AGENDA

FOR

222nd OCC MEETING

Time of meeting : 10:30 Hrs.

Date of meeting : 17th January, 2025 (Friday)

Venue : NERLDC Conference Hall, Guwahati

Contents

NORTH EASTERN REGIONAL POWER COMMITTEE

AGENDA FOR 222nd OCC MEETING TO BE HELD ON 17.01.2025 (FRIDAY) AT 10:30 HRS

1. PART-A: CONFIRMATION OF MINUTES

1.1. Confirmation of Minutes of 221st Meeting of OCC Sub-Committee of NERPC

The minutes of 221st meeting of OCC Sub-committee held on 17.12.2024 at NERLDC Conference Hall, Guwahati were circulated vide letter No. NERPC/SE (O)/OCC/2024/ 3463-3505 dated 23rd December, 2024.

The sub committee may confirm the minutes of 221st OCC meeting.

2. PART-B: ITEMS FOR DISCUSSION

AGENDA FROM NERPC

2.1. Outage planning

I. Generation Planning (ongoing and planned outages)

a. In 217th OCCM, NEEPCO informed that they would provide daily inflow data for storage-type Hydro PS. NHPC also agreed to provide inflow data as per the NER operational data format. Based on that data provided from NEEPCO and NHPC present per day MU and projected number of days of operation.

Plants	Reservoir Level in meters (as on 09/10/2024)	MU Content	Present DC (MU)	No of days as per current Generation
Khandong + Khandong STG II	722.11	32	0.5928	54
Kopili	608.5	93	2.0007	46
Doyang	318.4	33	0.37445	88
Loktak	769.09	250	2.474	101

b. The outage of other generating stations may be approved considering the present water levels in reservoirs.

c. Outage Planning of Transmission elements

As per the Outage planning procedure of NER the planned outages approved in the OCC forum has to be reconfirmed by the availing utilities on 10:00hrs. of D-4 to 12:00 hrs. of D-3) to NERLDC in order to either avail the approved shutdown or cancel it.

If an outage is to be availed on say 10th of the month, the shutdown availing agency would reconfirm to NERLDC between 10 hrs. of 6th of the month to 1200 hrs. of 7th of the month. This practice is necessary to ensure optimal capacity utilization and the time required for associated system study/coordination by/amongst RLDC/NLDC.

Subsequently NER stakeholders have provided shutdown request for transmission elements for the month of December-2024. That is attached as **Annexure B 2.1(c)**

Members may deliberate.

AGENDA FROM NERLDC

2.2. Operational Performance and Grid discipline during December 2024:

NERLDC will present the Operational Performance and Grid Discipline Report for the month of December 2024 (Annexure B 2.2).

Members may deliberate.

2.3. Review of Day-ahead State Forecast Error

As per IEGC, 2023 Regulation 31.2.c:

Quote:

"The demand estimation by each SLDC shall be done on day ahead basis with time block wise granularity for the daily operation and scheduling. In case SLDC observes a major change in demand in real time for the day, it shall immediately submit the revised demand estimate to the concerned RLDC for demand estimate correction."

Unquote:

The demand estimates are being received from all the states on day ahead basis in regular manner. The error (MAPE) table of the demand estimates sent by states for the previous month are as shown below:

Date	अरुणाचल प्रदेश/ Arunachal Pradesh	असम / Assam	मणिपुर/ Manipur	मेघालय/ Meghalaya	मिज़ोरम/ Mizoram	नागालैंड/ Nagaland	त्रिपुरा/ Tripura	उत्तर पूर्वी क्षेत्र/ NER
11/29/2024	16.02	6.26	8.78	4.18	10.75	12.60	4.48	5.97
11/30/2024	14.29	6.42	3.96	3.73	37.37	7.08	7.42	4.97
12/1/2024	11.69	53.81	8.54	17.67	23.43	21.14	12.79	29.58
12/2/2024	9.46	36.47	9.74	5.82	13.87	5.51	4.17	20.26
12/3/2024	7.97	11.67	10.60	1.99	10.19	14.04	6.39	7.70
12/4/2024	7.92	9.58	3.62	7.06	6.41	6.73	7.03	5.59
12/5/2024	7.35	10.14	5.44	7.72	6.77	8.87	3.36	4.99
12/6/2024	6.72	60.12	8.27	4.11	7.60	6.00	5.48	54.20
12/7/2024	10.44	3.66	9.60	4.17	11.05	6.66	5.97	2.49

12/8/2024	10.91	8.74	13.76	4.28	7.61	9.25	9.61	4.95
12/9/2024	8.64	8.95	15.46	5.11	5.77	4.67	2.73	4.65
12/10/2024	7.83	6.41	11.98	6.65	5.58	9.11	3.91	4.09
12/11/2024	11.08	5.08	13.40	6.37	4.11	12.08	4.14	7.90
12/12/2024	13.03	3.52	5.37	3.69	6.57	15.10	3.72	1.93
12/13/2024	9.47	3.80	7.76	2.80	4.99	16.19	6.63	2.32
12/14/2024	6.25	2.82	5.42	2.84	4.03	16.56	14.12	2.98
12/15/2024	5.89	7.30	5.79	7.17	9.22	18.88	6.60	5.33
12/16/2024	5.48	6.24	5.34	6.62	5.12	18.48	7.45	4.61
12/17/2024	5.25	4.48	4.65	7.70	14.39	20.27	37.68	6.53
12/18/2024	8.35	4.19	6.49	4.93	8.82	19.47	7.27	3.02
12/19/2024	7.39	2.77	4.31	2.66	5.74	19.27	6.17	1.60
12/20/2024	6.58	2.35	4.85	3.70	3.57	15.72	8.11	1.79
12/21/2024	5.80	2.47	7.23	7.58	6.07	13.78	7.30	2.04
12/22/2024	9.08	7.89	23.43	16.35	24.57	13.46	8.68	3.77
12/23/2024	6.66	2.97	3.97	4.10	21.25	14.99	6.64	2.78
12/24/2024	9.77	1.91	4.73	3.83	16.63	12.03	7.53	2.20
12/25/2024	7.84	3.86	10.18	5.58	23.61	16.97	8.66	3.47
12/26/2024	8.37	2.52	4.84	2.99	28.16	18.78	5.82	1.78
12/27/2024	9.65	2.85	4.63	2.91	14.79	16.53	8.19	1.74
12/28/2024	9.17	3.00	3.84	3.20	8.25	15.94	7.22	2.19
12/29/2024	10.20	4.84	39.10	3.87	19.83	19.92	8.01	3.39
12/30/2024	7.51	4.17	5.21	17.71	7.98	20.77	5.80	2.57
12/31/2024	10.60	9.08	4.04	3.53	4.95	11.97	7.97	4.46
1/1/2025	9.46	10.05	6.45	7.72	19.25	17.58	7.95	8.31
1/2/2025	7.16	13.81	5.53	3.99	17.42	22.84	8.50	7.74

It has been observed that due to high error percentages, incorrect forecasts are being incorporated in the operational planning in day ahead manner. In view of the above it is requested to analyze the above errors and make necessary changes in the data/methodology for forecasting for a much reliable day ahead forecast and resource adequacy.

Members may deliberate.

2.4. Sharing of Methodology of Day-Ahead/ week ahead/ Month ahead Demand Forecasting

As per deliberation in Agenda Item C.21 of 219th OCC meeting held on 22nd October 2024, all the NER SLDC's were requested to share the respective

methodology of the states for demand forecasting in Day-Ahead/ week ahead/ Month ahead Demand Forecasting horizon.

As per verbal communication with all the SLDC's and respective forecasting personnel, a draft methodology as communicated by respective SLDC's was prepared and shared with all the SLDCs for any comments/correction on 12th December 2024. Any comments/ corrections to the draft methodology are still awaited.

In view of the above, it is requested to accept the draft methodology. Further, proper analysis of the methodologies is requested for a more reliable demand forecast. The relevant methodology is attached in **Annexure B 2.4**.

Members may deliberate.

2.5. Performance of online network estimation tools at RLDC

IEGC mandates RLDCs and SLDCs to utilize the network estimation tool integrated in their EMS and SCADA systems for the real time operational planning study. Also, performance of the online estimator tools shall be reviewed in monthly operational meetings as per IEGC Regulation 33(2).

Quote:

"SLDCs, RLDCs and NLDC shall utilize network estimation tool integrated in their EMS and SCADA systems for the real time operational planning study. All users shall make available at all times real time error free operational data for the successful execution of network analysis using EMS/SCADA. Failure to make available such data shall be immediately reported to the concerned SLDC, the concerned RLDC and NLDC along with a firm timeline for restoration. The performance of online network estimation tools at SLDC and RLDC shall be reviewed in the monthly operational meeting of RPC. Any telemetry related issues impacting the online network estimation tool shall be monitored by RPC for their early resolution."

Unquote:

The performance of online network estimation tools at NERLDC is shown below:

03-Jan-2025 14:55:51

Difference & % Error of RTCA and RTNET

Constituents	SCADA	RTCA		RTNET	
		Difference	Error %	Difference	Error %
NER Generation	1652	511	23.00	508	23.00
NER Load	1965	322	15.00	508	15.00
Tripura	164	35	17.00	35	17.00
Assam	1026	78	7.00	78	7.00
Meghalaya	271	12	4.00	12	4.00
Manipur	154	7	4.00	7	4.00
Arunachal	125	13	10.00	13	10.00
Nagaland	112	24	17.00	24	17.00
Mizoram	112	14	14.00	14	14.00

Similarly, SLDC's are requested to present their online network estimation tool performance in the monthly operational meeting of RPC to comply with IEGC regulation 33(2).

Members may deliberate.

2.6. Submission of datasheet for NER Black Start Procedure 2025

In compliance with IEGC 2023, the following clauses mandate the preparation and updating of grid restoration procedures:

Regulation 34. (1), Based on the template issued by NLDC, SLDC of each State and the RLDC of each region shall prepare restoration procedures for the grid for their respective control areas, which shall be updated every year by the concerned SLDC and RLDC taking into account changes in the configuration of their respective power systems.

Regulation 34. (2), Each RLDC, in consultation with the NLDC, CTU, and the concerned STUs, SLDCs, users and RPC, shall prepare detailed procedures for restoration of the regional grid under partial and total blackouts which shall be reviewed and updated annually by the concerned RLDC.

Regulation 34. (3), Detailed procedures for restoration post partial and total blackout of each user system within a region shall be prepared by the concerned user in coordination with the concerned SLDC, RLDC or NLDC, as the case may be. The concerned user shall review the procedure every year and update the same.

In view of the above, the respective datasheet has been shared with all concerned NER utilities dated 03.01.2025 as per **Annexure B 2.6**.

All concerned NER utilities/ISGS are kindly requested to update their respective datasheets and submit them at the earliest by 18th Jan 2025 to facilitate the preparation of the NER Black Start Procedure 2025.

Members may deliberate.

2.7. Impact of 132kV Loktak – Ningthoukhong D/C in Manipur Power System

The generation from Loktak HEP is evacuated through the following transmission lines in the Manipur system:

1. 132 kV Loktak – Ningthoukhong TL
2. 132 kV Loktak – Imphal (PG)
3. 132 kV Loktak – Jiribam (PG)
4. 132 kV Loktak – Rengpang (MA) - Jiribam (MA) - Jiribam (PG)

However, the 132 kV Rengpang (MA) - Jiribam (MA) line has been under long outage since 18:18 Hrs of 17-11-2023.

Considering the current scenario, studies suggest tripping of 132 kV Loktak–Jiribam (PG) or 132 kV Loktak–Imphal (PG) line would result in high loading in 132 kV Loktak–Ningthoukhong line:

Long-Term Measures:

1. Reconductoring of the 132 kV Loktak – Ningthoukhong line.
2. Commissioning of the second circuit of the 132 kV Loktak – Ningthoukhong (Ckt II).

Short-Term Remedial Measures:

An SPS (Special Protection Scheme) may be designed at Loktak HEP to ensure the following:

If any circuit of the 132 kV Loktak–Jiribam (PG) or 132 kV Loktak–Imphal (PG) line trips, and the loading on the 132 kV Loktak–Ningthoukhong line exceeds 70 MW (as per Manipur), the generation at Loktak HEP will be instantly backed down to 70 MW.

Members may deliberate.

2.8. Multiple Grid constraints in Assam Power system:

The Assam system is facing severe constraints during summer season and same has been raised in several OCC and RPC forums. The list of the constraints are given below.

Constraints in System	**Comments**	**Long term solution**
Non-Compliant of N-1 criteria of 2x160 MVA ICTs at 220/132 kV BTPS (AS)	Due to High demand in Bongaigaon, Kokrajhar, Gauripur, Gosssaigaon, Bilasipara, Dhaligaon and Rangia areas majors load are fed radially and thus tripping of any 132 kV lines leads to grid disturbance in Assam system. 1. It is also to be mentioned that 220/1322 kV ICT I & II at BTPS(AS) are kept segregated at different buses and thus feeding the separate load radially. 2. 132 kV Bongaigaon (BTPS)-Kokrajhar-Bilasipara-Gauripur link operate radially.(132 kv Gossaigaon -	The 220kV Salakati - Alipurduar line is planned to be LILO at Gossaigaon (Agimaoni), providing some load relief to BTPS, potentially negating the need for an additional ICT (Minimum 100 MW increase in TTC of Assam. The Assam can draw more power from Gossaigaon side based on the development of downstream network)

	Gauripur line generally kept in open condition) 3. 132 kV Dhaligaon-Gossaigaon link operate radially. 4. 132 kV Bornagar buses are kept split, thus forming radial connection; one is 132 kV Dhaligaon-Bornagar line and other one is 132 kV Rangia-Nathkuchi-Bornagar link. 5. 132 kV Nalbari-Barpeta line kept in open condition. Due to this 132 kV Dhaligaon-Barpeta and 132 kV Rangia-Nalbari line operate in radial mode.	
Non-Compliant of N-1 criteria of 2x100 MVA ICTs at 220/132 kV Rangia	Due to high demand in Rangia area majors load are fed radially and thus tripping of any 132 kV lines lead to grid disturbance in Assam system. 1. 132 kV Tangla and 132 kV Sipajhar load fed radially eithther through Rangia or Sonabil side. Thus, tripping of any line would lead to GD in Assam system. 2. 132 kV Kamalpur load fed radially through Rangia side. Thus, tripping of any line would lead to GD in Assam system. 3. 132 kV Sishugram bus operate in split mode, thus forming radial connection; one is 132 kV Rangia-Kamalpur-Amingaon-Sishugram link	1. Commissioning of 400/220 kV Rangia substation and associated transmissions lines 2. Upgradation of 220/132 kV ICTs at Rangia substaion

	and other one is 132 kV Sarusajai-Kamakhya-Sishugram link. 4. It has been observed that the voltage levels at multiple 132 kV nodes, particularly in the Assam power system, are dropping below 122 kV during peak times, which is a cause for concern	
Non-Compliant of N-1 criteria of 220 kV Balipara-Sonabil D/C	1. TTC/ATC of NER is limited due to high loading on 220 kV Balipara-Sonabil D/C 2. Impact on reliability of Capital area of Assam system.	1. Utilization of Balipara ICT by Assam: Due to reconfiguration of 132kV Balipara-Sonabil and 132kV Balipara-Ghoramari as 132 kV Sonabil-Ghoramari line, the ICTs at Balipara is not being utilized by Assam. Commisioning of 132 kV Balipara-Misamari D/C (approved in C-METS) 2. Re-conductoring of 220 kV Balipara-Sonabil D/C with high Ampacity conductor
Non-Compliant of N-1 criteria of 220 kV Misa-Samaguri D/C	Impact on reliability of Capital area of Assam system.	1. Commissioning of 400/220 kV Sonapur substation and associated transmissions lines

Non-Compliant of N-1 criteria of 220 kV Sarusajai-Azara D/C	Impact on reliability of Capital area of Assam system.	1. Commissioning of 400/220 kV Sonapur substation and associated transmissions lines,
Non-Compliant of N-1 criteria of 132 kV Tinsukia-Ledo-Rupai - Chapakhowa-Roing-Pasighat-Along-Basar-Daporijo-Ziro-Panyor HEP lik	132 kV Tinsukia-Ledo-Rupai link are having very old conductor, the links is not able to sustain more than 60 MW load for longer period, thus grid disturbance occured on triping of link from the farthest end i.e. 132 kV Tinsukia-Ledo or 132 kV Tinsukia - Rupai or 132 kV Panyor HEP-Ziro line.	Reconductoring of 132 kV Tinsukia-Rupai, 132 kV Tinsukia-Ledo and 132kV Ledo-Rupai line with ampacity conductor
Non compliant of N-1 critera of 132 kV Sarusajai-Kahelipara tripple circuit	Due to High demand in capital area during peak hours, majors load are fed radially and may lead to grid disturbance in capital area of Assam. Following lines are kept in open condition in Capital region for controlling the loading of critical elements. 1. 132 kV AIIMS- Amingaon line 2. 132 kV Bus at Sishgram operate in Split mode	Reconductoring of 132 kV Sarusajai-Kahelipara tripple circuit with high ampacity may be done
N-1 Reliability of	The Upper Assam System is vulnerable under N-1-1 contingency.	1. Commissioning of 2nd ckt of 220 kV Mariani-

Upper Assam Power System	Considering the worst scenario like continuous shutdown or Force Outage of 220 kV Samaguri-Mariani (AS) line or 220 kV AGBPP-New Mariani (PG) line, the flow gate of Upper Assam Power System needs to be monitored.	Mariani(PG) line: Approved by CEA 2. Early Commissioning of 220 kV Samaguri – Mariani 1(Latest Status: Kaziranga Forest Clearance pending)

SLDC Assam is requested to address these issues urgently by implementing the planned assets and solutions to relieve congestion in the network. Proactive implementation of the proposed measures will significantly enhance the reliability and efficiency of Assam's power system.

Members may deliberate.

2.9. Implementation of the AUFLS and df/dt schemes

As deliberated in 15th meeting of NPC held on 14.12.2024 against Agenda 6: "Report on Automatic Under Frequency Load Shedding (AUFLS) and df/dt scheme:"

Quote:

"The following quantum of load relief settings of AUFLS scheme for year 2024-25 were approved by the Committee:

Sr. No.	*Stage*	*Frequency (Hz)*	*Demand Disconnection (%)*	Quantum of Load shed in MW					
AUFLS Set Points and Percentage Quantum of Relief				NR	SR	WR	ER	NER	All India Load shed
1	Stage 1	49.4 Hz	5.00%	3802	3214	3425	1383	174	11998
2	Stage 2	49.2 Hz	6.00%	4562	3857	4109	1659	208	14395
3	Stage 3	49.0 Hz	7.00%	5322	4500	4794	1936	243	16795
4	Stage 4	48.8 Hz	7.00%	5322	4500	4794	1936	243	16795
	Total (in MW):			**19008**	**16071**	**17122**	**6914**	**868**	**59983**

"The implementation of the AUFLS and df/dt schemes must be completed by March 2025. RPCs are required to regularly monitor the implementation of the UFR scheme as a whole including the bulk consumers connected at the ISTS level. RPCs may communicate above decisions to the respective States for implementation."

Unquote:

SLDCs are requested to conduct meetings with their DISCOMs to find solutions for feeder mapping and expedite the same. Minutes of 15th meeting of NPC held on 14.11.2024 is attached as per Annexure B 2.9.

Members may deliberate.

2.10. Agenda of operational issues of DISCOMs at RPC level and Monitoring of 30 GW of capacity under the PM Surya Ghar Yojana scheme

As per Agenda 12 of the 15th NPC meeting (Annexure B 2.10) held on 14.11.2024, and Agenda 14.3 of the 14th NPC meeting held on 03.02.2024, following decision of the NPC committee was agreed upon:

i) Only the operational aspects of DISCOMs may be discussed at the RPC level.

ii) Monitoring of the installation of 30 GW of capacity under the PM Surya Ghar Yojana scheme at Discom level may be discussed under this agenda item.

Hence, DISCOM's are requested to deliberate their operational issues and may update the present status of monitoring of roof-top solar integration at DISCOM level.

Members may deliberate.

2.11. Responsibility of Users for compliance monitoring as per IEGC:

This is a general information to all, as per IEGC 2023, a list of various responsibilities that have to be performed by each user have been prepared and attached as Annexure 4. The same has to be performed and intimated to the concern person as mentioned in the list.

Hence, all the users are requested to submit the compliance as per Annexure B 2.11

Members may deliberate.

2.12. Early implementation of FGMO as per IEGC:

IEGC 2023 was effective for 01st October 2023 for all the utilities. Accordingly, the generating stations and units thereof with governors shall be under Free Governor Mode of Operation in accordance with Regulation 30. (10). (d) of IEGC 2023. The inherent dead band of a generating unit or frequency controller shall not exceed +/- 0.03 Hz and the governor shall be set with respect to a reference frequency of 50 Hz and response outside the dead band shall be with respect to a total change in frequency in compliance with Regulation 30. (10). (k).

As per deliberation in 221st OCC, all the eligible generating stations (ISGS) have implemented the FGMO. Also, status of FGMO for intra-state generation to be updated by respective SLDCs.

Members may deliberate.

2.13. Publication of "Reactive Power Management Document of North Eastern Region 2024.

With due course, it is to be informed that "Reactive Power Management Document of North Eastern Region 2024" has been published on 31st Dec'24 in NERLDC website.

Power and Voltage Control document of NER 2024 is updated as on Dec-2024 and uploaded on NERLDC website under following link

https://www.nerldc.in/wp-content/uploads/Reactive-power-Doc-NER-2024_RP_NER_2024-1.pdf

This document is in continuation to the previous edition for understanding the basics of reactive power and its management towards voltage control, its significance, and consequences of inadequate reactive power support. It also includes details of reactive power support available at present and efforts by planners from future perspective in respect of NER grid.

Members may deliberate.

2.14. Hunting in generators during oscillations

Severe forced oscillations were observed in the grid in the North Eastern region PMU's at 10:13-11:25 hrs & 12:21-13:04 hrs of 08-12-2024. The oscillations were observed in both active and reactive powers of all the phases in the grid.

It was informed to NERLDC control room that hunting of around 10 MW was observed in Unit 2 and Unit 3 at BGTPP and 10-12 MW fluctuations in both the modules of OTPC. Similarly, it was conveyed from NLDC that such kind of hunting in the machines were observed in many power generating units

throughout the country. Such simultaneous hunting in is a serious concern for power security of the grid. The oscillations observed in the grid are suspected to be forced kind of oscillations that might have been caused due to RE penetration in the country.

In lights of such critical situation it is requested to:

Ensure PSS is properly tuned and available at all times for damping the low frequency oscillations.

Provide necessary DAS and PSS performance data during the events to NERLDC for PSS performance verification.

Members may deliberate.

2.15. Philosophy and logic for FSC auto switching and auto disconnection in 400 kV Bongaigaon-Balipara 3 &4 at 400 kV Balipara S/S

As per deliberation in Agenda 2.7: "Restoration of FSC (Fixed Series Compensator) Operation for Balipara-Bongaigaon Lines 3 & 4" of 221st OCC Meeting held on 17th December 2024, the issue of the bypass circuit breaker of the FSC at the Balipara substation has been resolved for Ckt 3 and work is going on for Ckt 4.

In view of the requirement of FSC as per real time grid conditions, it is requested to share the philosophy and logic for FSC auto switching and automatic disconnection in 400 kV Bongaigaon-Balipara 3 & 4 at 400 kV Balipara S/S. PGCIL is requested to update on the matter.

Members may deliberate.

2.16. AP Islanding scheme logic activation status as per special meeting:

A meeting was held on 03rd January 2025 for activation of Itanagar Islanding Scheme Activation. Following are the actions need to be taken as per the meeting whose status may be updated by utilities:

1. UFR setting at the following action need to be set at 48.2 Hz with a time delay of 300ms:

Sl. No	UFR Location	Implementing Agency	Status Update(whether UFR setting is enabled)
1	132 kV Panyor HEP-Pare HEP line at 132 kV Panyor HEP	NEEPCO	
2	132 kV Panyor HEP-Itanagar line at 132 kV Panyor HEP	NEEPCO	
3	132 kV Panyor HEP-Lekhi line at 132 kV Panyor HEP	NEEPCO	
4	132 kV Itanagar-BNC line at 132 kV BNC	PGCIL	
5	132 kV Itanagar-Gohpur line at 132 kV Gohpur	ASSAM	

6	132 kV Nirjuli-Gohpur line at 132 kV Gohpur	ASSAM	
7	132 kV Nirjuli-North Lakhimpur line at 132 kV North Lakhimpur	MUML	
8	North Lakhimpur - Pare HEP line at 132 kV North Lakhimpur	MUML	

2. SPS Implementation at Pare HEP: SPS for tripping of one unit of Pare in case of two units are running is to be implemented. NEEPCO may update the status.
3. UFR Post-Island Formation: UFR setting at SMS and Salasar fedders is to be changed to 48.0 Hz and 47.8 Hz (instantaneous trip) respectively. Also an additional feeders of around 5 MW is to be identified as an UFR post island and to be set at 47.7 Hz instantaneous trip. DOP,AP may please update the status.
4. The UFR for post Island Formation were for AUFLS purpose that quantum of load is to be shifted outside the island for AUFLS defence mechanism.
   DOP, AP may update the status.

Members may deliberate.

2.17. PSD withdrawal delay during Dec'2024

- NEEPCO delayed in returning SD of Monarchak GTG & STG by 10 days & 13 days respectively.
- NTPC delayed in returning SD of BgTPP Unit-1 by 6 days.

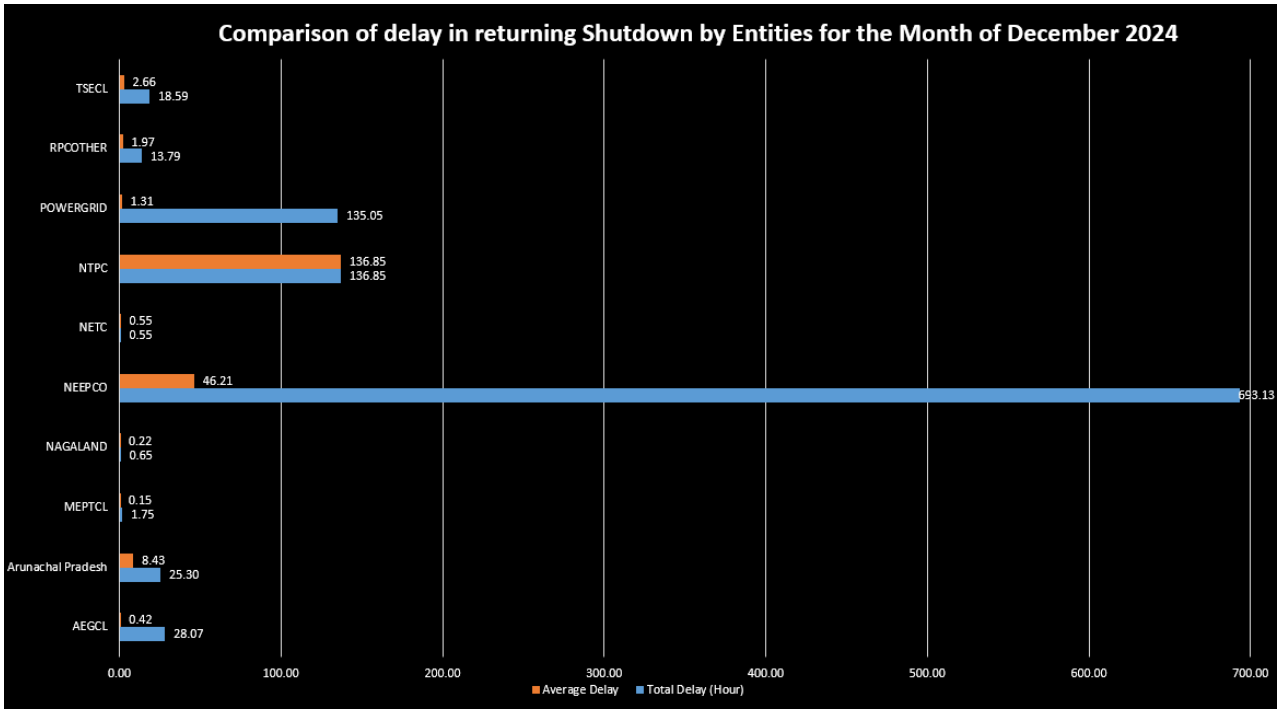


Fig: Comparison of delay in returning Shutdown by Entities for the Month of December 2024

Members may deliberate.

2.18. Communication for Revision of Schedule on account of forced outage

It has been observed that different information exchange practices are being followed by Generators in the North Eastern Region in the event of forced outages. To harmonise the process, the following may be adopted by entities. With regard to the scheduling process, the relevant Regulation and Operating procedure are outlined below:

Clause 49.7 of IEGC Regulations 2023:

"Generating Stations shall immediately intimate the outage of the unit along with the requisition for revision of Declared Capacity and schedule and the estimated time of restoration of the unit, to SLDC or RLDC, as the case may be."

Also reproduced from Clause 12.16 of **Operating Procedure of NER 2024**
"Revised Declared Capacity and schedule shall be effective from 7th time block if email or written communication receipt at NERLDC is in the odd time block and from 8th time block if email or written communication receipt at NERLDC is in the even time block, counting the time block in which the request of email or written communication receipt considered the first-time block."

In the case of a forced outage (following a tripping) of a generating unit, the following may be considered:

1. The generating station shall provide written communication to NERLDC Control Room as early as possible, including details of the outage, the quantum of bilateral transactions to be curtailed if any.
2. Subsequently, Generating Station to communicate NERLDC Control room over Telephone.
3. The time block in which the email or written communication request is received shall be considered the first time block for scheduling practises.
4. The schedule revision details may be provided in WBES software by the Generating Station.

Members may deliberate.

2.19. Early implementation of SPS at BTPS S/s and non-compliance of BTPS ICT:

The 220/132 kV BTPS (Assam) substation is equipped with 2x160 MVA, 220/132 kV ICTs. The BTPS (Assam) substation supplies power supply to the areas of Kokrajhar, Bilasipara, Gauripur, Gossaingaon, Dhaligaon, APM, Barpeta, Nalbari, Barnagar, Nathkuchi, Kamalpur, Sipajhar, BGR, and Railway TSS within the Assam Power System.

As it is observed during the month of July: 84.21%, August: 88.43 % and September: 80.66% of the time loading of these elements together was more than 160 MW, thus not satisfying the N-1 contingency criterion. Tripping of one of these ICTs will result in reduction in reliability in BTPS (AS) Area of Assam Power System.

A short-term measure to address the N-1 contingency of the 2 x 160 MVA ICTs at BTPS, an SPS scheme was reviewed by NERLDC on 14th October 2024, with several suggestions provided for its implementation. However, no update has been received from AEGCL regarding the progress of this critical scheme. The delay in implementation remains a significant concern, as the non-compliance directly impacts the reliability and safety of the Assam Power System in the BTPS area. AEGCL is once again urged to prioritize the implementation and commissioning of the SPS at the earliest to mitigate risks and ensure system reliability and same has been intimate via mail dated 09-12-2024. (Annexure B 2.19)

Cooperation from all stakeholders is requested to support the safe, reliable, and integrated operation of the grid. This matter is submitted for the committee's kind information and necessary action.

As per the deliberations in 221st OCC forum, AEGCL representative intimated the forum that proposal for funding for procurement of one no. 160 MVA transformer at BTPS substation is already submitted to MoP. However, due to funding issues the scheme has not been finalised yet.

In 221st OCC meeting, the forum advised AEGCL that the proposal for the said project can be submitted to PSDF. SLDC, Assam also apprised the forum that the SPS shall be operational within one month.

Members may deliberate.

2.20. Update on commissioning of 220kV AGBPP – Namsai DC to ensure reliability of Arunachal system:

The commissioning of the 132kV Chapakhowa-Roing D/C line on July 4th, 2023, has significantly contributed to stabilizing the power grid in Arunachal Pradesh by reducing grid disturbances and ensuring a reliable power supply.

However, the limited capacity of the 132kV Tinsukia-Ledo and 132kV Tinsukia-Rupai lines, which can handle approximately 60 MW, has restricted the full utilization of the Assam-Arunachal Pradesh interconnection. Frequent tripping incidents, primarily due to jumper breakages, have caused partial blackouts in both states, highlighting the need to strengthen these lines.

To further enhance the reliability and robustness of the regional power system, the early commissioning of the 220kV Namsai-Kathalguri (AGBPP) D/C line is essential. This measure is critical for ensuring uninterrupted power flow, supporting economic growth, and fostering overall development in the region.

As per the 220th OCC forum, the expected commissioning of the 220kV Namsai-Kathalguri line is targeted for October 2025, subject to RoW issue.

As per the deliberations in 221st OCC meeting, representative of Powergrid apprised the forum that 220 kV bus bar replacement work at Kathalguri end is also a part of the original scope of work. And for the said work support from NEEPCO is required. The forum advised NEEPCO to extend necessary support to Powergrid in completing the bus bar replacement work.

Further, the forum advised Powergrid to expedite the commissioning of 220 kV Namsai-Kathalguri line.

On query of Member Secretary, NERPC on revised DPR for reconductoring of 132 kV Tinsukia-Rupai and 132 kV Tinsukia-Ledo to PSDF ,Assam representative informed that the revised DPR was submitted to PSDF Secretariat on 12.12.2024.

Members may deliberate.

AGENDA FROM POWERGRID

2.21. Procurement of cold spare transformers and reactor for Northern Eastern Region

CERC had set up a Committee on dated 15.03.2018 consisting of representatives from CERC, NLDC, CEA & POWERGRID under the Chairmanship of the Chief (Engineering) of the CERC to assess the

requirement of regional spares including bus reactors, line reactors, ICTs, etc. This would ensure reliability of the grid and reduce downtime in case of any failure/outage.

1. As per CERC Committee recommendation, the following spares transformers & reactors are required to be kept as spare for North Eastern Region as per POWERGRID assets base:

Transformer:

MVA Rating of Transformers	Voltage Rating	Total Installed unit in POWERGRID	Spare Required as per CERC report	RPC Approved Spares	Qty Proposed for procurement	Location/State of spare requirement
3Ø-315MVA	400/132/33 kV	1	1	0	1	Assam
3Ø-160MVA	220/132kV	6	2	1	1	Nagaland
3Ø-100MVA	220/132kV	2	2	1	1	Assam
3Ø-50MVA	132/33kV	4	2	1	1	Manipur
TOTAL:			**4**			
Tentative Cost			**43.94 Cr**			

Reactors:

MVAR Rating of Reactors	Voltage Rating	Total Installed unit	Spare Required as per CERC report	RPC Approved Spares	Qty Proposed for procurement	Spare requirement
3Ø-125MVAR#	420kV	6	2	1	1	Manipur
3Ø-63MVAR*	420kV	32	3	2	1	Manipur
3Ø-31.5MVAR	245kV	1	1	0	1	Nagaland

3Ø-20MVAR	245kV	1	1	0	1	Assam
3Ø-20MVAR	132kV	7	3	0	3	Manipur, Mizoram, Tripura
TOTAL:			7			
Tentative Cost			**34.56 Cr**			

Quantity considered for both 125MVAR & 80MVAR reactors in Manipur. In case of failure of existing 80MVAR reactor, replacement can be done with 125MVAR.

Quantity considered for both 50MVAR & 63MVAR reactors. In case of failure of existing 50MVAR reactor, replacement can be done with 63MVAR.

In view of the above, it is requested for approval for procurement of cold spare transformers & reactors of various ratings as per CERC .The tariff for the investment made is to be shared by constituents as per the provisions of CERC Regulation.

As per the deliberation of the 220th OCCM, the forum requested PGCIL to submit the complete details regarding state wise requirement of spares as well details of available spares. Accordingly, PGCIL has submitted the requisite details via e-mail dated 29/11/24. The list is attached as **Annexure B 2.20**.

As per the deliberations in 221st OCC forum, representative of Tripura intimated the forum that they would submit their views in the next OCC forum. Further, NERPC advised NERLDC to conduct a detailed study about the requirement of reactors, installed in short T/Ls(<100kM) and their impact on grid voltage. And if any reactor is found to be redundant (having nominal effect on the grid voltage) after the due study, the same can be taken out and be used as a spare.

Members may deliberate.

2.22. Request for continuous shutdown of 132kV S/C Loktak-Imphal line for construction works:

It is to bring to your kind attention that reconductoring works for 132 kV S/C Loktak-Imphal Transmission Line under NERES-XIX Project have been awarded in North Eastern Region which is to be executed by POWERGRID. All the materials have been supplied at site and the executing agency has also deployed the required manpower for taking up the reconductoring works.

It may be mentioned that POWERGRID had requested M/s NHPC on 29.10.2024 for continuous shutdown of the subject line for the months of Nov-24 & Dec-24. However, NHPC had expressed that shutdown of their HEP in the current season would not be viable as the water level in the dam is at the highest levels and all 3 nos. generating units are running at full capacity.

Further, M/s NHPC has intimated that the scheduled maintenance of all 3 units have also been postponed to Jan25 & Feb25. A copy of the minutes of meeting between POWERGRID and M/s NHPC at Loktak is enclosed.

The timely completion of above works is important for the improvement of power system in the state of Manipur as well as the region as a whole. As the shutdowns have not been concurred, the mobilized manpower by the agencies have also become idle.

Hence, we are requesting your good self to look into this matter and make necessary arrangements for sanctioning the shutdown for 45 days from 15.12.2024 onwards, so that the above transmission line can be upgraded to carry more power, which improves overall grid stability.

As per the deliberations in 221st OCC forum, NERLDC informed that in case of s/d of the said line, only two lines (132kV Loktak-Jiribam and 132kV Loktak-Ningthounkong) will remain for evacuation of Loktak Power (135 MW) and considering the N-1 criteria of any of the lines, outage of one unit of Loktak is required in order to allow the s/d.

NHPC Loktak apprised the forum that the water level in the reservoir is full and in case of outage of any unit, spillage will occur. This will cause not only wastage of the natural resources but also the financial loss to NHPC.

He further intimated that the water level is expected to decrease by February-2025 and the shutdown can be allowed once the water level decreases to avoid spillage.

Members may deliberate.

AGENDA FROM KMTL

2.23. Proposal for Common Pool of Emergency Restoration System (ERS) Equipment in the North Eastern Region:

Following the discussions during the 27th TCC and NER Power Committee Meetings on 7th and 8th November 2024 in Guwahati, it is to highlight the challenges faced by Kohima Mariani Transmission Limited (KMTL) regarding Emergency Restoration System (ERS) arrangements.

KMTL operates a 254 km transmission line across Assam, Nagaland, and Manipur, with over 60% of the route passing through hilly and highly vulnerable terrain. Additionally, ongoing ethnic conflicts in Manipur have disrupted ground patrolling in certain areas, as communicated to the Manipur authorities and shared with NERPC.

As a private entity, KMTL is not eligible for ERS procurement under the PSDF fund, and the high cost of ERS systems makes independent maintenance challenging. In light of this, we propose creating a common pool of ERS equipment in the North Eastern region, managed by PGCIL and NETC. This pool would ensure the efficient utilization of resources and provide access to ERS equipment for all stakeholders including KMTL, during emergencies.

KMTL is willing to formalize this arrangement through a Memorandum of Understanding (MoU) to ensure seamless access to the common ERS pool when needed.

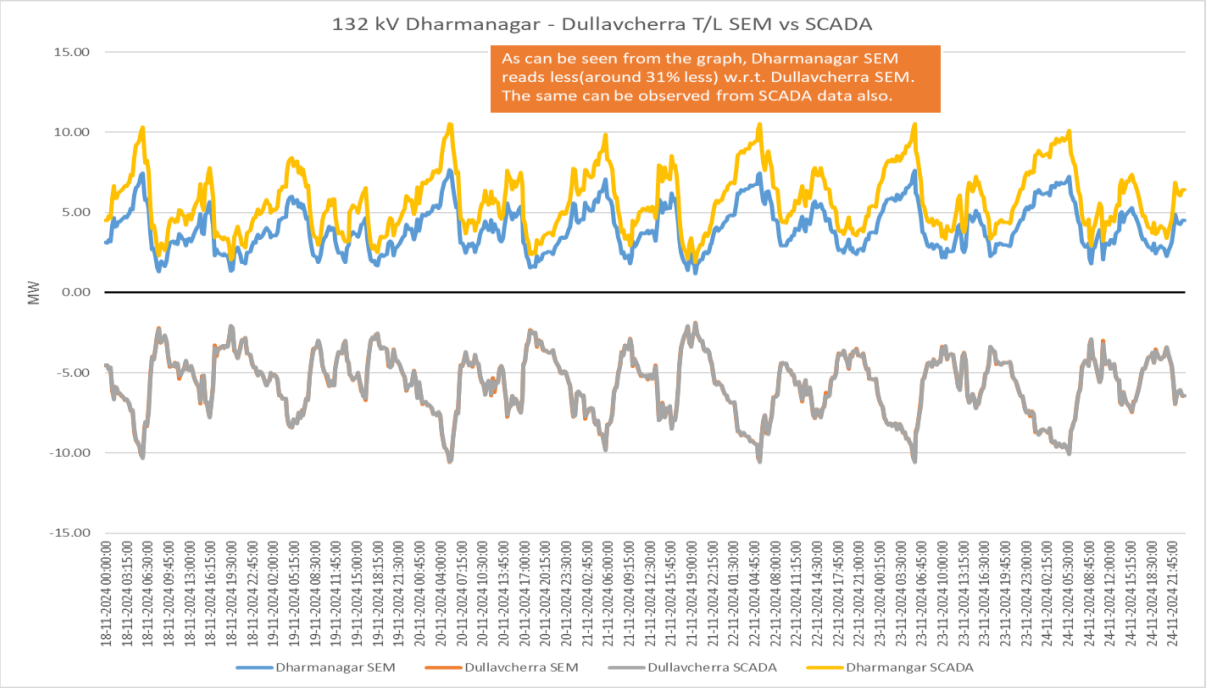
The forum's kind consideration and support in establishing this initiative will significantly enhance the region's ability to respond to emergencies effectively.

Members may deliberate.

3. PART-C: METERING ITEMS

3.1. Issue in SEM data of 132 kV Dharmanagar end of Dullavcherra Feeder

It has been observed that the data received from Dharmanagar end is erroneous and the same neither matches with SCADA data nor with data from Dullavcherra end. Several follow ups have been initiated regarding the matter with utility (here POWERGRID Kumarghat due to non-availability of DCD with concerned utility), however, matter is yet to be resolved.

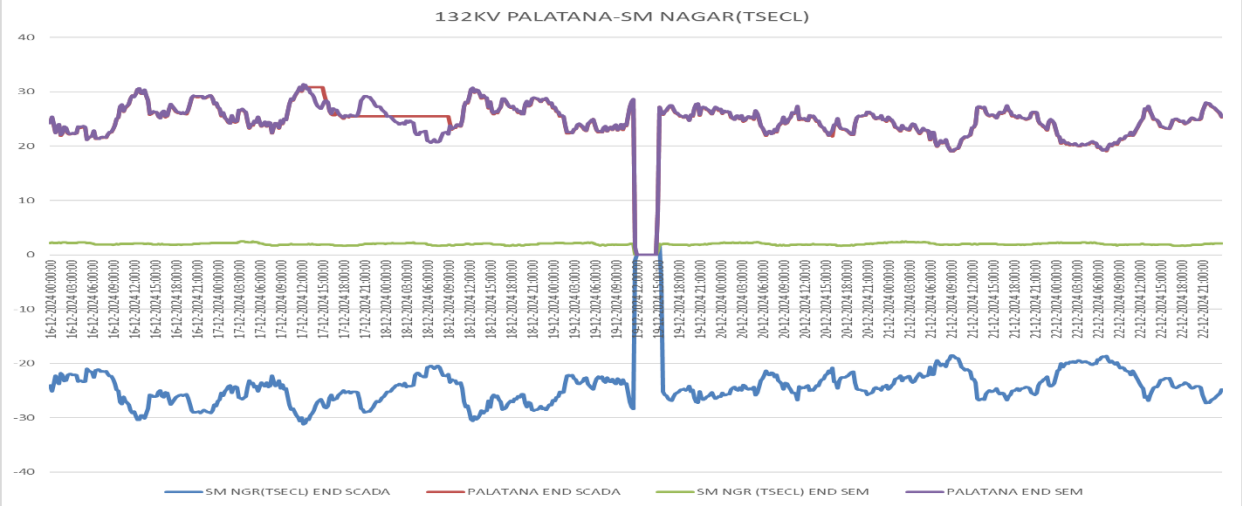


Members may deliberate.

3.2. Issue in SEM data of 132 kV SM Nagar (TSECL) end of Palatana Fdr. (400 kv T/L charged at 132 kV):

Weekly SEM data of 132 kV SM Nagar (TSECL) is essential for accounting of Tripura Drawal. Recently, Planned Shutdown was availed dated 02-12-2024 for Installation of ABT meter under SAMAST Project at SM Nagar end. On return of S/D, meter for SM Nagar end was reading close to zero (0). On intimation of the same to utility, S/D was availed again on 19-12-2024 to

resolve the issue. However, the same could not be resolved. It is pertinent to mention that similar issue has already been discussed in 207th and 208th OCCM. Tripura & POWERGRID may kindly look into the issue on priority basis.



Members may deliberate.

3.3. Issue in receipt of data from 132 kV Tipaimukh S/S

Weekly SEM data from 132 kV Tipaimukh (Manipur) S/S is essential for accounting of Manipur Drawl. However, SEM data for said substation is not being received. On query, downloading data from DCD to laptop has been failing.

Members may deliberate.

3.4. Issue in Receipt of Data from Luangmual S/S

Weekly SEM data from 132 kV Luangmual(Mizoram) Substation is important for accounting of Mizoram drawal. However, SEM data for said substation is not being received since 11/11/2024. Issue with licence of Vinplus Software in Designated laptop has been reported by the concerned Substation.

In 221st OCCM, forum advised Mizoram to take up the matter with L&T and resolve the issue by next OCCM. Data is yet to be received from said Substation.

Mizoram may kindly update status.

3.5. Receipt of SEM data from 132 kV Budhjungnagar, 132 kV Ambassa, 132 kV Dharmanagar, 132 kV PK Bari & 132 kV SM Nagar (TSECL) Substations:

As per 175th OCCM dated 18th Feb 2021 agenda D.12, Indigrid and Powergrid NERTS were given responsibility to collect and send SEM data on weekly basis for Tripura owned substations viz 132kV Ambassa S/s,132kV Budhjungnagar S/s, 132 kV PK Bari S/s and 132 kV SM Nagar S/s for the interim period, due to shortage of DCDs. The relevant extracts are furnished below

Quote:

"The forum noted that due to the existing shortage of DCDs, the same cannot be provided to Tripura for some time for new locations. This creates difficulty in getting SEM data from Budhjangnagar, Ambasa, PK Bari and SM Nagar. The Matter was discussed and it was decided that during the interim period Powergrid NERTS will provide readings from PK Bari and SM Nagar of Tripura and Sterlite will provide readings from Budhjangnagar and Ambassa of Tripura."

Unquote

As per IEGC 2023 Clause 49(12)(e) entity shall be responsible to send weekly meter data to RLDC. The relevant extracts are furnished below

Quote:

"Entities in whose premises the IEMs are installed shall be responsible for (i) monitoring the healthiness of the CT and PT inputs to the meters, (ii) taking weekly meter readings for the seven day period ending on the preceding Sunday 2400 hrs and transmitting them to the RLDC by Tuesday noon, in case such readings have not been transmitted through automatic remote meter reading (AMR) facility (iii) monitoring and ensuring that the time drift of IEM is within the limits as specified in CEA Metering Regulations 2006 and (iv) promptly intimating the changes in CT and PT ratio to RLDC."

Unquote

In 221st OCCM, Tripura confirmed the receipt of 3 nos. of DCDs and that the same have been dispatched to Dharmanagar, Ambassa and SM Nagar(State) S/Ss. Tripura further intimated that the remaining works shall be completed

by 21/12/2024 and the meters shall be reporting successfully from 23/12/24.
However, data is yet to be received from concerned utilities on weekly basis.

Tripura may update the status.

3.6. Issue with SEM data from Udaipur S/S:

Time Drift issue was observed in Udaipur meter (NP-8470-A). Replacement of said meter was approved in 213th OCC forum. As per deliberation in 221st OCCM, Tripura appraised the forum that the replacement of the meter will be done by 21/12/2024. However, NERLDC is yet to receive data of replaced Udaipur Meter for Palatana T/L. Moreover, as per

Tripura may update the status.

3.7. Metering Philosophy used in NERLDC for energy accounting:

As per IEGC Regulation 49. (12). (h), RLDCs shall forward IEM readings to the concerned RPC on a weekly basis by each Thursday for the preceding week. It is noted that on certain occasions, all the Main SEM data in the region are not available within the prescribed timelines due to any number of reasons (DCD failure, Internet issue, Local PC software/Hardware issue etc.). In such cases, it is required to substitute the Main meter data with Check/Standby Meter data. In absence of Check/Standby meters, Net Bus summation is used to substitute Main meter. The procedure used by NERLDC for the same is hereby annexed (Annexure-5).

Members may deliberate.

4. PART-D: ITEMS FOR UPDATE/FOLLOW-UP

4.1 Status of ADMS:

Status for Automatic Demand Management Scheme in 7 States of NER.

Name of the utility	SAT Completion	DoCO
DoP Ar.Pradesh	27-01-2021	Enabled & in-operation
AEGCL/APDCL	07-12-2020	Enabled & in-operation
MSPCL	24-11-2020	Enabled & in-operation
MePTCL/MePDCL	31-08-2020	Enabled & in-operation
P&ED Mizoram	22-02-2021	Enabled & in-operation
DoP Nagaland	17-11-2020	Enabled & in-operation
TSECL	24-12-2020	Enabled for two substations while yet to be enabled for other three substations

In 214th OCCM, TSECL updated that LoA for ADMS installation at Takerjhala, Bishalgarh, Khyarpur and Manu has been issued in Feb'24 and work to be completed by June'24

In 217th OCCM, TSECL updated that at Kyarpur and Manu, inspection has been done and LoA will be issued after receipt of the price offer this month.

In 218th OCCM they have started to identify load point that can be relieved in case of operation of ADMS for SM Nagar, and Bishalgarh.

Status of ADMS in Tripura

i. Feeders where ADMS is installed

Sl. No.	Name of Feeder	Area Under The Feeder	Load in MW
1	BISHALGARH 33-11 KV	STATION, LALSINGH MURA, DURGA NAGAR, KADAMTALI, BAZAR	4.9
2	TAKARJALA 33-11 KV	FACTORY GOLAGHAT, TAKARJALA, JAMPUIJALA, GABORDI, MOHARAM GOLAGHATI	4.4
2	S M NAGAR 132-33-11 KV	KANCHANMALA, ANANDA NAGAR, STATION, RANIKHAMAR, CHOWMUHONI BAZAR	3.8

ii. Expected load to be relieved when ADMS operates

Sl. No.	Name of Feeder	Area Under the Feeder	Load in MW
1	BISHALGARH 33-11 KV	LALSINGH MURA, DURGA NAGAR, KADAMTALI	3.2
2	TAKARJALA 33-11 KV	FACTORY GOLAGHAT, TAKARJALA, GABORDI, MOHARAM GOLAGHATI	3
2	S M NAGAR 132-33-11 KV	KANCHANMALA, ANANDA NAGAR, RANIKHAMAR	2.5

iii. Setting of each feeder

Overdraw: 40MW or 20% of schedule when frequency < 49.85 Hz

Note: 1. ADMS not operated in last 6-7 months (Jan'24 – August'24).

2. Shifting work is completed for Bishalgarh and Takarjala Sub-station.

In 219th OCC, TSECL apprised the forum that the shifting works are still underway and is expected to be completed in 3 months time.

Members may deliberate.

4.2 Implementation/Review of Islanding schemes of NER:

As per Clause 10 of the Central Electricity Authority (Grid Standards), Regulations, 2010: "Islanding Schemes- (1) The Regional Power Committees shall prepare Islanding schemes for separation of systems with a view to save healthy system from total collapse in case of grid disturbance. (2) The Entities shall ensure proper implementation of the Islanding Schemes". In this regard the Islanding schemes which are being planned/have been implemented in NER are mentioned below, along with the updates from 218th OCCM.

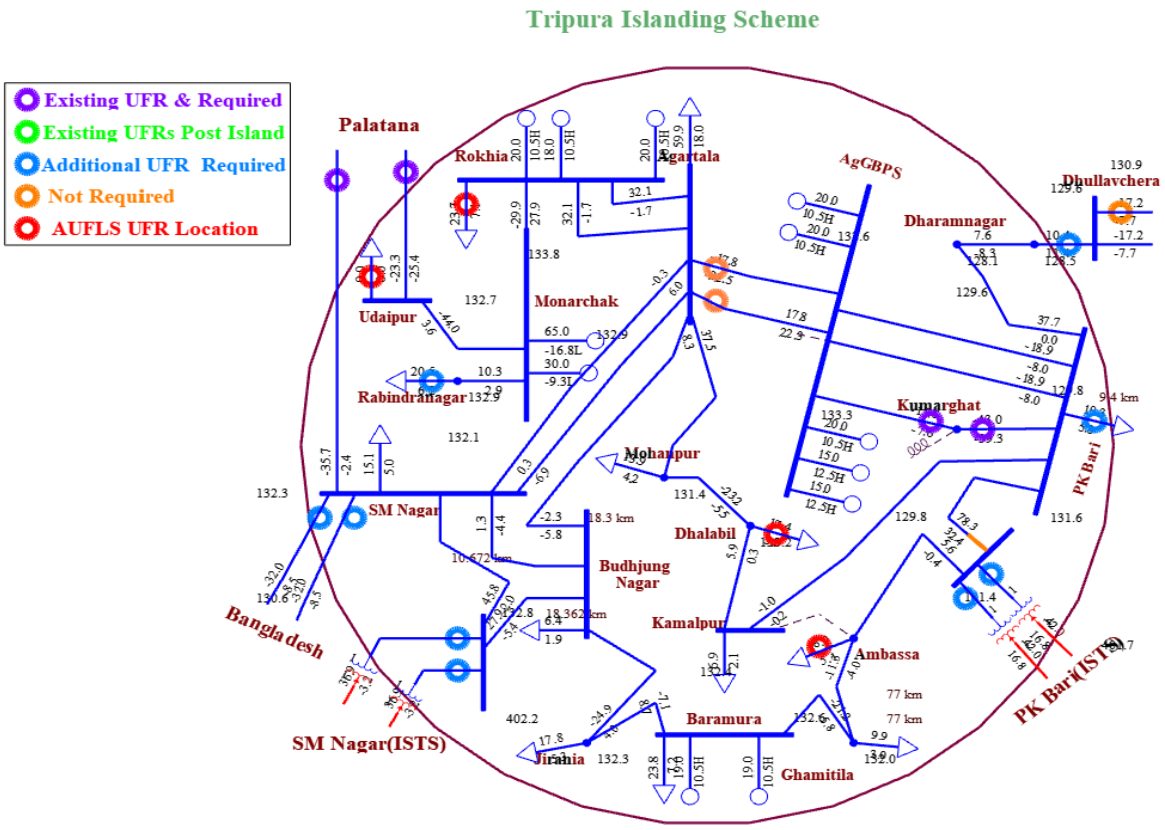
A. Guwahati Islanding Scheme

Assam updated that modified DPR has been sent to PSDF.

B. Tripura/Agartala Islanding Scheme

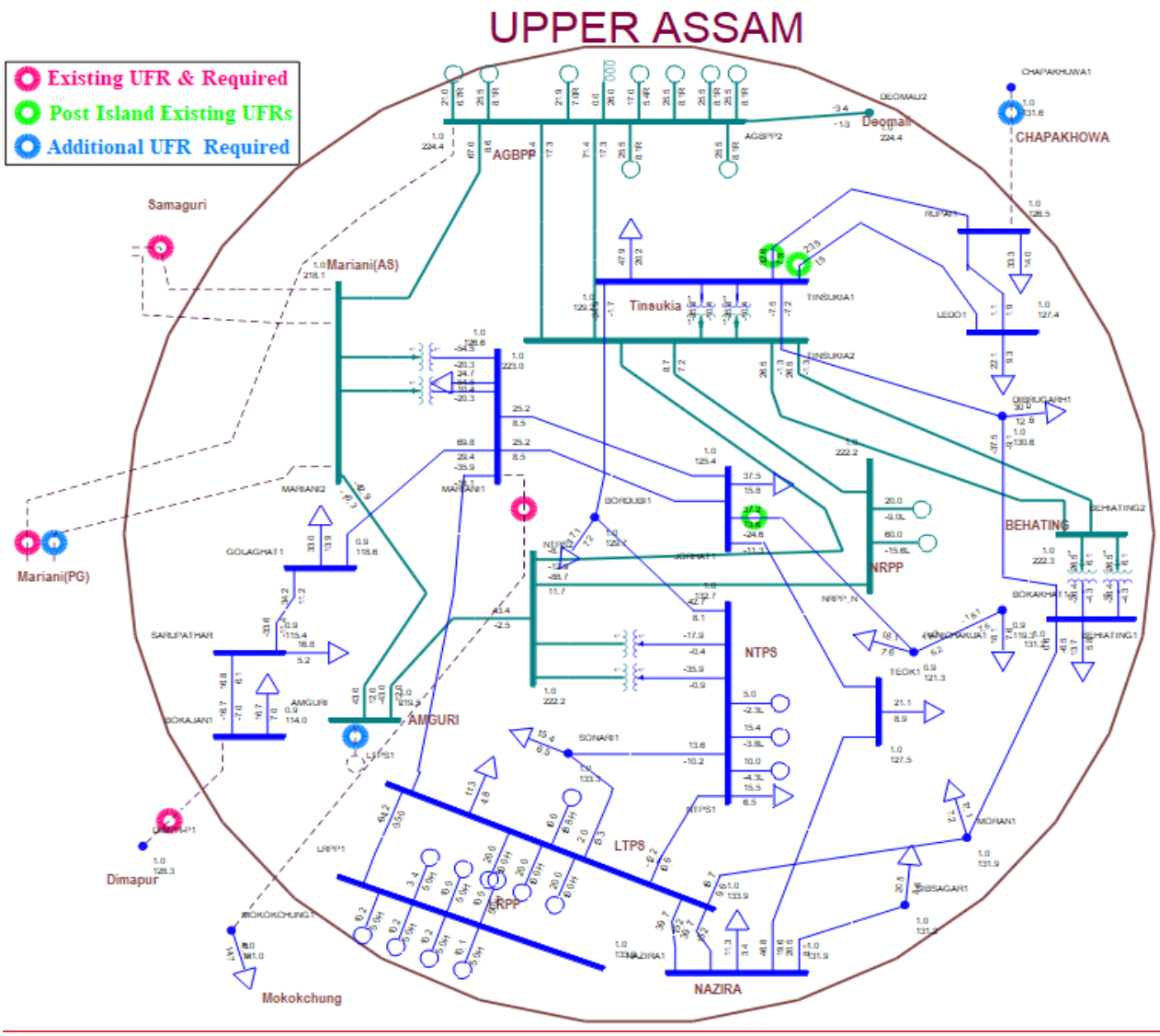
NERLDC informed forum that required format was shared with Tripura.

NERLDC have also apprised forum that generation data form Tripura along with load data yet to be received from Tripura. Forum requested Tripura to provide all the required data at earliest.



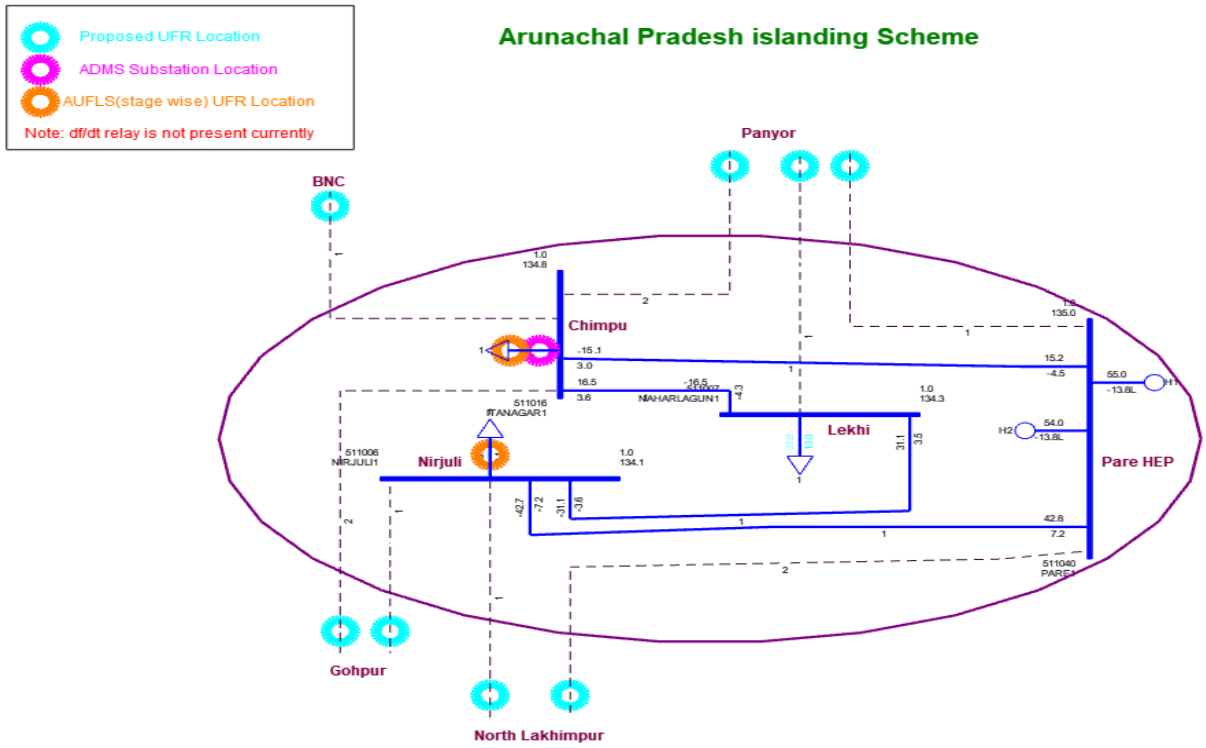
C. Upper Assam Islanding Scheme

Assam informed forum that NTPS was a very old power station and they did not have the data as required for updation for islanding scheme. For LTPS, regarding change in frequency settings, communication has been done with BHEL and we are awaiting response from their end. For LRPP, Stage I frequency setting is alarm and Stage II frequency setting is Trip. Forum asked NEEPCO and AEGCL to make the necessary changes and update their settings in consultation with their respective OEMs.



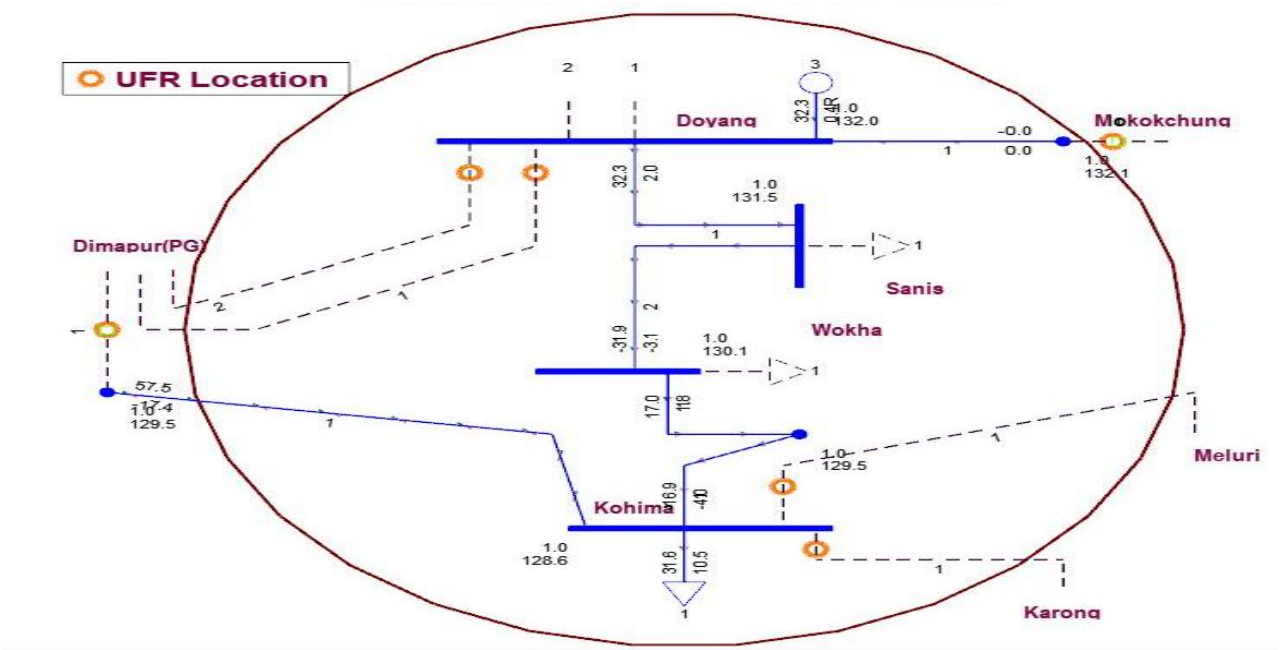
D. Itanagar Islanding Scheme

Arunachal Pradesh informed that the required load data had been submitted to NERLDC.



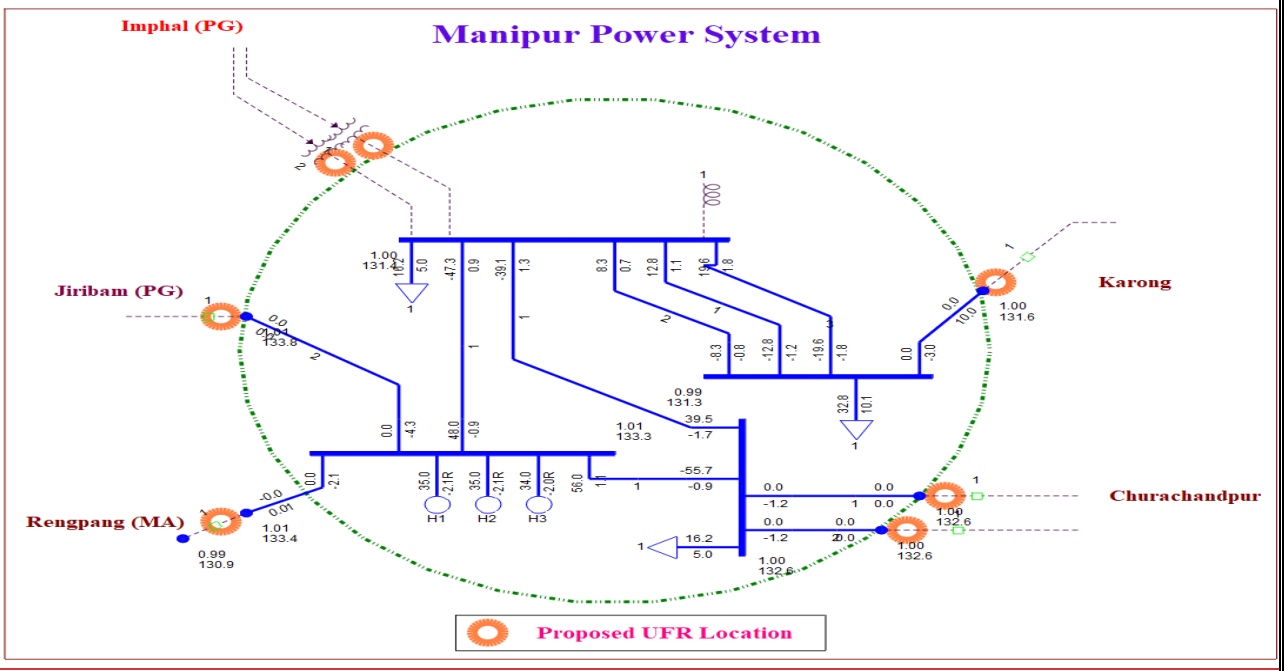
E. Kohima Islanding scheme

DoP Nagaland updated that the DPR preparation was underway, as they have not received budgetary offer from vendor. MS, NERPC urged DoP Nagaland to take the budgetary offer from a vendor at the earliest so that the same may be got approved in the upcoming RPC meeting.



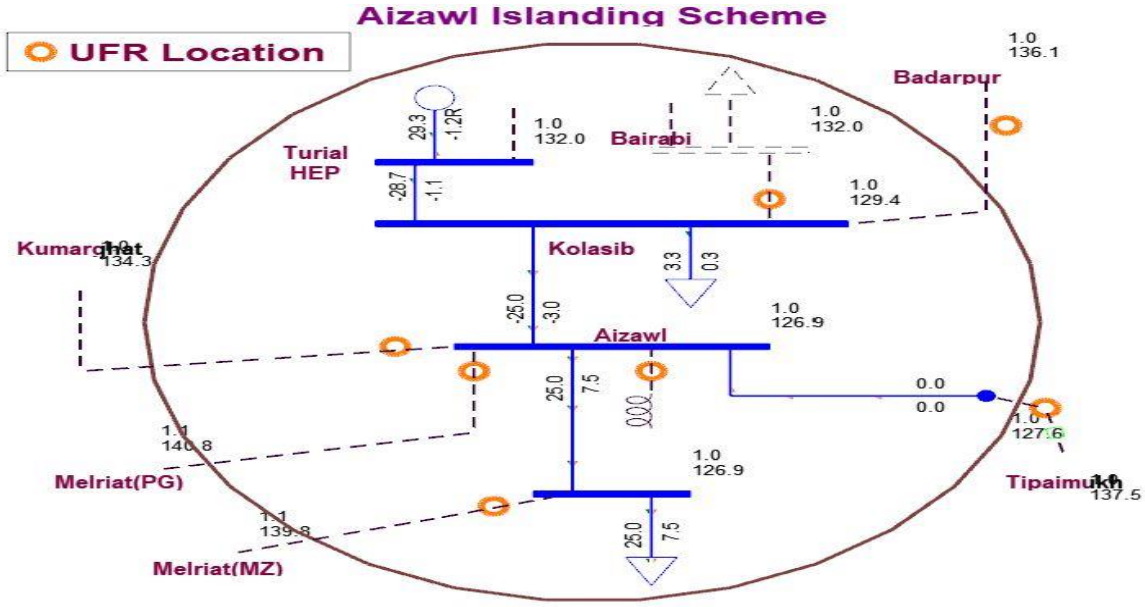
F. Imphal Islanding scheme

Manipur informed forum that due to law-and-order situation AUFLS mapping was pending from sub-station's end and assured to provide the required data shortly. NERLDC stated that data from NHPC was yet to be received. NHPC stated that they would provide required data shortly.



G. Aizawl Islanding scheme

Mizoram informed that the required load data had been provided to NERLDC. The forum stated that a special meeting would be held shortly to finalize the scheme.



H. Meghalaya/Shillong Islanding Scheme

NERLDC requested Meghalaya utilities to provide the load and generation data at the earliest as format for data had already been shared with Meghalaya.

MS, NERPC has urged all the stakeholder to expedite the process so that this Islanding Scheme can be approved in next RPC meeting. Schematic diagram is under process.

The following deliberations followed in 220th OCCM:

Tripura/Agartala Islanding Scheme:

NERLDC apprised the forum that all the data has been received from Tripura. Dynamic study has been completed and Load-Generation study is under way.

Upper Assam Islanding Scheme:

NERLDC apprised the forum that dynamic study as well as Load-Generation study has been completed. However, NEEPCO is required to submit the UFR settings for 2 nos. of units of AGBPP. NEEPCO agreed to

submit the information at the earliest. Assam may prepare the DPR post submission of data by NEEPCO.

Itanagar Islanding Scheme:

NERLDC apprised the forum that all necessary study has been completed. Arunachal Pradesh may prepare the DPR for Itanagar Islanding Scheme.

Kohima Islanding Scheme:

NERLDC apprised the forum that dynamic data has not been received from Doyang completely. As such dynamic study is pending. NEEPCO agreed to share the data at the earliest to NERLDC.

Imphal Islanding Scheme:

NERLDC apprised the forum that data from NHPC Loktak has been received. Manipur has identified the 33 kV feeders but are yet to share load-generation data for the identified feeders. Dynamic study is going on.

Aizawl Islanding Scheme:

NERLDC apprised the forum that dynamic data has not been received from Turial. NEEPCO agreed to share the data at the earliest. Mizoram also intimated the forum that exploration for a change in feeders is under way as per priority. Load-generation data for such feeders shall have to be shared with NERLDC.

Shillong Islanding Scheme:

Meghalaya apprised the forum that the old machine at Umium stage III is being replaced with a new machine. As such, NERLDC requested Meghalaya to share dynamic data for Umium Stage I, Stage II and Stage IV and also for New Umtru.

Members may update.

4.3 Automatic Under Frequency Load shedding (AUFLS) scheme of NER:

Status as updated in 219th OCCM

Name of the State/utility	Installation of UFRs	Status of mapping
Ar. Pradesh	Completed	DoP Arunachal Pradesh stated that mapping of feeder at Lekhi SS (Industry feeder, stage 1) will be carried out by end of Oct'24. For rest of the feeders and substations, coordination with GE is underway and will be taken up gradually.
Assam	Completed	Completed
Manipur	UFR installed but not enabled as system integration work is underway, to be completed by Aug'24.	Mapping is pending from substations end, which is being hampered due to Law & Order situation in the State. It is in the last stage of integration (90%) and will be completed by Aug'24.
Meghalaya	Completed	Completed
Mizoram	Completed	Coordination with GE is underway for mapping, completion by Sep'24.
Nagaland	Completed	Completed
Tripura	Completed	All mapping done except for Ambassa SS due to communication link issue. To be done by next NeTEST meeting.

Forum noted the status updated as provided in the above table. NERPC informed that AUFLS quantum has been revised for NER for the FY 2024-25 and presented the revised quantum for load shedding to the forum, which is provided below:–

UFR load shedding for NER States for the FY 2024-25

State	stg I (MW)	Stg II	Stg III	Stg IV
Ar. Pradesh	8.659594937	10.39151392	12.12343291	12.12343291
Assam	112.3419494	134.8103392	157.2787291	157.2787291
Manipur	11.54612658	13.8553519	16.16457722	16.16457722
Meghalaya	18.85556962	22.62668354	26.39779747	26.39779747
Mizoram	7.542227848	9.050673418	10.55911899	10.55911899
Nagaland	8.100911392	9.721093671	11.34127595	11.34127595
Tripura	16.85362025	20.2243443	23.59506835	23.59506835
Total	183.9	220.68	257.46	257.46

For FY 2023-24 (already under operation)

State	stg I (MW)	Stg II	Stg III	Stg IV
Ar. Pradesh	10	14	12	10
Assam	90	125	113	115
Manipur	10	10	10	10
Meghalaya	25	25	25	25
Mizoram	5	5	5	5
Nagaland	10	10	10	10
Tripura	15	12.2	21.2	30
Total	165	201	196	205

The forum requested the States to implement the revised load shedding quantum within two months.

As per IEGC provisions, Tripura is requested to provide the MW and CB status data for further mapping activities.

The forum requested RLDC to prepare a feeder-wise report (MW and CB status) for those States that have completed the mapping and present it at the next OCC meeting

The following deliberations followed in 220th OCCM:

DoP, AP apprised the forum that new loads have been identified but new UFR scheme has not been implemented yet. DoP,AP further apprised the forum that the new UFR scheme shall be implemented by March-2025.

Assam apprised the forum that revised load quantum shall be implemented in 10-12 days.

Manipur apprised the forum that the new UFR scheme shall be implemented in three months' time.

Meghalaya updated that the additional load identification (for stg III and IV) is underway.

Mizoram apprised the forum that new loads have been identified and UFR will be implemented on these feeders shortly

Tripura apprised the forum that new loads have been identified for implementation of UFR. He further informed that Mapping at Ambassa is still pending due to communication link issue.

In 221st OCC meeting, Arunachal Pradesh, Assam and Meghalaya apprised the forum that the new UFR load shedding scheme shall be implemented by January-2025.

Members may update.

4.4 Monthly Review of LGBR

PARTICULARS (Peak Demand in MW as per LGBR vs Actual)	Aug-24 (LGBR)	Aug-24 (Actual)	Sep-24 (LGBR)	Sep-24 (Actual)	Oct-24 (LGBR)	Oct-24 (Actual)
Arunachal Pradesh	170.24	186	174.39	194	180.84	170
Assam	2933.00	2524	2823.00	2812	2756.00	2262

Manipur	225.00	213	223.60	235	223.40	226
Meghalaya	385.00	359	390.00	317	380.00	354
Mizoram	137.00	130	147.00	148	145.00	136
Nagaland	191.60	188	191.20	184	187.00	176
Tripura (exc. Bangladesh)	368.06	359	379.65	376	354.00	333
NER DEMAND (exc. Bangladesh)	3851.10	3764	4045.80	3936	3759.80	3482

PARTICULARS (Energy Requirement in MU as per LGBR vs Actual)	Aug-24 (LGBR)	Aug-24 (Actual)	Sep-24 (LGBR)	Sep-24 (Actual)	Oct-24 (LGBR)	Oct-24 (Actual)
Arunachal Pradesh	177.87	98.627	148.91	92.642	111.04	85.779
Assam	1647.00	1379.249	1476.00	1399.326	1156.00	1071.669
Manipur	92.00	74.102	89.00	76.968	97.00	80.690
Meghalaya	218.32	172.613	219.00	136.361	220.00	154.880
Mizoram	78.76	54.084	79.80	56.046	78.76	56.529
Nagaland	106.00	80.122	96.30	84.694	89.00	77.279
Tripura (excl. Bangladesh)	200.40	209.847	176.72	190.18	174.38	220.047
NER DEMAND (exc. Bangladesh)	2520.35	2068.642	2285.73	2036.217	1926.18	1747.493

LGBR projection for November'24, December'24 and January'25

PARTICULARS (Peak Demand in MW as per LGBR)	Nov-24 (MW)	Nov-24 (MU)	Dec-24 (MW)	Dec-24 (MU)	Jan-25 (MW)	Jan-25 (MU)
Arunachal Pradesh	185.00	92.32	184.70	108.85	187.37	111.21
Assam	2020.00	935.75	1761.00	923.00	1761.00	951.00
Manipur	252.73	98.00	283.65	118.00	275.31	129.00
Meghalaya	425.00	234.00	450.00	253.00	465.00	259.00

Mizoram	157.00	78.77	166.00	82.91	184.00	86.02
Nagaland	190.00	82.00	190.00	86.00	190.00	82.00
Tripura (exc. Bangladesh)	321.56	116.63	279.53	99.17	282.00	110.60
NER DEMAND (exc. Bangladesh)	3324.98	1637.48	3250.16	1670.92	3247.18	1728.83

Members may deliberate.

4.5 Long Outage of NER State Generator and transmission lines:

The following NER State generators and Transmission lines are under long outage since long time. Considering the increasing demand trend and reliable power supply in the Region, respective utilities are requested to take necessary action to restore the mentioned units as follows:

Unit Details	Outage time	Reason	Expected Date
Baramura Unit 4	11:15 Hrs of 08-02-2023	Excitation problem.	
NTPS Unit 2	15:04 Hrs of 02-09-2023	Low Gas Pressure.	
Baramura Unit 5	20:17 Hrs of 26-03-2024	Gas fuel hydrolic trip low.	

Transmission Line	Outage time	Reason	Expected Date
400kV Imphal - Thoubal I	13:32 Hrs of 18-10-2021	Tripped on DP, ROW issue. Expected revival not furnished	
132kV Kohima - Meluri	10:05 Hrs of 27-09-2023	S/D taken by Kohima transmission div for dismantling of Tower no. AP 130	
132 kV Jiribam-Rengpang	18:18 Hrs of 17-11-2023	Tripped on Earth fault	

In 219th OCCM, utilities updated as under: -

Generating units-

Sl. No	Unit details	Utility	Update on revival
1	Baramura Unit 4	TPGCL (Tripura)	Out due to shortage of gas
3	Baramura Unit 5	TPGCL	Out due to shortage of gas
4	LTPS Unit 7	APGCL	OEM parts ordered. Expected by Feb-25

Transmission lines-

Sl. No	Element	utility	Update on revival
1	400 Imphal-Thoubal ckt I &II	MSPCL	Ckt I - ROW, Litigation pending in court. Ckt II is already charged on 14th September 2024.
2	132kV Kohima-Meluri	DoP Nagaland	NHIDLC payment pending. 3 months after the payment
3	132kV Jiribam-Rengapng	MSPCL	Line partially charged. i.e. sectionalize charged upto Nongba from the Rengpang end (a distance of 5 km). The section from Nongba to Jiribam (Manipur) is yet to be charged which is around 45 km. Full charging will take time as no access to the affected area. Expected by December-24.

Members may update.

4.6 Methodology for calculation of FRO of Intra-State entities:

Methodologies to assign FRO to its intra-state entities. These are given below:

Method-I: FRO allotted to a State control area to be distributed only among the intra-State generating stations giving due consideration to generation within the State control area and details as given in Table 4 under sub-clause(g) of Reg. 30 Clause (10) of CERC (IEGC) Regulations, 2023. The FRO in MW/Hz shall be calculated as:

$$\textbf{FRO} = \left(\frac{\textit{Average Generation of individual generating station}}{\textit{Sum of Avg. Generation of all considered generating stations}}\right) * \textit{FRO alloted to the state control area}$$

Method-II: FRO allotted to a State control area to be distributed among the intra-state generating stations and load, giving due consideration to generation and load within the State control area and details as given in Table 4 under sub-clause(g) of Reg. 30 Clause (10) of CERC (IEGC) Regulations, 2023. The FRO in MW/Hz shall be calculated as**:**

$$\textbf{FRO} = \left(\frac{\textit{Average Generation of individual generating station}}{\textit{Sum of Avg. Generation of all considered generating stations+ Average Demand of State Control Area}}\right) * \textit{FRO alloted to the state control area}$$

Method-III: FRO alloted to a State control area to be distributed among the intra-state generating stations and load giving due consideration to generation within the State control area and details as given in Table 4 under sub-clause(g) of Reg. 30 Clause (10) of CERC (IEGC) Regulations, 2023. The demand response to be considered equal to the maximum 4% of Average Demand per Hz

$$\textbf{FRO} = \left(\frac{\textit{Average Generation of individual generating station}}{\textit{Sum of Avg. Generation of all considered generating stations} - \textit{Demand Response}(4\%\ \textit{of Avg.Demand per Hz}}\right) * \textit{FRO alloted to the state control area}$$

Method –IV: FRO alloted to a State control area to be distributed only among the intra-State generating stations giving due consideration to generation and load within each control area across the All-India grid and details as given in Table 4 under sub-clause(g) of Reg. 30 Clause (10) of CERC (IEGC)

Regulations, 2023. The FRO in MW/Hz shall be calculated as

$$\textbf{FRO} = \left(\frac{\textit{Average Generation of individual generating station}}{\textit{Sum of Avg. Generation and Avg.Demand of all control areas}}\right) * \textit{FRO alloted to the state control area}$$

As per 220th OCCM deliberation, NERLDC has prepared case studies for all the above-mentioned methods. The case studies shall be shared with all the states. The forum requested the states to go through the case studies and finalize the method for calculation of FRO for intra-state entities.

Members may update.

5. PART-E: ITEMS FOR STATUS

5.1 Implementation of projects funded from PSDF:

The status as informed in 219thOCCM:

State	R&U scheme	ADMS	Capacitor Installation	SAMAST**	Line Differential Protection
Ar. Pradesh	Package-I (Diagnostic tools) Complete in all respects. P-II (for PLCC & communication) Supply completed. Erection WIP. 50% requisition submitted. P-III (Substation equipment) Agreement signed and 10% requisition submitted. Total 90% requisition by Apr'22. Completion by Dec'22. (Approval from TSA and Account opening in 3 months)	Project completed in all respects.	-	30% requisition submitted. Amount not received in the TSA account.	By Aug.'24
Nagaland	Completed in all respects.	Work completed in all respects. UC submitted	-	30% requisition submitted	Lines identified. Under DPR preparation stage.

Mizoram	Final 10% disbursed. UC to be submitted.	Work completed in all respects. Remaining part of final 10% to be disbursed ASAP.	To reply to TESG queries.	30% requisition submitted.	Revised DPR including both 132kV Aizawl-Luangmual and 132kV Khamzawl-Khawiva to be submitted.
Manipur	Package-II: completed Package-I: all stations complete except Ningthoukhong. By May'22.	Work completed in all respects. UC submitted in Oct'21.	WIP.	10% disbursed for IT portion, no disbursement for Meter, AMR portion. 20% disbursement for IT portion after completion of 3rd milestone. 30% to be disbursed for Meter, AMR portion	Revised DPR for LDP of 132kV Imphal-Yurembam-III to be submitted by June'22.
	33kV System Integration with SLDC	In tendering stage			
	Reliable Communications for grid connectivity	In tendering stage			
Tripura	Completed. Final UC submitted on 04th May'22.	Final 10% requisition submitted.	Not relevant in present scenario with commissio	10% successfully disbursed. 20% fund reversed back from vendor	For 132kv 79Tilla-Budhjungnagar line and for Rokhia link

			ning of ISTS lines. Issue dropped	account. Will be resolved soon.	LDP at own cost. Tendering undergoing . DPR preparation for rest of the lines
Assam	Work completed except CRP, SAS work in 8stations which have been retendered and awarded to M/s SIEMENS. Completion by Dec'22	Project completed in all respects.	-	30% funds yet to be fully disbursed. 60% requisition sent.	Lines identified. DPR submitted.
Meghalaya	MePTCL – completed in all respects. MePGCL – Completed in all respects.	Project completed in all respects.	-	90% works completed. Communication pending.	All works except OPGW done

5.2 Status update of important grid elements under prolonged outage impacting system operation:

Sl. No	Element	Owner	Status up to the 218thOCCM	Latest Status
1	132kV Mariani – Mokokchung (*out since April'2008*)	AEGCL	DPR sent to PSDF	
2	132kV Roing-Pasighat (*charged through ERS tower*	NERTS	September'24	
3	132kV Srikona – Panchgram	AEGCL	task will be completed by Sept.'24	
4	400kV Imphal – Thoubal-I and 315MVA	MSPCL	RoW, litigation pending in court.	

	400/132kV ICT at Thoubal			
5	63MVAR Bus Reactor at Byrnihat to be replaced with 80MVAR Reactor	MePTCL	Installed. Relay system pending. To be completed shortly.	
6	Permanent restoration of Tower loc. No. 4 of 132kV Jiribam-Haflong line	NERTS	line was restored on ERS on 8th July. For permanent restoration survey is underway and the work will tentatively be completed within six months.	

5.3 Status of commissioning for upcoming projects

Sl. No	Name of the element	Utility	Status up to the 218th OCCM	Latest Status
1	132kV Monarchak-Surjamaninagar	TSECL	20 km stringing left, 2 tower foundation pending and pending 8 nos. tower erection. Tentative completion by Sept.'24	
2	PLCC for 132kV Loktak-Ningthoukong and 132kV Loktak-Rengpang(existing lines)	MSPCL	Sept.'24. Work hampered due to Law & order situation in Manipur	
3	220kV Samaguri – Mariani-I	AEGCL	Survey completed. Cost estimate being prepared.	
4	220kV AGBPP –Namsai D/C	TBCB	Oct'25, subject to RoW issue	
5	Upgradation of 132kV Surjamaninagar-Surjamaninagar(ISTS), 132kV Bodhjungnagar-SMNagar, 132kV P.K.Bari-Ambassa,	TSECL	Resolution adopted in 26th RPC. Sent to MoP, GoI	

	132kV P.K. Bari-P.K.Bari(ISTS)			
6	LILO of 132kV Leshka-Khliehriat-I at Mynkre and Mynkre SS and 33kV downstream at Mynkre.	NERPSIP	LILO line charged. SS by Sept.'24	
7	220kV Rangia – Amingaon D/C and 220/132kV 2x160MVA Amingaon S/S	NERPSIP	SS charged; Line idle charged. Load charging to be done shortly	
8	132kV Rengpang-Tamenglong and 132/33kV 4x6.67MVA at Tamenglong at Manipur	NERPSIP	Works hampered due to present law and order condition.	.
9	132/33kV West Phaileng S/S at Mizoram	NERPSIP	Ready for charging.	
10	132/33kV 2x12.5MVA Marpara S/S at Mizoram	NERPSIP	20 km stringing left, 2 tower foundation pending and pending 8 nos. tower erection. Tentative completion by August'24	
11	132/33kV 2x12.5MVA Lungsen S/S at Mizoram	NERPSIP	Sept.'24. Work hampered due to Law & order situation in Manipur	
12	132kV Chawngte – S.Bungtlang S/S at Mizoram	NERPSIP	Ready for charging.	.
13	132kV W.Phaileng-Marpara S/C at Mizoram	NERPSIP	Sept.'24, works hampered due to delay in tree cutting in forest area	
14	220kV Zhadima – Mokokchung at Nagaland	NERPSIP	Ckt 1 charged in Mar'23. Other ckt waiting for finalization of MoU	

15	132kV Wokha-Zunheboto – Mokokchung at Nagaland	NERPSIP	WokhaZunheboto section has been completed. Balance section by By Sept.'24	
16	132kV Tuengsang – Longleng at Nagaland	NERPSIP	Tuensang SS upgradation package has been awarded. August'24	
17	132/33kV Amarpur S/S at Tripura	NERPSIP	Sept.'24	
18	132/33kV Manu(new) S/S at Tripura	NERPSIP	Sept.'24	
19	132kV Dharmanagar-Kailashor	NERPSIP	Sept.'24	
20	132kV Ziro-Yazali and 132/33kV Yazali S/S	POWERGRID-Comprehensive	Sept.'24	
25	132kV Chimpu – Holongi and 132/33kV Holongi S/S	POWERGRID - Comprehensive	Clearance form AAI for SS and line is pending	
26	Unit 1 and 2 of Lower Subansiri HEP	NHPC	Sept.'24	
27	400kV Lower Subansiri-BNC line2	PGCIL	Line idle charged	
28	Gantry for LS-BNC line 2	NHPC	Sept.'24	
29	Bus reactor at Lower Subhansisri	NHPC	Sept.'24	
30	Conversion of MT to DM at (i)132kV Khliehriat, (ii)132kV Badarpur, (iv) 132kV Imphal	NERTS	Imphal-depends upon the law and order in Manipur. No contracts coming up. Badarpur and Khleihriat-order yet to receive	

31	220kV New Shillong-NangalBibra(ISTS 220/132kV) TL	MEPTCL	As updated by PGCIL, survey completed and report also completed	
32	220kV Bongaigaon-Nangalbibra (ISTS) DC and 220/132kV Nagngalbibra (ISTS) substation	Sterlite	Tentative completion by Sept.'24.	
33	HTLS reconductoring of 132kV Hailakandi-Dullavcherra	AEGCL	During 23rd TCC RPC meeting, the forum recommended for the upgradation and preparation of DPR by AEGCL. AEGCL is already planning for reconductoring of the lines. However, Funding source is not finalized yet.	
34	HTLS reconductoring of 132kV Panchgram-Hailakandi	AEGCL	Included in CEA 2030 Augmentation Scheme. AEGCL is already planning for reconductoring of the lines. However, Funding source is not finalized yet	.
35	HTLS reconductoring of 132kV Srikona-Pailapool	AEGCL	Included in CEA 2030 Augmentation Scheme. AEGCL is already planning for reconductoring of the lines. However, Funding source is not finalized yet.	

5.4 Status of ISTS expansion scheme in NER

A. Status of downstream 220kV or 132kV network by STUs from the various commissioned and under-construction ISTS substations in NER

Sl	ISTS S/s	State	Voltage ratio, Trans. Cap	Down- stream Voltage level (kV)	Unutilized bays	Status of ISTS bay	STU Lines for unutilized bays	Status of Lines (as updated in 219thOCCM)	
								Date of Award	Completion schedule
1	New Mariani (POWERGRID)	Assam	400/220kV, 2x500MVA	220	2	Commissioned	New Mariani (POWERGRID) – Diphu (Assam) 220kV D/c line	Plan for route survey from Diphu to New Mariani is underway. The transmission route traverses designated forest area. Survey work is completed only funding is pending. Three years from date of LoA. Completion is expected by 2028.	Plan for route survey from Diphu to New Mariani is underway. The transmission route traverses designated forest area. Survey work is completed only funding is pending. Three years from date of LoA. Completion is expected by 2028.
2	New Kohima (TBCB)	Nagaland	400/220kV, 2x500 MVA	220	2	Commissioned	New Kohima (TBCB) – New Kohima (Nagaland) 220kV D/c line	LoA Feb'2021	OPGW and PLCC work will be completed by Oct 2023. All works are being implemented by Nagaland only. Line would be charged after completion of communication link.
3	Nangalbibra (TBCB)	Meghalaya	220/132kV, 2x160MVA	132	2	Under construction (Dec'23)	Nangalbibra (ISTS) – Nangalbibra (MePTCL) 132kV D/c	LoA is under process. Fund is yet to be	within 6 months after award.

							(HTLS,800A) Line:about 5km	released from the Govt. of Meghalaya.	

B. Status of 400kV substations and other important elements being implemented by STUs in NER under intra-state schemes to be connected through ISTS

Sl. No.	Substation/Location	Transformation Capacity/ Element	Date of Award	Completion Schedule
B	**Tripura (to be implemented by TSECL)**			
I	**Surajmaninagar (TSECL)**	400/132kV, 2x315MVA	JV formation, between PGCIL and STU by Mar'23	12 months from Date of Award
a)	LILO of both circuits of Surajmaninagar (ISTS) – Palatana 400kV D/c line atSurajmaninagar (TSECL) S/s	400kV D/c	All works except 400kV termination at Surjamaninagar(TSECL) by POWERGRID to be done. Balance works under separate contract.	LILO completed for 400kV ckt 2 (by PGCIL) without bay readiness, LILO has been charged.Total completion subjected to Sub-station readiness at Surajmaninagar

5.5 Status Review for the Items Referred from previous OCCMs:

SL No.	Item for Discussion	Status as per 219thOCCM	Latest Status
1.	Voltage and MVAR issues at 400kV Kameng S/Sn (Agenda No. C7 of 189th OCCM)	Discussion with OEM M/s BHEL is underway.	
2.	Implementation of Bus Bar Protection at 132 kV Kahilipara (AEGCL) Substation (C.8 of 196th OCCM)	CT under procurement. Tentative target is Dec'24	

3.	Installation of Line differential protection in Rokhia-N.Rokhia line	CBs arrived. Tentative completion by Sept.'24	
4.	Reconductoring of Umiam stg I stg III, upgradation of CT ratio to 800/1	Approaching PSDF for funding	
5.	Restoration of tower no. 3 and 12 of LILO of Nirjuli-Dikrong Transmission line to Lekhi Substation (B.23. of 193rd OCCM)	Tower locations in spate of floods. Works stalled. Expected completion after monsoon.	
6.	Upgradation of Tuensang substation to 132kV level, under NERPSIP. (item B.15 of 203rd OCCM)	NERPSIP updated that tender has been awarded by the end of June'23 and the work will be completed in Sept.'24	
7.	Khandong Bus A, Kopili ckt 1 bay and Khliehriat ckt 1 bay at Khandong SS	NEEPCO updated that LoA has been awarded on 30th August 2023 and work to be tentatively completed by Sept.'24	
8.	400kV Bus Bar 2 at Panyor Lower HEP (Item C.9 of 216th OCCM)	NEEPCO informed that the isolator spares had arrived and for SF6 breaker, retendering was underway. He further stated that the work would be tentatively completed by May'25.	

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