

North Eastern Regional Power Committee

Agenda For

55th PCC Sub-Committee Meeting

Time of meeting : 10:30 Hrs.

Date of meeting : 11th November, 2019 (Wednesday)

Venue : “NERPC Conference Hall”, Shillong.

A. CONFIRMATION OF MINUTES

CONFIRMATION OF MINUTES OF 54th MEETING OF PROTECTION SUB-COMMITTEE OF NERPC.

The minutes of 54th meeting of Protection Sub-committee held on 22nd January, 2020 at Guwahati were circulated vide letter No. NERPC/SE/PCC/2018/2565-589 dated 07th February, 2020.

The Sub-committee may confirm the minutes of 54th 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. Detailed list attached at **Annexure-B.1.**

Members may please discuss.

B.2 Frequent tripping of 132kV Balipara - Tenga line:

132 kV Balipara – Tenga Line tripped 3 times in Sep’20 and 6 times in Oct’20. Pending actions as per discussions in 55th PCCM and OCC meetings:

- Conversion of all T connections to LILO for 132kV Balipara – Khupi
- Periodic maintenance of the line by DoP Ar.Pradesh

Members may please discuss.

AGENDA ITEMS FROM NERPC

B.3 Frequent tripping of lines in the 132kV RHEP-Ziro-Daporizo-Along-Pasighat corridor:

132kV RHEP-Ziro-Daporizo-Along-Pasighat-Roing-Tezu-Namsai line corridor is radial and tripping of any line in between leads to Grid Disturbance.

Name of the line	Number of Trippings		
	Aug’20	Sep’20	Oct’20
132kV Along-Pasighat	3 times	9 times	1 time
132kV Ziro-Daporizo	1 time	1 time	NIL
132kV Daporizo-Along	1 time	NIL	NIL

Remedial actions already undertaken:

- O/C settings at RHEP reviewed considering the present loading of the line.
- Auto-Reclosure implemented for 132kV RHEP-Ziro

It has been noted that no DR/EL is being submitted by DoP Ar.Pradesh for the lines owned and maintained by DoP Ar.Pradesh viz. 132kV Daporizo-Along, 132kV Along-Pasighat.

Members may please discuss.

B.4 Review of Settings for Important elements:

In the Sub-group meeting on 15th October,2020 NERTS informed that the HTLS parameters are being searched for the 132kV AGTCCPP-79Tilla D/C line and shall be implemented by Oct'20. Director(O&P), NERPC stated that as per detailed discussions of the Sub-group the following settings need to be reviewed with co-ordination amongst the concerned utilities:

(i)All 132kV feeders of DHEP

(ii)400/132kV ICTs at Palatana & 132kV Palatana-Udaipur

(iii)132kV Melriat-Zuangtui with downstream of 132kV Zuangtui(Zemabawk)

(iv)132kV Dimapur-Dimapur D/C with downstream of Dimapur(Nagarjan)

He requested all the utilities to submit the related settings to NERPC at the earliest.

Members may please discuss.

AGENDA ITEMS FROM NERLDC:

B.5 Status of submission of FIR and DR & EL outputs for the Grid Events for Oct'20:

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 Oct'20(as on 04.11.20) is given below:

Name of Utility	Total FIR/ DR/EL to be submitted	% Submission of		
		FIR	DR output	EL output
DoP, Arunachal Pradesh	19	21	11	0
AEGCL	45	84	78	2
MSPCL	26	100	81	77
MePTCL	18	28	44	0
P&ED, Mizoram	0	No Event		
DoP, Nagaland	21	100	87	65
TSECL	14	0	21	21
POWERGRID	61	39	71	22
NEEPCO	57	44	42	47
NHPC	3	0	0	0
NTPC	2	0	0	0
OTPC	2	50	100	0

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

NERLDC may please deliberate.

B.6 Major Grid Events in NER Power System in Oct'20:

Details of the major Grid Events in NER Power System since last Subgroup Meeting held on 15.10.20 are given the below table:

1. Disturbance in Karong area of Manipur Power System due to non-operation of Distance Protection of 132 kV lines at Karong: 5 times in Oct'20
2. Tripping of both units at Kameng HEP for fault in 400 kV Balipara - Kameng 1 Line on 08.10.20
3. Blackout of 132 kV Hailakandi area of Assam Power System on 09.10.20
4. Blackout of Kolasib substation on 10.10.20
5. Grid Disturbance in Meghalaya Power System on 13.10.20 & 14.10.20
6. Blackout of Monarchak on 17.10.20

NERLDC 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 54th PCCM NERLDC informed that sample DR outputs have not been received. Only those DRs which have been submitted sporadically subsequent to trippings have been analyzed for proper channel standardization.

All utilities were requested to submit DR outputs by February 2020.

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:

- Status of AEGCL & MePTCL is monitored in PCC subgroup meeting.
- 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 54th 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	Lines identified. LDP for 132kV Imphal-Imphal and 132kV Jiribam-Jiribam proposed. Under DPR preparation stage.	
MePTCL	LoA issued. First tranche of funds received from PSDF.	
P&ED Mizoram	Lines identified viz. 132kV Aizawl-Luangmual and 132kV Kawmzawl-Khawiva. Under DPR preparation stage.	
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	To be intimated	NEEPCO	
132kV RHEP-Pare-2	NERTS	Fiber to be allocated by Feb'20	NEEPCO	

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 Name	Status as per last Sub-group meeting	Utility	Latest status
A. Existing				
1	SPS-2 (Tripping of 400kV Palatana-Silchar D/C when both modules of Palatana in service)	SPS loading part of SPS-2 at Silchar to be removed.	POWERGRID	
2	SPS-6 (When 132kV Umiam Stg-I to Umiam Stg-III D/C line trips)	Identified 30 MW load at Mawngap. Carrier issues from Umiam Stg-I to Mawngap by Nov'20	MePTCL	
3	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)	a) Wiring for tripping of 132 kV BTPS-Dhaligaon D/C at BTPS to be removed. b) In case of over loading, a signal to be sent from BTPS to Agia to trip 220 kV Agia – Azara S/C and 220 kV Agia – Boko S/C, both circuits at Agia end. By Oct'20	AEGCL	
4	SPS-9 (Tripping of 132kV AGTCCPP – Kumarghat line)	Put in service on 13.10.2020. Protection coupler to be procured for the line and Carrier-intertrip to be implemented for complete effectiveness of SPS	NERTS	
New				
1	SPS related to secure & reliable operation of BgTPP	->Logic buiding completed. ->Wiring by Oct'20 ->Digital channel for 400kV D/C line by Oct'20 ->Detailed Scheme to be shared with NERPC/NERLDC after implementation	NTPC	
2	SPS related to secure & reliable operation of Monarchak	->Will be implemented during shutdown in Sep'20 ->Generation reduction slightly less than 65MW ->Detailed Scheme to be shared with NERPC/NERLDC after implementation	NEEPCO	
3	SPS for RHEP-Pare	->M/s GE to implement ->Delayed due to lockdown measures	NEEPCO	

For Islanding Scheme-2:

Identification of feeders for additional UFR based load shedding with procurement of UFRs for the same by TSECL

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 per last Sub-group	Latest Status
1	Grid Disturbance in Dimapur area of Nagaland on 30.09.19 due to tripping of 220kV Misa-Dimapur D/C, 132kV Dimapur-Dimapur D/C, 132kV Bokajan-Dimapur	Overreach of Main -2 relay of 220kV Misa-Dimapur-I at Misa to be rectified	NERTS	Settings OK. Testing in next Shutdown.	
2	Unwanted tripping of 132 kV Imphal (PG) - Ningthoukong Line ((03-03-2020 15:57:00, 16-03-2020 05:25, & 132 kV Loktak - Ningthoukhong Line for reverse faults	Ningthoukong end DR of 132kV Loktak- Ningthoukong to be time synchronised, channel standardisation to be done.	MSPCL	GPS clock unavailable. DR channel standardisation by Oct'20.	
3	Tripping of 132kV Loktak- Ningthoukong & 132kV Imphal- Ningthoukong on 01.08.20	Faulty DP relay at Ningthoukong for Imphal(PG) to be replaced.	MSPCL	To be replaced under PSDF scheme.	
4	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	Found OK at Biswanath Chariali. M/s GE & NERTS to visit RHEP.	

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5	Tripping of 132 kV AGTCCPP - Kumarghat Line only at AGTCCPP on 02-04-2020 18:06:00	Calibration of numerical relay at AGTCCPP	NEEPCO	By Oct'20.	
6	Tripping of all units at AGBPP on 10-05-2020 at 11:47hrs	referred to OEM for checking the logics of newly commissioned auxiliary systems.	NEEPCO	Delayed due to pandemic	
7	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	After commissioning of PLCC	
8	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	Estimate preparation under process.	
9		Line differential protection to be installed for link feeder at Rokhia	TPGL	Estimate preparation under process.	
10	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 visit by Oct'20	
11	Tripping of 220 kV AGBPP - Deomali Line @ 12:51:00 09-06-2020	CT sensing problem at AGBPP	DoP Ar.Pradesh	By Nov'20	
12	Pare Units 1&2 tripped on 22.06.2020	Differential protection of SST operated. However units also tripped. Referred to ANDRIZ HYDRO for RCA.	NEEPCO	ANDRIZ reply awaited	
13	Tripping of 220kV BTPS-Rangia D/C lines and 132kV Rangia-Motonga line on	Carrier intertrip to be implemented for 220kV Rangia-BTPS D/C.	AEGCL	Carrier communication work is completed at Rangia end.	

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14	23.07.2020	AR operation to be tested for 220kV Rangia-BTPS D/C	AEGCL	Carrier communication work could not be completed at BTPS end due to panel damage.	
15		Testing of DP at Rangia for BTPS#1 to be done	AEGCL		
16	Tripping of 220kV BTPS-Salakati D/C on 05.08.2020	non-operation of O/C protection at Salakati for Ckt#I to be checked	NERTS	By Oct'20	
17	Tripping of 132 kV Lumshnong-Panchgram twice on 12.07.2020	B/U settings to be modified as per fault current for 132kV Lumshnong-Khliehriat	MePTCL	By Oct'20	
18		DR time synchronisation	MePTCL	In discussion with OEM	
19	Blackout of 220kV Mariani, 220/132kV Mokokchung(PG) & 132kV Mokokchung(NAG) on 06.08.2020	At AGBPP end E/F TMS of Mariani(PG) line to be revised to 1.2 from 0.12	NEEPCO	B/U E/M relay de-commissioned. Relay setting and PSL to be sent to NERTS.	
20		AR to be implemented at DHEP for 132kV DHEP-Mokokchung with check syc function at Doyang	NEEPCO	OEM site visit awaited. Delayed due to COVID.	
21	Tripping of 132 kV Aizawl - Luangmual Line on 14-08-2020	Delayed opening of CB(150ms) to be investigated by P&ED Mizoram	P&ED Mizoram	By Oct'20	
22	Tripping of 132 kV Ranganadi - Ziro Line three times in Aug'20	AR non-operation due to Trip coil problem to be rectified	NEEPCO	By Oct'20	
23	Tripping of both 132kV Aizawl-Tipaimukh & 132kV Jiribam-Tipaimukh on	TMS for B/U protection to be co-ordinated with DP at Tipaimukh.	MSPCL	By Oct'20	

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24	25.08.20	Software to be procured for downloading DR/EL	MSPCL	Requisition sent to higher authority	
25	400 kV Alipurduar - Bongaigaon 1 Line tripped on 18-08-2020 & 400 kV Alipurduar - Bongaigaon 2 Line tripped on 02-08-2020	Conductor failure. To be taken up with OEM	M/s STERLITE	By Oct'20	
26	Tripping of 220 kV BTPS - Rangia 2 Line 3 times in Aug'20	Testing of DP at Rangia for BTPS#1 to be done due to delayed detection of Z-1 at Rangia be done due to delayed detection of Z-1 at Rangia.	AEGCL	Relays to be tested and report to be submitted by Dec'20	
27		AR operation on Z-I only to be tested for both ends	AEGCL	by Oct'20	
28	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	By Oct'20	
29	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	Procurement of relay in progress.	
30		GT settings at Kameng to be reviewed	NEEPCO	To be taken up with OEM	
31	Tripping of 220 kV Misa - Samaguri I and II lines, 220 kV Samaguri - Jawaharnagar line, 220 kV Samaguri - Sonapur line, 220 kV Samaguri - Sonabil line on 17-09-2020	Two separate DC sources to be installed with source separation and DCDB at Samaguri also by Dec'20.	AEGCL	-	
32	Tripping of 220/132 kV, 100	Jumper Strengthening to	AEGCL	-	

	MVA ICT II at BTPS(AS) on 29-09-2020	be done at BTPS			
33	Tripping of 132 kV Dullavcherra - Hailakandi line, 132 kV Dharmanagar - Dullavcherra line & 132 kV PK Bari - Dharmanagar line on 05.09.20	Non-operation of CB at Dharmanagar for P.K.Bari line to be investigated	TSECL	-	
34	Tripping of 132 kV New Umtru HEP U-I, New Umtru HEP U-II, 132 kV New Umtru - Umtru line and 132 kV New Umtru - EPIP II line on 17-09-2020	High set O/C, E/F for New Umtru lines to be disabled.	MePGCL	-	
35	Tripping of 400 kV Ranganadi - BiswnathChariali D/C and 132 kV Ranganadi - Pare 2 Line on 11.09.20	Reasons for tripping of Line Reactors for external fault to be investigated	NEEPCO	-	
36	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	-	

Concerned utilities may please update the status.

D. ITEMS FOR INFORMATION

D.1 Summary of NER Load Loss:

Summary of NER Grid Loss (MU) for FY 2019-20 & FY 2020-21

Year	Aug	Sept	Oct
FY 2019-20	0.2299	0.3020	0.3175
FY 2020-21	0.6190	0.8830	0.2317

Localized Load Loss for October, 2020

Sl No.	Affected State	Area	Load Loss in MU
1	Arunachal Pradesh	Itanagar	0.025
2		Pasighat	0.101
3		Khupi	0.035
4	Assam	Rangia	0.012
5		Hailakandi	0.004
6		Golaghat and Bokajan	0.023
7	Manipur	Churachandpur	0.002
8		Karong	0.011
9	Meghalaya	Capital Area	0.109

This is for information only.

Any other item:

Date and Venue of next PCC

It is proposed to hold the 56th PCC meeting of NERPC on second week of February, 2021. The date & exact venue will be intimated in due course.
