



सत्यमेव जयते

भारत सरकार

Government of India

विद्युत मंत्रालय

Ministry of Power

पूर्वी क्षेत्रीय विद्युत समिति

Eastern Regional Power Committee

14, गोल्फ क्लब रोड, टॉलीगंज, कोलकाता-700033

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सं /NO. ERPC/EE/OPERATION/2025/1835

दिनांक/DATE:03.02.2025

सेवा में /To
संलग्न सूची के अनुसार /As per list enclosed.

विषय : 24 जनवरी 2025 (शुक्रवार) को कोलकाता में भौतिक रूप से आयोजित 223वीं OCC बैठक का कार्यवृत्त - संबंध में।

Sub: Minutes of 223rd OCC Meeting held on 24.01.2025 (Friday) physically at Kolkata – reg

महोदय/महोदया,
Sir(s)/Madam,

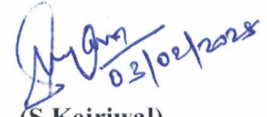
कृपया अपनी जानकारी और आवश्यक कार्रवाई के लिए 24 जनवरी 2025 (शुक्रवार) को कोलकाता में 10:30 बजे भौतिक रूप से आयोजित 223वीं ओसीसी बैठक के संलग्न कार्यवृत्त देखें। यह ईआरपीसी वेबसाइट (www.erpc.gov.in) पर भी उपलब्ध है।

Please find enclosed **Minutes of 223rd OCC Meeting** held on **24.01.2025 (Friday) physically at Kolkata** at 10:30 hrs for your **kind information** and **necessary action**. The same is also available at ERPC website (www.erpc.gov.in).

टिप्पणियाँ, यदि कोई हों, कृपया यथाशीघ्र इस कार्यालय को अग्रेषित करें।

Observations, if any, may please be forwarded to this office at the earliest.

भवदीय /Yours faithfully



(S.Kejriwal)

SE(Operation)

एसई (ऑपरेशन)

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ERPC:: Kolkata

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मुख्य अभियंता, ओपीएम, सीईए	मुख्य अभियंता, एनपीसी, सीईए	सहायक सचिव,ईआरपीसी
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ईआरपीसी:: कोलकाता



**MINUTES
OF
223rd OCC MEETING**

Date: 24.01.2025

Eastern Regional Power Committee

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EASTERN REGIONAL POWER COMMITTEE

MINUTES OF 223rd OCC MEETING HELD ON 24.01.2025 (FRIDAY) AT 10:30 HRS

Member Secretary, ERPC chaired the **223rd OCC** meeting. On welcoming all the participants, he outlined the performance of ER grid during **December-2024** and highlighted the following points:

- ❖ In **December-2024**, energy consumption of ER was **13291 MU** which is **almost same as December-2023**.
- ❖ In **December-2024**, Peak demand met of ER was **23057 MW** which is **11.5% more than December-2023**.
- ❖ During **December-2024**, **76.4 %** of time, the grid frequency was in IEGC Band (49.90Hz-50.05Hz).
- ❖ Thermal **PLF** of ER during **December-2024** was **74%**.
- ❖ Some thermal generating units were lauded for maintaining PLF more than **90%** during **December-2024** that are listed below:

Utility	Generating Stations	PLF %
WBPDC	Bakreswar TPS	99
	Santaldih TPS	101
NTPC	North karanpura TPP	97
	Darlipali STPS	98
DPL	DPL	92

❖ **Coal stock position:**

☐ Coal stock position (As on 21.01.2025) is as follows:

SL.	Name of States/Power Stns.	% of Actual Stock vis-à-vis Normative Stock
1.	Jharkhand (TVNL)	62%
2.	Odisha/IBTPS	60%
3.	WBPDC	13%(Min.Bakreshwar TPS -8 %, Max.Bandel TPS – 22 %)
4.	D.P.L. TPS	4%
5.	DVC	88%(Min. Mejia TPS-54%,
6.	NTPC	90% (Max.Farakka TPS-123% & Nabinagar STPP-137%

- ❖ DPL informed of fund constraint in replenishing coal stock. DPL was advised to submit action plan on enhancing their coal stock position. WBPDC and DPL were advised to

focus on building coal stock as per their normative requirement. WBPDCCL assured of increasing their coal stock from March 2025 onwards.

- ❖ DVC highlighted logistics issues behind low coal stock at Mejia TPS.
- ❖ All thermal GENCOs were urged on building coal stock as per normative requirement to evade any interruption in generation during the impending peak period(Summer 2025).
- ❖ **Transmission line (220 kV & above) commissioned during December-2024:**
 - ✓ 400kV-CHANDWA-LATEHAR (**JUSNL**) ckt-1&2(41 ckt Km) (ACSR Moose) commissioned on 14.12.2024.
 - ✓ 220kV-GAYA(PG)-BODHGAYA ckt-3 (**BSPTCL**) (ACSR Zebra) commissioned on 16.12.2024.
- ❖ He further highlighted the following:
 - ✓ Necessity of adequate availability of Thermal generation in non-solar hours for load generation balance.
 - ✓ DISCOMs of ER are requested to submit their issues of concern for resolution in ERPC forum(s).
 - ✓ On **4th Jan 2025 at 19:23 Hrs**, complete outage of power at **400 kV NTPC Barh** occurred which led to **generation loss** of around **1800 MW** Tripping of **400 kV Barh-Motihari-1** occurred due to conductor snapping.Subsequently, several meetings were held with Powergrid and NTPC
 - ✓ Draft Ammendment to **Manual on Transmission Planning Criteria** have been notified by **CEA** vide letter dated **08.01.2025** .Following changes have been incorporated:
 - ✦ A new chapter (**Chapter-7**) has been added on **Planning of Electric Power Transmission system** which elaborates a structured roadmap on both ISTS and intra-state network planning in coordination with CTU,STUs, RPCs, NLDC, RLDC,SLDCs.
 - ✦ Design and operational parameters of certain conductors have been updated.
 - Suggestions/Comments have been invited by CEA(Power System Planning and Appraisal Division) from all stakeholders.
- ❖ **ED,ERLDC** at the outset underlined the following facts and issues:
 - India's national grid is undergoing a crucial transformative period with quantum of RE penetration being scaled upto 13%.
 - Importance of Resource adequacy with active collaboration of all SLDCs and PMCs of DISCOMs was emphasized. In this regard, the a
 -
 - ction points concluded in the meeting dated 05.11.2024 at CERC were highlighted
 - Odisha has constituted a Grid coordination Committee at state level comprising state Transco, Discoms and intra-state generators.Similar initiative form other ER states was requested.
 - Underfrequency (typically < 49.5Hz) is being observed in the morning hours. High RE penetration with intermittent nature is one of the major driving factors.

- ❖ *A Compendium on interaction with SLDCs was formally inaugurated jointly by Member Secretary,ERPC and ED,ERLDC.*

1. PART-A: CONFIRMATION OF MINUTES

1.1. Confirmation of Minutes of 222nd OCC Meeting held on 23rd December 2024 physically at Kolkata

The minutes of 222nd Operation Coordination Sub-Committee meeting held on 23.12.2024 was circulated vide letter dated 07.01.2025.

Members may confirm the minutes of 222nd OCC meeting.

Deliberation in the meeting

Members confirmed the minutes of 222nd OCC meeting.

2. PART-B: ITEMS FOR DISCUSSION

2.1 Disturbance at 400 kV NTPC Barh on 4th Jan 2025 at 19:23 Hrs: ERPC

On 4th Jan 2025 at 19:23 Hrs, complete outage of power at 400 kV NTPC Barh occurred which led to generation loss of around 1800 MW. Subsequently a meeting was held on 8th Jan 2025 among ERPC, ERLDC and NTPC for which record notes of meeting is attached at **Annexure B.2.1.1** Further, another meeting was also held on 8th Jan 2025 among ERPC, ERLDC and Powergrid to discuss Tripping of 400 kV Barh-Motihari-1 due to conductor snapping for which record notes of meeting is attached at **Annexure B.2.1.2**

Major points of discussions are as follows-

- NTPC was requested to immediately review the protection setting implemented at all generating stations and disable O/c protection setting if enabled anywhere.
- NTPC was also requested to submit protection setting of all generating stations to ERPC and ERLDC for verification.
- NTPC submitted that they wanted to keep Backup overcurrent protection with pickup above thermal limit with the AND logic of VT supervision to avoid GT failure in case of any eventuality since they experienced similar cases in past.
- Powergrid informed that conductor snapping of 400 kV Barh-Motihari-1 was in mid-span section. It was further stated that these lines were usually lightly loaded, and this was the first time that the line flow had crossed around 1100 MW.
- Powergrid emphasized that they would intensify patrolling and thermo-vision scanning of all the joints in the entire line corridor of fog prone areas and this would be completed by next 15 days.

NTPC and Powergrid may update. Members may discuss.

Deliberation in the meeting

ERLDC gave a brief presentation explaining the event in detail.

NTPC apprised:

- ✓ *Overcurrent relay settings has now been revised to 1.25 times the thermal limit. Now O/C setting with VT fuse (AND logic) has been deployed.*
- ✓ *It was assured that the relay settings of outgoing feeders at all generating stations will be checked and corrected accordingly.*

Powergrid ER-I informed:

400 kV Barh-Motihari line has always been lightly loaded (around 150-200 MW). Now thermo-vision scanning is being conducted to detect the vulnerabilities in line hardware components.

OCC Decision

- OCC expressed serious concern on total generation loss at NTPC Barh station on 4th Jan 2025.
- OCC advised NTPC to adhere to the CEA guidelines for protection relay settings. However, to accommodate any operational concern consent of OCC/PCC forum should be obtained after due deliberation.
- OCC suggested that real time testing of loading capability of important transmission lines, especially those responsible for power evacuation from generating units, needs to be carried out on periodic basis to avert recurrence of such disturbance.
- OCC suggested that Powergrid should conduct periodic survey on all such lightly loaded lines, identify vulnerabilities and take appropriate measures to prevent such disturbance in future..
- ERLDC was advised to maintain a consolidated database on relay settings at all ER generating stations and validate the same as per protection philosophy of Eastern region. If any discrepancy is observed, the same may be flagged in OCC/PCC forums.

2.2 Comprehensive Shut Down Plan for 220 KV Dalkhola S/S for replacement of Bus Isolator and Bus Conductor under ADDCAP: Powergrid ER-II

- ✓ As already detailed in many OCC meetings and S/D meeting, under ADDCAP 2019-24, complete upgradation of Dalkhola SS is undertaken. In coordination with ERLDC/SLDC, POWERGRID/ER-II, able to complete SAS upgradation and Bus Bar integration of Dalkhola SS after availing many important S/D. Even all line side Isolators are changed for all feeders.
- ✓ Now only, Bus Isolators are balance for replacement along with Main Bus Conductors (From Single Tarantula to Double Moose). Accordingly in many S/D meetings it is discussed that for changing even one bus isolators, atleast 02 nos Bus S/D are required and for Bus-II isolator it is very much difficult as through conductor is also charged in that scenario.
- ✓ To overcome the issue, an alternative arrangement to feed the supply to Dalkhola (W.B) is planned through 220 KV Purnea-D/C. In modified arrangement, the final connectivity will be 220 KV Purnea-Dalkhola(W.B)-D/C bypassing 220 KV Dalkhola(PG).
- ✓ To achieve the connectivity, first 220 KV Purnea-D/C will be taken and ERS will be installed to connect Dalkhola WB at PG SS. Subsequently, after direct connectivity, entire Dalkhola (PG) will be taken S/D for replacement of Bus Isolator. Further to ensure, alternative power supply of Gazole SS, ensured through 220 KV Kishanganj-Dalkhola & 220 KV Dalkhola-Gazole, via new segregated Dalkhola SS (New). In that case, starting from Dalkhola (WB)-D/C to Bus Coupler will be deenergized (Through jumper will be disconnected).

Detail schematic attached for reference.

To achieve the connectivity following S/D's are required (Dates are tentative):-

SL No	Name of Element	From Date	From Time	To Date	To Time	Remarks
01.	220 KV DALKHOLA- PURNEA-I	27.01.2025	08:00	30.01.2025	16:00	Will be returned as 220 KV Purnea- Dalkhola(W.B)-I.
02.	220 KV DALKHOLA- PURNEA-II	27.01.2025	08:00	01.02.2025	16:00	Will be returned as 220 KV Purnea- Dalkhola(W.B)-II.
03.	220 KV DALKHOLA- DALKHOLA-I	29.01.2025		30.01.2025		Will be returned as 220 KV Purnea- Dalkhola(W.B)-I.
04.	220 KV DALKHOLA- DALKHOLA-II	31.01.2025		01.02.2025		Will be returned as 220 KV Purnea- Dalkhola(W.B)-II.

After returning 220 KV Dalkhola(WB)-Purnea-D/C, entire Dalkhola (PG) will be bypassed and taken complete S/D for replacement of Bus Isolators.

SL No	Name of Element	From Date	From Time	To Date	To Time	Remarks
01.	220 KV DALKHOLA- PURNEA-I	27.01.2025	08:00	05.03.25	16:00	For Bus Isolator replacement along with Bus Conductor Replacement.
02.	220 KV DALKHOLA- PURNEA-II	27.01.2025	08:00	05.03.25	16:00	
03.	220 KV DALKHOLA- KISHANGANJ-I	04.02.2025	08:00	05.03.25	16:00	
04.	220 KV DALKHOLA- KISHANGANJ-II	04.02.2025	08:00	05.03.25	16:00	
05.	220 KV DALKHOLA- GAZOL-I	04.02.2025	08:00	05.03.25	16:00	
06.	220 KV DALKHOLA- GAZOL-II	04.02.2025	08:00	05.03.25	16:00	
07.	220 KV BUS COUPLER AT DALKHOLA	04.02.2025	08:00	05.03.25	16:00	
08.	220 KV TRANSFER BUS COUPLER AT DALKHOLA	04.02.2025	08:00	05.03.25	16:00	

Further after completion of all Bus Isolators and bus conductor upto 220 KV Bus Coupler all connectivity will be normalized and remaining section covering Gazole/Kishanganj will be taken.

Subsequently, if required, 01 Ckt of Dalkhola-Gazole & Dalkhola-Kishanganj can be reconfigured as 220 KV Kishanganj-Gazole-S/C using transfer bus of Dalkhola (PG).SLD of Dalkhola S/S attached at **Annex B.2.2.**

Powergrid ER-II may explain. Members may discuss.

Deliberation in the meeting

Powergrid ER-II presented the proposal of bus shutdown with Dalkhola(WB) to be fed from Purnea through ERS.

WB SLDC expressed reservation regarding complete bus shutdown at Dalkhola(PG) S/S for bus isolator replacement in the section feeding Gazole as the reliability of supply to Malda will be compromised.

OCC Decision

With consent of WBSETCL/WB SLDC, OCC approved the requested shutdown schedule as follows:

SL No	Name of Element	From Date	From Time	To Date	To Time	Remarks
01.	220 KV DALKHOLA- PURNEA-I	29.01.2025	08:00	30.01.2025	16:00	Will be returned as 220 KV Purnea-Dalkhola(W.B)-I.
02.	220 KV DALKHOLA- PURNEA-II	29.01.2025	08:00	01.02.2025	16:00	Will be returned as 220 KV Purnea-Dalkhola(W.B)-II.
03.	220 KV DALKHOLA- DALKHOLA-I	29.01.2025		30.01.2025		Will be returned as 220 KV Purnea-Dalkhola(W.B)-I.
04.	220 KV DALKHOLA- DALKHOLA-II	31.01.2025		01.02.2025		Will be returned as 220 KV Purnea-Dalkhola(W.B)-II.

SL No	Name of Element	From Date	From Time	To Date	To Time	Remarks
01.	220 KV DALKHOLA- PURNEA-I	27.01.2025	08:00	05.03.25	16:00	For Bus Isolator replacement
02.	220 KV DALKHOLA- PURNEA-II	27.01.2025	08:00	05.03.25	16:00	
03.	220 KV DALKHOLA- KISHANGANJ-I	04.02.2025	08:00	05.03.25	16:00	

04.	220 DALKHOLA- KISHANGANJ-II	KV	04.02.2025	08:00	05.03.25	16:00	along with Bus Conductor Replacement.
05.	220 DALKHOLA- GAZOL-I	KV	04.02.2025	08:00	05.03.25	16:00	
08.	220 TRANSFER COUPLER DALKHOLA	BUS AT	04.02.2025	08:00	05.03.25	16:00	

OCC opined that in view of upcoming board exams in West Bengal, the schedule of availing shutdown of 220 kV Dalkhola-Gazole ckt-I & II to be finalized mutually by Powergrid and West Bengal.

2.3 Ensuring network Strengthening and Augmentation of transformation capacity at Rajarhat (POWERGRID), Kolkata: ERLDC

2.3.1 Update on Rajarhat GIS (POWERGRID) 400/220kV S/S: 2x500MVA: ERLDC

- ◆ During the deliberations in the 222nd OCC meeting held on 23.12.24, West Bengal SLDC representative expressed deep concern regarding a potential power crisis at Rajarhat (PG) in 2025-2026, based on the current loading pattern in and around the Kolkata area. It was also emphasized the need to prioritize the installation of a 3rd 400/220KV,500MVA ICT at Rajarhat (PG) with the same urgency as Subhasgram (PG) to prevent a recurrence of similar critical situations in the future.
- ◆ It was further highlighted that if the proposed 3rd ICT is not operational by the summer of 2026, severe congestion is likely to affect the ICTs at Rajarhat (PG). Additionally, it was noted that the state assembly elections are expected to take place in 2026, adding to the significance of addressing this issue promptly.
- ◆ Powergrid ER-II updated in the meeting that tender for procurement of the 3rd ICT has been annulled twice and currently re-tendering is under progress. Bid opening is scheduled tentatively in Feb 2025, thereafter, commissioning of the ICT will take 18 months. It is expected to be commissioned by end of 2026 or first half of 2027.
- ◆ In view of the above, an alternative arrangement may be thought off to ensure 3rd ICT at Rajarhat before 2026 Summer.

ERLDC may explain. POWERGRID ER-II may update. Members may discuss.

Deliberation in the meeting

- ◆ *ERLDC submitted:*

As both ICTs at Rajarhat (PG) are expected to operate on full load in Summer 2025 itself ,similar crisis situation as that of Subhasgram(PG) may be experienced at Rajarhat(PG) in Summer 2026 in absence of the 3rd ICT.This may jeopardize reliable power supply to Kolkata and adjoining areas in Summer 2026.

Powergrid ER-II apprised:

- ✓ Tender for procurement of the 3rd ICT has been annulled twice and currently re-tendering is under consideration. New Tender has not yet been floated by Powergrid.
- ◆ WB SLDC and WBSETCL raised deep concern on the inordinate delay in 3rd ICT commissioning at Rajarhat (PG) despite being accorded formal approval in 21st CMETS-ER in July 2023.

OCC Decision

- OCC viewed the matter seriously and agreed with the concern expressed by West Bengal on the lack of credible progress by Powergrid in procurement of 3rd ICT at Rajarhat.
- OCC referred the issue for deliberation in TCC forum.
- Powergrid was urged to present a comprehensive plan including reasons of delay along with timeline of tendering, supply, transportation and installation activities for 3rd ICT commissioning at Rajarhat (PG) in the upcoming TCC meeting.

2.3.2 Update on reconductoring of 220kV Intra-state lines around Kolkata: ERLDC

Loading of the following 220KV lines was not N-1 compliant for more than 50% of the time during last summer. Loading even touched the maximum limit of the lines during the peak demand period. As per demand growth in the Capital city, the situation will be very critical in the upcoming summer 2025 & 2026.

The matter was deliberated in the **210th OCC meeting** to replace existing ACSR Zebra Conductor of few 220kV lines around Kolkata with high capacity HTLS Conductor due to sustained high loading during high demand period.

OCC gave the technical go-ahead to the proposal. The list of lines is as follows:

1. Barasat-Kasba 220 KV D/C Transmission Line (R.L. \approx 39.1 KM).
2. Subhasgram-Kasba 220 KV D/C Transmission Line (R.L. \approx 23.0KM).
3. Jeerat-Barasat 220 KV D/C Transmission Line (R.L. \approx 23.3 KM).

Considering the demand growth in the Capital city of Kolkata & delay in reconductoring of 220kV lines, West Bengal is requested to share the followings for reliable power supply to Kolkata:

1. Detailed action plan on the 220kV lines upgrade project, including timelines.
2. Tentative network re-arrangement near Kolkata to ensure reliable power supply during high demand period.

ERLDC may explain. WBSETCL may update. Members may discuss.

Deliberation in the meeting

WBSETCL updated:

The proposal of reconductoring has been submitted for funding from PSDF to NLDC a year ago, however formal approval is not received yet.

OCC Decision

OCC noted. WBSETCL was advised to expedite reconductoring of the 220 kV intra-state lines (as above) once the funding option gets finalized.

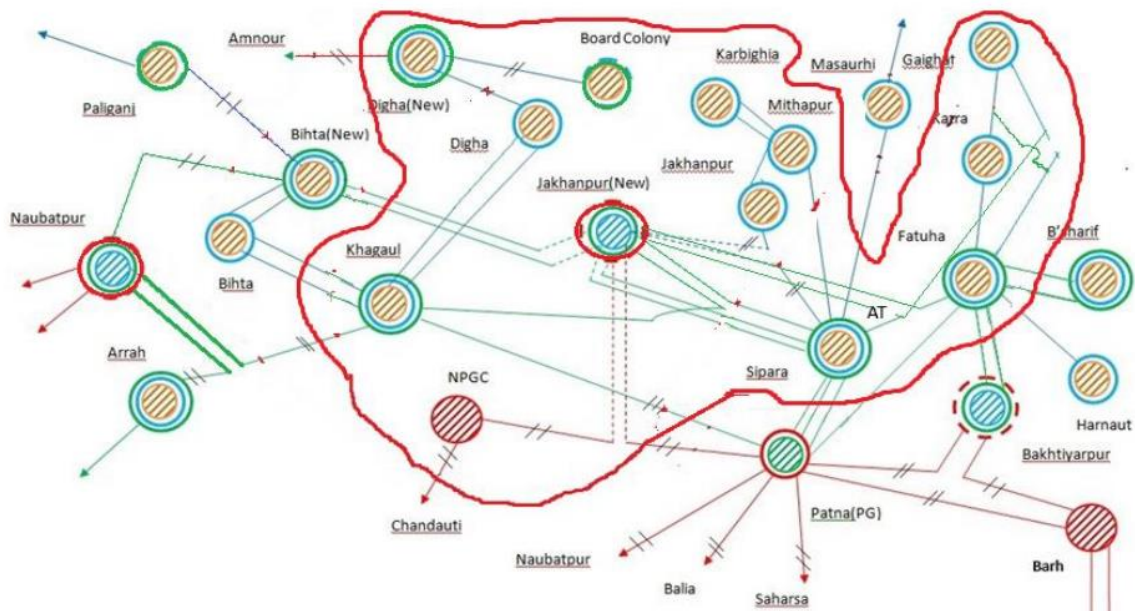
2.4 Update on Patna Islanding scheme: ERPC

The Patna islanding scheme would be formed with Units of NPGCL along with loads of Patna city.

NTPC was entrusted for carrying out study of NPGC units and M/S Solvinia had submitted report on study of islanding scheme dated 08th May 2024. Thereafter based on comments received from ERLDC, replies were submitted by M/S Solvinia. NTPC had communicated the report to all concerned including SLDC Bihar.

Some further tests needed could not be carried out due to non-receipt of relevant data from Bihar.

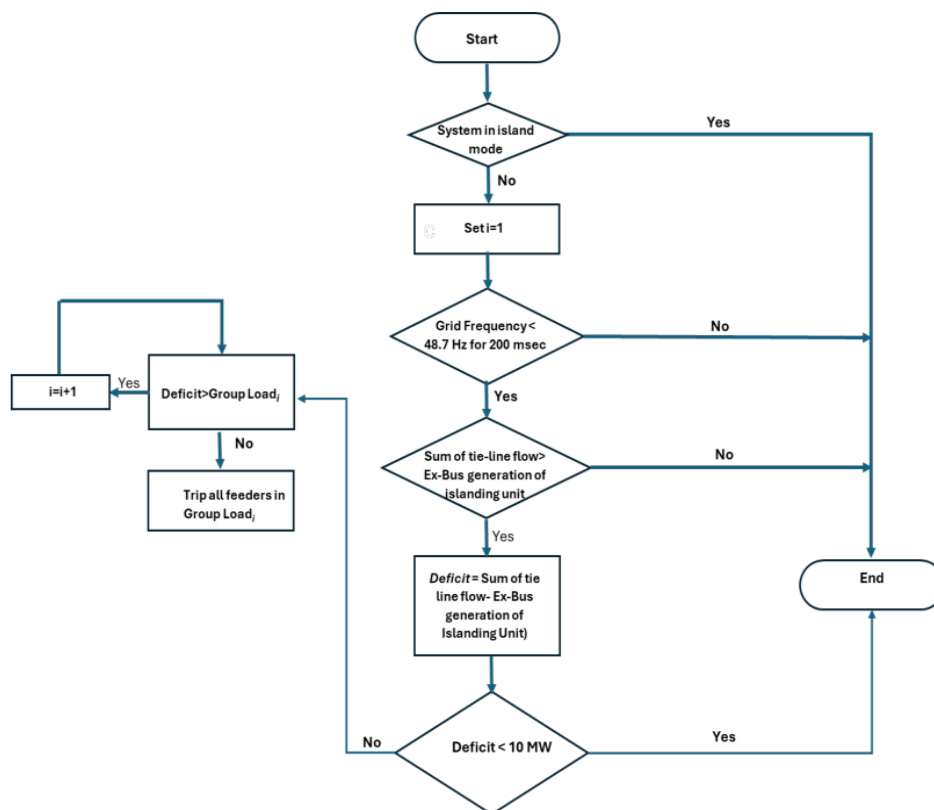
- The proposed Patna islanding scheme aims to isolate one running unit of NPGC (660 MW) with pre-identified load of Patna city and nearby areas. After isolation of selected loads and NPGC through the identified network, run the island in islanded mode to cater the city load and to extend start-up supply to generating stations in adjoining area to facilitate early restoration.
- Patna city and nearby loads will be islanded with one of the running units of NPGC (660 MW). NPGC is connected to the grid through 400 kV NPGC-Jakkanpur D/c and 400 kV NPGC Gaya D/c lines. For the islanding 400 kV NPGC-Jakkanpur D/c and at Jakkanpur through 400/220 kV ICTs, pre-identified 220 kV feeders will be selected which will be isolated to confirm the islanding of the Patna loads from the rest of the grid with one unit of NPGC.



in the island. It is necessary to maintain the load generation balance within the island for island stability.

- The control scheme will continuously monitor load generation imbalance and will trip identified feeders' priority wise if load generation imbalance goes beyond a certain limit and frequency reaches 48.7 Hz for 200 msec.
- **Islanding (2 stages):**
 - When Frequency reaches 48.4 Hz, then with a delay of 500 msec, identified system will be islanded. For islanding, a number of tie lines need to be tripped to isolate the system from the grid. The command to trip the feeders will go from the Central master controller. As a back-up UFR relays may be installed in the identified feeders set at 48.4 Hz and 500 msec time delay.
 - After islanding, another stage of feeder disconnection is also to be done if island frequency decreases. Three sub-stages are set after islanding and UFR relays will be installed on the identified feeders to get the desired load relief.
 - Stage 2A: 80 MW at 48.2 Hz
 - Stage 2B: 40 MW at 48.0 Hz
 - Stage 2C: 50 MW at 47.8 Hz

The list of feeders identified for tripping to maintain load generation balance are attached in **Annex B.2.5**. Feeders selected for pre-islanding disconnection will be identified as per below logic:



ERLDC may update.SLDC Bihar may update the present status along with future action plan. Members may discuss.

Deliberation in the meeting

ERLDC updated:

- ✓ The feeder list shared by Bihar has adequate load quantum in line with the proposed islanding logic.
- ✓ BOQ preparation is under progress in coordination with M/S Siemens. Once the quotation is received, cost implications will be finalized in DPR.

OCC Decision

- OCC consented to the islanding logic as proposed by ERLDC for implementation in the NPGC units to be islanded with loads of Patna city.
- OCC referred the issue to upcoming TCC for deliberation.
- OCC advised Bihar SLDC to submit the finalized DPR with cost implications in TCC meeting. ERLDC was advised to coordinate and assist Bihar in DPR preparation.

2.5 Philosophy for FRO distribution among the DVC Generating Stations: DVC

In line with the Clause No. 4.4 (b) of the CERC Approved NLDC procedure for computation of Average Monthly Frequency Response Performance, Beta 'β', SLDCs have been directed to assess the FRO (Frequency Response obligation) in respect of the Generating Stations, whose tariff is determined by CERC & falling under jurisdiction of the SLDC. Accordingly, SLDC, DVC has proposed the following methodology for distribution of FRO among all the DVC Generating Stations since these generators are under Section 62 of the Electricity Act - 2003.

FRO as allotted to the DVC State is = 517 MW/Hz for Solar Hrs & 333 MW/Hz for Non-Solar Hrs.

1. Step-I: The Total MU demand-met data of DVC Control area has been computed from the SCADA for last FY and accordingly average MW demand data has been assessed. The Avg. MW demand has been for both Solar & Non-Solar Hours.
2. Step- II: It has been assumed that ~ 4% of the Average demand contributes to the DVC C/A frequency response during any Frequency excursion event - Demand Response.
3. Step -III : The remaining FRO to the Generating Stations: = (FRO allotted to DVC C/A – Demand Response of 4%)
4. Step- IV: Total MU Generation and the Avg. MW Generation for each Station has been computed based on the SCADA record of last FY. The remaining FRO has been allocated among the Plants in pro-rata of Avg. MW Generation for each station.

The detail computation & station-wise FRO figures has been depicted in the below table:

The SCADA data of Generating Stations for **Last FY (2023-24):**

AG(M Wh)	SCADA									
	BTPS	DSTP S	KTPS	RTPS	CTPS	MTPS-7&8	MTPS-5&6	MTPS-1-3	MTP S-4	Total Thermal
Apr-23	322302	642268	651608	618250	174873	601860	290776	232296	121547	3655780
May-23	323673	629137	583199	575950	310226	638330	276195	272646	9038	3618394
Jun-23	258144	614440	621920	567160	322485	589760	271767	295482	0	3541158

Jul-23	1164 71	5856 44	6162 40	6121 00	3215 12	558280	294043	31879 5	1499 2	3438076
Aug-23	3354 80	6277 40	5010 45	5626 90	3157 99	535300	290583	23887 6	1165 17	3524030
Sep-23	2786 63	5591 35	6444 87	5596 91	3017 84	473936	226098	23786 9	1135 67	3395231
Oct-23	2673 72	5302 97	5168 84	4827 60	2740 73	396640	280779	30807 4	1191 40	3176019
Nov-23	2893 17	5689 71	3120 47	5191 60	2919 57	562730	272922	29552 7	1212 45	3233876
Dec-23	3050 30	5124 64	4922 16	5569 40	2903 30	610440	260881	34026 1	1232 28	3491790
Jan-24	3275 89	4437 53	6420 40	6324 25	3099 32	631101	234502	30794 9	1260 59	3655350
Feb-24	3084 20	4179 51	5945 14	5609 41	2704 87	573806	270073	30646 4	1159 22	3418577
Mar-24	2807 61	6185 02	6342 88	3473 94	2682 86	589355	293841	32750 7	9671 9	3456652
Total MWh	3413 222	6750 302	6810 488	6595 462	3451 743	676153 8	326245 9	34817 47	1077 972	4160493 2
Avg. MW	389	768	775	751	393	770	371	396	123	4736

FRO (MW/Hz)	Solar Hrs	Non-Solar hrs
DVC State	517	333

DVC Avg. Demand (MW)	3200	3200
DVC Avg. generation (MW)	4736	4736
Demand Response (MW/Hz) (4% of Avg. Demand)	128	128
Required Generator Response (MW/Hz) (State FRO - Demand Response)	389	205

BTSPS	32	17
DSTPS	63	33
KTPS	64	34
RTPS	62	32
CTPS	32	17
MTPS-7&8	63	33
MTPS-5&6	31	16
MTPS-1-3	33	17

MTPS-4	10	5
	389	205

***Total DVC Demand of 2023-24 is 27456MU >> Avg. 3134MW. Extrapolated as 3200MW in 24-25**

The same has also been suggested as a feasible method (Method-III) as per the deliberations of the 48th FOLD Meeting.

Method-III of 48th FOLD Minutes

FRO = (Average Generation of individual generating station/ (Sum of Avg. generation of all considered generating stations)) X (FRO allotted to state control area - Demand Response (=4% of Avg. Demand per Hz))

The demand response to be considered equal to the maximum 4% of Average Demand per Hz.

Further details along with MOM of FOLD meeting enclosed at **Annex-B.2.6** DVC may explain. Members may discuss.

Deliberation in the meeting

DVC SLDC shared a brief presentation and submitted:

- *In line with the CERC approved methodology of average monthly frequency response, all SLDCs need to assess Frequency Response obligation i.r.o intra-state generators whose tariff is determined by CERC.*
- *Accordingly, the above methodology (further details at Annex B.2.6) is proposed for FRO distribution among DVC generators covered under Section 62 of Electricity Act 2003.*
- *Last year SCADA data (average MW and MU) of all generating stations has been considered as reference in devising this methodology.*

OCC Decision

OCC noted the methodology for computation of Beta factor on monthly basis as proposed by DVC.

2.6 Bus split operationalization at NTPC Kahalgaon: ERPC

As decided in 219th OCC Meeting, a committee comprising of members from ERPC and ERLDC visited NTPC Kahalgaon on 17-10-2024 to assess the status of Bus splitting at 400 kV level and way forward for operationalization of 400 KV Bus sectionalizer.

Following works need to be done to complete the installation of ICT 3 & 4:

1. Determination of underground cable conduit path for 400/132 kV ICT-3, 4 and 5 allocated for stage 2 supply.
2. Excavating the existing cable and relaying from Stage-1 132kV to New Stage-2 132 kV switchyard, where ICT 3 & 4 will be connected.
3. Laying of additional 22.8 ckt. km control cable for STs.
4. Jumpering of ICTs in 132kV & 400kV level.
5. Bay equipment testing.
 - NTPC apprised that determination of underground power cables is one of the major challenges to proceed further with laying of cables between two 132kV switchyards. The tentative time to complete the ICT commissioning is **25th May 2025**.
 - Meanwhile in view of increased fault level of NTPC Kahalgaon and to facilitate interim arrangement of standby ISTS connectivity to Godda Thermal Power project of M/s Adani

Power (Jharkhand) Ltd. (APJL) with Indian grid, Bus splitting at 400KV Kahalgaon needs to be done on priority.

222nd OCC Decision

In view of continued operation of 400 kV bus in synchronised mode at NTPC Kahalgaon at high fault level, OCC expressed serious concern over the lack of desired progress in 132 kV power cable laying and thereby suggested participation of representative from concerned site i.e NTPC Kahalgaon in next OCC meeting for clarity i.r.o progress in bus splitting activities at the site.

NTPC may confirm timeline and feasibility of Bus splitting with current configuration. Member may discuss.

Deliberation in the meeting

NTPC informed:

- ✓ Bay is ready for the new ICT at 400 kV Kahalgaon switchyard.
- ✓ Visit by M/S GE is planned next week for breaker testing.
- ✓ Though cable route has been identified, laying of 132 kV power cable has not yet been completed.
- ✓ Persistent contractual discord is hindering the desired progress in activities.

ERLDC raised concern on operating 400 kV bus in Kahalgaon at high fault level.

OCC Decision

- *In view of continued operation of 400 kV bus in synchronised mode under high fault level condition, OCC observed lack of seriousness on the part of NTPC for implementing the bus splitting scheme as recommended .*
- *OCC referred the issue to upcoming TCC/ERPC meeting for deliberation.*

2.7 Replacement of SEM in ER, from Non-DLMS to DLMS platform and compliances to latest standards: Powergrid ER-II

- Considering the initial phase of metering (year 2012), all the Energy Meters procured were non DLMS type which are specially manufactured only to cater some specific requirements. The initial meters were procured from L&T OEM. Then gradually from 2016 onwards DLMS protocol Meters are introduced, and different OEM make Meters are procured.
- These Meters are capable of handling **15 min Load Survey** Block data. However, when the upcoming requirements and regulations are taken into consideration, some Meters do not have the technical functionality to cater the requirements. A brief analysis of Meter types connected with AMR system, is given below.

Time interval	L&T (Qty: 411)	Genus-01seris (Qty: 763)	Genus-02 series (Qty: 325)	Secure (Qty: 18)
15 min Data Block	✓	✓	✓	✓
05 min Data Block	✗	✗	✓	✓
01 min instant	✗	✓	✓	✓

- ✓ The L&T make Meters are nearing 14 years of service on field and becoming susceptible to errors, frequent hang issues, and breakdowns. We have already received multiple complaints from different utilities regarding the same. It is imperative that all the L&T make meters (411 Qty) needs to be replaced with newly procured meters (GENUS/SECURE) to prevent any unwanted errors in settlement. In addition to that, a certain quantity of 01 series Genus make Meters are also needs to be replaced to ensure the technical capability of upcoming requirements.
- ✓ The approx. count of new Meters requirement will be 1021. At present newly supplied Secure make SEM are available in ER (ER-II- 250+ ER-I-210), i.e, 460 Nos.
- ✓ Going by phased manner replacement, immediately L&T make SEM's may be replaced, subsequently, procurement of new SEM by 600 quantity (Approx) also needs to be considered. However, phased manner can be considered for the same.
- ✓ This replacement management will be a comprehensive one and will cater the needs in upcoming future.

Powergrid ER-II may explain. Members may discuss.

Deliberation in the meeting

Members discussed and apprised that in many areas the existing L&T meters are non-compatible with the new requirements of block-wise data

Powergrid ER-II informed:

- ✓ *411 no.s of L&T meters have already been in operation for more than 12 years, hence urgent replacement is required.*
- ✓ *As of now, there is a stock of 460 no.s of new meters,*

However, ERLDC stated that replacement of 330 L&T meters is required.

OCC Decision

- *OCC opined that 330 no.s of L&T meters should be replaced with existing stock of Secure make meters and the list of stations/Meters to be replaced shall be furnished by ERLDC. Powergrid was also advised to keep the remaining 130 meters (approx.) as buffer stock to take care of any urgent requirement.*
- *Members were of the view that procurement plan for new meters conforming to new TS shall be taken up for discussion once the roadmap of 05 min scheduling gets finalized and 5 min metering is put into practice.*

2.8 Replacement of Old Data Concentrator Unit (DCU) for AMR, in compliance with regulations.: Powergrid ER-II

- The Data Concentrator Unit (DCU) are the most essential items in the AMR solution. In Eastern Region, when the initial phase of AMR implementation started (Nov-2012), the DCUs were manufactured to be in synch with the type of Meters and the end user requirements (only to cater 15 min block data parameters). Also, the DCUs are being procured from an overseas vendor (VIOLA OEM).
- Gradually, from 2016 onwards, new SEM types are being introduced with DLMS protocol compliance along with multiple type of data parameters. To cater this requirement, the firmware of the DCUs is upgraded. Gradually, new DCUs are put in the AMR system (indigenous Make) to have multi-vendor scenario in the system and to reduce single OEM dependency. At present, a customized DCU firmware is being developed throughout the

period and put in operation to handle multiple type of requirements like different Protocol Meters, different OEM make Meters, Handling Kiosk type location in AMR, and ensuring system security (like VPN based communication, Secure data transfer protocol, Data Encryption). This is running successfully throughout the period.

- As POWERGRID already highlighted in many previous meetings, multiple Proof of Concepts (POC) have been carried out in the existing AMR with the newly procured DCUs, to test the feasibility of upcoming regulations of 05 min block data, instantaneous data etc. The successful POC results are being shared with members. (Reference 217th OCC).
- In the present AMR scenario, we have some of the DCU quantity present which are of VIOLA OEM make, those were procured in the initial phase. These DCU are specially designed for L&T make Meters and the initial Series of Genus Make Meters. Also, considering the CEA/CERC regulations of IT/OT hardware life, the DCU are reaching to end-of-life cycle.
- Total DCU quantity to be replaced is: 106 no's. The new DCU which will be procured, will comply to the existing as well as upcoming technical requirements for high end activities. In Eastern Region, as we have already a steady system running and also have tested and developed the prototype environment of new AMR requirements as part of AMR Phase5 project, it is recommended that the new DCU may be procured in synch with the last approved LOA of AMR Phase5.
- Project timeline will be 09 months for procurement and installation of DCUs at stations, with 03 years warranty support. Total additional cost for DCU procurement will be 98,73,900 INR and additional DCU implementation Service charges will be 24,68,475 INR. Total service & Supply cost will be Rs. 1,23,42,375/- (Rs. One crore twenty three lacs forty two thousand three hundred seventy five only) excluding taxes. However after due approval & negotiation final price could be arrived and will be intimated duly.
- Procurement of DCU and replacement work will be a one-time roll-out job. Once the DCUs are replaced at stations, AMR system will be ready for catering the existing Meters as well as the new Meters (as and when those will be installed at stations). No additional changes will be needed in AMR, during replacement of Meters.
- The DCUs which will be procured for existing AMR, there are multiple level of firmware customization needs to be done. As stated above, in the AMR system of ER, there are multiple types and OEM make Meters present. For that different version of DCU firmware is developed. The current DCU firmware is capable to catering both DLMS & Non DLMS meters in a single DCU. Also, in a single DCU, both Genus make and Secure make DLMS Meters are connected in the same port and successful data retrieval is happening. Special DCU firmware is designed to handle the Kiosk type locations. In addition to the existing requirements, the DCU firmware has been upgraded as well (to build prototype) for catering both 05 min & 15 min Load Survey Meters. So, it is imperative that just procurement of the DCU will not suffice the requirements, plenty of effort to be put for developing the customized firmware as well which will be a huge time taking process. As M/S TCS has already completed these development part and handling the system, it is recommended to place the LOA to them and execute the job.
- Members may discuss and provide approval to place the LOA to M/S TCS on single tender (Nomination) basis.

Powergrid ER-II may explain. Members may discuss.

Deliberation in the meeting

Powergrid ER-II informed:

- ✓ Total 106 number of VIOLA make DCUs are currently present in the AMR of ER. These DCUs are mainly designed for L&T make Meters and have reached end of designated life cycle, thus need to be replaced.
- ✓ This replacement will be a one-time job and the newly replaced DCUs shall be capable of catering to all 15 min, 5 min and 1 min meters.

OCC Decision

OCC technically consented to the proposal of DCU replacement and referred to upcoming CCM for financial concurrence.

2.9 Review of AUFLS in Eastern region: ERPC

- ◆ A Task Force was constituted by NPC vide letter dated 25.08.2023 on Implementation of AUFLS and df/dt scheme under the chairmanship of Member Secretary, SRPC and comprising members from NPC, RPCs and Grid-India.
- ◆ The Task force after convening meeting on 11.09.2023 submitted its report to NPC in 14th NPC meeting on 05.02.2024, wherein certain recommendations were made.
- ◆ Accordingly, as per decision of 214th OCC meeting, a special meeting was convened on **10.07.2024** to deliberate on successful implementation of Automatic Under Frequency Load Shedding (AUFLS) in Eastern region wherein following course of action was delineated to all constituent ER states.
- ◆ **Action points:**
 - All SLDCs were instructed to shift the load quantum from Stages –III & IV to stage-I & II respectively as an interim measure till new feeders for additional load relief gets identified by individual state DISCOMs.
This must be implemented at the earliest with necessary changes in frequency settings of the existing UFRs and the same shall be reviewed in upcoming OCC meeting.
 - All SLDCs were advised to share the identified feeders list for revised load relief quantum within a month. The status shall be reviewed in monthly OCC meetings.
 - Curtailment of critical loads should be avoided. However, in stage-III and stage-IV, as it operates only in severe threat to grid stability, industrial loads may also be considered. Accordingly DVC and IPCL (having dominant industrial consumers) were urged to identify industrial feeders for load relief in stage-III and stage-IV.
 - All SLDCs were urged to expedite and ensure SCADA visibility of existing as well as newly identified feeders under AUFLS for effective supervision of load relief quantum.
- ◆ Based on submission by DVC, revised load relief quantum as follows:

(Figs in MW)

Constituent	Stage-1	Stage-2	Stage-3	Stage-4	Total
Bihar	315	379	442	442	1577
Jharkhand	87	105	122	122	437
DVC	172	207	241	241	861
Odisha	306	367	428	428	1530
West Bengal	497	597	696	696	2486
Sikkim	5	6	7	7	25

Total	1383	1660	1937	1937	6916
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Constituent wise	Annual Consumption	Consumption factor	Demand met	Peak demand factor	Demand contribution
Bihar	40952	0.220	7578	0.236	0.228
Jharkhand	12391	0.067	1923	0.060	0.063
DVC	26214	0.141	3476	0.108	0.125
Odisha	41142	0.221	7104	0.221	0.221
West Bengal	65009	0.349	11868	0.370	0.359
Sikkim	526	0.003	137	0.004	0.004
Total Consumption	186234	1.000	32086	1.000	1.000

UFR Feeders real time monitoring has been discussed in NPC as well as various forums of ERPC. Further, with new IEGC 2023 the same has been mandated as quoted below:

IEGC 2023, Clause 13.d: “SLDC shall ensure that telemetered data of feeders (MW power flow in real time and circuit breaker status) on which UFR and df/dt relays are installed is available at its control centre. SLDC shall monitor the combined load in MW of these feeders at all times. SLDC shall share the above data with the respective RLDC in real time and submit a monthly exception report to the respective RPC. RLDC shall inform SLDCs as well as the concerned RPC on a quarterly basis, durations during the quarter when the combined load in MW of these feeders was below the level considered while designing the UFR scheme by the RPC. SLDC shall take corrective measures within a reasonable period and inform the respective RLDC and RPC, failing which suitable action may be initiated by the respective RPC.”

In view of the same, ERLDC in coordination with SLDCs has been able to achieve good data availability and continuously following up with SLDC for 100% Integration. Further, based on 14th **NPC meeting on 05.02.2024, Special meeting of ERPC for UFLS held on 10th July 2024, ER TCC meeting held on 5th Sept 2024 and subsequent OCC meeting decision**, constituents were advised to implement enhanced required quantum in each stage of UFLS due to increase in demand and energy consumption.

Further it is emphasized that RLDC on a quarterly basis is required to be analysed the duration during which the combined load in MW of UFR feeders is below the level considered while designing the UFR scheme by the RPC. This is to ensure that sufficient loads are there during all times to ensure this adequate relief from this defence scheme for maintaining grid security.

Present Status of shifting AUFLS stage 3 & 4 feeders to AUFLS Stage 1 and 2 and identification of additional feeders for all stages of AUFLS is as follows (as per information received by ERLDC SCADA):

Utility	Stage 3 & 4 feeder shifting to Stage 1 and 2	Updated in ERLDC UFLS Monitoring Display	New feeder Addition for Stage 1-4 for meeting

			new ULFS Quantum requirement
Bihar	Stage 1,2,3 old feeder either discarded or shifted in stage 4.	Updated as per list provided	New feeders list communicated to ERLDC
Jharkhand	Completed as informed by SLDC	Updated as per list provided	New feeders list yet to be shared
DVC	Completed as informed by SLDC	Updated as per list provided	New feeders list communicated to ERLDC
Odisha	Completed as informed by SLDC	Updated as per list provided	New feeders list communicated to ERLDC
West Bengal-WBSEDCL	Completed as informed by SLDC	Updated as per list provided	New feeders list yet to be shared
West Bengal-CESC	Not Shifted, New feeders identified and UFR implemented	Updated as per list provided	New feeders list communicated to ERLDC

Deliberation as per 222nd OCC

✓ Bihar SLDC apprised:

By end of Feb 2025, all four stages of AUFLS will be having adequate load relief quantum.

✓ DVC informed:

- All UFRs have been tested and successfully implemented in stages –I & II as per requirement.
- New feeders have been identified in stages –III & IV where UFR testing shall be completed in one month.

✓ WBSEDCL updated:

New feeders for load shed in stages-III & IV have been identified and installation of UFRs will be completed by March 2025.

✓ SLDC Odisha informed:

All pending installation of UFRs across four stages of AUFLS will be completed by December 2024.

Annexure 2.8.1 provides the UFLS Status in Eastern Region with details of New UFR Quantum wise feeder identification and Requirement of additional feeders to be identified. In addition, it also provides new Quantum based identified feeders with UFR relays and their SCADA data availability at ERLDC.

The detailed status of UFLS implementation as per enhanced quantum utility as well stage wise, newly identified feeder, UFR relay implementation status, Available MW quantum with UFR relays, SCADA data integration and data availability of feeders is provided in **Annexure 2.8.2**

All SLDCs/STUs and individual state DISCOMs may update action taken/future plan w.r.t AUFLS. Members may discuss.

SLDCs may update. Members may discuss.

Deliberation in the meeting

❖ BSPTCL(Bihar SLDC) updated:

Pending 500 MW load relief in AUFLS shall be implemented by FEB 2025 and SCADA itegration of the new feeders will also be done shortly.

❖ OPTCL affirmed of sharing the list of feeders by mid of Feb 2025.

❖ WBSLDC assured that entire alooted load relief quantum under their jurisdiction will be implemented with UFR by end of Feb 2025.

OCC Decision

OCC advised all SLDCs/STUs and concerned DISCOMs:

▪ To ensure availability of sufficient load relief (MW) in each of the four stages as follows:

Constituent	Stage-1	Stage-2	Stage-3	Stage-4	Total
Bihar	315	379	442	442	1577
Jharkhand	87	105	122	122	437
DVC	172	207	241	241	861
Odisha	306	367	428	428	1530
West Bengal	497	597	696	696	2486
Sikkim	5	6	7	7	25
Total	1383	1660	1937	1937	6916

Stages-I &II, being first line of defence in AUFLS ,should be given first priority in maintaining required load relief quantum.

- *All pending installation and testing of UFRs in Stages-I & II must be completed by Feb 2025.*
- *To identify new feeders for implementing AUFLS in stage III & IV who have successfully implemented AUFLS in stage I & II by shifting load quantum from stage III & IV.List of new identified feeders in stage III & stage IV of AUFLS must be share with ERPC by all SLDCs.*
- *To ensure SCADA data mapping for all newly identified UFR feeders at ERLDC level & in case of non-availability of SCADA data, anticipated timelines for making availability of SCADA data must be communicated for all applicable UFR feeders.*

- *To ensure periodic testing of UFRs for ascertaining their healthiness in coordination with ERLDC and submit report to ERPC/ERLDC.*

2.10 UFR operation of Purulia Pumped Storage Plant: ERLDC

- In 214th OCC, dated 23.04.24, ERLDC highlighted the necessity of disconnecting pumped storage plants operating in pumping mode from the grid just before Stage-I of AUFLS i.e at 49.5 Hz, as mandated in IEGC 2023 as well as recommended in report of Task force(NPC) on AUFLS. WB SLDC requested to implement automatic tripping mechanism after end of the General Election 2024 and WBSEDCL underlined need of consultation with concerned OEM.
- **OCC advised West Bengal SLDC to share the action plan for implementing this automatic tripping mechanism as soon as consultation with the concerned OEM is completed by WBSEDCL.**
- In view of upcoming high-demand period, the implementation of automatic tripping of PPSP is very crucial for safe and secure operation of grid. WB SLDC is requested to share the action plan for automatic tripping of PPSP implementation.

ERLDC may explain. WB SLDC and WBSEDCL may update. Members may discuss.

Deliberation in the meeting

- ❖ *WBSEDCL submitted :*
- ✓ *The feasibility of tripping Purulia Pumped Storage Plant before Stage-I of AUFLS gets triggered has been taken up with concerned OEM of Japan but necessary clarification is still awaited.*
- ✓ *Being a very old generating station, implementing any modified operation mechanism needs prior consent from OEM to ensure reliability.*
- ❖ *ERLDC asserted the need of Purulia PSP to shift from pumping mode to discharging mode even if it doesn't get disconnected from grid on onset of Stage-I of AUFLS.*

OCC Decision

- *ERLDC was requested to share in next OCC the details of incidents in recent past where grid frequency has dipped below 49.5 Hz to assess the necessity of implementing*
- *WBSEDCL was advised to submit the report from concerned OEM in next OCC, highlighting the practical constraints involved in implementing the automatic tripping mechanism at Purulia PSP.*

2.11 Generation target for FY 2025-26: ERPC

THERMAL

- Annual assessment and finalization of the Generation Programme and Planned Maintenance Schedules of generating units is undertaken by CEA every year. This process involves fixing up the Overall Generation Target for the country (involving Fuel-wise fixation of Generation Target also) based on last year generation, anticipated demand, likely economic growth etc.

- Following this, Fuel Wise target will be allocated to the various generating stations based on their past performances, planned maintenance schedule and the future planning as submitted by the respective generating station.

□ In this regard, all power generating stations are requested to furnish the below mentioned details as per enclosed formats

a) Unit-wise monthly generation proposed during **2025-26** taking into account likely fuel availability, the anticipated loss of generation on account of various factors such as grid constraint, low schedule/ Reserve shut down due to high cost, coal/lignite quality etc., if any

b) The Unit-wise schedule of planned Maintenance for the year 2025-26.

On approval of planned maintenance schedule by the respective RPCs (Regional Power Committees), same shall be taken up by CEA(GM Division) to facilitate planning at All India level.

220th OCC Decision

- OCC advised all thermal generating units of ER to submit the details of unit-wise planned maintenance and anticipated generation(MU) for FY 2025-26 at the earliest.

Deliberation in the meeting

OCC Decision

- *OCC informed all thermal GENCOs that submission of generation target of their respective units is crucial for finalizing Pan-India generation target and Resource adequacy planning by Ministry of Power.*
- *OCC advised all thermal generating units of ER to submit the details of unit-wise planned maintenance and anticipated generation(MU) for FY 2025-26 within a week positively.*

2.12 Scheduling related issues: NTPC ER-1

- The scheduling software is not configured to comply with regulatory provisions i.e. restricting the scheduling of a generating station below its technical minimum after 14:30 hrs on D-1.
- In case SCUC support is not provided, the downward revision of schedule by beneficiaries after 1500 Hr. i.e. after issuance of the SCUC entitlement list, the station is forced to incur significant losses to maintain its technical minimum and make it available to cater peak demand of the beneficiaries.
- It is requested that such provisions be incorporated in the scheduling software and the DISCOMs may refrain from downward scheduling after 1430 hrs on D-1 to comply with the regulations. This is required to ensure the operational efficiencies of the stations, grid-stability, and avoiding commercial loss to the generator.
- Also the cases where previously such incidences have happened the same may be rectified and schedule may be revised as per IEGC 2023 provisions.

NTPC ER-1 may explain. Members may discuss.

Deliberation in the meeting

NTPC informed:

Upgradation in WBES is pending in line with the 1st Amendment to IEGC 2023.

OCC Decision

OCC noted and advised ERLDC to expedite in incorporating the necessary changes in WBES software to prevent downward scheduling by the DISCOMs after 14:30 hrs on D-1 in compliance with the extant provisions of IEGC 2023.

2.13 Overhauling of Barauni Unit-9 : NTPC ER-I

In FY 25-26, OH of 250 MW Unit-9 is planned from 01.12.25 to 30.12.25 for 30 days.

However in view of increased number of boiler tube leakage in this financial year it is proposed to prepone the overhauling from **23-Feb-2025** to **24-March-2025** so as to increase reliability and **availability of unit during peak months**.

Members may discuss. OCC may approve.

Deliberation in the meeting

NTPC requested for the following planned outages:

- 1. Barauni U#9:: From 23.02.2025 to 24.03.2025*
- 2. Farakka (U#1 & U#2): 11.03.2025 to 05.04.2025*

It was also informed that approved shutdown of Barh Unit#5 and Kahalgaon Unit#2 will not be availed.

SLDC Bihar requested for pre-poning the shutdown of Barauni U#9 from 15th Feb 2025.

WBSEDCL raised serious concern and vehemently opposed the requested shutdown of Farakka TPS by NTPC during crunch period starting in April 2025.

OCC Decision

OCC approved the proposed shutdown of Barauni U#9 from 15.02.2025 to 16.03.2025 while advised NTPC to avail the shutdown and complete maintenance of Farakka units by March 2025 .

2.14 Shutdown request by Dikchu HEP

It is hereby informed that the shutdown of the Dikchu plant has been rescheduled from 20th January to 28th February 2025. This shutdown is due to the dismantling of the existing 132KV GIS and the installation of a new 132KV GIS. During this period, power generation will not take place at the Dikchu plant.

Members may discuss.

Deliberation in the meeting

OCC Decision

OCC approved the planned shutdown of Dikchu HEP as proposed.i.e from 20th Jan to 28th Feb 2025.

2.15 Reviewing data for preparation of ER Restoration procedure: ERLDC

As per IEGC 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. IEGC Regulation 34.3 states that detailed procedures or 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.

ERLDC has already via mail dated 24.12.24 circulated the relevant portion of latest *Restoration procedure of Eastern region* with all the constituents including ISGS, IPP, transmission licensee, transnational entity, railway divisions, which they have been asked to review and update by 13th January 2025. However, responses were received from following utilities:

- North Karanpura thermal
- Tashiding Hydro
- Indigrid transmission licensee
- North eastern frontier railway
- Eastern railway

All other constituents were given a reminder mail on 17.01.25 to send relevant information by 22.01.25. Based on the responses as on 22.01.25, the document shall be finalised. Any updates if received after this date shall be incorporated in subsequent versions. The above-mentioned constituents (SLDC, ISGS/IPP) are requested to send detailed restoration procedure (prepared by themselves) specific to their system as mandated in IEGC at the earliest to ERLDC.

ERLDC may explain. Members may discuss.

Deliberation in the meeting

OCC Decision

OCC advised all constituents to furnish relevant information on restoration procedure to ERLDC in compliance to IEGC 2023.

2.16 Connection Agreement for STU Lines: ERLDC

Clause 9 (3) of the **CERC Indian Electricity Grid Code, 2023**, states the following:

“In case of intra-State transmission system getting connected to inter-State transmission system, Connectivity Agreement shall be signed between intra-State transmission licensee, CTU, and inter-State transmission licensee after the award of the project and before physical connection to ISTS.”

- Additionally, CERC, via its order in Petition No. 216/MP/2023 dated 03-10-2024, has directed CTU to sign a tripartite agreement among the STU, CTU, and the concerned ISTS licensee. Similar directions have also been issued by CERC to CTU through its letter dated 22-10-2024.
- In line with the provisions of IEGC 2023 and the above order(s)/direction(s) of CERC, all STUs in the Eastern Region are requested to sign the Connectivity Agreement with CTU for intra-State elements. To initiate the process of signing the Connectivity Agreement,

STUs must submit their applications to CTU via the NSWS portal. Detailed guidelines regarding the Connectivity Agreement are available on the CTUIL website.

- CTU connection agreement for following lines are yet to be submitted by States:

Sl. No.	Name of the element	Charging date	Concerned SLDC
1	220 kV Rajarhat-Newtown A2 ckt-1	16-Jan-24	West Bengal
2	220 kV Rajarhat-Newtown A2 ckt-2	16-Jan-24	West Bengal
3	132 kV Malda-Manikchak 1	19-Nov-24	West Bengal
4	132 kV Malda-Manikchak 2	19-Nov-24	West Bengal
5	400 kV Chandwa-Latehar 1	14-Dec-24	Jharkhand
6	400 kV Chandwa-Latehar 2	14-Dec-24	Jharkhand

It is essential to note the following:

- Any upcoming intra-State project in the Eastern Region that will connect to a CTU point must ensure that the Connectivity Agreement with CTU is signed prior to FTC. All STUs are requested to initiate the process of signing connectivity agreements for projects that have already been approved and are currently under execution.
- Any FTC request for intra-State entities connected to CTU points must be forwarded to ERLDC-FTC along with the signed Connectivity Agreement.

Member may note.

Deliberation in the meeting

- ❖ *ERLDC submitted the challenges faced in issuance of FTC in absence of connectivity agreement between STUs and CTU for intra-state elements getting connected to ISTS network.*
- ❖ **OCC Decision**
 - *All Eastern Region SLDCs/STUs were requested to execute all pending connection agreements with the CTU including any intra-state (STU) lines connected to ISTS points after the implementation of IEGC 2023, effective from 1st October 2023.*
 - *STUs of West Bengal and Jharkhand were advised to submit to ERLDC the connection agreement with CTU for intra-state elements as follows:*

Sl. No.	Name of the element	Charging date	Concerned SLDC
1	220 kV Rajarhat-Newtown A2 ckt-1	16-Jan-24	West Bengal
2	220 kV Rajarhat-Newtown A2 ckt-2	16-Jan-24	West Bengal
3	132 kV Malda-Manikchak 1	19-Nov-24	West Bengal
4	132 kV Malda-Manikchak 2	19-Nov-24	West Bengal
5	400 kV Chandwa-Latehar 1	14-Dec-24	Jharkhand
6	400 kV Chandwa-Latehar 2	14-Dec-24	Jharkhand

- *OCC opined that a connection agreement with CTU is required even if the changes occur solely on the STU side, keeping ISTS connection point unchanged. This includes scenarios such as:*
 - ✓ *LILO of an existing line connected to the CTU system to a new STU substation.*

✓ *Shifting an existing CTU-STU connecting line to a new STU substation.*

- *To avoid last-minute delays in FTC, all STUs were advised to initiate the connection agreement process with CTU at least one year before the physical connection of the lines to ISTS system.*

2.17 Requirement of PTCC Clearance as per CEA Regulations, 2023: ERLDC

- The Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulations, 2023, specify in Section 80:
- “Protection against electromagnetic interference – The owner of every electric supply line of voltage level 11 kV or above shall obtain the clearance of Power Telecommunication Co-ordination Committee to ensure the safety of the personnel and telecommunication line as per the requirement of section 160 of the Act.”
- In several instances, it has been observed that STU lines fail to provide PTCC Clearance during FTC. In some cases, only the copy of PTCC Clearance Application is submitted, while in others, PTCC approval is submitted very late that too after repeated follow-up. Furthermore, modifications to the line or deviations from the originally approved scheme often lack the requisite PTCC Clearance.
- **It is important to note that Grid-India has received multiple communications from the CEA PCD, emphasizing the mandatory compliance with the above regulation. It is essential to obtain the PTCC Certificate prior to charging any intra-State line for the first time.**
- Latest communication from CEA dated 17.10.24 is attached as **Annexure B.2.18**.
- Henceforth, any FTC request for the first-time charging of intra-State lines must be submitted to ERLDC-FTC along with the PTCC Clearance.
ERLDC may explain. Members may note.

Deliberation in the meeting

ERLDC briefly informed about the necessity of PTCC clearance for STU lines.

OCC Decision

OCC noted and advised all STUs to share PTCC clearance with ERLDC prior to issuance of FTC i.r.o intra-state lines. This is to ensure protection against electromagnetic interference in line with

2.18 Periodic Testing of power system elements: ERPC

As mandated in **IEGC 2023, 40.1 & 40.2**, periodic tests shall be carried out on power system elements to ascertain the correctness of mathematical models used for simulation studies as well as ensuring desired performance during an event in the system.

Relevant portion of clause is as below:

Quote:

“

40. PERIODIC TESTING

.....

40.2 (a) *The owner of the power system element shall be responsible for carrying out tests as specified in these regulations and for submitting reports to NLDC, RLDCs, CEA and CTU for all elements and to STUs and SLDCs for intra-State elements.*”

40.2 (b) *“All equipment owners shall submit a testing plan for the next year to the concerned RPC by 31st October to ensure proper coordination during testing as per the schedule. In case of any change in the schedule, the owners shall inform the concerned RPC in advance.
.....”*

Unquote

In 217th OCC Meeting held on 24.07.2024, the matter was discussed in detail and OCC advised all the generators & owners of HVDC/FACTS devices to strictly adhere to the IEGC 2023 guidelines & submit the required testing data & plan to ERPC at the earliest (as per clause 40.2.(b).

None of the generators or owners of HVDC/FACTS devices have submitted the testing plan yet. All are requested to submit the testing schedule at the earliest.

222nd OCC Decision

All GENCOs of ER who have not yet submitted details were advised to furnish the testing plan i.r.o individual synchronous generators in the shared google sheet within a week positively in compliance to IEGC 2023.

- ERLDC was requested to maintain a consolidated database on testing schedule of all generating utilities of ER.

Details still awaited from OPGC, Ind Bharat, JITPL, DPL, HEL, Hiranmoyee Energy.
CESC submitted incomplete details.

All these Gencos are requested to submit schedule in the Google sheet.
<https://docs.google.com/spreadsheets/d/1m6KCKONdObMhre9-1me1kvHTEBYUdXUOISYdn5FR4fM/edit?gid=0#gid=0>

All GENCOs and HVDC/FACTS owners may update.

Deliberation in the meeting

OCC Decision

OCC advised the following GENCOs to share the testing plan in the google sheet(<https://docs.google.com/spreadsheets/d/1m6KCKONdObMhre9-1me1kvHTEBYUdXUOISYdn5FR4fM/edit?gid=0#gid=0>) in compliance to IEGC 2023 (Clauses: 40.1 & 40.2):

- ✓ OPGC
- ✓ OHPC
- ✓ Ind Bharat
- ✓ JITPL
- ✓ DPL

- ✓ HEL
- ✓ Hiranmoyee Energy

Since the last date for furnishing the testing plan was 31st October 2024 as per IEGC 2023, The

Tests to be carried out along with applicability are detailed hereunder:

Power System Elements	Tests	Applicability
Synchronous Generator	(1) Real and Reactive Power Capability assessment. (2) Assessment of Reactive Power Control Capability as per CEA Technical Standards for Connectivity (3) Model Validation and verification test for the complete Generator and Excitation System model including PSS. (4) Model Validation and verification of Turbine/Governor and Load Control or Active Power/ Frequency Control Functions. (5) Testing of Governor performance and Automatic Generation Control.	Individual Unit of rating 100MW and above for Coal/lignite, 50MW and above gas turbine and 25 MW and above for Hydro.
HVDC/FACTS Devices	(1) Reactive Power Controller (RPC) Capability for HVDC/FACTS (2) Filter bank adequacy assessment based on present grid condition, in consultation with NLDC. (3) Validation of response by FACTS devices as per settings.	To all ISTS HVDC as well as Intra-State HVDC/FACTS, as applicable

2.19 Periodic Mock Drill Exercises in areas of generation, transmission and distribution of the power sector: ERPC

In compliance to **Disaster Management Plan for Power Sector (2022)** as drafted by CEA(as per Disaster Management Act 2005) and approved by Ministry of Power (Govt. of India) as well as in order to be prepared for any eventuality, periodic mock drill exercises are to be undertaken in various areas of generation, transmission and distribution of the power sector by considering various crisis and disaster situations like an earthquake, floods etc. Depending on the vulnerability of the installations/plant, mock drills to handle such situations need to be undertaken. The utilities are also required to ensure that at least one mock drill exercise for every crisis/disaster situation to which the installation/plant is vulnerable is undertaken in each quarter. The adverse observations made on each event of Mock drill should be taken into account and it should be ensured to prevent occurrence of such undesirable events in the future.

In this regard, Secretary (Security) , Cabinet Secretariat, Govt of India has stressed on undertaking the following measures:

- ✓ Availability of details pertaining to local district authorities, revenue authorities, law enforcement, fire management authorities, etc., across the townships
- ✓ Adequate vetting of personnel/organisation responsible for township security by local law enforcement agencies.

- ✓ Regular conduct of mock drills in the townships, especially evacuation drills with
- ✓ ambulance and drills for handling major fire accidents.

Till now quarterly mock drill reports have been received from NHPC and WBPDC. Mock drill reports regularly received from WBPDC. NTPC has shared mock drill reports for ER thermal generating units for Q2 of FY 2024-25

□ **Action points:**

As per deliberation of **1st MEETING ON REGIONAL DISASTER MANAGEMENT (EASTERN REGION)** dated **09.07.2024**(MOM at **Annex-B.2.19** :

- ◆ At least one mock drill exercise for every crisis/disaster situation to which the installation/plant is vulnerable must be undertaken in each quarter and quarterly report by the utilities to be shared with CEA for review and onward submission to Ministry of Power (Govt of India) . (Action: All thermal GENCOs (Central,IPP), all hydro generating stations, all ISTS licensees . SLDCs to coordinate with respective GENCOs,STUs and DISCOMs within their jurisdiction)
- ◆ Utilities are requested to share the experience on the mock drill exercises and scope for improvements.

Mock Drill reports received from **NTPC, NHPC** and **WBPDC**(on regular basis)

All other GENCOs(Central sector/state/private) and Transmission utilities(Central sector/state/private) are requested to share the details

Deliberation in the meeting

OCC Decision

- ✓ OCC noted that mock Drill reports have been received only from NTPC, NHPC and WBPDC till date.
- ✓ OCC advised all the utilities to:
 - Conduct periodic Mock Drills i.e. at least one mock drill exercise in each quarter to which the installation/plant is vulnerable in order to be prepared for any unforeseen eventuality.
 - Share Quarterly mock drill reports with ERPC which will then be sent to CEA for review & finally report will be submitted to Ministry of Power (Govt of India). This is in compliance to Disaster Management Plan in Power sector and Disaster management Act 2005.
- ✓ Besides all generating utilities, all transmission licensees (ISTS licensee and STUs) were advised to furnish detailed mock drill reports on quarterly basis. SLDCs were requested to coordinate with respective GENCOs,STUs and DISCOMs within their jurisdiction in this regard.

3. PART-C: ITEMS FOR UPDATE/FOLLOW-UP/INFORMATION

3.1. ER Grid performance during December 2024.

The average and maximum consumption of Eastern Region and Max/Min Demand (MW), Energy Export for the month December-2024 were as follows:

AVERAGE CONSUMPTION (MU)	MAXIMUM CONSUMPTION(MU)/ DATE	MAXIMUM DEMAND (MW)	MINIMUM DEMAND (MW)	SCHEDULE EXPORT	ACTUAL EXPORT
		DATE / TIME	DATE / TIME	(MU)	(MU)
428.8 MU	450.4 MU, 30.12.2024	23057 MW, 31.12.2024 at 18:26 Hrs.	14561 MW, 14.12.2024 at 03:26 Hrs.	5731	5684

ERLDC/ERPC may highlight the performance of the ER grid.

Deliberation in the meeting

The grid performance of ER for the month of December 2024 was highlighted.

3.2. Update on Reconductoring of ISTS lines under Eastern Region Expansion Scheme-44: ERPC

- ❖ Several 220 kV transmission lines and substations were implemented in Indian grid along with cross border lines for importing power from Chukha Hydro Electric Plant in Bhutan. The generating station was commissioned in years 1986-88 and the transmission system is now more than 35 years old. Considering the age of conductors and increase in conductor snapping incidences, reconductoring of these transmission lines has become necessary.
- ❖ The matter was deliberated in various OCC forums as well as in 52nd TCC meeting of ERPC.
- ❖ In a meeting was convened by CEA under the chairpersonship of Member (Power System) on 27-08-2024, it was decided that matter of reconductoring of cross border lines will be separately taken up with Bhutan.
- ❖ However, reconductoring of ISTS portion of 220 kV corridor viz. Alipurduar (POWERGRID) – Falakata (WBSETCL) – Birpara (POWERGRID) – Binaguri (POWERGRID) – Siliguri (POWERGRID) – Kishanganj (POWERGRID) – Dalkhola (POWERGRID) – Gazole (WBSETCL) – Malda (POWERGRID), may be taken up under ISTS. Further, reconductoring of intra-state LILO portion of Birpara (POWERGRID) – Alipurduar (POWERGRID) 220 kV D/c line at Falakata (WBSETCL) and Dalkhola – Malda 220 kV D/c line at Gazol (WBSETCL) shall be carried out by WBSETCL matching with HTLS conductor of the main ISTS line in the matching timeframe.

Name of the scheme	Implementation timeframe	Implementation mode	Implementing agency	Estimated Cost (Rs. in Cr)
ERES-44	18 months (15 months on best effort basis) from the date of allocation	RTM	Powergrid	385.77

WBSETCL works associated with reconductoring of ISTS lines

- ❖ In the NCT(National Committee on Transmission) meeting dated 23.10.2024 , the following were decided:
- ✦ WBSETCL shall reductor their following lines sections under intra-state scheme matching with completion of ISTS scheme namely ERES-44:
 - ✓ About 4 km intra-state portion of Alipurduar (POWERGRID) Falakata (WBSETCL) 220 kV D/C line at Falakata end with HTLS conductor of ampacity 1250 A along with necessary upgradation of associated 220 kV bay equipment at Falakata (WBSETCL) end commensurate with rating of HTLS (1250 A).
 - ✓ About 4 km intra-state portion of Birpara (POWERGRID) - Falakata (WBSETCL) 220 kV D/C line at Falakata end with HTLS conductor of ampacity 1250 A along with necessary upgradation of associated 220 kV bay equipment at Falakata (WBSETCL) end commensurate with rating of HTLS (1250 A).
 - ✓ About 2 km intra-state portion of Dalkhola (POWERGRID) - Gazole (WBSETCL) 220 kV D/C line at Gazole end with HTLS conductor of ampacity 1250 A along with necessary upgradation of associated 220 kV bay equipment at Gazole (WBSETCL) end commensurate with rating of HTLS (1250 A).
 - ✓ About 2km intra-state portion of Gazole (WBSETCL) - Malda (POWERGRID) 220 kV D/C line at Gazole end with HTLS conductor of ampacity 1250 A along with necessary upgradation of associated 220 kV bay equipment at Gazole (WBSETCL) end commensurate with rating of HTLS (1250 A).
- ✦ WBSETCL will LILO the Dhalkola - Gazole 220 kV D/C line with 1250 A HTLS under their intra-state scheme for establishment of 220 kV level at their existing 132/33kV Raiganj (WBSETCL) S/S.
- ✦ ISTS licensee and WBSETCL shall coordinate for reconductoring of their respective portion of the lines matching with completion schedule of this scheme.
- It is kindly requested that WBSETCL may note the scope of works (as provided in the minutes of NCT) and coordinate with POWERGRID for matching implementation of their works.
- The **progress report** may be shared on **monthly** basis to **CEA, ERPC** and **CTU**.

As per **222nd OCC** Deliberation:

Powergrid ER-II updated:

Bilateral meeting with Bhutan as well as WBSETCL on finalizing the modalities of reconductoring shall be convened by 15th January 2025. The outcome of the same will be intimated in next OCC.

WBSETCL and Powergrid may respond. Members may discuss.

Deliberation in the meeting

Powergrid ER-II updated:

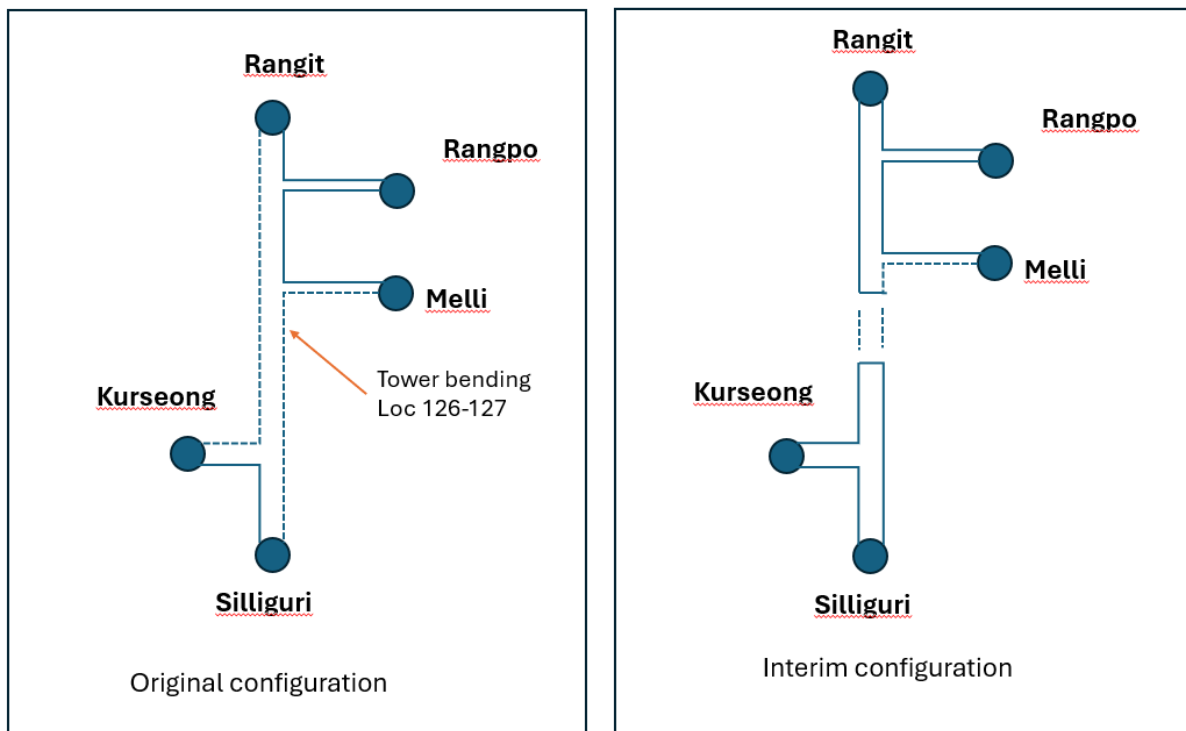
A meeting was convened on 17.01.2025 with Bhutan to finalize the modalities of reconductoring of CTS in Bhutan portion. MOM of the same will be circulated.

OCC Decision:

- OCC advised Powergrid ER-II to expedite the reconductoring works of CTS as per timeline approved in 24th NCT meeting (MOM attached at **Annex-B.3.2**) and share monthly progress report of the same with CEA, CTU and ERPC.
- WBSETCL was advised to coordinate with Powergrid ER-II for carrying out reconductoring works on intra-state portions of 220 kV lines under CTS matching with the timeframe of ISTS lines. This is in compliance to decisions of 24th NCT meeting. Both WBSETCL and Powergrid need to finalize modalities bilaterally and update in next OCC.

3.3. Update on Restoration of 132kV Rangit-Kurseong & 132kV Siliguri-Melli-Rangpo lines: ERLDC

- Due to incessant rain and several landslides, towers at loc. 125-128 of **132 kV Rangit-Kurseong** and **132 kV Siliguri-Melli** got badly affected. Out of which tower at loc. 126,127 got severely damaged. Both the lines were switched on 5th October 2024 on request of PowerGrid.
- Consequently, **Kurseong** and **Melli** (Kalimpong source) are fed through single source of **Siliguri** and **Rangpo** respectively. To ensure reliable power supply at Melli & Kurseong, ERLDC conducted one meeting on **08.10.2024** (online mode) with participants from ERPC, ERLDC, West Bengal SLDC, Sikkim, Powergrid and NHPC Rangit.
- Considering the difficulties & time requirements due to hilly terrain for restoration of the said portion, temporary reconfiguration of these lines was explored to extend additional sources to Melli & Kurseong. It was decided that part of the healthy line of **132 kV Siliguri-Melli** will be reconfigured as **132 kV Siliguri-Kurseong ckt2** as a second source of Kurseong and another healthy portion of **132 kV Siliguri-Melli** will be reconfigured as **132 kV Rangit-Melli** for a second source of Melli.
- After necessary reconfiguration, **132 KV Siliguri-Kurseong-II (interim)** arrangement charged on **9th October** and **132kV-Rangit-Melli (interim)** has been charged tentatively on **22nd October**. POWERGRID intimated that it would take 15-20 Days to restore the original configuration after rectifying damaged towers.



As per 222nd OCC deliberation:

Powergrid ER-II apprised:

- Short pilling for the tower 126-127 is not feasible in the area due to lack of adequate soil strength. The required soil strength is of 8-9 unit however it has been found to have below 4.5 unit.
- Thus, nearby locations have been surveyed with higher soil strength to hold the tower.
- New towers have been diverted from Berhampore and Dalkhola.
- New route for shifting of tower no-127 & 126 has been carried out as it is not possible to reasort the line in same tower foundation.
- Restoration of the said line with diverted route will be completed by 15.03.2025.

222nd OCC Decision:

- OCC advised Powergrid ER-II to expedite restoration activity of original configuration of 132 KV D/C Siliguri-Melli & Rangit-Kurseong Lines to the best feasible extent.
- OCC requested Govt. of West Bengal to extend all possible administrative assistance to Powergrid ER-II for resolving the persistent ROW issues.
- WBSETCL was advised to coordinate with Powergrid ER-II in lowering the existing OPGW of 132 kV WBSETCL lines below the span 126-127 shall be routed underground via approach cable and overhead Powergrid lines shall provide lightning protection to these 132 kV lines of WBSETCL.

Powergrid and WBSETCL may update. Members may discuss.

Deliberation in the meeting

Powergrid updated that the work is in progress. They are trying their best to complete tower restoration within the stipulated timeframe.

3.4. Update on actions taken to prevent repeated tripping of 132 kV Chuzachen-Rangpo D/C: ERPC

- **132 kV Chuzachen-Rangpo D/C** tripped more than **10 times** since **May'24** causing total generation loss occurred at Chuzachen HEP (110 MW) due to sequential tripping of both lines in three instances.
- In most of the trippings, **phase to phase** fault was reported with a distance of around **12 km** from **Rangpo**.
- A joint committee with members from Powergrid, Chuzachen HEP and Sikkim transmission wing, Dept. of Power (Sikkim) was constituted for joint site inspection. The committee submitted its report after visiting the site on 01.10.2024.
- Committee observations during the visit were as below:
 - ✓ Critical tree infringement and bamboo trees between loc. 27-29 along the corridor.
 - ✓ Severe infringement along with several flashover marks on the conductor and burnt trees along the corridor.
 - ✓ Less ground clearance b/w loc. 28-29 for Ckt-1 (4.1 meter instead of minimum requirement of 6.1 meter).
- **The Committee recommended two new towers to be constructed between loc. 28-29 and 35-36 (one each) and hill cutting along the periphery of tower no. 27 to improve ground clearance.**
- Considering the severity of less ground clearance and potential of damage to human life, the recommended measures need to be implemented on an immediate basis.
- As per **221st OCC** Deliberation:
In absence of Sikkim representative, the latest status could not be updated

The same matter was discussed in the **220th OCC** Meeting wherein **OCC advised Sikkim to expedite in implementation of Committee recommendations i.r.o increasing ground clearance by construction of a new tower(between loc. 28-29) and hill cutting (around tower no. 27). OCC also advised to update the same to ERPC/ERLDC every week.** However, the update has yet not been received.

222nd OCC Decision

OCC advised Sikkim SLDC and representative from Sikkim transmission wing (Govt. of Sikkim) to attend the next OCC meeting for updating the status on actions taken as per Committee recommendations.

Sikkim may update. Members may discuss.

Deliberation in the meeting

Sikkim representative was not present in the meeting.

3.5. Update on Restriction of Talcher-Kolar HVDC Bi-pole: ERPC

- ❖ HVDC Talcher-Kolar Pole-2 was operated at reduced capacity from March 24, 2024, due to problem with the R-phase converter transformer at the Talcher end. There was no spare converter transformer at Talcher and subsequently, it was decided to shift the spare converter transformer from HVDC Kolar to Talcher (PG)
- ❖ Since April'24, either pole of HVDC blocked 5 times out of which, in 4 times the other pole went to ground return mode instead of metallic return mode resulting in overloading of

400kV Talcher-Meeramundali D/C and generation backdown was done either manually or through operation of SPS.

- ❖ Meanwhile, power order of Talcher-Kolar poles was reduced to 1500MW from 2000MW due to which other critical lines of the region were getting overloaded. **Accordingly, Talcher generation was curtailed in the range of 800-900MW during peak hours for approximately 50 days in the summer, impacting both Eastern Region (ER) and Southern Region (SR) beneficiaries.** Later on, with decrease in ambient temperature HVDC Talcher-Kolar power order was restored and generation back down was withdrawn.
- ❖ **To mitigate the risk of similar power supply challenges experienced during summer 2024, Odisha (PG) may share the replacement plan of existing Converter Transformer.**

222nd OCC deliberation:

ERLDC raised concern on generation backdown of NTPC Talcher and consequent challenge of demand portfolio management to be faced by ER beneficiaries in upcoming Summer 2025 if the converter transformer is not charged and put to service at HVDC Talcher station at the earliest.

Powergrid Odisha updated:

Formal clearance from Powergrid Corporate is still pending for charging the new converter transformer at HVDC Talcher station.

222nd OCC Decision

OCC advised Powergrid Odisha to present a detailed report on the same in next OCC.

As per latest update:

1. It has already been mailed to ERLDC vide mail reference on dated 03 July 2024 to operate the converter transformer (Pole-2, R Phase) in full load capacity. (Annexure-I). Further, water sprinkling arrangement has been installed to keep the oil temperature of the said transformer under control.
2. During the 221st OCC meeting on 09.12.24 of SRPC, forum deliberated about the healthiness of Converter transformer at Talcher and advised for close monitoring of converter transformer (Annexure-II)
3. Presently, C₂H₂ is in declining trend, other gases are slowly increasing. It is now under close monitoring. Matter has already been taken up with competent authority for further advice. (Annexure- III)
4. **As the said Conv Transformer has been in operation at rated capacity for six month w.e.f 03.07.2024 without further increase in C₂H₂ and the other gases being in constant monitoring, it is apparent that there is no immediate danger to the transformer unit , However , as the spare unit is readily available at site , the same can be put into service in case of requirement.**

Powergrid Odisha may further update. Members may discuss.

Deliberation in the meeting

Powergrid Odisha updated:

New Converter Transformer shall be kept as cold spare and the existing converter transformer can be kept in continuous service without compromising the rated power transfer capability of

Talcher-kolar HVDC Bipole. This is based on close monitoring of acetylene and other gases as part of healthiness assessment of the existing converter transformer.

OCC Decision

- OCC noted. Powergrid Odisha was advised to keep the new converter transformer as hot spare in case of observing any deterioration in healthiness of the existing converter transformer.
- This is to facilitate early replacement and thereby avoiding possible generation backdown at NTPC Talcher in upcoming Summer.

3.6. Regarding Non-Submission of Forecasting Data from States: ERLDC

The **Clause 2 of Regulation 31 of IEGC 2023** has mandated all the SLDCs to timely submit the demand estimate data to the respective RLDC and RPC.

The demand estimation data provided by SLDCs will be required in resource adequacy planning and regional load forecasts conducted by the RLDC.

Currently, the day ahead data is regularly received from all the states except Sikkim.

221ST OCC decision:

- ◆ OCC advised all SLDCs for strictly adhering to the schedule of demand estimation as mandated in IEGC 2023, timely sharing with ERLDC as well as uploading of forecasting error on their respective websites.
- ◆ OCC advised all SLDCs for strictly adhering to the schedule of demand estimation as mandated in IEGC 2023, timely sharing with ERLDC in specified format as well as uploading of forecasting error on their respective websites.
- ◆ SLDCs who are submitting day ahead forecast were advised to also share the forecasting data for their respective control areas on weekly as well as monthly basis with ERLDC.
- ◆ All SLDCs were also urged to regularly furnish resource adequacy data besides demand forecast.
- ◆ SLDC Odisha was advised to expedite implementation of the demand forecasting software and positively update the status in next OCC.

Latest Forecast receipt status is shown below:

DATA RECEIPT STATUS Y FOR THE MONTH OF	FEB 25 RA
Bihar	NO
DVC	NO
Jharkhand	YES
Odisha	NO
Sikkim	NO
West Bengal	NO

Weekly Resource Adequacy:

DATA RECEIPT STATUS FOR THE WEEK OF	02.12.2024 to 08.12.2024 _RA	09.12.2024 to 15.12.2024 _RA	16.12.2024 to 22.12.2024 _RA	23.12.2024 to 29.12.2024 _RA
Bihar	NO	NO	NO	NO
DVC	NO	NO	NO	NO
Jharkhand	YES	YES	YES	YES
Odisha	NO	NO	NO	NO
Sikkim	YES	YES	YES	YES
West Bengal	NO	NO	NO	NO

Weekly Forecast:

DATA RECEIPT STATUS BY 1ST WORKING DAY FOR THE WEEK OF	25.11.24 TO 01.12.2024_FC	02.12.2024 TO 08.12.2024_FC	09.12.24 TO 15.12.24_FC	16.12.2024 TO 22.12.2024_FC	23.12.2024 TO 29.12.2024_FC
Bihar	NO	NO	NO	YES	YES
DVC	YES	YES	YES	YES	YES
Jharkhand	NO	YES	NO	YES	YES
Odisha	NO	NO	NO	NO	NO
Sikkim	YES	YES	YES	YES	YES
West Bengal	NO	NO	NO	NO	NO

Resource adequacy Data Receipt Status

DATA RECEIPT STATUS FOR THE WEEK OF	02.12.2024 to 08.12.2024 _FOR ECAST	09.12.2024 to 15.12.2024 _FORECAST	16.12.2024 to 22.12.2024 _FORECAST	23.12.2024 to 29.12.2024 _FORECAST
Bihar	YES	NO	YES	NO
DVC	YES	YES	YES	YES
Jharkhand	YES	YES	YES	YES
Odisha	YES	YES	YES	YES

Sikkim	YES	YES	YES	YES
West Bengal	NO	NO	NO	NO

Daily Resource Adequacy:

DATE	Bihar	DVC	Jharkhand	Odisha	Sikkim	West Bengal
	RA	RA	RA	RA	RA	RA
01-12-2024	NO	NO	YES	NO	YES	NO
02-12-2024	NO	NO	YES	NO	YES	NO
03-12-2024	NO	NO	YES	NO	YES	NO
04-12-2024	NO	NO	YES	NO	YES	NO
05-12-2024	NO	NO	YES	NO	YES	NO
06-12-2024	NO	NO	YES	NO	YES	NO
07-12-2024	NO	NO	YES	NO	YES	NO
08-12-2024	NO	NO	YES	NO	YES	NO
09-12-2024	NO	NO	YES	NO	YES	NO
10-12-2024	NO	NO	YES	NO	YES	NO
11-12-2024	NO	NO	YES	NO	YES	NO
12-12-2024	NO	NO	YES	NO	YES	NO

13-12-2024	NO	NO	YES	NO	YES	NO
14-12-2024	NO	NO	YES	NO	YES	NO
15-12-2024	NO	NO	YES	NO	YES	NO
16-12-2024	NO	NO	YES	NO	NO	NO
17-12-2024	NO	NO	YES	NO	NO	NO
18-12-2024	NO	NO	YES	NO	YES	NO
19-12-2024	NO	NO	YES	NO	YES	NO
20-12-2024	NO	NO	YES	NO	YES	NO
21-12-2024	NO	NO	YES	NO	YES	NO
22-12-2024	NO	NO	YES	NO	YES	NO
23-12-2024	NO	NO	YES	NO	YES	NO
24-12-2024	NO	NO	YES	NO	YES	NO
25-12-2024	NO	NO	YES	NO	YES	NO
26-12-2024	NO	NO	YES	NO	YES	NO
27-12-2024	NO	NO	YES	NO	YES	NO
28-12-2024	NO	NO	YES	NO	YES	NO

29-12-2024	NO	NO	YES	NO	YES	NO
30-12-2024	NO	NO	YES	NO	YES	NO
31-12-2024	NO	NO	YES	NO	YES	NO

Daily Forecast:

DATE	Bihar Forecast	DVC FC	Jharkhand FC	Odisha FC	Sikkim FC	West Bengal FC
01-12-2024	NO	YES	YES	YES	YES	YES
02-12-2024	NO	YES	YES	YES	YES	YES
03-12-2024	NO	YES	YES	YES	YES	YES
04-12-2024	YES	YES	YES	YES	YES	YES
05-12-2024	YES	YES	YES	YES	YES	YES
06-12-2024	NO	YES	YES	YES	YES	YES
07-12-2024	YES	YES	YES	YES	YES	YES
08-12-2024	YES	YES	YES	YES	YES	YES
09-12-2024	NO	YES	YES	YES	YES	YES
10-12-2024	NO	YES	YES	YES	YES	YES
11-12-2024	YES	YES	YES	YES	YES	YES
12-12-2024	YES	YES	YES	YES	YES	YES
13-12-2024	YES	YES	YES	YES	YES	YES
14-12-2024	YES	YES	YES	YES	YES	YES
15-12-2024	YES	YES	YES	YES	YES	YES
16-12-2024	YES	YES	YES	YES	YES	YES
17-12-2024	YES	YES	YES	YES	YES	YES
18-12-2024	YES	YES	YES	YES	YES	YES
19-12-2024	YES	YES	YES	YES	YES	YES
20-12-2024	YES	NO	YES	NO	YES	YES
21-12-2024	NO	YES	YES	YES	YES	YES
22-12-2024	YES	YES	YES	YES	YES	YES
23-12-2024	YES	YES	YES	YES	YES	YES
24-12-2024	NO	YES	YES	YES	YES	YES
25-12-2024	NO	NO	YES	YES	YES	YES
26-12-2024	NO	NO	YES	YES	YES	YES
27-12-2024	NO	YES	YES	YES	YES	YES
28-12-2024	YES	YES	YES	NO	YES	YES
29-12-2024	YES	YES	YES	YES	YES	YES

30-12-2024	YES	YES	YES	YES	YES	YES
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Hence it is again requested to all the concerned for timely submission of demand estimation data to ERLDC. This collaboration is essential for effective planning and preparedness to meet the region's electricity demands efficiently and reliably.

ERLDC may explain and all SLDCs may update. Members may discuss.

Deliberation in the meeting

OCC Decision

- *OCC advised all SLDCs for strictly adhering to the schedule of demand estimation as mandated in IEGC 2023, timely sharing with ERLDC in specified format as well as uploading of forecasting error on their respective websites.*
- *SLDCs who are submitting day ahead forecast were advised to also share the forecasting data for their respective control areas on weekly as well as monthly basis with ERLDC.*
- *All SLDCs were urged to regularly furnish resource adequacy data besides demand forecast.*
- *SLDC Odisha was advised to expedite implementation of the demand forecasting software and positively update the status in next OCC.*

3.7. Non-Submission of FRC data in stipulated timeframe: ERLDC

Adhering to IEGC clauses **30.8** and **30.10.(a)** to **30.10.(q)**, generating stations within the Eastern region are required to submit essential data to ERLDC within two days of receiving a notification regarding a reportable frequency event. Additionally, according to clause 30.10.(n), all control areas within the eastern region must assess their frequency response characteristics and share the evaluation, along with high-resolution data, with the ERLDC. Therefore, timely submission of primary response data is crucial for compliance with the IEGC.

222nd OCC decision:

All generators were advised to regularly share high resolution data against each reportable frequency event with ERLDC on time to facilitate accurate assessment of FRP for respective control areas.

The latest data receipt status is given below: (as on **11.01.2025**)

STATIONS	04.01.2025 19:23
FSTPP #STG 1 & 2	Received
FSTPP # STG 3	Received
KhSTPP #STG 1	Pending
KhSTPP #STG 2	Received
TSTPP #STG 1	Received
Barh stage-1	Pending
Barh stage-2	Pending
BRBCL	Received
Darlipalli	Received
North Karanpura	Received
NPGC	Received
TEESTA V	PLANT OUT
GMR	Received
MPL	Received
ADHUNIK	Pending
JITPL	Pending
INDBHARAT	Pending
TASHIDING	Pending
TEESTA III	PLANT OUT
DIKCHU	Received
Bihar	Pending
Jharkhand	Pending
DVC	Pending
OPTCL	Pending
WB	Pending
Updated as on	10.01.2025

Hence all are again requested to follow the stipulated timeline and submit the data to ERLDC and also fill the google sheet below to include the email address where notifications of reportable events should be sent.

https://docs.google.com/spreadsheets/d/1slvAOmQIEQVIMn0LnB78eKMa2sz2QYICZ-sPEpeV_jk/edit?usp=sharing

ERLDC may explain. Members may discuss.

Deliberation in the meeting

OCC Decision

All generators were advised to regularly share high resolution data against each reportable frequency event with ERLDC on time to facilitate accurate assessment of FRP for respective control areas.

3.8. Mock Black Start: ERLDC

- As per IEGC Reg. 34.3: A mock trial run of the procedure for different sub-systems including black-start of generating units along with grid forming capability of inverter-based

generating station and VSC-based HVDC black-start support at least once a year under intimation to the concerned SLDC and RLDC.

- Also, diesel generator sets and other standalone auxiliary supply source to be used for black start shall be tested on a weekly basis and the test reports are to be shared to the concerned SLDC, RLDC and NLDC on a quarterly basis.
- As per IEGC Reg. 34.4: Simulation studies are to be carried out by each user in coordination with RLDC for preparing, reviewing and updating the restoration procedures considering the following:

- (a) Black start capability of the generator;
- (b) Ability of black start generator to build cranking path and sustain island;
- (c) Impact of block load switching in or out;
- (d) Line/transformer charging;
- (e) Reduced fault levels;
- (f) Protection settings under restoration condition

As per intimation received in Winter Preparedness 2024 dated 12.11.2024 hosted by ERLDC, a tentative date was received from each user regarding the mock drill of black start of generating units under their jurisdiction. The same is listed below:

Sl. No.	Name of Hydro Station	Schedule of Mock Black Start	Tentative date as on 12.11.2024	2024 Actual Date of Test
1	U. Kolab	Jun-24	Jan-24	
2	Balimela	Jul-24	Nov-24	
3	Rengali	Jun-24	Nov-24	
4	Burla	Jul-24	Jan-24	
5	U. Indravati	May-24	N/A	Sep-24
6	Maithon	Dec-24	2nd week of Dec-24	
7	TLDP-III	Oct-24	Nov-24 – Dec-24	
8	TLDP-IV	Oct-24	Nov-24 – Dec-24	
9	Subarnarekha	Sep-2024 4th week	1st week of Dec-24	3 rd December 2024
10	Teesta-V	N/A	N/A	N/A
11	Chuzachen	Oct-24	Yet to be informed	
12	Teesta-III	N/A	N/A	N/A
13	Jorethang	Dec-2024 3rd week	Yet to be informed	
14	Tashiding	2nd week of Dec 2024	Yet to be informed	
15	Dikchu	N/A	Yet to be informed	N/A

16	Rongnichu	Mar-24	Test already conducted	18th March and 20th March 2024
17	Mangdechu		Yet to be informed	

All the users are requested to confirm dates for mock drill of black start of each generating unit. Also, the users are requested to share the data required simulation studies before the scheduled date of mock drill.

Deliberation in the meeting

OCC Decision

- *OCC advised all black start capable hydro generating units of ER to update their schedule of mock black start to ERLDC at the earliest. This is in compliance to IEGC 2023 (CERC).*
- *OCC further opined that in case of non-receipt of further update by respective hydro generating units the proposed tentative schedule of mock black start may be considered as final. Thereafter all black start capable hydro units shall have to conduct mock black start at least once in a year as mandated in IEGC 2023.*

4. PART-D: OPERATIONAL PLANNING

4.1. Anticipated power supply position during February-2025

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of February 2025 is prepared by ERPC Secretariat (**Annexure D.1**) on the basis of LGBR for 2024-25 and feedback of constituents, keeping in view that the units are available for generation and expected load growth etc.

Members may update.

Deliberation in the meeting

The updated anticipated power supply position for February 2025 is provided at **Annexure D.1**.

4.2. Major Thermal Generating Units/Transmission Element outages/shutdown in ER Grid (as on as on 16-01-2025)

a) **Thermal Generating Stations outage report:**

SL No	STATION	STATE	AGENCY	UNIT NO	CAP ACIT Y (MW)	REASON(S)	OUTAGE DATE
1	BARAUNI TPS	BIHAR	NTPC	7	110	Poor condenser vacuum	19-Jul-2023
2	BARAUNI TPS	BIHAR	NTPC	6	110	Low vacuum	22-Jul-2023
3	MEJIA TPS	DVC	DVC	3	210	Tube leakage in economiser	14-Dec-2024
4	IB.TPS	ODISHA	OPGC	2	210	Boiler Tube Leakage	14-Dec-2024
5	Sterlite	ODISHA	SEL	4	600	Ash evacuation problem	14-Dec-2024
6	MEJIA TPS	DVC	DVC	6	250	Boiler Tube Leakage	15-Dec-2024
7	Sterlite	ODISHA	SEL	2	600	APH problem	15-Dec-2024
8	FSTPP	WEST BENGAL	NTPC	4	500	Boiler tube leakage	14-Dec-2024
9	SANTALDIH TPS	WEST BENGAL	WBPDC	6	250	Annual Overhauling	23-Nov-2024
10	HALDIA ENERGY LTD	WEST BENGAL	HEL,CESC	1	300	Yearly maintenance activities	15-Dec-2024
11	CHANDRAPURA TPS	DVC	DVC	8	250	Annual overhauling	15-Dec-2024

12	KHSTPP	BIHAR	NTPC	5	500	Annual overhauling	14-Nov-2024
13	KBUNL	BIHAR	NTPC	2	195	Capital overhauling	15-Nov-2024
14	MPL	JHARKHAND	MPL	2	525	Annual Overhauling	22-Nov-2024
15	FSTPP	WEST BENGAL	NTPC	1	200	Capital Overhauling	01-Dec-2024
16	NABINAGAR(NPGC)	BIHAR	NTPC	3	660	Annual Overhauling	06-Dec-2024

All Generating stations are requested to update expected restoration time and reason outage to ERLDC/ERPC on weekly basis in case of any change at their end.

b) Major Generating stations Out on Reserve Shutdown due to low system demand:

SL No	STATION	STATE	AGENCY	UNIT NO	CAPACITY (MW)	REASON(S)	OUTAGE DATE
1	SOUTHERN	WEST BENGAL	CESC	1	67.5	Low system demand	14-Dec-2024
2	SOUTHERN	WEST BENGAL	CESC	2	67.5	Low system demand	11-Dec - 2024

c) Hydro Unit Outage Report:

S. NO	STATION	STATE	AGENCY	UNIT NO	CAPACITY (MW)	REASON(S)	OUTAGE DATE
1	TEESTA STG III Hep	SIKKIM	TUL	1	200	Sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in Teesta River and damage of Teesta III Dam & downstream Powerhouses	04-Oct-2023
2	TEESTA STG III Hep	SIKKIM	TUL	2	200		
3	TEESTA STG III Hep	SIKKIM	TUL	3	200		
4	TEESTA STG III Hep	SIKKIM	TUL	4	200		
5	TEESTA STG III Hep	SIKKIM	TUL	5	200		
6	TEESTA STG III Hep	SIKKIM	TUL	6	200		
7	DIKCHU Hep	SIKKIM	SKPPL	2	48	Sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in Teesta River and damage of Teesta III Dam & downstream Powerhouses	04-Oct-2023

8	TEESTA HPS	SIKKIM	NHPC	1	170	Sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in Teesta River and damage of Teesta III Dam & downstream Powerhouses	04-Oct-2023
9	TEESTA HPS	SIKKIM	NHPC	2	170		
10	TEESTA HPS	SIKKIM	NHPC	3	170		
11	TASHIDING	SIKKIM	DANS	1	48.5	Shaft Seal Replacement work	01-Dec-2024
12	RANGIT HPS	SIKKIM	NHPC	3	20	Initially unit was taken out for replacement of Main Inlet Valve (MIV) Seal, later unit was taken under Capital Overhauling from 00:00 hrs of 27.12.2024.	25-Dec-2024
13	TASHIDING	SIKKIM	DANS	2	48.5	Wicket gate shear pin failure alarm appeared. After inspection shear pin NO-13 found broken.	16-Jan-2025
14	CHIPLIMA HPS / HIRAKUD II	ODISHA	OHPC	1	24	Capital Overhauling	15-Dec-2023
15	BURLA HPS/HIRAKUD I	ODISHA	OHPC	2	49.5	Capital Maintenance	26-Nov-2024
16	INDRAVATI	ODISHA	OHPC	3	150	For replacement of Main Inlet Valve (MIV)	17-Dec-2024
17	BALIMELA HPS	ODISHA	OHPC	3	60	Rectification of vibration of generator	26-Dec-2024
18	RENGALI HPS	ODISHA	OHPC	3	50	Annual Overhauling	01-Jan-2025
19	INDRAVATI	ODISHA	OHPC	1	150	Fault in governor	06-Jan-2025
20	BALIMELA HPS	ODISHA	OHPC	6	60	Initially unit was out due to Severe water leakage from turbine, later unit was taken under Repair and maintenance work from 00:00 hrs of 16.01.25	06-Jan-2025
21	U. KOLAB	ODISHA	OHPC	1	80	Capital Overhauling	07-Jan-2025
22	BALIMELA HPS	ODISHA	OHPC	5	60	Repair and maintenance work	16-Jan-2025

d)Long outage report of transmission lines (As on 16.01.2025):

Transmission Element / ICT	Outage From	Reasons for Outage
220/132KV 100 MVA ICT II AT LALMATIA	22.01.2019	220/132KV, 100MVA Transformer (NTPC side) is charged on 07.02.2024 from HV side on no load. Now, it is in idle charged condition
220KV-FSTPP-LALMATIA-I	21.04.2021	Two nos. of tower collapsed on 29.05.2024 near to Lalmatia GSS in the Loc. No. 246 & 247. Presently 220 kV Farakka-Lalmatia line is charged (from loc no 241 to loc 84) at 132 kV voltage level

		for anti-theft purpose by tapping at loc. No. 100-101.
220KV-WARIA-BIDHANNAGAR-1 & 2	08.06.2022	To control overloading of 220 kV Waria-DSTPS (Andal) D/C line
132KV-BARHI-RAJGIR-1	25.03.2023	Dismantling of tower no. 227, 228, and 229 crossing the premises of Mahabodhi Cultural centre along with Destraining of conductor of both circuits and Earth wire between tension tower no. 218-237 in same line.
132KV-NALANDA-BARHI(DVC)-1	25.03.2023	
400KV-RANGPO-TEESTA-V-1 & 2	04.10.2023	Tower near gantry of Teesta V powerhouse collapsed due to sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in TEESTA river and damage of Teesta III Dam & downstream Powerhouses
400KV-TEESTA-III-RANGPO-1	04.10.2023	Hand tripped from Teesta-III end due to sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in TEESTA river and damage of Teesta III Dam & downstream Powerhouses
400KV-TEESTA-III-DIKCHU-1	04.10.2023	
400KV-JHARSUGUDA-ROURKELA-4	01.04.2024	Reconductoring work
132KV-RANGPO-SAMARDONG-1	22-05-2024	Rangpo: Y-N fault with fault distance 0.157 KM 14.562kA Samardong: NA
220KV-RAJARHAT-NEW TOWN(AA-II)-2	10-07-2024	Initially line out due to rectification of gas leakage problem from B-Ph breaker pole. Line declared under breakdown after charging attempt after return of shutdown. After that fault found in b-phase cable.
132KV-RANGPO-SAMARDONG-2	02-08-2024	132/66/11kV Samardong ss have become inaccessible due to continuous raining and landslides. It is very difficult for round the clock deployment of shift manpower due to road non-accessibility
400KV/220KV 315 MVA ICT 2 AT INDRAVATI.	09-09-2024	Tripped due to Over Flux protection operated
400KV/220KV 315 MVA ICT 1 AT NORTH KARANPURA	12-09-2024	Tripped on Differential protection
132KV-MADHEPURA (BH)-SAHARSA(PMTL)-1	23.09.2024	To control loading on 132kV Madhepura-Saharsa line
132KV-MELLI-SILIGURI-1	05-10-2024	S/d for inspection of tower of Loc.127 found twisted due to heavy landslide & heavy continuous rainfall in Soom Tea Garden under Darjeeling section. Line charged as 132 KV Siliguri-Melli II (Interim arrangement) at 19:20 hrs on 09-10-2024. This interim arrangement is obtained by horizontal jumpering at Loc-129 after disconnecting main jumper for both Rangit & Melli side.
132KV-RANGIT-KURSEONG-1	05-10-2024	S/d for inspection of tower of Loc.127 found twisted due to heavy landslide & heavy continuous rainfall in Soom Tea Garden under Darjeeling section. Line charged as 132 KV Siliguri-Melli II (Interim arrangement) at 19:20 hrs on 09-10-2024. This

		interim arrangement is obtained by horizontal jumpering at Loc-129 after disconnecting main jumper for both Rangit & Melli side.
400KV/220KV 315 MVA ICT 1 AT TSTPP	01-11-2024	Tripped on PRD protection
400KV-JHARSUGUDA-ROURKELA-2	04-11-2024	Reconductoring Works
132KV-RAXAUL(NEW)-PARWANIPUR-1 & 2	14-11-2024	The loop in loop out work at Nepal side
132KV-PATRATU-PATRATU-1 & 2	16-11-2024	Diversion/Heightening of line due to inadequate clearance from under construction railway Line by PVUNL
132KV-CHUZACHEN-RANGPO-1	29-11-2024	Rangpo : B-N ,Z-1, 7.8 KA, 5.61 KM
400KV-ALIPURDUAR (PG)-PUNASANGCHUN-JIGMELING-2	02-12-2024	SD Availed by Bhutan for rectify/Replace the LA for 400kV Jigmeling _Puna_ALI-1.
400KV-KHSTPP-BARH-2	07-12-2024	Uprating of bay & line equipment's
400KV-BINAGURI-TALA-1	09-12-2024	AMP Work
400KV-ALIPURDUAR (PG)-PUNASANGCHUN-JIGMELING-1	10-12-2024	Jumper connection and interconnection removal at Kamichu
400KV-PATNA-BARH-1 & 2	15-12-2024	Jumpering work in LILO portion at GSS Bakhtiyarpur
400KV/220KV 315 MVA ICT 4 AT JEERAT	21-12-2024	ABNORMAL SOUND OBSERVED.
400KV-DURGAPUR-KHSTPP-1	03-01-2025	Shifting of line bay equipment under installation of 63 MVAR line reactor at NTPC Kahalgaon
400KV-MALDA(PG)-NEW PURNEA-1	04-01-2025	Shifting of tower
400KV-MALDA(PG)-NEW PURNEA-2	06-01-2025	Shifting of tower
220KV-DALKHOLA (PG)-GAZOLE-1	06-01-2025	To control loading of 220kV Malda-Gazole D/C
220KV-DALKHOLA (PG)-GAZOLE-2	07-01-2025	To control loading of 220kV Malda-Gazole D/C
400KV/220KV 315 MVA ICT 1 AT TSL KALINGANAGAR	08-01-2025	Annual maintenance work

Transmission licensees/ Utilities are requested to update expected restoration date & work progress regarding restoration regularly to ERLDC/ERPC on monthly basis by 5th of each month so that status of restoration can be reviewed in OCC. Utilities are also requested to update outage of any elements within their substation premises like isolator/breaker to ERLDC/ERPC regularly. (Reported as per Clause 5.2(e) of IEGC)

Deliberation in the meeting

Members noted.

4.3. Commissioning of new units and transmission elements in Eastern Grid in the month of December -2024.

The details of new units/transmission elements commissioned in the month of December 2024 based on the inputs received from beneficiaries:

NEW ELEMENTS COMMISSIONED DURING December, 2024

GENERATING UNITS

क्र. Sl. No.	स्थान Location	मालिक/यूनिट का नाम OWNER/UNIT NAME	यूनिट संख्या/स्रोत Unit No./Source	संकलित क्षमता (मेगावाट) Capacity added (MW)	कुल/स्थापित क्षमता (मेगावाट) Total/Installed Capacity (MW)	दिनांक DATE	टिप्पणी Remarks
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NIL

आई.सी.टी/जी.टी/ ICTs/ GTs / STs

क्र. Sl. No.	एजेंसी/मालिक Agency/Owner	उप-केन्द्र SUB-STATION	आईसीटी संख्या ICT NO	वोल्टेज (केवी) Voltage Level (kV)	क्षमता (एमवीए) CAPACITY (MVA)	दिनांक DATE	टिप्पणी Remarks
1	MPL	MAITHON POWER LIMITED	ST-3	400/11	80	26-12-2024	
2	OCPL	DARLIPALI	ICT-1	132/33	31.5	27-12-2024	Dedicated for Manoharpur mines (OCPL)
3	OCPL	DARLIPALI	ICT-2	132/33	31.5	28-12-2024	Dedicated for Manoharpur mines (OCPL)

TRANSMISSION LINES

क्र. Sl. No.	एजेंसी/मालिक Agency/Owner	लाइन का नाम LINE NAME	लंबाई (किमी) Length (KM)	कंडक्टर प्रकार Conductor Type	दिनांक DATE	टिप्पणी Remarks
1	JUSNL	400KV-CHANDWA-LATEHAR(JUSNL)-2	41.216	ACSR Moose	14-12-2024	
2	JUSNL	400KV-CHANDWA-LATEHAR(JUSNL)-1	41.216	ACSR Moose	14-12-2024	
3	BSPTCL	220KV-GAYA(PG)-BODHGAYA-3	31.0	ACSR Zebra	16-12-2024	
4	OCPL	33KV-DARLIPALLI (NTPC)-MANOHARPUR-1	12.20 (11.7 km OH line +0.5 km U/G XLPE Cable)	AAAC	31-12-2024	Dedicated for Manoharpur mines (OCPL)

लिलो / प्रेषण लाइन की पुनर्व्यवस्था / LILO/RE-ARRANGEMENT OF TRANSMISSION LINES

क्र. Sl. No.	एजेंसी/मालिक Agency/Owner	लाइन का नाम / लिलो पर Line Name/LILO at	लंबाई (किमी) Length (KM)	कंडक्टर प्रकार Conductor Type	दिनांक DATE	टिप्पणी Remarks
1	Power Dept, Govt. of Sikkim	220KV-Legship-NEW MELLI-1	10.25	TWIN MOOSE ACSR	31-12-2024	LILO of 220 kV Tashiding HEP to New Melli -I at 220/132 kV Legship Pooling station

बस/लाइन रिएक्टर / BUS/LINE REACTOR

क्र. Sl. No.	एजेंसी/मालिक Agency/Owner	एलेमेंट का नाम Element Name	उप-केन्द्र SUB-STATION	वोल्टेज (केवी) Voltage Level (kV)	दिनांक DATE	टिप्पणी Remarks
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NIL

बस / BUS

क्र. Sl. No.	एजेंसी/मालिक Agency/Owner	एलेमेंट का नाम Element Name	उप-केन्द्र SUB-STATION	वोल्टेज (केवी) Voltage Level (kV)	दिनांक DATE	टिप्पणी Remarks
NIL						
एच.वी.डी.सी/ए.सी फिल्टर बैंक/फैक्ट्स डिवाइस संबद्ध प्रणाली / HVDC /AC Filter bank / FACTS DEVICE associated System						
क्र. Sl. No.	एजेंसी/मालिक Agency/Owner	एलेमेंट का नाम Element Name	उप-केन्द्र SUB-STATION	वोल्टेज (केवी) Voltage Level (kV)	दिनांक DATE	टिप्पणी Remarks
NIL						
बे / BAYS						
क्र. Sl. No.	एजेंसी/मालिक Agency/Owner	एलेमेंट का नाम Element Name	उप-केन्द्र SUB-STATION	वोल्टेज (केवी) Voltage Level (kV)	दिनांक DATE	टिप्पणी Remarks
1	BSPTCL	132KV MAIN BAY OF BANMANKHI AT SAHARSA(New)	SAHARSA(New)	132	07-12-2024	
2	BSPTCL	132KV MAIN BAY OF SAHARSA (BSPTCL)-1B AT SAHARSA(New)	SAHARSA(New)	132	07-12-2024	
3	BSPTCL	132KV MAIN BAY OF SAHARSA-2U AT SAHARSA(New)	SAHARSA(New)	132	07-12-2024	
4	BSPTCL	132KV MAIN BAY OF UDAKISHANGANJ AT SAHARSA(New)	SAHARSA(New)	132	07-12-2024	
5	PVUNL	400KV TIE BAY OF ST 1 AND LINE 2 AT PVUNL	PVUNL	400	16-12-2024	
6	PVUNL	400KV MAIN BAY OF LINE-2 AT PVUNL	PVUNL	400	16-12-2024	
7	PVUNL	400KV MAIN BAY OF ST-1 AT PVUNL	PVUNL	400	16-12-2024	
8	PVUNL	400KV TIE BAY OF ST 3 AND LINE 5 AT PVUNL	PVUNL	400	21-12-2024	
9	PVUNL	400KV MAIN BAY OF LINE 5 AT PVUNL	PVUNL	400	21-12-2024	
10	JUSNL	400KV MAIN BAY OF PATRATU -2 at LATEHAR(JUSNL)	LATEHAR	400	24-12-2024	
11	PVUNL	400KV MAIN BAY OF ST-2 AT PVUNL	PVUNL	400	24-12-2024	
12	PVUNL	400KV TIE BAY OF LINE-4 AND ST-2 AT PVUNL	PVUNL	400	24-12-2024	
13	Power deptt., Govt. of Sikkim	220KV MAIN BAY OF NEW MELLI-1 AT 220/132 KV LEGSHIP POOLING SUBSTATION	Legship	220	31-12-2024	
14	OCPL	132KV MAIN BAY OF 31.5 MVA ICT-1 AT DARLIPALI	DARLIPALI	132	27-12-2024	
15	OCPL	132KV MAIN BAY OF 31.5 MVA ICT-2 AT DARLIPALI	DARLIPALI	132	28-12-2024	
16	BSPTCL	220KV MAIN BAY OF GAYA(PG) -3 AT BODHGAYA	Bodhgaya	220	16-12-2024	

Members may note.

Deliberation in the meeting

Members noted.

4.4. UFR operation during the month of December 2024

Frequency profile for the month as follows:

MONTH	MAX	MIN	% LESS IEGC BAND	% WITHIN IEGC BAND	% MORE IEGC BAND
	(DATE/TIME)	(DATE/TIME)			
December, 2024	50.42 Hz on 15- 12-2024 at 06:03 hrs	49.49 Hz on 22- 12-2024 at 09:07 hrs	5.6	76.4	18.0

Hence, no report of operation of UFR has been received from any of the constituents.

Members may note.

Deliberation in the meeting

Members noted.

Chapter 7 **PROCEDURE FOR PLANNING OF ELECTRIC POWER TRANSMISSION SYSTEM³**

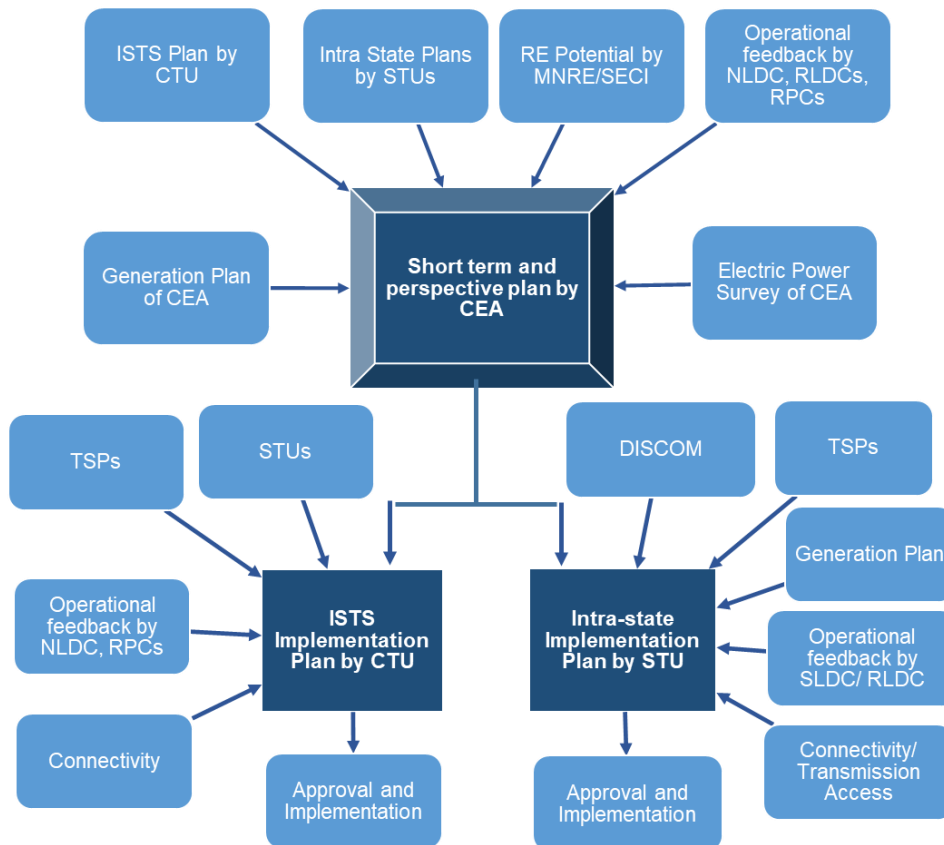
7.1 Planning of Electric Power Transmission System

- 7.1.1 CEA shall draw up short term plan every year on rolling basis for up to next five years time horizon and perspective plan every alternate year on rolling basis for next ten years horizon in accordance with Electricity (Transmission System Planning, Development and Recovery of Inter-State Transmission Charges) Rules 2021. While preparation of Short term and perspective plan, CEA shall consult with CTU, STUs, Ministry of New and Renewable Energy (MNRE), RPCs, Solar Energy Corporation of India (SECI), NLDC, RLDCs, generators etc. For perspective plan CEA shall also consult State Governments and Industry Associations. Details of preparation of plans is given in Paragraph 7.2.
- 7.1.2 CTU shall draw up plan for Inter-State Transmission System for up to next five years on rolling basis every year in accordance with Electricity (Transmission System Planning, Development and Recovery of Inter-State Transmission Charges) Rules 2021.
- 7.1.3 For preparing implementation plan of ISTS, Central Transmission Utility (CTU) shall consult the State Transmission Utilities (STUs) , Central Government, State Governments, generating companies, Regional Power Committees (RPCs), Central Electricity Authority (CEA), System Operators, licensees and any other person notified by the Central Government in this behalf. The entities intending to use ISTS shall give their network access requirement well in advance considering time required for implementation of the transmission assets. Details of preparation of implementation plan of ISTS by CTU is given in Paragraph 7.3.
- 7.1.4 STUs shall draw up implementation plan for Intra-state Transmission System in consultation with DISCOMs, generators, system operator and state government. Details of preparation of implementation plan of Intra-state Transmission System by STUs is given in Paragraph 7.4.

The Short-term/perspective/implementation plans shall be prepared considering the provisions of this Manual and other relevant Rules/Regulations.

- 7.1.5 Flow chart of the planning is given below:

³ Inserted vide Amendment-I



7.2 Short Term and Perspective Transmission system Plan by CEA

7.2.1 Section 3(4) of the Electricity Act, 2003, provides that the Authority shall prepare a National Electricity Plan in accordance with the National Electricity Policy and notify such plan once in five years. Further, Electricity (Transmission System Planning, Development and Recovery of Inter-State Transmission Charges) Rules, 2021, provides that Central Electricity Authority shall draw up short term plan every year on rolling basis for up to next five years time horizon and perspective plan every alternate year on rolling basis for next ten years time horizon for development of the electricity system and coordinate the activities of the planning agencies for the optimal utilization of resources to sub serve the interests of the National economy and to provide reliable and quality electricity to all consumers.

7.2.2 CEA shall consult relevant stakeholders for preparation of short term and perspective plan and for coordinating the activities of planning agencies through regional standing committees namely Standing Committee on Short Term and Perspective Power System Planning (SCSTPPSP).

7.2.3 Five number of regional standing committees namely “Standing Committee on Short Term and Perspective Power System Planning” one for each region to be constituted to review the existing and under implementation intra-state and

inter-state transmission system in the region, review the operational constraints faced by the system operators in the region, examination of new ISTS proposals and proposals from STUs/Electricity Departments and examine the associated transmission system for generating stations.

7.2.4 Data requirement from various stakeholders for the short term and perspective plan:

- a) Data and information to be provided within CEA: Data related to electricity demand, ISTS and intra-state generation capacity addition/phasing out data, generation plan, and status of on-going transmission system.
- b) Data and information to be provided by CTU: All the planning related data and models in respect of Inter-State Transmission System (ISTS), generating stations connected to ISTS, transmission system requirements, relevant data for connectivity/ General Network Access (GNA) of generation project and drawing entities etc.
- c) Data and information to be provided by STUs (including DVC): All the planning related data and models in respect of Intra-State Transmission System (Intra-STS), transmission system requirements, relevant data for connectivity/ GNA of generation project and drawl entities would be considered
- d) Data and information to be provided by Grid Operator: Information regarding signals of any congestion in any part of the ISTS and Intra-STS in respect of ICT and line loadings, low voltages, over-voltages, extremely high or low fault levels, stability issues, SPS schemes, islanding schemes etc. Historical data of ICT and line loadings, bus voltages, generation and demand profile etc. Any long term issue with in operation of HVDC at rated capacity and both directions i.e. forward and reverse and restrictions in line loadability limit of commissioned transmission system.
- e) Data and information to be provided by Regional Power Committees (RPCs): Provide operational feedback and facilitate data collection from STUs related to transmission planning and protection coordination etc.
- f) Data and information to be provided by MNRE/SECI: Location of the RE potential along-with quantum of the potential including type of such RE, BESS and Green Hydrogen (GH₂) Potential (Wind/Solar/Hybrid/BESS/GH₂), details of offshore wind potential and time-frame in which the above potential is expected to materialize.

7.2.5 In accordance with the above, the procedure to be followed for preparation of short term, and perspective plan by CEA is as given below:

S. No.	Actions	Timelines
1.	Furnishing of data by various stakeholders	by 30 th April

2.	Analysis of data, carrying out system studies and preparation of draft report	by 31 st July
3.	Time to be given to constituents for comments on draft report and incorporation of additional system, if any	August
4.	Meeting with stakeholders on regional basis	September - October
5.	Incorporation of comments, carrying out studies and preparation of Final Report	30 th November
6.	Issue of Final Report	31 st December

- 7.2.6 Load-generation scenarios shall be worked out as per the requirements so as to reflect the daily and seasonal variations in electricity demand and generation availability (such as cases for peak, off-peak and other than peak / off-peak hours for different seasons considering low, moderate and high renewable/other generation dispatch).
- 7.2.7 While planning the transmission system, options of upgrading the existing ISTS in place of building new transmission lines (such as increasing the line loading through use of compensation, reconductoring, network re-arrangement, augmentation of transformation capacity etc.) shall be explored for optimally utilizing the existing assets.
- 7.2.8 To avoid bottling up of power, STUs shall also plan and implement their downstream networks along with the evolved inter-state transmission system in similar time-frame.
- 7.2.9 The short term and perspective plan consists of broad inter-state and intra-state transmission system requirement of the country which includes:
- Growth of transmission system in India
 - Transmission system planning philosophy and development process
 - New technologies in transmission system
 - Studies and Analysis
 - Transmission system requirements.

7.3 Implementation Plan of ISTS by CTU

- 7.3.1 The Central Transmission Utility shall draw up plan for Inter-State Transmission System for up to next five years on rolling basis every year identifying specific transmission projects which are required to be taken up along with their implementation time lines, considering the plans made by Central Electricity Authority and studying the progress in generation capacity and demand in different parts of the country as well as taking note of General Network Access requests made by Designated Inter-state Customers, any signals of any congestion in any part of the Inter-State Transmission System and difficulties in obtaining right of way for development of transmission corridors. For

preparing this plan, Central Transmission Utility shall consult the State Transmission Utilities, Central Government, State Governments, Central Electricity Authority, Regional Power Committees, generating companies, System Operators, licensees and any other person notified by the Central Government in this behalf.

- 7.3.2 The principle for planning of the Inter-State Transmission System shall be to ensure that it is available as per the requirements of the stakeholders, as reflected by their Connectivity and General Network Access requests. The transmission system shall be planned and developed matching with the growth of generation and load, as far as possible, and while doing the planning, care shall be taken that best possible techno-economical alternative is taken up for implementation.
- 7.3.3 CTU shall be the nodal agency for compilation of data required for formulation of basic network data file (base case files) for the purpose of ISTS planning.
- 7.3.4 Data requirement from various stakeholders
- a) Data and information to be provided by CEA: Short term and perspective plan for development of the transmission system.
 - b) Data and information to be provided by STUs (including DVC): All the planning related data and models in respect of Intra-State Transmission System (Intra-STTS), generating stations connected to Intra-STTS etc.
 - c) Data and information to be provided by Generators: Generators connected or intending to connect to ISTS shall submit their technical data including validated models in a comprehensive manner.
 - d) Data and information to be provided by ISTS Transmission Licensees: Steady state and dynamic data pertaining to transmission line, substation equipment, HVDC, FACTS etc.
 - e) Data and information to be provided by Regional/National Load Despatch Centre: Information regarding signals of any congestion in any part of the ISTS in respect of ICT and line loadings, low voltages, over-voltages, extremely low or high fault levels, stability issues etc and historical data of ICT and line loadings, bus voltages, generation and demand profile etc. Any long term issue in operation of HVDC at rated capacity and both directions i.e. forward and reverse and restrictions in line loadability limit of the commissioned transmission system.
 - f) Data and information to be provided by Regional Power Committees (RPCs): Provide operational feedback and facilitate data collection from STUs related to transmission planning and protection coordination etc.
 - g) Data and information to be provided by MNRE: Location of the RE potential (Wind/Solar/Hybrid/BESS/GH₂) along-with quantum and timeframe, details

of offshore wind potential, demand potential on account of Green Hydrogen/Ammonia production facilities etc.

- h) Data from Applications of Connectivity / General Network Access:
Applications for grant of Connectivity or grant of GNA.

7.3.5 Planning Timelines:

The entire process for transmission planning shall be undertaken on continuous basis, involving two cycles in a year i.e. from April to September (interim) and October to March (final). The ISTS Planning cycle is tabulated below:

Sl. No.	Activity	Concerned entity	1 st cycle: Apr-Sep	2 nd cycle: Oct-March
1.	Data Collection by CTU:			
	<ul style="list-style-type: none"> Inputs regarding plans made by CEA (short term and perspective plans for next ten years) 	MNRE, CTU, CEA, STUs, RPCs, and GRID INDIA	01 st to 30 th April	01 st to 31 st October
	<ul style="list-style-type: none"> Open Access / General Network Access / Cross border transaction requests made by Designated Inter- state Customers / other entities 			
	<ul style="list-style-type: none"> Data to be submitted by the STUs (to be facilitated - by RPCs) 			
	<ul style="list-style-type: none"> Transmission constraints along with operational data to be submitted by System Operators to CTU 			
	<ul style="list-style-type: none"> RE related inputs to be provided by MNRE 			
2.	Data validation and preparation of Load-Generation Balance (LGBs) Scenarios at All India level for different scenarios through joint consultation in separate regional meetings	CTU, CEA, STUs, RPCs, and GRID INDIA	15 th June	15 th December
3.	Preparation of base case files for identified LGB(s) at All India level	CTU	30 th June	31 st December
4.	Single or Multi Regional Joint System studies for evolution of new ISTS schemes and / or augmentation of existing system	CTU, CEA, GRID INDIA, and concerned RPC(s) & STU(s)	31 st July	31 st January

5.	Preliminary proposal along with assumptions on CTU website for stakeholders' comments	CTU	15 th August	15 th February
6.	Final Report		30 th September	31 st March

7.3.6 The report shall comprise of power supply scenario, load generation balance, measures taken to mitigate the envisaged issues in the grid, system studies and analysis, ISTS scheme etc.

7.4 Implementation plan of Intra-State Transmission System by STU

7.4.1 As per Section 39 of the Electricity Act, 2003, State Transmission Utility (including DVC) shall be responsible to undertake transmission of electricity through Intra-State transmission system, to discharge all functions of planning and co-ordination relating to intra-State transmission system with Central Transmission Utility, State Governments, generating companies, Regional Power Committees, Authority, licensees, any other person notified by the State Government. STU to ensure development of an efficient, co-ordinated and economical system of intra-State transmission lines for smooth flow of electricity from generating stations to the load centres and to provide non-discriminatory open access to its transmission system.

7.4.2 Based on the perspective plan of Central Electricity Authority, STUs (including DVC) to make their own plan considering Intra-state generation capacity addition/phasing out of transmission system, load growth, operational feedback etc on annual rolling basis.

7.4.3 Data requirement

- a) Data and information to be provided by DISCOMS: Node-wise electricity demand data of State with its composition. Details of rooftop solar generation and small hydro/solar/wind generation etc. connected at distribution level.
- b) Data and information to be provided by SLDC/RLDC: Information regarding signals of any congestion in any part of the intra state transmission system in respect of ICT and line loadings, low voltage, over-voltages, fault levels, stability issues etc and historical data of ICT and line loadings, bus voltages, generation and demand profile etc for the purpose of study and analysis.
- c) Data and information to be provided by Intra-STS Transmission Licensees: Steady state and dynamic data pertaining to transmission line, substation equipment, HVDC, FACTS etc.

- d) Data and information to be provided by Bulk Consumers: Anticipated electricity demand data (if any).
- e) Data from Applications of Connectivity/General Network Access: Applications for grant of connectivity or grant of GNA.
- f) Information regarding plan of augmentation of ISTS network in the State: From plan of CEA and CTUIL.

7.4.4 Timelines

S. No.	Actions	Concerned entity	Timelines
1.	Data Collection by STU:		
	<ul style="list-style-type: none"> Inputs regarding plans made by CEA (short term & perspective plans for next ten years) and CTU (implementation plan) 	CEA, CTU	01 st to 30 th April
	<ul style="list-style-type: none"> Open Access / General Network Access /other entities 	DISCOMS, Generators, Bulk Consumer	
	<ul style="list-style-type: none"> Drawal data, Transmission constraints along with operational data to be submitted by System Operators to STU 	SLDC	
2.	Data validation and preparation of Load-Generation Balances (LGBs) at State level for different scenarios through joint consultation in separate meetings	STU	30 th June
3.	Preparation of base case files for identified LGB(s) at State level	STU	
4.	Draft Plan along with assumptions on STU website for stakeholders' comments	STU	15 th August
5.	Stakeholders' comments on the preliminary proposal	Stakeholders	31 st August
6.	Finalisation of transmission schemes considering comments / suggestions of stakeholders and uploading of the final Plan on STU website	STU	30 th September

- 7.4.5 The implementation plan for intra-state transmission system shall comprise of power supply scenario, load generation balance, system studies and analysis, details of Intra-state transmission scheme, measures taken to mitigate the constraints envisaged in the grid etc.

7.5 Approval and Implementation

7.5.1 Approval of ISTS Projects: The ISTS projects planned by CTU to be approved as per following provisions.

7.5.1.1 Electricity (Transmission System Planning, Development and Recovery of Inter-State Transmission Charges) Rules, 2021 provides that “3(5) *The Inter-State Transmission System projects drawn up by Central Transmission Utility shall be placed before the National Committee on Transmission constituted by the Central Government and the National Committee on Transmission shall also include a nominee of each Regional Power Committee. The projects along with their timeline for implementation shall be approved by the Central Government after considering the recommendations of the National Committee on Transmission; Provided that the Central Government may approve any transmission project as deemed necessary from the system or strategic point of view, without waiting for the recommendation of the National Committee on Transmission.*”

7.5.1.2 Ministry of Power, Govt. of India vide office order dated 28th October, 2021 has revised the Terms of Reference (TOR) for National Committee on Transmission. As per the point No. 2 (viii) of amended terms of reference:

“The NCT shall recommend to Ministry of Power (MoP) for implementation of the ISTS projects with cost more than Rs 500 crore, along with their mode of implementation i.e. Tariff Based Competitive Bidding (TBCB) / Regulated Tariff Mechanism (RTM), as per the existing Tariff Policy. However, the NCT shall approve the ISTS costing between Rs 100 crore to Rs.500 crore or such limit as prescribed by MoP from time to time, along with their mode of implementation under intimation to MoP. The ISTS costing less than or equal to Rs. 100 crores, or such limit as prescribed by MoP from time to time, will be approved by the CTUIL along with their mode of implementation under intimation to the NCT and MoP. After approval of the ISTS by the NCT or the CTU (as the case may be), the TBCB project shall be allocated to Bid Process Coordinators through Gazette Notification, while the RTM project shall be allocated to CTU.”

7.5.1.3 MoP vide letter dated 3rd July, 2023 has amended para 2 (ix) of the ToR of NCT as follows:

“National Committee on Transmission (NCT) will appoint BPCs for all the projects costing more than Rs 100 Crore and will communicate corresponding BPC immediately so that the respective BPCs can start survey work for the particular project”

7.5.2 Implementation of ISTS Project

7.5.2.1 As per National Tariff Policy 2016, while all future inter-state transmission projects shall, ordinarily, be developed through competitive bidding process, the Central Government may give exemption from competitive bidding for

implementation through Regulated Tariff Mechanism (RTM) mode for (a) specific category of projects of strategic importance, technical upgradation etc. or (b) works required to be done to cater to an urgent situation on a case-to-case basis.

The respective approving agencies shall also approve mode of implementation of the transmission project. Further, NCT to finalise Bid Process Coordinators (BPCs) for the transmission schemes to be implemented through Tariff Based Competitive Bidding route. Bidding timelines should be followed as per the standard bidding documents (SBD).

7.5.2.2 The BPCs shall submit the survey report for the transmission schemes within 60 days from the date of NCT meeting. Based on the survey report, implementation timeframe of the scheme shall be worked out.

7.5.3 Approval and Implementation of Intra-State Project

7.5.3.1 In regard to implementation of intra-state transmission system, the Tariff Policy notified on 28th January, 2016 provides that –

“5.3 The tariff of all new generation and transmission projects of company owned or controlled by the Central Government shall continue to be determined on the basis of competitive bidding as per the Tariff Policy notified on 6th January, 2006 unless otherwise specified by the Central Government on case to case basis.

Further, intra-state transmission projects shall be developed by State Government through competitive bidding process for projects costing above a threshold limit which shall be decided by the SERCs.”

7.5.3.2 STU shall plan and implement the Intra-state Transmission Schemes keeping in view the above provisions.

Annexure D.1

Updated Anticipated Peak Demand (in MW) of ER & its constituents for February 2025

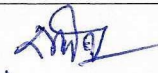
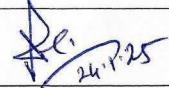

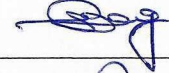






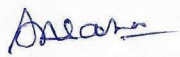



1	BIHAR	Demand (MW)	Energy Requirement (MU)
	NET MAX DEMAND	5804	2792
	NET POWER AVAILABILITY- Own Sources	990	378
	Central Sector+Bi-Lateral	5053	3836
	SURPLUS(+)/DEFICIT(-)	239	1422
2	JHARKHAND		
	NET MAXIMUM DEMAND	1935	1021
	NET POWER AVAILABILITY- Own Source	400	187
	Central Sector+Bi-Lateral+IPP	1307	710
	SURPLUS(+)/DEFICIT(-)	-228	-125
3	DVC		
	NET MAXIMUM DEMAND	3200	90
	NET POWER AVAILABILITY- Own Source	5700	160
	Central Sector+MPL	300	8
	Bi- lateral export by DVC	2400	67
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	400	11
4	ODISHA		
	NET MAXIMUM DEMAND (OWN)	4800	4500
	NET MAXIMUM DEMAND (In Case of CPP Drawal of 900 MW(peak) and average drawal of 700 MW)	5700	5021
	NET POWER AVAILABILITY- Own Source	2746	2621
	Central Sector	2060	1875
	SURPLUS(+)/DEFICIT(-) (OWN)	6	-4
	SURPLUS(+)/DEFICIT(-) (I(In Case of CPP Drawal of 900 MW(peak) and average drawal of 700 MW)	-894	-525
5	WEST BENGAL		
	WBSIEDCL		
5.1	NET MAXIMUM DEMAND	6650	3573
	NET MAXIMUM DEMAND (Incl. Sikkim)	6655	3576
	NET POWER AVAILABILITY- Own Source (Incl. DPL)	5125	2772
	Central Sector+Bi-lateral+IPP&CPP+TLDP	2652	1200
	EXPORT (To SIKKIM)	5	3
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	905	395
5.2	CESC		
	NET MAXIMUM DEMAND	1570	685
	NET POWER AVAILABILITY- Own Source	1030	379
	IMPORT FROM HEL	540	256
	TOTAL AVAILABILITY OF CESC	1580	635
	SURPLUS(+)/DEFICIT(-)	10	-50
	WEST BENGAL (WBSIEDCL+CESC+IPCL) (excluding DVC's supply to WBSIEDCL's command area)		
	NET MAXIMUM DEMAND	8468	4258
	NET POWER AVAILABILITY- Own Source	5825	3151
	CS SHARE+BILATERAL+IPP/CPP+TLDP+HEL	3193	1456
	SURPLUS(+)/DEFICIT(-) BEFORE WBSIEDCL'S EXPORT	551	348
	SURPLUS(+)/DEFICIT(-) AFTER WBSIEDCL'S EXPORT	546	345
6	SIKKIM		
	NET MAXIMUM DEMAND	129	70
	NET POWER AVAILABILITY- Own Source	44	29
	Central Sector	308	153
	SURPLUS(+)/DEFICIT(-)	223	112
	EASTERN REGION		
	NET MAXIMUM DEMAND	24088	12730
	NET MAXIMUM DEMAND ((In Case of CPP Drawal of 800 MW(peak) and average drawal of 700 MW)	24988	13251
	BILATERAL EXPORT BY DVC (Incl. Bangladesh)	2415	1623
	EXPORT BY WBSIEDCL TO SIKKIM	5	3
	EXPORT TO B'DESH & NEPAL OTHER THAN DVC	642	431
	NET TOTAL POWER AVAILABILITY OF ER (INCLUDING CS ALLOCATION +BILATERAL+IPP/CPP+HEL)	26478	15536
	SURPLUS(+)/DEFICIT(-)	-671	748
	SURPLUS(+)/DEFICIT(-) (In Case of CPP Drawal for Odisha)	-1571	227

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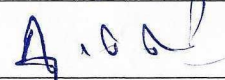



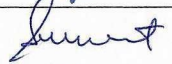
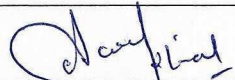



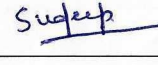



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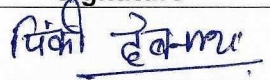
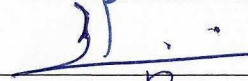

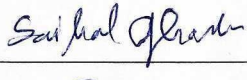
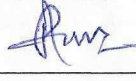

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Participants in 223rd OCC Meeting

Venue: ERPC Conference Hall, Kolkata

Time: 10:30 Hrs.

Date: 24.01.2025 (Friday)

Sl.	Name	Designation	Organisation	Contact No.	E-mail Id	Signature
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