protection cleared the fault in 430 msec. 28.09.21 ->Suspected RB-N fault in 132kV Doyang-Mokokchung line. ->From Mokokchung(DoP), Z2 cleared the fault in 480 msec.	

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				->At Mokokchung(PG) end, EF protection cleared the fault in 360 msec.	
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Items related to DoP Nagaland, NEEPCO and NERTS

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
21.	Tripping of 132 kV Doyang - Mokokchung (DoP, Nagaland), 132 kV Mokokchung (PG) - Mokokchung (DoP, Nagaland) D/C line, 132 kV Doyang-Sanis and 132 kV Dimapur - Doyang 2 on 08.10.21			->Suspected Y-N fault in 132 kV Doyang - Mokokchung (DoP, Nagaland). ->Pre-fault data not present in DR from Doyang. ->At Dimapur end, Backup O/C & E/F protection cleared the fault in 1.3 sec. -> No DR from Sanis. ->From Mokokchung(DoP, Nagaland) end, Z2 cleared the fault in 530 msec. ->From Mokokchung(PG) end, IN>1 protection cleared the fault in 500 msec.	

Items related to DoP Nagaland, MSPCL

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
22.	Tripping of 132 kV Dimapur(PG)- Kohima line, 132 Kohima - Wokha line and 132 kV Karong -Kohima line on 27.07.21		->B/U Relay for 132kV Karong-Kohima at Karong to be replaced.	->At Dimapur end, single line to fault (B-N) converted to double line to ground fault after 1.15 sec. Z3 cleared the YB-N fault in 0.85 sec. ->At Kohima end for Karong line, directional earth fault cleared the B-N fault in 850 msec. ->No DR from 132kV Kohima-Wokha line.	

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23.	Tripping of 132 kV Karong-Kohima, 132kV Kohima-Wokha and 132kV Kohima-Dimapur(PG) on 15.09.21			->Suspected R-N fault in 132kV Kohima-Wokha line. ->At Dimapur end, Z2 cleared the fault in 440 msec.	
24.	Tripping of 132kV Yurembam-Karong, 132 kV Karong-Kohima, 132kV Kohima-Wokha and 132kV Kohima-Dimapur(PG) on 28.09.21.		->B/U Relay for 132kV Karong-Kohima at Karong yet to be replaced. ->BB protection to be implemented at Yurembam. ->Z-4 setting at Yurembam to be reduced to 200ms.	->R-N fault. Exact location to be intimated. ->At Dimapur end, Z2 cleared the fault in 820 msec. ->At Imphal end, overcurrent protection cleared the fault in 410 msec. Z2 also picked the fault.	
25.	Tripping of 132 kV Yurembam – Karong, 132kV Karong - Kohima and 132 kV Dimapur (PG) – Kohima on 15.10.21			->Suspected B-N fault in 132kV Dimapur-Kohima line. Z2 cleared the fault in 470 msec at Dimapur. ->Tripping of 132 kV Yurembam – Karong, 132kV Karong – Kohima to be investigated.	
26.	Tripping of 132 kV Yurembam – Karong, 132 kV Dimapur (PG) – Kohima, 132 kV Kohima – Wokha and 132 kV Sanis – Wokha on 20.10.21			->Suspected Y-B fault in 132kV Kohima-Wokha line. ->Z1 picked the fault at Kohima end however fault was cleared after 1.1 sec. ->At Imphal end, DR does not show pre-fault conditions. ->At Karong end for 132kV Imphal-Karong line, Z4 picked the fault. ->Z3 cleared the fault at Dimapur end after 1.3 sec. ->No DR for 132 kV Sanis – Wokha line.	
27.	Tripping of 132 kV Yurembam – Karong, 132 kV Kohima – Wokha and 132 kV Dimapur (PG) – Kohima on 06.11.21		->B/U Relay for 132kV Karong-Kohima at Karong yet to be replaced. ->BB protection to be	->Suspected B-N fault in 132 kV Kohima – Wokha line. ->As per FIR from Kohima, Z1 picked the fault for 132kV kohima-Wokha line	

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			implemented at Yurembam. ->Z-4 setting at Yurembam to be reduced to 200ms.	at Kohima. No DR from Kohima end. ->At Wokha end, Z2 cleared the fault in 490 msec. ->At Dimapur(PG), directional TEF cleared the fault in 1.5 sec.	
28.	Tripping of 132 kV Karong – Kohima, 132 kV Kohima – Wokha and 132 kV Dimapur (PG) – Kohima on 08.11.21			->Y-N fault. ->At Dimapur(PG) end, Directional EF operated. ->DR submitted from Kohima does not correspond to the fault.	

Items related to DoP Nagaland and MSPCL

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
29.	Tripping of 132 kV Sanis - Wokha line, 132 Kohima -Wokha line and 132 kV Karong -Kohima line on 02.08.21			->Suspected Y-B fault in 132kV Kohima-Wokha line. ->Z1 operated at Kohima end for Wokha feeder. ->Overcurrent Protection operated at Kohima end for 132kV Karong-Kohima line. ->As per FIR, no tripping at Sanis end. ->No DR from Wokha and Sanis end.	
29.	Tripping of 132 kV Yurembam – Karong and 132kV Karong - Kohima on 05.09.21, 11.09.21 and 26.09.21 (twice)			05.09.21 ->Suspected Downstream B-N fault at Karong end. ->From Yurembam, OC protection cleared the fault in 510 msec. Z3 also pick up the fault. -> At Karong end for 132kV Karong – Kohima line, Z4 picked the fault. At Kohima end, IN>1 trip the line. Pre-fault is not present in DR from Kohima end.	

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				<p>11.09.21 ->Suspected R-N fault in 132kV Karong – Kohima. Z1 cleared the fault at Kohima end. ->No DR/FIR from other ends.</p>	
				<p>26.09.21,10:13 Hrs ->Root cause may please be intimated. 26.09.21,16:15 Hrs ->Suspected R-Y fault in 132kV Karong-Kohima line. Z1 operated at both ends. ->At Karong end for 132kV Imphal(MSPCL)-Karong line, SOTF trip operated. No DR from Imphal end.</p>	
30.	<p>Tripping of 132 kV Yurembam – Karong and 132kV Karong - Kohima on 15.10.21 and 21.10.21</p>		<p>->B/U Relay for 132kV Karong-Kohima at Karong yet to be replaced. ->BB protection to be implemented at Yurembam. ->Z-4 setting at Yurembam to be reduced to 200ms.</p>	<p>15.10.21 ->As per FIR from Karong, fault was in 33kV Karong-kangpokpi Line. ->At Karong end for 132kV Yurembam-Karong line, fault cleared in 100 msec on R3. DR at Karong to be standardized. ->No DR from Imphal end. ->No pre-fault data from Kohima end. 21.10.21 ->Suspected B-N fault in 132kV Karong – Kohima line. Z1 operated at Kohima end. -> No DR from other end.</p>	
31.	<p>Tripping of 132 kV Imphal (Yurembam)-Karong line and 132kV Karong-Kohima on 02.12.21</p>		<p>->B/U Relay for 132kV Karong-Kohima at Karong yet to be replaced. ->BB protection to be implemented at Yurembam. ->Z-4 setting at Yurembam to be</p>	<p>->Suspected downstream fault at Karong. ->Z3 picked the fault at Kohima end. As per FIR from Kohima, B/U EF operated. ->At Karong end for Kohima, Z4 picked the fault. ->At karong end for Yurembam, SOTF cleared the fault.</p>	

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			reduced to 200ms.	->No tripping at Yurembam end.	
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Items related to AEGCL

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32 .	Tripping of 132 kV Gohpur - North Lakhimpur D/C Line on 10.07.21(twice)		-> Carrier aided intertripping to be made functional for 132kV Gohpur – N.Lakhimpur D/C to avoid delayed fault clearance. ->Z-2 timing at Gohpur for N.Lakhimpur D/C has to be reduced to 350ms, carrier communication to be tested.	04:46 10.07.21 ->Z1 cleared the fault at both ends for D/C lines. 14:16 10.07.21 ->Suspected fault in line-2, Z1 operated at Gohpur. Z2 operated at North Lakhimpur end in 590 msec. ->For line-1, Z2 protection cleared the fault at Gohpur end in 550 msec.	
33 .	Tripping of 132 kV BTPS - Dhaligaon 1 & 2 Line on 16.07.21		->Dhaligaon end DP settings to be reviewed.	->YB-N Fault due to Lightning. Z1 cleared the fault at BTPS end. ->Z1 operated at Dhaligaon end for line 1. -> No DR from Dhaligaon for line 2.	
34 .	Tripping of 132 kV Kahilipara - Sarusajai 1, 2 and 3 line, 132 kV Kahilipara Main Bus I, 132 kV Kahilipara Transfer Bus I and 132 kV Kahilipara - Kamalpur Line on 02.08.21			->R-Y phase bus fault at Kahilipara. ->Z2 protection operated at Sarusajai end for line 1,2 and 3. ->Z5 picked the fault at Kahilipara for all the feeders.	
35 .	Tripping of 220 kV BTPS - Rangia D/C and 132 kV Motonga (Bhutan) - Rangia on 05.08.21			->Suspected B-N fault in 132kV BTPS- Rangia 2. ->At BTPS end, Z2 cleared the fault in 580 msec for both circuits. ->No tripping at Rangia end for circuit 1. ->Z1 picked the fault at Rangia end for ckt	

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				2 after 590 msec. Thereafter, fault was cleared in 70 msec. ->No DR for 132 kV Motonga (Bhutan) – Rangia line.	
36	Tripping of 132 kV Golaghat - Mariani (AEGCL) line on 07.08.21			->As per FIR, no tripping at Golaghat end. Dir. E/F operated at Mariani end. ->No DR from both ends.	
37	Tripping of 132 kV BTPS - Dhaligaon D/C on 10.08.21			->Suspected Vegetation related R-N fault. ->Z1 operated at Dhaligaon end. ->TEF protection operated after 430 msec at BTPS end.	
38	Tripping of 220 kV AGBPP - Tinsukia D/C line, 220 kV NTPS - Tinsukia 1 Line and 100 MVA, 220/132 kV Transformer 1 & 2 at Tinsukia on 20.08.21			->As per FIR from Tinsukia for 220 kV NTPS - Tinsukia 1 Line, LBB operated as Y-pole CB failed to open for Y-phase to ground fault in zone 1 of 220 kV NTPS - Tinsukia 1 Line. -> No DR from other ends.	
39	Tripping of 220/132kV Tinsukia ICT 1&2, 132kV Tinsukia-Bordubi and 132kV Tinsukia-Dibrugarh on 16.09.21.			->As per FIR from Tinukia, B phase jumper snapped on LV side of 100MVA Transformer 1. ->For 132kV Tinsukia-Dibrugarh line,Z4 picked and cleared the fault in 550 msec at . -> No DR from other ends.	
40	Tripping of 220 kV Jawaharnagar – Samaguri on 09.10.21			->Suspected R-N fault in 220 kV Jawaharnagar – Samaguri line. Z1 operated at Samaguri end. No DR from Jawaharnagar.	

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41	Tripping of 220 kV Karbi Langpi - Sarusajai D/C on 14.10.21 (twice) and 17.10.21			<p>14.10.21 11:06Hrs ->Suspected B-N fault in 220 kV Karbi Langpi – Sarusajai line 1. Z1 operated at Sarusajai end for line 1. Z2 operated at Sarusajai for line 2. ->No DR from Karbi Langpi.</p> <p>14.10.21 12:28 Hrs ->Suspected B-N fault in 220 kV Karbi Langpi – Sarusajai line 1. Z1 operated at Sarusajai end for line 1. Z2 operated at Sarusajai for line 2. ->No DR from Karbi Langpi.</p> <p>17.10.21 ->Suspected RB-N fault. ->Both line tripped on ZCOM-trip at Sarusajai end. ->No DR from Karbi Langpi.</p>	
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Items related to AEGCL and Meghalaya

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
42.	Tripping of 132kV Khliehriat (MePTCL)- Lumshnong on 06.09.21.			<p>-> YB-N fault. ->Z4 picked fault at Lumshnong end. Z2 pick up at Khliehriat end. ->Fault was cleared in 220 msec at Khliehriat end.</p>	

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43	Tripping of 132kV Khleiriat(ME) – Lumshong on 07.01.2022 and 20.01.2022.			<p>07:39 Hrs on 07.01.2022 ->At 07:18 Hrs, 132 kV Panchgram – Lumshnong line tripped. ->As per FIR from Lumshnong, when 132 kV Panchgram – Lumshnong was charged at 07:39 Hrs ,132kV Khleiriat(ME) – Lumshong line tripped on broken conductor indication. Suspected fault in 132 kV Panchgram – Lumshnong. ->Pre-fault condition not present in the DR from Lumshnong for 132kV Khleiriat(ME) – Lumshong line.</p>	
				<p>16:30 Hrs on 20.01.2022 ->At 16:07 Hrs, 132 kV Panchgram – Lumshnong line tripped. ->As per FIR from Lumshnong, when 132 kV Panchgram – Lumshnong was charged at 16:30 Hrs ,132kV Khleiriat(ME) – Lumshong line tripped on broken conductor indication. Suspected fault in 132 kV Panchgram – Lumshnong.</p>	
44	Tripping of 132kV Khleiriat(ME) – Lumshong and 132 kV Panchgram - Lumshnong on 18.01.2022.			<p>07:09 Hrs on 18.01.2022 -> As per FIR, 132kV Khleiriat(ME) – Lumshong line tripped on broken conductor indication. Suspected fault in 132 kV Panchgram – Lumshnong. ->Pre-fault conditions not present in the DR sent. ->DR to be standardized.</p>	

Items related to MSPCL

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
45.	Tripping of 132 kV Yurembam – Karong and 132kV Karong - Kohima on 03.08.21			->Suspected R-B fault in 132kV Karong – Kohima line. ->Z1 operated at Karong end for Kohima line. ->Z4 picked the fault at Karong end for 132kV Yurembam – Karong. SOTF/TOR trip cleared the fault.	
46	Tripping of 132 kV Imphal (MSPCL) - Yaingangpokpi D/C line on 15.08.21			->As per FIR, fault was in 132kV Yaingangpokpi-Hundung line. ->DR submitted were not for this GD.	
47.	Tripping of 132 kV Imphal (Yurembam)-Karong line on 04.11.21		->BB protection to be implemented at Yurembam. ->Z-4 setting at Yurembam to be reduced to 200ms.	->DR from Imphal end does not contain pre-fault data. ->As per FIR from Karong end, line tripped while charging 132kV Karon-Kohima line.	
48.	Tripping of 132 kV Ningthoukhong-Churachandpur D/C lines and 132 kV Churachandpur - Kakching line on 29.11.21		->O/C setting at Yurembam for Yaingangpokpi D/C to be revised.	->No DR submitted. ->As per FIR, LA burst at Churachandpur. No tripping at Ningthoukhong end.	

Items related to Meghalaya

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
49	Tripping of 132 kV Myntdu Leshka - Khleihriat 1 & 2 Line and Myntdu Leshka Unit 1,2 & 3 on 18.07.21, 22.07.21(twice) and 30.07.21		->Relay to be time synced at Leshka and Khleihriat. ->Jumper strengthening to be done. ->Line patrolling reports to be submitted.	18.07.21 ->As per FIR, Y phase conductor snapped at Myntdu Leshka for feeder 2. 13:35 Hrs 22.07.21 ->Three phase to gnd fault. Z1 cleared the fault at all ends. 14:35 Hrs 22.07.21 ->Three phase to gnd fault. Z1 cleared the fault at all ends.	

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				30.07.21 ->As per FIR, B phase conductor snapped for feeder 1. ->At Khliehriat end for feeder 2, IN>1 trip operated after 1.2 sec.	
50	Tripping of 132 kV Myntdu Leshka - Khliehriat 1 & 2 Line and Myntdu Leshka Unit 1,2 & 3 on 04.08.21 and 22.08.21			04.08.21 ->R-Y fault. ->Z1 protection operated for both the lines at both ends.	
				22.08.21 ->As per FIR, cause of tripping was snapping of jumper between line and wave trap at Leshka switchyard. ->At Khliehriat end, IN>1 tripped both the line. Pre-fault data not present in the submitted DR.	
51.	Tripping of 132 kV Myntdu Leshka - Khliehriat 1 & 2 on 05.09.21 and 09.09.21.		->Relay to be time synced at Leshka and Khliehriat. ->Jumper strengthening to be done. ->Line patrolling reports to be submitted.	05.09.2021 ->Suspected Lightning 3-phase to gnd fault. Z1 protection operated at both ends. 09.09.2021 ->Suspected lightning related YB-N fault. Z1 protection operated at both ends.	

Items related to NEEPCO, OTPC and TSECL

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
52.	Tripping of 132 kV Palatana – Udaipur, 132 kV Monarchak – Udaipur, Monarchak Unit ST and AGTCCPP Unit 2 on 13.10.21		->400/132kV ICTs at Palatana & 132kV Palatana-Udaipur reviewed settings to be Implemented.	->RYB fault. Z2 cleared the fault at Monarchak in 520 msec. No DR from other ends.	

Items related to NEEPCO and TSECL

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
53.	Tripping of 132 kV Monarchak – Udaipur and Monarchak Unit			->R-N fault. Z4 cleared the fault at Monarchak after 580	

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	GT & ST on 06.10.21			msec. Z1 cleared the fault at Udaipur.	
54.	Tripping of 132 kV Monarchak – Rokhia, 132 kV Agartala - Rokhia D/C, Rokhia Unit 7 & 9 and Monarchak Unit GT on 13.10.21 (twice)			<p>04:23 Hrs</p> <p>->Exact fault location to be intimated.</p> <p>-> For 132V Agartala-Rokhia line 2, Z4 picked the fault at Rokhia. Z2 cleared the fault in 410 msec from Agartala end.</p> <p>-> For 132V Agartala-Rokhia line 1, DR from Agartala end for line 1 not standardized. At Rokhia end, Z1 cleared the fault in 60 msec.</p> <p>->For 132kV Monarchak-Rokhia line, initially Z4 pick up the fault at Rokhia end. Later, Z1 cleared the fault in 60 msec.</p> <p>07:09Hrs</p> <p>->Exact fault location to be intimated.</p> <p>-> For 132V Agartala-Rokhia line 2, Z1 cleared the fault at Rokhia in 60 msec. Z2 cleared the fault in 410 msec from Agartala end.</p> <p>-> For 132V Agartala-Rokhia line 1, Z2 cleared the fault in 390 msec from Agartala end. At Rokhia end, initially Z4 picked the fault. After 60 msec delay, Z1 cleared the fault in another 60 msec.</p> <p>->For 132kV Monarchak-Rokhia line, Z1 cleared the fault at Rokhia end in 60 msec.</p>	

Items related to TSECL

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
55.	Tripping of 132 kV Monarchak – Rokhia, 132kV Monarchak-Udaipur and Monarchak STG & GTG			<p>->Suspected Y-N Fault in 132kV Monarchak-Rokhia.</p> <p>->As per FIR for 132kV Monarchak-</p>	

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	on 05.09.21			Udaipur, at Monarchak end Z4 picked the fault.	
56.	Tripping of 132kV Monarchak-Udaipur on 15.09.21			->Y-B Fault. Z1 operated at Udaipur end. ->No DR from Monarchak	
57.	Tripping of 132 kV Monarchak – Rokhia and Monarchak STG & GTG on 08.09.21 and 22.09.21			08.09.21 ->YB-N fault. Z1 operated at Rokhia end. Z2 cleared the fault at Monarchak. 22.09.21 -> B-N fault. Z2 operated at Rokhia end. No DR from Monarchak.	
58.	Tripping of 132 kV Dharmanagar-PK Bari on 27.09.21.			->RB-N fault in 132 kV Dharmanagar-PK Bari line. Z1 operated at PK Bari end. ->No DR from Dharmanagar end.	

Items related to NHPC, MSPCL and Powergrid

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
59.	Tripping of 132 kV Loktak-Ningthoukhong and 132kV Imphal(PG)-Ningthoukhong on 13.09.21 and 20.09.21.		->Defective Card at Loktak PLCC panel to be replaced. ->Z-3 timing at Imphal for Ningthoukhong feeder to be revised to 500ms. ->Z-4 at Loktak for Ningthoukhong feeder to be revised to 350ms. ->Backup relay coordination for Imphal-Ningthoukhong-Loktak has to be done to avoid tripping of healthy line 132Kv Imphal-Ningthoukhong.	13.09.2021 ->Suspected R-N fault in 132kV Loktak-Ningthoukhong line. ->At Loktak end, overcurrent protection cleared the fault. ->At Imphal end, Z2 cleared in 360 msec. 20.09.2021 -> Suspected Y-N fault in 132kV Imphal(PG)-Ningthoukhong line. Z1 protection operated at Imphal end. ->At Loktak end, Z3 and overcurrent picked the fault. ->No DR from Ningthoukhong end.	

Items related to NEEPCO and Powergrid

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup

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60.	Tripping of 400kV Balipara-Kameng II line and Kameng Unit 1 &2 on 24.09.21.			->No fault was observed from DRs from Kameng end. ->As per FIR from Balipara, Ckt-I did not trip at Balipara end. DT was received from Kameng end for ckt II.	
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Items related to NERTS

Sl No	Description of Event	Action Already Taken	Recommended actions in last sub- group	Discussion Points	Deliberation of the Subgroup
61.	Tripping of 132 kV Badarpur – Kolasib and 132 kV Aizawl – Kolasib Line on 28.10.21			->Suspected Y-B fault in Kolasib downstream. Z3 cleared the fault from Aizwal and Badarpur end.	

Members may please discuss.

AGENDA ITEMS FROM NERLDC:

B.9. Non-operation of auto-reclosure in Important Grid Elements for transient faults w.e.f. July'21.

Sl. No	Name of the Line	Utility	Date and Time
1	220 kV AGBPP - Tinsukia 1 Line	AEGCL	15-07-2021 at 16:19 Hrs
2	220 kV AGBPP - Tinsukia 2 Line	AEGCL	28-10-2021 at 17:33 Hrs
3	220 kV Agia - Boko Line	AEGCL	04-09-2021 at 12:08 and 30-09-2021 at 11:36 Hrs
4	220 kV Agia - BTPS 1 Line	AEGCL	01-09-2021 at 19:47 Hrs , 23-10-2021 at 10:09 Hrs,29.01.22 at 13:18 Hrs
5	220 kV Agia - BTPS 2 Line	AEGCL	28-07-2021 at 11:57 Hrs, 13-09-2021 at 10:57 Hrs, 30-09-2021 at 11:28 Hrs, 10-10-2021 at 11:40 Hrs
6	220 kV Azara - Sarusajai 1 Line	AEGCL	11-09-2021 at 11:33 Hrs
7	220 kV Azara - Sarusajai 2 Line	AEGCL	05-09-2021 at 12:21 Hrs
8	220 kV Balipara - Sonabil 1 Line	AEGCL	01-08-2021 at 20:06 Hrs, 11-09-2021 at 10:50 Hrs.
9	220 kV BTPS - Rangia 1 Line	AEGCL	18-09-2021 at 00:58 Hrs and 09-10-2021 at 19:03 Hrs.

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Sl. No	Name of the Line	Utility	Date and Time
10	220 kV BTPS - Rangia 2 Line	AEGCL	09-07-2021 at 10:03 Hrs, 10-07-2021 at 11:51 Hrs, 05-08-2021 at 11:36 Hrs, 29-08-2021 at 13:36 Hrs and 29-08-2021 at 15:06 Hrs.
11	220 kV Jawaharnagar - Samaguri Line	AEGCL	12-07-2021 at 11:59 Hrs, 16-09-2021 at 06:19 Hrs, 20-09-2021 at 17:33 Hrs, 01-10-2021 at 10:36 Hrs, 03-10-2021 at 14:57 Hrs, 09-10-2021 at 11:35 Hrs
12	220 kV Karbi Langpi - Sarusajai 1 Line	AEGCL	03-10-2021 at 14:20 Hrs, 14-10-2021 at 11:06 Hrs and 14-10-2021 at 12:28 Hrs
13	220 kV Karbi Langpi - Sarusajai 2 Line	AEGCL	11-09-2021 at 10:40 Hrs, 13-09-2021 at 13:22 Hrs, 14-10-2021 at 11:06 Hrs and 14-10-2021 at 12:28 Hrs
14	220 kV Mariani (AEGCL) - NTPS Line on 28-08-2021	AEGCL	28-08-2021 at 20:21 Hrs, 09-09-2021 at 18:47 Hrs, 01-11-2021 at 08:16 Hrs.
15	220 kV Mariani (AEGCL) - Samaguri Line	AEGCL	22-07-2021 at 01:05 Hrs, 23-07-2021 at 06:42 Hrs, 25-08-2021 at 10:22 Hrs.
16	220 kV Samaguri - Sonabil 1 Line	AEGCL	15-10-2021 at 10:53 Hrs
17	220 kV Samaguri - Sonabil 2 Line	AEGCL	14-10-2021 at 10:35 Hrs
18	220 kV Sarusajai- Sonapur Line	AEGCL	16-09-2021 at 06:19 Hrs, 12-10-2021 at 10:28 Hrs, 05.02.22 at 15:55Hrs
19	220 kV Agia - Azara	AEGCL	05.02.22 at 17:41Hrs
20	220 kV Samaguri-Sonapur Line	AEGCL	25.01.22 at 06:15Hrs
21	220 kV Byrnihat - Misa 1 Line	MePTCL	11-09-2021 at 12:39 Hrs, 21-09-2021 at 08:20 Hrs
22	220 kV Byrnihat - Misa 2 Line	MePTCL	20-12-2021 at 02:20 Hrs
23	132 kV Badarpur - Khliehriat Line	POWERGRID	25.09.21 at 13:08 Hrs, 01.02.22 at 23: 43 Hrs
24	220 kV Mariani (PG) - Mokokchung (PG) 1 Line	POWERGRID	29-07-2021 at 23:04 Hrs
25	400 kV Imphal - New Kohima 2 Line	POWERGRID	02.02.22 at 10:54Hrs
26	400 kV Balipara - BiswanathChariali 2 Line	POWERGRID	02-10-2021 at 10:55 Hrs
27	400 kV Misa - Silchar 2 Line	POWERGRID	12-10-2021 at 07:27 Hrs
28	400 kV Byrnihat - Silchar Line	NETC&MePTCL	25-09-2021 at 11:51 Hrs
29	400 kV Palatana - Silchar 1 Line	NETC	13-10-2021 at 03:28 Hrs, 04-11-2021 at 09:49 Hrs

Sl. No	Name of the Line	Utility	Date and Time
30	400 kV Palatana - Silchar 2 Line	NETC	04-09-2021 at 12:46 Hrs and 12-09-2021 at 16:21 Hrs

Members may please discuss.

B.10. Frequent tripping of 132kV Balipara-Tenga(20 times) .

132 kV Balipara – Tenga line tripped 20 times since July 2021 to January 2022 resulting in Black out of Tenga and Khupi area of Arunachal Pradesh Power System and Diskhi Power Station

DoP, AP is requested to intimate the root cause of tripping and also submit DR and EL output along with FIR for proper analysis of the event.

Members may please discuss.

B.11. Frequent tripping of 132kV Along-Daporizo and 132kV Along-Pasighat.

132 kV Along – Daporizo line and 132 kV Along – Pasighat line tripped 5 times and 22 times respectively since July 2021 to January 2022 resulting in Black out of Along, Pasighat, Roing, Tezu and Namsai area of Arunachal Pradesh Power System.

As per the analysis from the submitted DR and EL output, fault was mainly due to vegetation infringement. NERLDC vide Letter no NERLDC/SOII/14/1868 dated 03.08.2021 and NERLDC/SOII/14/2391 dated 30.11.2021 had requested for clearance of vegetation infringement to avoid repeated tripping of the line. It is requested to submit detailed report furnishing the measures taken to resolve the issues.

Members may please discuss.

B.12. Frequent tripping of 132kV Dimapur-Kohima.

132 kV Dimapur – Kohima line tripped 34 times since July 2021 to January 2022 with fault distance within 15 to 58 km from Dimapur in 33 cases.

As per the analysis from DR output, tripping of line was mostly due to high resistive vegetation fault. NERLDC vide Letter no NERLDC/SOII/14/1842 dated 29.07.2021 had requested for clearance of vegetation infringement to avoid repeated tripping of the line.

DoP, Nagaland is requested for thorough patrolling of the line and infringement clearance and submit patrolling report to NERPC and NERLDC.

Members may please discuss.

B.13. Repeated GD in Mokokchung area of Nagaland.

Gird disturbance occurred 5 (five) times on 20th July, 26th July, 29th July, 18th September and 28th September 2021 at Mokokchung area of Nagaland Power System.

For Grid Disturbance on 18th September and 28th September 2021, fault was in 132 kV Doyang - Mokokchung (DoP, Nagaland) Line. Fault was delayed cleared from Mokokchung (DoP Nagaland) end on operation of Zone II protection. The said fault was also sensed by the Back Up relay at Mokokchung (PG) for 132 kV Mokokchung (DoP Nagaland) D/C Lines and fault was cleared from Mokokchung (PG) on operation of earth fault protection prior to opening of CB at Mokokchung (DoP Nagaland) for Doyang Line.

Members are required to suggest measures to avoid unwanted tripping of healthy lines resulting in Grid Disturbance in Mokokchung area of Nagaland Power System.

Members may please discuss.

B.14. Frequent tripping of 132kV DHEP-Sanis and 132kV Sanis-Wokha .

132 kV Doyang – Sanis line tripped on 08.10.21 and 132 kV Sanis - Wokha line tripped on 17.10.21, 20.10.21 and 19.11.21 reducing the reliability of Wokha and Sanis area of Nagaland Power System. Due to non-submission of DR and EL output, proper analysis of the events could not be done. DoP, Nagaland is requested to submit detailed report of the events and also upload DR and EL output in Tripping Portal.

Members may please discuss.

B.15. Tripping of Karong line at Kohima multiple times .

132 kV Kohima-Karong line tripped at Kohima end only on 19th June'21, 24th July'21, 27th July'21 and on 02nd August'21 due to operation of B/U EF relay. The tripping on 24th July'21 and 2nd August'21 was due to fault in 132 kV Kohima – Wokha line.

Tripping of healthy Karong line at Kohima by operation of B/U protection for REVERSE fault inferred to be unwanted. The CT-PT inputs, directional features of B/U relay along with settings needs to be checked/reviewed immediately for healthiness

Members may please discuss.

B.16. GD in Karong area on 20th Jan'22.

132 kV Yurembum - Karong line tripped on B/U protection for fault in 132 kV Kohima – Meluri line at 20:07 Hrs on 20.01.22 which resulted in black out of Karong area of Manipur Power System. MSPCL is requested to check/test the B/U relay at Karong immediately to prevent further mis-operation.

Members may please discuss.

B.17. Frequent tripping of 220kV lines in Assam System.

Repeated tripping of the following lines in Assam Power System were observed since July 2021

- 220 kV BTPS-Agia I: 7 times (9th July, 1st Sept, 6th Sept, 2nd Oct, 23rd Oct, 30th Oct 2021 and 29th Jan 2022)
- 220 kV BTPS-Agia II: 5 times (28th July, 6th Sept, 13th Sept, 30th Sept and 10th Oct 2021)

- 220 kV BTPS- RangiaI :9 times (19th July, 5th August, 10th Sept, 16th Sept, 18th Sept, 20th Sept, 9th Oct, 12th Oct and 1st Dec 2021)
- 220 kV BTPS- RangiaII : 7 times (9th July, 10th July, 5th August , 29th August (two times), 3rd Sept and 27thSept 2021)
- 220 kV Balipara – Sonabil: 3 times (1stAugust, 6th Sept and 11th Sept 2021)

As per the analysis, the lines mostly tripped on vegetation fault with some tripping involving opening of jumper as well. AEGLC is requested to intimate the root cause for these events and remedial measures that has been taken. Also, intensive patrolling of the lines is to be done to avoid repeated tripping and patrolling report may be submitted to NERPC and NERLDC.

Members may please discuss.

B.18. Multiple tripping at Rengpang area.

132 kV Rengpang-Jiribam Line & RengpangLoktak Line tripped thrice since December'21 due to fault in 132 kV Rengpang – Jiribam Line. No DR and EL output have been submitted by MSPCL for these events to conclude the root cause. However, as per the DR output at Loktak, Zone III was detected, and the fault disappeared within 73 msec. However, 132 kV Loktak – Rengpang line tripped at Rengpang for reverse fault on B/C OC & EF protection.

MSPCL is requested to check the healthiness of the distance relay and directionality of the B/C OC and EF relay at Rengpang to avoid re-occurrence of the events resulting in Grid Disturbance in Rengpang area.

Members may please discuss.

B.19. Frequent tripping of 132kV Loktak-Rengpang.

132 kV Loktak – Rengpang line tripped 16 times since September'21. As per the DR output from Loktak, fault was mostly due to vegetation infringement. NERLDC vide Letter no NERLDC/SO-II/14/1911 dated 11.08.21 and NERLDC/SO-II/14/2084 dated 20.09.21 had raised concern on frequent tripping of this line.

MSPCL is requested to intimate the root cause for frequent tripping of this line and share remedial measures that has been taken to NERPC and NERLDC.

Members may please discuss.

B.20. Frequent tripping of 132kV Karong-Kohima.

132 kV Karong – Kohima line line tripped 18 times since September'21. As per the DR output, fault was mostly due to vegetation infringement. Being inter-state line, frequent tripping of 132 kV Karong – Kohima line is a major concern and reduces the reliability.

MSPCL and DoP, Nagaland is requested to intimate the root cause for frequent tripping of this line and share remedial measures that has been taken to NERPC and NERLDC.

Members may please discuss.

B.21. Tripping of 132kV Lumshnong-Panchgram and 132kV Lumshnong-Khliehriat.

132 kV Panchgram - Lumshnong Line and 132 kV Lumshnong - Khliehriat Line tripped thrice since January'22 due to Jumper failure. As per the DR output, the line tripped on broken conductor. NERLDC vide Letter no NERLDC/SO-II/14/2597 dated 19.01.22 shared the observations and suggested that broken conductor check is normally used for ALARM purpose as per guidelines of Ramakrishna task force and the same may be reviewed. MePTCL is requested to intimate the measures that has been taken in this regard.

Also, 132 kV Panchgram – Lumshnong line, being an Inter-State line, tripped 9 times since September'21 which is a cause of major concern.

MePTCL and AEGCL are requested to intimate the root cause for frequent tripping of this line and share remedial measures that has been taken to NERPC and NERLDC.

Members may please discuss.

B.22. Unwanted tripping of 132kV Khliehriat-Khliehriat on Z3 on 02.10.21.

132 kV Khliehriat(MePTCL)–Khliehriat(PG)-2 Line and 132 kV Khliehriat(PG)-Khandong 1 Line tripped at 01:29 Hrs on 2nd October'21. As per the DR analysis, fault was in 132 kV Khandong – Khliehriat 1 line which was cleared by Khliehriat(PG) within 487 msec in Zone II and no carrier aided tripping was observed. However, the same fault was cleared by Khliehriat (MeTCL) on Zone III within 403 msec resulting in tripping of healthy line.

NERTS is requested to review the carrier aided scheme at Khliehriat(PG) for 132 kV Khandong 1 Line.

MePTCL is requested to coordinate the Zone III at Khliehriat(MePTCL) with Zone II timing of 132 kV Khliehriat – Khandong 1 Line.

Members may please discuss.

B.23. Grid Disturbance at Kolasib area of Mizoram Power System.

GD occurred at Kolasib area of Mizoram Power System on 07.09.21 and 28.10.21 due to tripping of multiple elements.

As per the analysis, it appears that the fault was in 132 kV Badarpur – Kolasib line on 07.09.21. No tripping was reporting at Kolasib which resulted in tripping of 132 kV Aizawl – Kolasib line at Aizawl on B/U EF. Reason for Non-operation of CB at Kolasib may be intimated by NERTS.

For fault on 28.10.21, it was likely in the downstream side of Kolasib area of Mizoram Power System. The exact location of the fault may be intimated by P&ED Mizoram to NERLDC and NERPC along with a copy of the root cause of the event and the remedial measures taken to avoid re-occurrence.

Members may please discuss.

B.24. Grid Disturbance in Zuangtui area of Mizoram Power System.

132 kV Melriat – Zuangtui line tripped 6 times since July'21 resulting in black out of Zuangtui area of Mizoram Power System. For fault on 30.07.21 (twice) and 02.08.21 (twice), CB tripped at Zuangtui area only which suggest fault in downstream system.

The protection which issued trip command at Zuangtui could not be concluded due to non-standardization of DR channels.

The exact location of the fault may be intimated by P&ED Mizoram to NERLD. Directionality of the Back-up protection may be checked to avoid tripping of healthy line.

Members may please discuss.

B.25. Grid Disturbance in Udaipur area of Tripura Power System.

Grid disturbance occurred at Udaipur area of Tripura Power System at 13:00 Hrs on 18.08.21 due to the tripping of 132 kV Monarchak - Udaipur Line and 132 kV Palatana - Udaipur Line. Due to non-operation of protection system at Udaipur for Palatana line, fault was cleared by tripping of healthy 132 kV Monarchak – Udaipur line from Monarchak on Zone-2. NERLDC vide Letter no NERLDC/SO-II/14/1940 dated 19.08.21 requested TSECL to furnish the root cause of the event and remedial measures that has been taken and the same has not been received.

Reason for Non-operation of Protection system at Udaipur S/S for Palatana line may be intimated by TSECL to avoid re-occurrence.

Members may please discuss.

B.26. Grid Disturbance in Monarchak area of Tripura Power System.

Grid disturbance occurred in Monarchak area of Tripura Power System at 02:05 Hrs on 5th August 2021 due to the tripping of 132 kV Monarchak - Rokhia Line and 132 kV Monarchak - Udaipur Line. As per the DR analysis, fault was in 132 kV Monarchak – Udaipur line which was cleared from Rokhia end within 350 msec on Zone II prior to opening from Monarchak for Udaipur line on Zone II within 500 msec.

TSECL is requested to carry out necessary Zone II timing coordination of Monarchak for Udaipur line with 132 kV Monarchak – Rokhia line to avoid tripping of healthy line.

Members may please discuss.

B.27. Frequent tripping of 132kV Monarchak-Rokhia and Monarchak-Udaipur.

132 kV Monarchak-Rokhia Line and 132 kV Monarchak-Udaipur Line tripped 19 times and 15 times respectively since July 2021. As per DR analysis, most of the tripping were single phase faults due to vegetation infringement. NERLDC vide Letter no NERLDC/SO-II/14/2096 dated 22.09.21 expressed concern over frequent of these lines which effects the reliability of evacuation path of Monarchak Power Plant.

TSECL is requested to intimate the root cause for these events and remedial measures that has been taken. Also, intensive patrolling of the line is to be done for vegetation infringement clearance and patrolling report may be submitted to NERPC and NERLDC.

Members may please discuss.

B.28. Misoperation of SPS-4 related to Bangladesh.

As per DR analysis from Surajmaninagar for Comilla II line, at 13:09 Hrs on 09.11.21, SPS-4 carrier signal was received resulting in tripping of 132 kV South Comilla II line (Line I was under Shutdown). However, as confirmed by OPTC, no carrier signal was sent from Palatana. Unwanted operation of this SPS results in failure of power supply to Bangladesh Power System which is a matter of concern.

POWERGRID is requested to share the root cause of the event and remedial measures that has been to avoid re-occurrence.

Members may please discuss.

B.29. Tripping of 132kV Palatana-SMNagar on LBB on 21.11.2021.

At 03:53 Hrs on 21.11.21, 132 kV Palatana – SM Nagar line tripped on LBB only at SM Nagar end.

The operation of LBB protection seems to be unwanted as there was no abnormal fault current and voltage at the time of event.

POWERGRID is requested to share the root cause of the event and remedial measures that has been to avoid such unwanted tripping resulting in interruption of power supply to Bangladesh Power System.

Members may please discuss.

B.30. Tripping of 132kV Melriat-Sihhmui on 14.12.2021.

132 kV Melriat – Sihhmui D/C tripped at 14:50 Hrs on 14.12.21 due to operation of Differential protection at Melriat end. However, no significant voltage dip was observed from DR output.

No DR and EL output has been generated at Sihhmui end as confirmed by POWERGRID and hence, the root cause cannot be concluded.

POWERGRID is requested to intimate the root cause of the event and corrective action that has been taken to avoid such multiple tripping of lines.

Members may please discuss.

B.31. Tripping of 400kV Balipara- Bongaigaon on 03.02.2022.

400 kV Balipara – Bongaigaon 1 Line tripped at Bongaigaon end only at 16:51 Hrs on 03.02.2022 due to receipt of DT signal as reported by RTAMC.

No DR and EL output have been uploaded at Bongaigaon end by POWERGRID and hence, the root cause cannot be concluded.

POWERGRID is requested to intimate the root cause of the event and corrective action taken.

Members may please discuss.

B.32. Tripping of 400kV Balipara- Misa-1 alongwith Main CB of Misa-2 on 07.01.2022.

400 kV Balipara-Misa-1 Line along with Main CB of Misa-2 Line tripped from Baliparaend only at 13:35 Hrs on 07.01.2022. As per DR output, no abnormalities in current and voltage signature were observed.

POWERGRID is requested to intimate the root cause of the event and corrective action taken to avoid re-occurrence.

Members may please discuss.

B.33. Tripping of 132kV Imphal-Imphal-I on 24.01.2022

Phase to Earth fault was in 132 kV Imphal (MSPCL)-Yangangpokpi-2 Line and fault was cleared from Imphal (MSPCL) within 200 msec on Z-II operation. Tripping of healthy 132 kV Imphal (PG)-Imphal (MSPCL)-1 Line from Imphal (PG) on B/U EF operation seems to be UNWANTED. NERLDC vide mail dated 25.01.2022 requested to POWERGRID to furnish the root cause of the event and remedial measures that has been taken and the same has not been received.

No DR and EL output have been uploaded at Imphal (PG) by POWERGRID and hence, the root cause cannot be concluded.

POWERGRID is requested to intimate the root cause of the event and corrective actions taken.

Members may please discuss.

B.34. Tripping of 400kV Palatana-Silchar on 17.12.21

While opening of Main CB at Palatana for Silchar 1 line to avail planned shutdown, DT signal was sent to Silchar end resulting in unwanted tripping of the line.

OTPC is requested to furnish the reason for sending DT while Tie Bay was in service at Palatana resulting in tripping of healthy line. Corrective action that has been taken may be shared with NERPC and NERLDC.

Members may please discuss.

B.35. Grid Disturbance in Kameng HEP on 24.09.21

400 kV Balipara - Kameng II Line tripped at 14:52 Hrs on 24.09.2021, while attempting to charge 400 kV Balipara - Kameng I Line (after returning from Shutdown) from Kameng resulting in black out of Kameng HEP and generation loss of around 300 MW. As per the DR analysis, DT was received at Balipara for Kameng II line, and no fault was observed at Kameng which seems unwanted tripping. NERLDC vide Letter no: NERLDC/SO-II/14/2111 dated 27.09.21 requested NEEPCO to intimate the root cause of the event.

NEEPCO is requested to intimate the reason for sending DT signal to Balipara while attempting to charge parallel line.

Members may please discuss.

B.36. Unwanted tripping of 2x500MVA ICTs at New Kohima for fault in 400kV New Kohima -New Mariani-I

At 13:08 Hrs on 01-11-21, 2x500 MVA ICT I and II at New Kohima tripped on operation of IN1>2 within 119 msec prior to tripping of 400 kV New Kohima-New

Mariani-1 Line on DEF within 1004 msec. NERLDC vide email dated 03.11.21 suggested review of IN1>2 and SEF settings as per the Ramakrishna Task Force Guidelines.

KMTL is requested to intimate the latest status and actions that has been taken to avoid mis-operation.

Members may please discuss.

B.37. Frequent tripping/outage of 220kV Karbi Langpi-Sarusajai D/C lines

220 kV Karbi Langpi - Sarusajai 1 & 2 lines tripped on 03.10.21, 10.10.21, 14.10.21 (Twice) and 17.10.21 resulting in blackout of Karbi LangpiHEP with generation loss of around 100 MW. As per the analysis from DR output, fault was mostly due to vegetation infringement. Frequent tripping of the above lines is the matter of serious concern and effects the reliability of evacuation path of Karbi Langpi HEP.

AEGCL is requested to intimate the root cause for these events and remedial measures that has been taken. Also, intensive patrolling of the line is to be done for vegetation infringement clearance and patrolling report may be submitted to NERPC and NERLDC.

Members may please discuss.

AGENDA ITEMS FROM NEEPCO

B.38. Protection of 132kV Pare-Nirjuli and 132kV Pare-N. Lakhimpur after modification works

As per NERSS-IX scheme, modification of transmission line from Pare to Nirjuli and Pare to North Lakhimpur shall take place. The protections of these two lines at Pare end are to be ensured by NEEPCO.

The executing agency of these two lines i.e. M/s Sterlite has proposed there shall be Line Differential Protection for the New line of 132KV Pare - Nirjuli which is of 20.10Km Circuit Km Length.

The forum is requested to confirm whether LDP is required for the above mentioned line or distance protection relay will suffice. This confirmation is required for NEEPCO to finalize the scope between NEEPCO and M/s Sterlite for completion of the modification work at Pare end.

NEEPCO may please deliberate.

C. I T E M S F O R S T A T U S R E V I E W

C. 1. STANDARDIZATION OF DR CHANNELS:

In 56th PCC meeting held on 21st April, 2021 it was decided that a webinar workshop on DR/EL downloading from various relays and DR standardization would be conducted by NERTS. Accordingly, NERTS-POWERGRID conducted a webinar/workshop on 17th June'2021.

DoP Ar. Pradesh, AEGCL, MSPCL, MePTCL, DoP Nagaland, TSECL may please intimate the latest status.

C.2 STATUS OF AUTO-RECLOSURE FOR IMPORTANT STATE GRID LINES:

Latest status of AEGCL lines

SPAR implemented at both ends	Status as updated in 56th PCC meeting	Latest status
220kV Agia - BTPS D/C	New ERL Panels installed. Latest Status to be intimated.	
SPAR implemented at one end	Status as updated in the last Sub-group Meeting	Latest status
220kV Agia-Azara D/C	SPAR available at Azara. At Agia by the end of January 2020. Tied to completion of PLCC works under R&U. Latest Status to be intimated.	
220kV Azara-Boko D/C	SPAR available at Azara. At Boko, the testing of the new panels is yet to be started. By January 2020. Tied to completion of PLCC works under R&U. Latest Status to be intimated.	
220kV Samaguri-Sarusajai D/C	PLCC to be established under R&U scheme. Tied to completion of PLCC works under R&U. Latest Status to be intimated.	
132kV Balipara-Sonabil	Balipara end status to be intimated. Tied to completion of PLCC works under R&U. Latest Status to be intimated.	
132kV Pavoi-Sonabil	PLCC to be established under R&U scheme. Tied to completion of PLCC works under R&U. Latest Status to be intimated.	

Status of MePTCL lines

Name of the line	Status as updated in 56th PCC meeting	Latest Status
132 kV Agia - Mendipathar	PLCC works completed. AR operation configuration to commence from Jun'21. 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 Jun'21	
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.2**.

Concerned utilities may please intimate the latest status.

C.3 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 co-ordinate for fiber allocation	NEEPCO	LDP to be implemented. Relay under procurement

As per approval of the 19th TCC/NERPC meeting NERTS is required to implement line differential protection for the following lines. The status may be discussed.

SN	Line	Length (CKm)
1	132kV D/C RC Nagar – Agartala - I	8.38
2	132kV D/C RC Nagar – Agartala - II	8.38
3	132kV D/C Mokokchung – Mokokchung - I	1.70
4	132kV D/C Mokokchung – Mokokchung - II	1.70
5	132kV S/C Aizawl – Melriat	12.00
6	132kV S/C Badarpur – Badarpur	1.02
7	132kV S/C Imphal – Imphal – I	1.50
8	132kV S/C Imphal – Imphal – II	1.50
9	132kV S/C Kumarghat – PK Bari	5.00
10	132kV S/C Khliehriat – Khliehriat - I	7.8
11	132kV S/C Dimapur (PG) – Dimapur (S) - Old	0.65
12	132kV S/C Dimapur (PG) – Dimapur (S) - New	0.65
13	220kV S/C Balipara - Tezpur	8.62
14	220kV Salakati – BTPS - I	2.70
15	220kV Salakati – BTPS - II	2.70

Concerned utilities may please update the status.

C.4 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.4**

Concerned utilities may please update the status.

C.5 Status for SPS and Islanding Schemes:

The latest status for suggested modifications to be updated:

Sl No	SPS Details	Status as per 56th PCC meeting	Utility	Latest status/Discussion points
A. Existing				
1	SPS-1 (Tripping of both modules of Palatana)	Load disconnection to be removed from logic at Silchar. Channels to be freed at Palatana& Silchar.	NERTS/OTPC	
2	SPS-2 (Tripping of 400kV Palatana-Silchar D/C when both modules of Palatana in service)	Load disconnection to be removed from logic at Silchar. Channels to be freed at Palatana& Silchar.	POWER GRID	In 180 th OCCM it was suggested to suitably modify the SPS upon commissioning

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				of 400kV Palatana – SMNagar-I.
3	SPS-3 (Tripping of both 400kV Silchar – Azara and 400kV Silchar-Byrnihat when both modules of Palatana in service)	SPS to be deactivated and channels to be freed at Silchar, Azara & Byrnihat	NERTS/ AEGCL/ MePTCL	
4	SPS-4(Tripping of both 400kV Silchar-Azara and 400kV Silchar-Byrnihat when both modules of Palatana not in service)	After commissioning of 400kV Silchar-Misa SPS to be deactivated and channels to be freed at Silchar, Azara & Byrnihat	NERTS	
5	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	
6	SPS-6 (When 132kV Umiam Stg-I to Umiam Stg-III D/C line trips)	Carrier communication established for 132kV Mawngap-Umiam Stg-I. Remaining for 132kV Umiam-Umiam Stg-I. By Jun'21.	MePTCL	<i>In 183rd OCCM MePTCL requested that location of load shedding i.e. Umiam/Mawphlang be finalized.</i>
7	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.	Logics implemented. Protection coupler not working at Agia end. Rectification by May'21.	AEGCL	
8	SPS-9 (Tripping of 132kV AGTCCPP – Kumarghat line)	To be de-activated after commissioning of 132kV AGTCCPP-PKBari D/C	NERTS	

9	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 to be shared with NERLDC/NERPC	NTPC	Schematic attached at Annexure-
10	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	
11	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 RHEP+one unit Pare HEP for ICT loading>145%	Under implementation. Overload relay to be procured.	NEEPCO	
SPS related to Bangladesh				
12	SPS-1(Outage of one ICT out of 400/132kV 2x125MVA ICTs at Palatana) SPS Action: 60MW load disconnection at South Comilla. Followed by shifting of the load to main Bangladesh grid	In 171st OCCM held on 16.10.2020 it was decided to keep implementation in abeyance in view of commissioning of 400kV Palatana-SMNagar	POWER GRID	
13	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. To be reviewed as per discussion in 184th OCCM on 26.11.2021.	NERTS/ TSECL	
14	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.	Bangladesh	

	Bangladesh followed by shifting of the load to main grid of Bangladesh				
15	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. To be reviewed as per discussion in 184th OCCM on 26.11.2021.	NERTS/ TSECL		
New					
	Name of SPS	SPS Trigger/Action	Utility	Status/Discussion points	
16	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	In 186th OCCM the ramp-up/down rates of Leshka HEP was informed. Based on the same suggested logic for SPS Action:	
				When 3 units are running and generation of each unit> 35MW	Trip one unit and reduce generation of other 2 units to 35MW
				When 3 units are running and generation of each unit< 35MW	Trip one unit
				When 2 units are running and generation of each unit> 35MW	reduce generation of both units to 35MW
17	SPS for charging of Bus Reactors at 400kV SMNagar	Tripping of both circuits of 400kV SMNagar-PKBari D/C trip both Bus Reactors at SMNagar, tripping of both Bus Reactors at SMNagar trips one circuit of 400kV SMNagar-PKBari D/C	INDIGRID	Approved in 176th OCCM on 22.03.2022. Implementation status	
18	SPS for Bus Reactors at 400kV PKBari	SPS to prevent frequent opening of 400kV Silchar-PKBari D/C	INDIGRID		

Status for Islanding Schemes:

Sl No	Name of the Islanding Scheme	Status as per last meeting	Timeline for SCADA visibility	Utility	Latest status/Discussion points
1	Tripura IS	In Special Meeting held on 06.10.21 tripping of 500MVA ICTs at 400kV Surjamaninagar and 400kV PKBari was decided. INDIGRID to maintain continuity in station supply has implemented the UFR settings in DP of 132kV lines at Surjamaninagar(ISTS) and PKBari(ISTS). UFR procurement by TSECL – 7 out of 20 installed.	Visible in SCADA	INDIGRID /TSECL	
2	Upper Assam (Assam-I) IS	Revised UFR settings to be implemented for 132kV Dimapur-Bokajan(at Dimapur), 220kV AGBPP-New Mariani(at AGBPP), 220kV New Mariani-Mariani(at Mariani)	Visible	NERTS/ AEGCL/ NEEPCO	
3	Guwahati (Assam-II) IS	Under planning stage. Detailed BoQ based on summary schedule to be submitted.	Visible	NERLDC /NERTS/ NTPC/ AEGCL	

Concerned utilities may please update the status.

C.6 Status against remedial actions for important grid events:

Sl. No	Details of the event	Remedial Actions suggested	Name of the utility	Status as intimated in last Sub-group	Latest status
1	Unwanted tripping of 132 kV Imphal (PG) - Ningthoukhong Line ((03-03-2020 15:57:00, 16-03-2020 05:25, & 132 kV Loktak - Ningthoukhong Line for reverse faults	Ningthoukhong end DR of 132kV Loktak- Ningthoukhong to be synchronised, channel standardisation to be done.	MSPCL	Time synchronization not yet done due to unavailability of required equipment.	

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2	Tripping of 132kV Loktak- Ningthoukhong & 132kV Imphal- Ningthoukhong on 01.08.20	Faulty DP relay at Ningthoukhong for Imphal (PG) to be replaced.	MSPCL	Faulty DP relay is to be replaced under PSDF scheme. Request is put up to the contractor to deliver the relay as soon as possible.	
3	Tripping of 400 kV BiswanathChariali - Ranganadi 2 Line for fault in 400 kV Balipara - BiswanathChariali 4 Line	CT knee point measurement to be done	NERTS & NEEPCO	Over-reach issue could not be resolved. OEM reply awaited.	
4	Tripping of 132 kV AGTCCPP - Kumarghat Line only at AGTCCPP on 02-04-2020 18:06:00	Calibration of numerical relay at AGTCCPP	NEEPCO	P442 procurement has been done. Installation works are yet to be completed.	
5	Tripping of 132kV Dimapur-Kohima, 132kV Karong - Kohima & 132kV Wokha-Kohima on 02-06-2020/20-06-2020	Carrier aided inter-tripping to be immediately implemented for 132kV Dimapur-Kohima	DoP Nagaland	PLCC installation done.	
6	132 kV Agartala-Rokhia D/C lines & 132 kV Monarchak - Rokhia line tripped on 05.06.2020, 09.06.2020	CBs to be installed at both ends of link feeder at Rokhia	TPGL	Estimated submitted	
7		Line differential protection to be installed for link feeder at Rokhia	TPGL	Estimated submitted	
8	220 kV AGBPP - Mariani(PG) line, 220 kV AGBPP - Mariani(AS) line, 220 kV AGBPP - Tinsukia D/C tripped on 09.06.2020, along with all units in service at AGBPP.	Joint checking to be conducted by AEGCL & NEEPCO for wiring issue for Bus selection isolator in LBB scheme for 220kV Tinsukia-I.	NEEPCO /AEGCL	Joint Inspection done. MoM prepared will be send to NERPC.	

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9	Tripping of 220kV BTPS-Rangia D/C lines and 132kV Rangia-Motonga line on 23.07.2020	Carrier intertrip to be implemented for 220kV Rangia-BTPS D/C.	AEGCL	PLCC panel was replaced. However, Carrier intertrip is disabled currently after maloperation of Y-phase CB at BTPS feeder 2 at Rangia. Will be enabled after inspection.	
10	Blackout of 220kV Mariani, 220/132kV Mokokchung(PG) & 132kV Mokokchung(NAG) on 06.08.2020	AR to be implemented at DHEP for 132kV DHEP-Mokokchung with check sync function at Doyang	NEEPCO	Under proposal stage	
11	Tripping of 132kV Loktak-Ningthoukong & 132kV Loktak-Rengpang tripped multiple times	3ph AR facility at Loktak for Z-I to be implemented at the earliest	NHPC	1ph AR facility for Z-1 is implemented only for Jiribam and Imphal lines. For Ningthoukhong and Rengpang lines, necessary shutdown will be taken.	
12	Tripping of all main CBs connected to 400kV Bus-2 at Balipara on 19.08.2020	Replacement of all MCTI relays for 400kV Balipara, Bongaigaon & Misa	NERTS	3 number of MCTI Relays are to be replaced at Balipara.	
13	Tripping of 132 kV Dimapur (PG)-Kohima (DoP, Nagaland) line, 132 Kohima -Wokha line and 132 kV Karong -Kohima line on 24-09-2020	Bus strengthening both at 132kV & 33kV level to be done at Kohima	DoP Nagaland	132kV strengthening approval awaited.	
14	Tripping of 132kV Umiam- Umiam Stg-I on 14.10.2020	Line differential protection to be implemented for 132kV Umiam-Umiam Stg-I	MePGCL	LDP under progress.	
15	Blackout of Ningthoukong on 13.04.2021	B/U co-ordination to be done for 132kV Imphal-Ningthoukong and 132kV Loktak-Ningthoukong	MSPCL/ NHPC	MSPCL informed that: For Imphal-Ningthoukhong B/U settings seem to be fine	

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				as there is no unwanted trippings for the last few months. For Loktak-Ningthoukhong B/U coordination not yet done. Required settings is requested so as to make the changes.	
16	Disturbance in Karong Area	B/U relay for 132kV Karong-Kohima at Karong to be replaced	MSPCL	B/U Relay for 132kV Karong-Kohima at Karong yet to be replaced.	
17	Blackout of 220/132kV Tinsukia S/S on 08.04.2021	Detailed report to be submitted to NERLDC/NERPC	AEGCL	-	
18		For downloading DR at Tinsukia OEM co-operation required. By July'21	AEGCL	-	
19	Disturbance in PKBari area of Tripura on 01.04.21	LBB scheme at PKBari to be shared with NERLDC/NERPC	INDIGRID	-	
20	Multiple tripping of 132kV Monarchak-Rokhia, 132kV Rokhia-Agartala D/C, Monarchak Unit and Rokhia unit on 30.04.21, 01.05.21, 23.05.21, 28.05.21	Proper vegetation clearance within switchyard at Rokhia equipment to be done to avoid re-occurrence.	TSECL		
21	Tripping of 132 kV Along - Daporijo Line on 23.04.21, 01.05.21, 27.05.21 and 28.05.21 (3 times).	From Aug'21 onwards all DR/EL would be submitted.	DoP Ar.Pradesh		
22	Tripping of 132 kV Balipara - Tenga Line and 132 kV Tenga - Khupi Line on 29.05.21 and 30.05.21(2 times), 03.06.21, 16.06.21 and 21.06.21 (3 times)	Infringement clearance is to be done and patrolling report to be submitted to NERPC and NERLDC	DoP Ar.Pradesh		

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23		Relay at Pare for NDTL to be tested for accelerated Z-3 operation.	NEEPCO		
24		B/U highest at Pare HEP for 132kV Chimpu line to be disabled.	NEEPCO		
25	Tripping of 132 kV Biswanath Chariali - Chimpu 1 & 2 Line, 132 kV Itanagar - Lekhi Line, 132 kV Pare - Itanagar Line, 132 kV Lekhi - Pare Line And 132 kV Ranganadi-Itanagar line on 12.05.21	Zone-4 timings at Chimpu are to be co-ordinated with Z-2 of remote end for all the feeders at Chimpu.	DoP Ar.Pradesh		
26		Bus Bar protection to be implemented at Chimpu	DoP Ar.Pradesh		
27		Till implementation of Bus bar protection at Chimpu pseudo BB protection using Z-4 to be implemented.	DoP Ar.Pradesh		
28	Tripping of 132 kV Gohpur - North Lakhimpur 1 & 2 Line, 132 kV Gohpur - Nirjuli Line, 132 kV Gohpur - Pavoi 2 Line and 132 kV Lekhi - Nirjuli Line on 26.05.21	Carrier aided intertripping to be made functional for 132kV Gohpur - N.Lakhimpur D/C and it is to be tested to avoid delayed fault clearance.	AEGCL		
29	Tripping of 132 kV Imphal (MSPCL) - Imphal (PG) 2 Line, 132 kV Imphal (MSPCL) - Yaingangpokpi D/C Line ON 12.04.21	BB protection to be implemented at Yurembam	MSPCL		
30		Z-4 setting at Yurembam to be reduced to 200ms	MSPCL		
31	Tripping of 132 kV Imphal (MSPCL) - Yaingangpokpi D/C Line on 19.04.21	O/C setting at Yurembam for Yaingangpokpi-I to be revised.	MSPCL		
32	Tripping of 132 kV Imphal (PG) - Ningthoukong Line, 132 kV Loktak - Ningthoukhong Line and 132 kV Imphal (PG) - Loktak Line on 13.06.21.	Z-3 timing at Imphal for Ningthoukong feeder to be revised to 500ms	NERTS		
33		Z-4 at Loktak for Ningthoukong feeder to be revised to 350ms	NHPC		

Agenda for 57th PCC Meeting to be held on 15th February, 2022

34		Backup relay coordination for Imphal-Ningthoukhong-Loktak has to be done to avoid tripping of healthy line 132kV Imphal-Ningthoukhong.			
35	Tripping of 132 kV Bokajan - Dimapur Line and 132 kV Bokajan - Golaghat Line on 23.06.21 and 28.06.21.	Carrier aided tripping to be implemented for 132kV Dimapur-Bokajan	NERTS/ AEGCL		
36	Tripping of 132 kV BTPS - Dhaligaon 1 & 2 Line on 26.06.21 and 29.06.21.	Reasons for DT send from BTPS end to be intimated.	AEGCL		
37		Dhaligaon end DP settings to be reviewed.	AEGCL		
38	Tripping of 132 kV NEHU - NEIGRIHMS Line,	DP relay at Panchgram for 132kV Lumshnong to be time synched	AEGCL		
39	132 kV Khliehriat-NEIGRIHMS Line, 132 kV Khliehriat - Mustem Line, 132 kV Panchgram - Lumshnong Line,	Carrier inter-trip to be immediately implemented for 132kV Lumshnong-Panchgram	AEGCL/ MePTCL		
40	132 kV Khliehriat (MePTCL) - Khliehriat (PG) 1& 2 Line and 132 kV Khandong - Khliehriat 1 & 2 Line on 16.04.21.	At NEIGRIHMS, Mustem, Khliehriat(ME) B/U relay settings to be co-ordinated to provide proper grading	MePTCL		
41	Tripping of 132 kV Myntdu Leshka - Khliehriat 1 & 2 Line and Myntdu Leshka Unit 2 & 3 on 09.06.21 and 26.06.21 (2 times)	Jumper strengthening to be done at Khliehriat and Leshka switchyard.	MePTCL/ MePGCL		
42	Tripping of 132kV Haflong - Jiribam line and 132kV Haflong - Umrangshu on 29 th June'2021	Downstream settings at Haflong(AS) to be co-ordinated.	AEGCL		

43	Tripping of 132kV Imphal-Ningthoukong and 132kV Loktak-Ningthoukong on 26.03.2021	DP relay to be installed for 132kV Imphal-Ningthoukong	MSPCL		
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Concerned utilities may please update the status.

AGENDA ITEM FROM NERLDC:

C.7 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 and DR & EL outputs in Tripping Monitoring Portal for events in Sept'21-as on 06.02.22is 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	72	39	21	22	0	17	17	0	12	12	33	22	21
AEGCL	165	134	118	97	1	16	12	0	7	5	30	24	51
MSPCL	133	110	43	33	0	30	36	0	24	7	23	36	57
MePTCL	56	41	49	45	0	3	2	0	0	0	15	4	9
MePGCL	20	0	6	0	0	4	7	0	0	0	20	10	13
P&ED, Mizoram	3	0	0	0	0	0	0	0	0	0	3	3	3
DoP, Nagaland	69	63	35	36	0	8	9	0	13	8	6	13	16
TSECL	61	0	25	27	0	3	3	0	4	2	61	29	29
POWERGRID	226	137	134	84	0	35	37	0	4	6	89	53	99
NEEPCO	195	68	69	59	0	72	73	0	3	3	127	51	60
NHPC	27	22	23	21	0	3	3	0	0	0	5	1	3
NTPC	10	0	1	1	0	8	8	0	0	0	10	1	1
OTPC	29	9	13	0	0	4	4	0	1	0	20	11	25
Sterlite Power	18	17	15	16	0	2	1	0	0	0	1	1	1
KMTL	5	3	3	0	0	0	0	0	0	0	2	2	5

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.

NERLDC may please deliberate.

Any other item:

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
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

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
21	400 kV	400 kV BgTPP - 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

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
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

<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
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. Implemeted 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. Implemeted 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 paralell 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	

Details of Auto Recloser of Lines in North Eastern Regional Grid

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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 - Pavoi	1	D/C	POWERGRID	AEGCL	POWERGRID	Not Available	Pavoi end- 3-ph AR will be implemented, BNC: POWERGRID may intimate the status
30	132 kV	132 kV Biswanath Chariali - Pavoi	2	D/C	POWERGRID	AEGCL	POWERGRID	Not Available	Pavoi end- 3-ph AR will be implemented, BNC: POWERGRID may intimate the status
31	132 kV	132 kV Pavoi - Sonabil	1	S/C	AEGCL	AEGCL	AEGCL	Not available	TPAR is available both at Pavoi 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 - Mokochung (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	

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57	132 kV	132 kV EPIP II - Byrnihat	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 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 parallell 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 parallell 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 parallell 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

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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 parallell 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 parallell 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

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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

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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 parallell 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 parallell 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 parallell 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 parallell 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 parallell 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 parallell 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 parallell with ongoing R&M works of PLCC &DPC by Septemeber 2019.

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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

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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 parallell 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 parallell 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

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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	AEGCL	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	AEGCL	AEGCL							
3	AGBPP - Tinsukia	2	NEEPCO	AEGCL	AEGCL							
4	Agia - Azara	1	AEGCL	AEGCL	AEGCL							
5	Agia - Boko	1	AEGCL	AEGCL	AEGCL							
6	Agia - BTPS	1	AEGCL	AEGCL	AEGCL							
7	Agia - BTPS	2	AEGCL	AEGCL	AEGCL							
8	Azara - Boko	1	AEGCL	AEGCL	AEGCL							
9	Azara - Sarusajai	1	AEGCL	AEGCL	AEGCL							
10	Azara - Sarusajai	2	AEGCL	AEGCL	AEGCL							

F. 220 kV Lines

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

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) - Mokokchung (PG)	1	POWERGRID	POWERGRID	POWERGRID							
31	Mariani (PG) - Mokokchung (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 - Pavoi	1	POWERGRID	AEGCL	POWERGRID							
30	Biswanath Chariali - Pavoi	2	POWERGRID	AEGCL	POWERGRID							
31	Pavoi - 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

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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-Oblum & 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 - Khleihiat	1	MePTCL	MePTCL	MePTCL							
120	Myntdu Leshka - Khleihiat	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							