



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/2024/ 1335

दिनांक/DATE: 06.11.2024

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

विषय : 28 अक्टूबर 2024 (सोमवार) को ईआरपीसी सचिवालय, कोलकाता में भौतिक रूप से आयोजित 220वीं OCC बैठक का कार्यवृत्त - संबंध में।

Sub: Minutes of 220th OCC Meeting held on 28.10.2024 (Monday) physically at ERPC Secretariat, Kolkata - reg.

महोदय/महोदया,
Sir(s)/Madam,

कृपया अपनी जानकारी और आवश्यक कार्रवाई के लिए 28 अक्टूबर 2024 (सोमवार) को ईआरपीसी सचिवालय, कोलकाता में 10:30 बजे भौतिक रूप से आयोजित 220वीं ओसीसी बैठक के संलग्न कार्यवृत्त देखें। यह ईआरपीसी वेबसाइट (www.erpc.gov.in) पर भी उपलब्ध है।

Please find enclosed **Minutes of 220th OCC Meeting** held on 28.10.2024 (Monday) physically at ERPC Secretariat, 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.

इसे सदस्य सचिव के अनुमोदन से जारी किया जाता है।
This issues with the approval of Member Secretary.

भवदीय /Yours faithfully,

(S.Kejrival)

SE(Operation)

एसई (ऑपरेशन)

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Chief Engineer, OPM, CEA	Chief Engineer, NPC, CEA	ASSISTANT SECRETARY,ERPC
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ERPC:: Kolkata

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2. मुख्य अभियंता (सिस्टम ऑपरेशन), बीएसपीटीसीएल, पटना, (फैक्स नं. 0612- 2504557/2504937)।
3. मुख्य अभियंता, ट्रांसमिशन (ओ एंड एम), जेयूएसएनएल, रांची (फैक्स नं.-0651- 2490486/2490863)।
4. मुख्य अभियंता, टीवीएनएल, डोरंडा, रांची - 834102 (फैक्स नंबर 06544-225414)
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9. महाप्रबंधक, टीटीपीएस, तालचेर, (फैक्स नंबर 06760-243212)
10. एसआर. महाप्रबंधक (विद्युत), ओएचपीसी लिमिटेड, भुवनेश्वर, (फैक्स नंबर 0674-2542102)
11. मुख्य अभियंता, सीएलडी, डब्ल्यूबीएसईटीसीएल, हावड़ा, (फैक्स नंबर 033-26886232)।
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20. कार्यकारी निदेशक, ईआरएलडीसी, पोसोको, कोलकाता, (फैक्स नंबर 033-2423-5809)
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25. महाप्रबंधक, पावरग्रिड, ईआर-I, पटना, (फैक्स नं.0612-2531192)
26. महाप्रबंधक (ओ एंड एम), पावरग्रिड, ओडिशा प्रोजेक्ट्स, साहिद नगर, भुवनेश्वर - 751 007
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ईआरपीसी:: कोलकाता



**MINUTES
OF
220TH OCC MEETING**

Date : 28.10.2024

**Eastern Regional Power Committee
14, Golf Club Road, Tollygunge
Kolkata: 700033**

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EASTERN REGIONAL POWER COMMITTEE

MINUTES OF 220TH OCC MEETING HELD ON 28.10.2024 (MONDAY) AT 10:30 HRS

Member Secretary, ERPC chaired the 220th OCC meeting. On welcoming all the participants, he outlined the performance of ER grid during **September-2024** and highlighted the following points:

- ❖ In **September-2024**, energy consumption of ER was **17610 MU** which is **3.4 %** more than **September-2023**.
- ❖ In **September-2024**, Peak demand met of ER was **30843 MW** which is **6.6%** more than **September-2023**.
- ❖ During **September-2024**, **77%** of time, the grid frequency was in IEGC Band (49.90Hz-50.05Hz).
- ❖ Thermal **PLF** of ER during **September-2024** was **65%**.
- ❖ Some thermal generating units were lauded for maintaining PLF more than **90%**. Generating stations whose PLF was more than **90%** during **September-2024** are listed below:

Utility	Generating Stations	PLF %
WBPDC	Bakreswar TPS	96
	Bandel TPS	93
	Sagardighi TPS	100
	Santaldih TPS	102
NTPC	Darlipali STPS	91

❖ **Coal stock position:**

☐ Coal stock position (As on 23.10.2024) is as follows:

SL.	Name of States/Power Stns.	% of Actual Stock vis-à-vis Normative Stock
1.	Jharkhand (TVNL)	78%
2.	Odisha/IBTPS	104%
3.	WBPDC	31%(Min.Kolaghat TPS-23%, Max.Santaldih TPS- 45 %)
4.	D.P.L. TPS	27%
5.	DVC	61%(Min.Raghunathpur TPP-45%, Max Bokaro TPS `A` exp- 80%)
6.	NTPC	68% (Max.North Karanpura TPP-133% & Min. Barauni STPS - 32%)

- ❖ He appreciated coal stock position of Gencos of ER in general , considering the prevailing bad weather & persistent rainfall in the region.WBPDCL and DPL were advised to focus on building coal stock as per their normative requirement.
- ❖ He further highlighted the following:
 - Cyclone '**DANA**' hitting state of Odisha and coastal parts of West Bengal with impact on power sector as follows:
 - Around 8 intra-state transmission lines have tripped in Odisha and around 14 intra-state lines have been opened prior to cyclone to mitigate overvoltage.
 - 220/132 kV Dhamara S/S of OPTCL was manually isolated for safety purpose.
 - However,no incident of blackout/islanding has been reported.
- ❖ **ED,ERLDC** at the outset underscored the following:
 - Significance of Resource adequacy study especially amid surge in variable generation in the grid in terms of enhanced RE integration.
 - Different aspects of Resource adequacy: Timely and accurate Demand Forecast, Injection schedule of intra-state generating stations, ISGS requisition of beneficiaries along with procurement plan i.r.o bilateral and collective transactions.
 - It was also apprised that Winter preparedness meeting shall be convened in online mode on 11th November 2024 to make concened stakeholders aware of various challenges of real time grid operation in winter(low demand period) and relevant mitigating measures.

1. PART-A: CONFIRMATION OF MINUTES

1.1. Confirmation of Minutes of 219th OCC Meeting held on 24th September 2024 physically at ERPC Secretariat, Kolkata

The minutes of 219th Operation Coordination Sub-Committee meeting held on 24.09.2024 was circulated vide letter dated 03.10.2024.

Members may confirm the minutes of 219th OCC meeting.

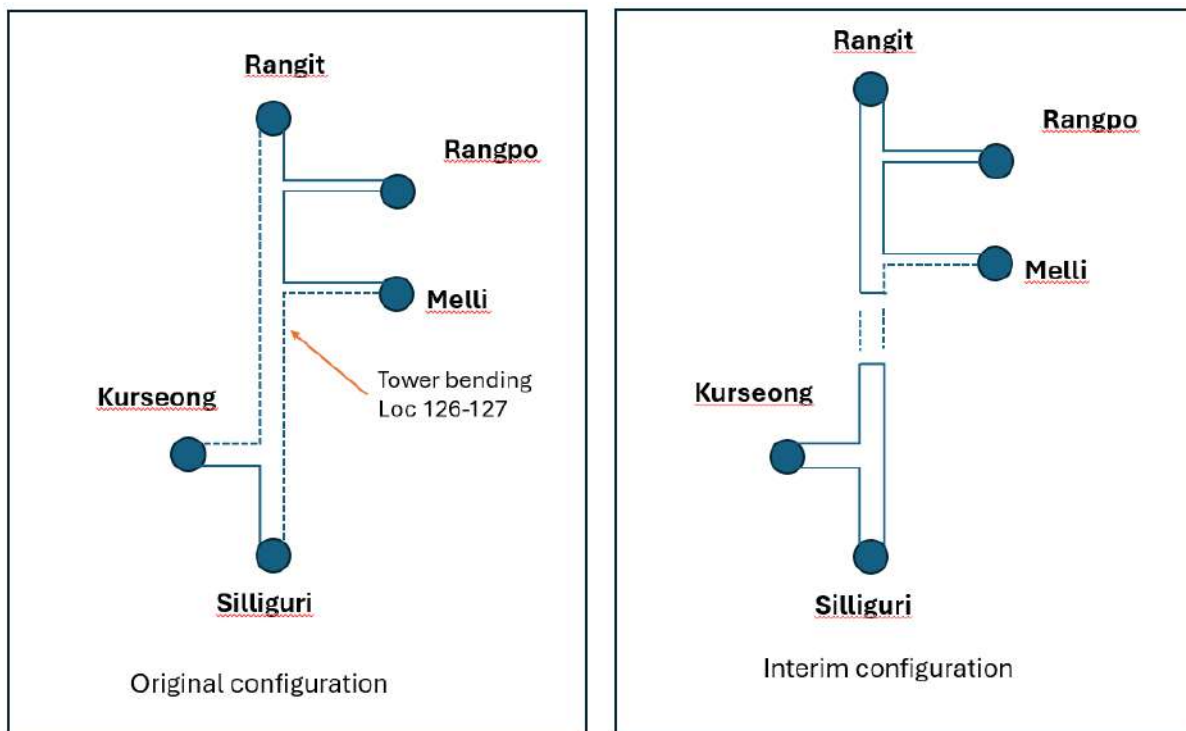
Deliberation in the meeting

Members confirmed the minutes 219th OCC meeting.

2. PART-B: ITEMS FOR DISCUSSION

2.1 Reconfiguration of 132kV Rangit-Kurseong-Siliguri & 132kV Siliguri-melli-Rangpo 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. The minutes of the meeting is attached as **Annexure B.2.1**.
- 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.



The unavailability of 132 kV Melli-Sagbari from 15.06.2017 was also raised in this meeting, which may have provided an alternate path for Melli & Rangit. Sikkim replied that 2-3 towers of said line have low clearance issues which need to be addressed and the matter is pending due to funding issues.

SLDC Sikkim and Powergrid may update. Members may discuss.

Deliberation in the meeting

Powergrid ER-II submitted :

- ✓ 132kV-Rangit-Melli (interim arrangement) has been put to service on 22.10.2024 serving as a second source to Melli. Similarly healthy portion of 132 kV Siliguri-Melli has been reconfigured as 132 kV Siliguri-Kurseong ckt2 on 09.10.2024 as a second source of Kurseong.
- ✓ Due to change in line length, Protection settings have been modified prior to charging.
- ✓ It was proposed that 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. WBSETCL agreed to it.
- ✓ Owing to severe ROW issues and unfavourable hilly terrain, the rectification works of damaged towers -126 & 127 is getting delayed.
- ✓ The original configuration of the lines may get restored by March 2025.
- ✓ Further, the shutdown of 132 kV D/C NBU-Lebong TL & Lebong-Rammam TL was requested for 3 days in mid January 2025 to carry out stringing works in overhead powerline.

OCC Decision

- OCC opined that reliability of power supply to Melli, Kurseong, adjoining Darjeeling area and power evacuation of Rangit should not be compromised.
- OCC urged Powergrid to expedite to the best feasible extent in restoration of original configuration of 132 KV D/C Siliguri-Melli & Rangit-Kurseong Lines.
- OCC requested Govt. of Sikkim to extend all possible assistance to Powergrid in resolving the ROW issues and restoring damaged towers at the earliest.
- OCC advised WBSETCL, WBSEDCL and Powergrid to mutually decide on the shutdown requests of 132 kV D/C NBU-Lebong TL & 132 kV D/C Lebong-Rammam lines.

2.2 Bus split operationalization at NTPC Kahalgaon: ERLDC

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**. Even this timeline seems improbable because of the various factors/challenges involved.

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.

The committee has discussed **operationalization of bus splitting scheme with present configuration** subject to taken care of following issues:

1. Segregation of auxiliary power consumption of 2 stages. This can be done by implementing an appropriate metering scheme.
2. NTPC raised the concern of circulating flow during changeover of stage 2 auxiliaries from Unit transformer to Station transformer side and vice versa due to difference in voltage at stage 1 and stage 2 side at 400 KV level, which will push voltage difference beyond the tolerance limit at 11 KV auxiliary bus.

It was decided the OS and Engineering team will come out with detailed studies to explore the feasibility of this options considering seasonal change in load pattern and to tackle the voltage variation issue at 11 KV level with fixed tap ratio change at UT, UAT and ST level and toggling excitation system of units.

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

Deliberation in the meeting

- A committee comprising representatives from ERPC, ERLDC and NTPC carried out a joint site visit at 400 kV NTPC Kahalgaon station.
- ERPC and ERLDC jointly outlined the key observations regarding implementation of bus split at NTPC Kahalgaon:
 - ✓ In the existing configuration (with bus sectionalizer closed), the committee advised NTPC to explore possible solutions as suggested. NTPC affirmed that the solutions suggested by committee i.r.o existing voltage difference are being examined.
 - ✓ Old 132 kV cable may be replaced in the PVC conduit or an alternate path may be explored for laying of new 132 kV cable.
 - ✓ Procurement and laying of control cables should be initiated with immediate effect.
 - ✓ Upon completion of all pending interconnection and jumpering works, testing of all bay equipment of ICT 3 & 4 needs to be carried out on priority.
 - ✓ Sustained operation of 400 kV system with sectionalizers closed in high fault scenario is detrimental to grid security.

Detailed Committee report is attached at **Annex- B.2.2**

OCC Decision

- OCC advised NTPC to abide by the recommendations of the committee as interim measures. In this regard, NTPC has to submit the study results on opening of bus sectionalizer to ERPC/ERLDC within 15 days.
- The final bus split scheme must be put to service by March 2025.
- NTPC was also advised to submit fortnightly progress report on status update.

2.3 Repeated tripping of 132 kV Chuzachen-Rangpo D/c and actions taken thereafter: ERLDC

- **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 meeting was called by ERLDC on **30.09.2024** with members from ERPC, ERLDC, Powergrid, Chuzachen HEP and Sikkim to discuss the above issue. In the meeting, Powergrid expressed its reluctance to further charge the line citing repeated feeding of high fault current from Rangpo GIS, which may damage the GIS equipment. As decided in the meeting, a 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. The MoM and committee report is attached as **Annexue-B.2.3.1 & B.2.3.2**
- 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.

ERLDC may explain. Sikkim may update on further course of action.

Deliberation in the meeting

- Powergrid apprised that owing to recurrent tripping of 132 kV Chuzachen-Rangpo D/C, 400 kV Rangpo GIS S/S is repeatedly feeding the phase-phase fault which is detrimental to life of substation equipment.
- Sikkim representative affirmed to share status of actions taken in line with joint Committee inspection report within a week.

OCC Decision

- OCC expressed serious concern on total generation loss of Chuzachen HEP due to multiple trippings of 132 kV Chuzachen-Rangpo D/C line.
- OCC advised Sikkim to expedite in implementation of Committee recommendations i.r.o increasing ground clearance by construction of new tower(between loc. 28-29) and hill cutting (around tower no. 27). Update on the same needs to be submitted to ERPC/ERLDC every week.

2.4 Implementation of SPS at Baripada: ERLDC

- It was decided in **216th OCC** meeting dated **29th June 2024** that a suitable SPS would be required at Baripada to avoid large scale blackouts in Odisha system.
- This was felt necessary after a near-miss event in the Odisha System on **29th May 2024** due to a simultaneous outage of **400 kV Jamshedpur-TISCO & 400 kV Lapanga-Meramundali D/C**.
- Accordingly, ERLDC conducted one meeting with SLDC Odisha on **5th July 2024** for the finalization of the SPS scheme and it was decided that load trimming would be done at the distribution level based on the SPS signal generated at Baripada S/S.
- Subsequently, in the **217th OCC**, SLDC Odisha and GRIDCO were advised to expedite SPS implementation at Baripada.
- SLDC Odisha shared the identified load list for the SPS at the distribution level. A follow-up meeting (online mode) was conducted by ERLDC with SLDC Odisha & POWERGRID (Odisha Project) on **2nd October 2024** in the presence of ERPC to finalize the SPS implementation procedure. Minutes of the meeting is attached in **Annexure B.2.4.1**.
- Further, SLDC Odisha asked for certain clarification vide letter dated **5th October 2024** which were clarified vide letter dated **8th October 2024**. Odisha is requested to expedite implementation of SPS. Letters attached as **Annexure 2.4.2 & Annexure 2.4.3**.
- SPS at Baripada will also play a crucial role in saving the Odisha system in case of any contingency during reconductoring work of **400kV-Talcher-Meeramundali-D/C** as it will deplete the tie line of Odisha.

ERLDC may explain. SLDC Odisha may update.

Deliberation in the meeting

SLDC Odisha expressed concern on load curtailment in Odisha for regulating power flow 400 kV lines between Jamshedpur and Baripada (PG).

ERLDC stated that all concerns of SLDC Odisha have been addressed vide letter dated 08.10.2024.(attached **Annex B.2.4**).

OCC Decision

OCC advised SLDC Odisha to update the status of SPS implementation Baripada within a week positively.

2.5 Delay in SPS implementation for synchronization of 2nd Unit (350 MW): IBEUL

- Meeting was conducted under chairmanship of **CEA** on **26.07.24** and subsequently JSW Energy Utkal Limited was accorded approval for synchronization of Unit No-2 (350MW) with grid under interim LILO arrangement vide letter No-CTU/E/Conn-INT-1A/2200000648 dated **20.08.24** (letter attached **Annex B.2.5**), synchronization was allowed with conditions of SPS quoted below:
"Synchronization of IBEUL Unit#2 can be allowed after implementation of SPS. SPS to be implemented with the logic that Main CBs of IBEUL and Jharsuguda circuits at OPGC end to be opened whenever loading on OPGG-Lapanga 400kV D/c line reaches to 850 MW per Circuit. TIE CB of IBEUL and Jharsuguda circuits at OPGC end shall remain closed so as to form IBEUL Jharsuguda 400 kV 2nd line"
- Upon receipt of letter JSW energy had started preparation for implementation of SPS, and approached OPGC requesting to allow for implementation of SPS however OPGC has objected and stated that the SPS scheme is not acceptable by OPGC and instead asked to modify the scheme vide letter no-1440 dated 01.10.24 (letter attached **Annex B.2.5**),the abstract is quoted below:
- **" Therefore, at this stage, OPGC is not in a position to consider further injection by IBEUL Unit #2 on OPGC-Jharsuguda Line-2 LILO. It may be resulting into load flow variation in case of manual breaker operation. OPGC would earnestly request your good office to review the decision on the above matter. However, in case of any compulsion in granting permission for Unit #2 operation of IBEUL, it is requested to revise the SPS without affecting any technical setting of time and quantum at OPGC end and all required generation backdown support/tripping of unit shall be planned at Ind-Barath end.**
- In view of the above we would like to inform that the above SPS logic decision was taken by the committee after consensus from all stake holders including OPGC, SLDC, ERLDC & ERPC, also we wish to inform that Unit no-2 is ready for synchronization. Request your kind intervention in resolving the above issue for facilitating the SPS implementation for enabling synchronization of unit at the earliest.

IBEUL may explain. SLDC Odisha and OPGC may update. Members may discuss.

Deliberation in the meeting

JSW energy Utkal Ltd (JSWEL) submitted:

- ✓ Synchronisation of Unit 2 has been permitted by CTU with the present LILO arrangement under the condition of implementation of SPS as per logic stated in letter. (**Annex B.2.5**)
- ✓ OPGC is reluctant to implement SPS logic despite repeated requests.

- ✓ *As of now , Unit 2 is ready for synchronisation but the same is being held up due to delay in SPS implementation.*

OPGC submitted :

- *OPGC units would be isolated from ISTS as per present logic of SPS operation and thereby reduce the redundancy for power evacuation.*
- *Proposed SPS should not be implemented at OPGC end and necessary generation backdown or unit tripping should be initiated at JSWEL end.Consent is given for SPS implementation at JSW energy Utkal Ltd end subject to consent from OPTCL.*

OCC Decision

- *OCC opined that the SPS logic has been finalized in line with decision taken in the meeting dated 26.07.2024 under chairmanship of Member(Power System),CEA.*
- *OCC further observed that synchronization of Unit#2 of JSWEL without implementation of SPS shall also jeopardize the power evacuation of OPGC units.*
- *OCC advised IBEUL to implement the SPS at IBEUL end without any change in boundary conditions of the SPS logic and taking care of the concerns of OPGC and OPTCL.*
- *OCC also advised IBEUL to expedite and complete the pending work of DTL by end of November 2024.*

2.6 Transmission system planning: ERPC

Intra-state transmission:

- A Plan/Report for transmission system requirement of ER states by 2031-32, is to be prepared by CEA in consultation with States of Eastern Region.
- In this regard following information/data of ER states is required:
 1. New proposals of the State regarding intra-state transmission system requirement by 2031-32, including New substation with its associates transmission line(s), evacuation system of new generations stations, Augmentation of existing substation, New transmission lines and Reconductoring of existing line etc.
 2. Justification of each proposal.
 3. Estimated cost of each proposal
 4. Present and proposed conductor details, in case of reconductoring proposals (i.e. Ampacity details, year of commissioning of existing line etc.)
 5. Node wise generation/demand data by 2031-32,
 6. Latest PSS/E load flow files incorporating updated proposals with .idv files,
 7. SLD of the existing and proposed intra-state transmission system,
 8. Plotting of existing as well as planned intra-state transmission system on PM Gatishakti National Master Plan portal.
 9. Latest Schedule of Rates (SoR).

ISTS rolling plan 2029-30

- As per ISTS Planning Procedure, CTU is required to draw up a plan for Inter-State Transmission System (ISTS) for upto next five years on rolling basis every year. The entire process for transmission planning is to be undertaken on a continuous basis, twice a year. i.e., from **April to September** and **October to March** of every financial year.

- In this regard, CTU has prepared the interim ISTS Rolling Plan for **2029-30** timeframe and is uploaded on CTU website.
- RPCs are requested to facilitate in providing the requested data from respective STUs for planning relating to ISTS.
- Details of communication from CTU on ISTS Rolling Plan attached at **Annex B.2.6**

All STUs and ISTS licensees may update. Members may discuss.

Deliberation in the meeting

OCC Decision

OCC advised all STUs/Transcos of Eastern region states to furnish the relevant details (as mentioned above) pertaining to the upcoming transmission projects(new lines, new substations, reconductoring of existing lines,etc) with CEA (Power System Planning and appraisal division PSPA-II) at the earliest.

In addition to this, ER STUs/TRANSCOS are also directed to furnish the respective requirement i.r.o ISTS network for finalizing ISTS rolling plan (2029-30) by CTU.

These shall aid in delineating a comprehensive plan on transmission system requirement of ER states for time horizon upto 2031-32.

2.7 Restriction on drawl by Bihar due to high loading at Dalkhola(WBSETCL) S/S: WB SLDC

- Earlier up to 30 MW load was decided to allow to Baisi from Dalkhola (WBSETCL) sub-station at radial mode. Further to the quantum, it was requested from Bihar through ERLDC in September 2023 for increasing the quantum to allow for Bihar from 30 MW to 40 MW to handle the emergency load requirement of Bihar.
- Despite the high loading on Dalkhola (WBSETCL) Sub-station ICTs, WB SLDC allowed drawl of Bihar at Baisi point from 30 MW to 40 MW on temporary basis with due consideration of the crisis of high load at Bihar which had led to public unrest and political intervention there, as was informed that time from ERLDC. SLDC WB communicated their decision through mail dated 23.08.2023 T.O.O 11:47 hrs.
- Now since last one year around 18 % load growth is observed at Dalkhola belt and for the area fed from Dalkhola (WBSETCL) sub-stn, hence severe congestion in terms of ICT loading is apprehended at Dalkhola (WBSETCL) sub-station in coming summer. Already 295 MVA loading reached in Dalkhola (220/132 kV) ICTs against installed capacity of 160 MVA * 2.
- Under these compelling circumstances, it may not be possible to allow load from Dalkhola (WBSETCL) point to Baisi (Bihar) in coming summer season. Bihar is thereby requested for making alternative arrangements accordingly.

West Bengal SLDC may explain and Bihar SLDC may update. Members may discuss.

Deliberation in the meeting

West Bengal SLDC apprised:

- Presently drawl of around 30 to 40 MW is allowed to Bihar for Baisi on interim basis from 220 kV Dalkhola(WB) S/S, radially fed through S/C 132 kV line.
- 220 kV Dalkhola(WB) S/S feeds two major load centres on downstream i.e Raiganj and Islampur. Considering substantial load growth over past one year, the two ICTs at Dalkhola (WB) S/S are already on the verge of overloading.
- Factoring in the future load growth, the ICTs at Dalkhola(WB) S/S are bound to encounter severe loading if unrestricted drawl by Bihar is allowed for Baisi.
- Under these circumstances, drawl by Bihar from Dalkhola(WB) has to be restricted to safeguard reliability of intra-state system of West Bengal.

Bihar SLDC submitted:

Presently there exists no other option to cater to the load at Baisi. Even power drawl from Dalkhola(PG) is not feasible due to non-availability of 132 kV bay.

OCC Decision

OCC advised ERLDC to carry out a joint study with West Bengal SLDC and Bihar SLDC to figure out alternate option for power drawl by Bihar without compromising reliability of intra-state network of West Bengal.

2.8 Update on 3rd ICT at Rajarhat (PG): WB SLDC

- In July 2023, at 21st CMETS-ER meeting West Bengal conveyed their consent for 3rd 500 MVA transformer for Rajarhat (PG) sub-station. Load pattern of last summer highly supporting the need.
- If the said ICT is not coming into service by summer 2026, then severe congestion will result across ICTs of Rajarhat(PG) as apprehended. Hence rolling on the process of procurement, transportation etc are the essence to avoid extreme time pressure during transportation, commissioning phases. Also to mention here that state Bidhansabha Election is expected in 2026.
- ✦ As per deliberation in **212th OCC** meeting:
 - West Bengal SLDC representative, based on present loading pattern in and around Rajarhat(PG) ,raised deep concern on facing power crisis at Rajarhat(PG) in 2025-2026 similar to present scenario at Subhasgram(PG). He urged to lay equal emphasis on installation of 3rd ICT at Rajarhat (PG) as that of Subhasgram(PG) to thwart recurrence of similar emergent situation in future. Thus importance of regular monitoring of 3rd ICT commissioning at Rajarhat (PG) was underscored.
 - Powergrid ER-II apprised the following:
 - Tender for procurement of new ICT at Rajarhat(PG) had been floated and presently in technical evaluation stage, price bid is awaited to be opened.
 - LOA shall be tentatively placed by end of March 2024.
 - Delay in planning for new ICT requirement was highlighted which in turn is leading to unwanted delays at later stage , since ICT procurement, especially for GIS like Rajarhat(PG) is undoubtedly a time consuming affair.
 - Standard timeline for new ICT commissioning is 18 months as per CEA guidelines.
- **OCC decision:**

- OCC advised Powergrid ER-II to closely coordinate with Powergrid Corporate centre so as to expedite tendering process keeping urgent requirement of the ICT at Rajarhat (PG) in consideration.
- OCC advised Powergrid ER-II to adhere to standard timeline of 18 months(as per CEA guidelines) for 3rd ICT commissioning at Rajarhat (PG).

An update of the status of procurement process vs target time to commission may please be discussed and intimated.

West Bengal SLDC may explain and Powergrid ER-II may update. Members may discuss.

Deliberation in the meeting

West Bengal SLDC submitted :

- *Regular monitoring of 3rd ICT commissioning at Rajarhat(PG) that was approved in 21st CMETS-ER, is needed .*
- *If the 3rd ICT doesn't get charged at Rajarhat(PG) by Summer 2026, reliable power supply scenario will get jeopardized.*

Powergrid ER-II updated:

- *The tender floated for procurement of 3rd ICT, as informed in 217th OCC , has been annulled and a fresh tender shall be floated soon.*
- *The new ICT commissioning at Rajarhat(PG) is not possible by March 2025.*
- *Regional spare of 500 MVA ICT is available at Maithon(PG) but the same is not possible for immediate commissioning at Rajarhat(PG) owing to highly challenging transportation process.*

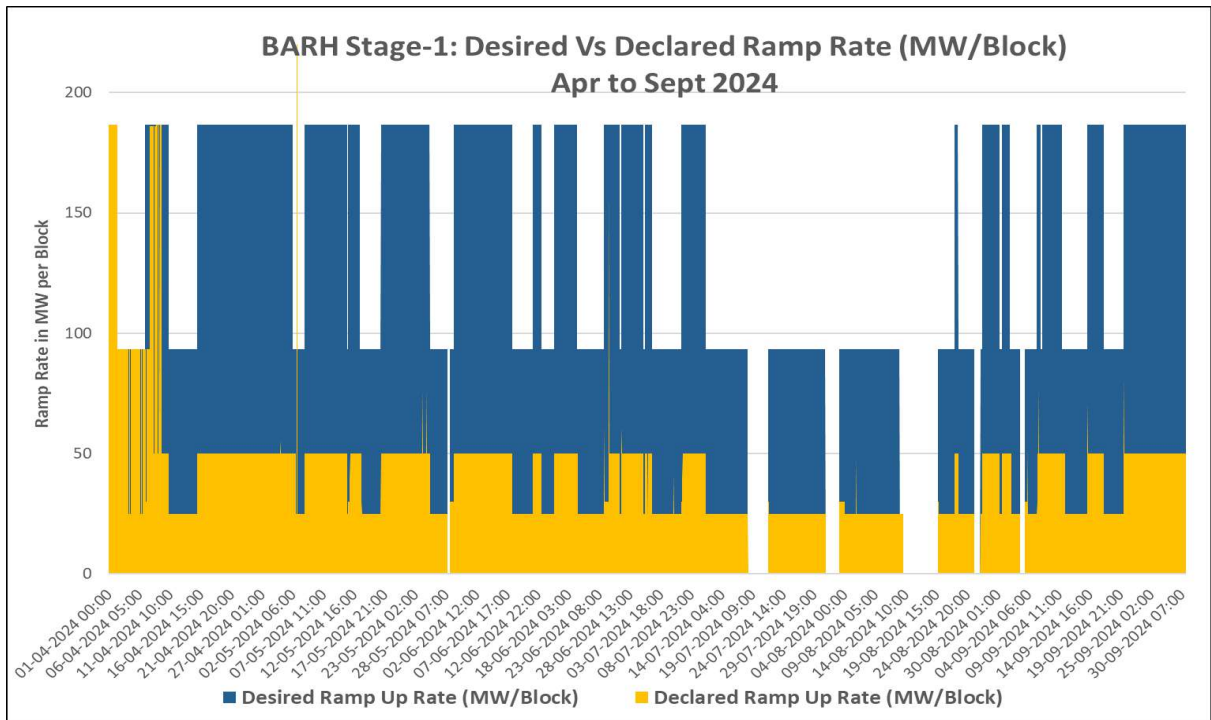
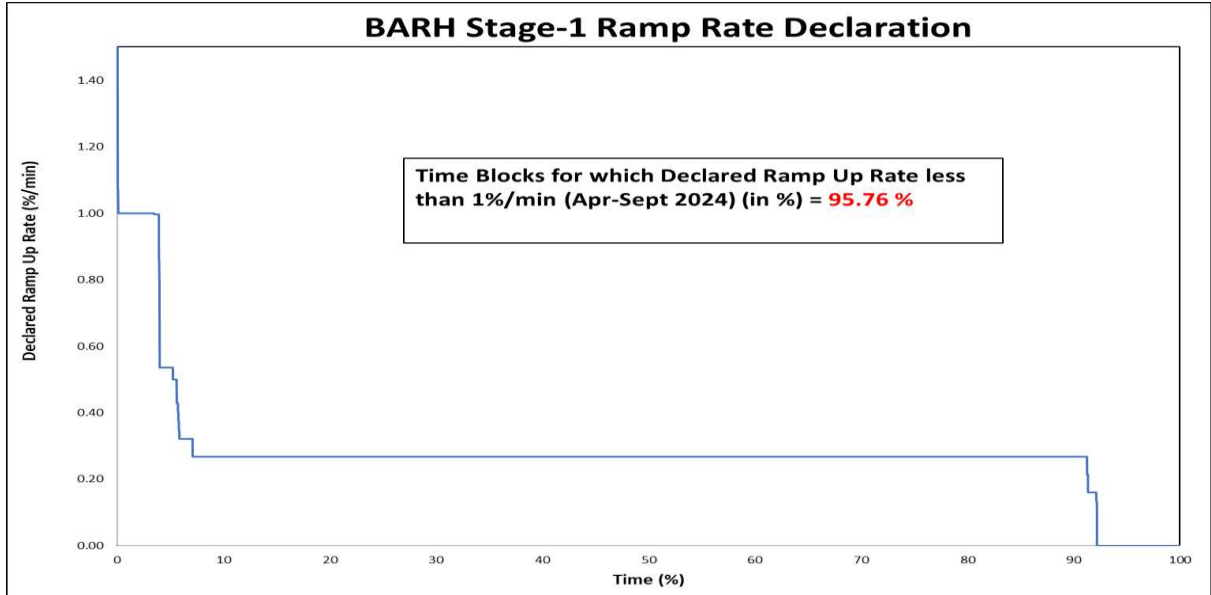
OCC Decision

- *OCC advised Powergrid ER-II to coordinate with Corporate Centre for re-initiating the procurement process of 3rd ICT at Rajarhat (PG) on priority. The 3rd ICT at Rajarhat (PG) must be put to service latest by March 2026 and accordingly planning should be carried out by Powergrid to avoid any instance of grid vulnerability.*
- *OCC advised Powergrid ER-II to plan the procurement and installation process for 3rd ICT commissioning at Rajarhat (PG) adhering to the standard timeline of 18 months (as per CEA guidelines).*
- *OCC also urged West Bengal STU to consider Long term planning of intra-state network of West Bengal in terms of augmentation or expansion(New Lakhikantapur S/S).*

2.9 Reduced declaration of Ramp rate by NTPC Barh stage 1: ERLDC

- *As per clause 45.9.a(i) of IEGC 2023, coal fired thermal power plants are required to declare ramp rate of not less than 1% of ex-bus capacity corresponding to MCR on bar per minute. However, it has been observed that Barh stage 1 generating station of NTPC Ltd. has been declaring ramp rate below 1% per minute during 96% of time between April 2024 to September 2024.*
- *As informed by various beneficiaries of the plant, declaration of reduced ramp rate for multiple number of time blocks results in difficulties in portfolio management by the beneficiaries. They are unable to vary their drawl schedule from Barh stage 1 from one block to the other in their desired rate. This also causes reduction of ramp reserves in the national power system.*

- Moreover, as per CERC (Terms and Conditions of Tariff) Regulations, 2024, the rate of return on equity is to be reduced by 0.25% due to failure to achieve the ramp rate as specified under Regulation 45(9) of IEGC Regulations, 2023.
- NTPC Barh Stage 1 is requested to kindly clarify that whether they have any technical constraint due to which they have been reducing declared ramp rates and it is requested to maintain ramp rate of at-least 1% per minute in compliance to IEGC 2023.



ERLDC may explain and NTPC may update. Members may discuss.

Deliberation in the meeting

ERLDC stated:

- As the drawl schedule can't be varied from one block to the other at a desired rate, demand portfolio management becomes challenging for beneficiaries in absence of desired ramp rate of the units in a series of time blocks.
- Declaration of reduced ramp rate by NTPC Barh (stg-I) is leading to depleted ramp reserves in the Indian power system.

NTPC submitted :

- Presently around 0.3% ramp rate is possible at Barh stage-I units.
- Achievement of desired ramp rate(1%) is not practically feasible at Barh stage-I owing to design constraints of the units i.e inadequate boiler response and design limitations of the generator.
- A petition has been filed before CERC for revising the ramp rate to 0.3%.

OCC Decision

- OCC noted that the matter is sub-judice and hence advised NTPC to update ERPC/ERLDC on issuance of any order by CERC.

2.10 Status of upcoming Thermal Generation Projects: ERPC

Thermal capacity is imperative due to escalating load demands mainly during non-solar hours. The year ahead LGB planning will be done shortly for FY 2025-26 to prepare for the upcoming summer season. The status of upcoming generating units is crucial for proper LGB planning & ensuring resource adequacy. These thermal power plants need to ensure their timely completion and integration into the grid for the upcoming demand surge.

The available status for units is as follows:

Unit Name	Status as per 52 nd TCC Meeting	Current Status (15.10.24)	Deliberation required
Barh U-3	COD by Q4 of 2024-25	Start-up power drawing w.e.f 30 th Apr 24	• Status of unit commissioning.
North Karanpura U-3	COD by Q4 of 2024-25	Startup power drawing from 16th Oct 24	• Status of unit commissioning.
Patratu	COD by Q4 of 2024-25	–	• Status of unit commissioning and development of Captive coal mines
Buxar TPP(SJVN) U-1	Unit#1 is likely to be synchronized by December, 2024 & Unit#2 to be synchronized by April 2025	Start-up power drawing from Naubatpur (BSPTCL)	• Status of 400kV & 220kV evacuation path • Status of unit commissioning.
IBUEL U-2	• To be commissioned by Jun 24 • DTL to be tentatively completed by Sept 24.	• Unit 2 is ready for synchronization. • SPS implementation pending. • DTL to be tentatively completed by Nov 24.	• Status of DTL

All concerned Thermal GENCOs may update current status of respective unit commissioning and associated evacuation path.

Deliberation in the meeting

➤ All GENCOs updated status as follows:

Unit Name	Status as per 52 nd TCC Meeting	Current Status (15.10.24)	Update in 220 th OCC
Barh U-3	COD by Q4 of 2024-25	Start-up power drawing w.e.f 30 th Apr 24	<ul style="list-style-type: none"> ✓ Stator has been dispatched from supplier and likely to reach site within next two months. ✓ COD of the unit by March 2025 .
North Karanpura U-3	COD by Q4 of 2024-25	Startup power drawing from 16th Oct 24	<ul style="list-style-type: none"> ✓ Erection of air-cooled condenser is presently under progress. ✓ COD of the unit by March 2025 .
Patratu	COD by Q4 of 2024-25	-	COD of the unit by March 2025 .
Buxar TPP(SJVN) U-1	Unit#1 is likely to be synchronized by December, 2024 & Unit#2 to be synchronized by April 2025	Start-up power drawing from Naubatpur (BSPTCL)	SJVN was not present in the meeting, so the previous status update remains unchanged.
IBUEL U-2	<ul style="list-style-type: none"> • DTL to be tentatively completed by Sept 24. 	<ul style="list-style-type: none"> • Unit 2 is ready for synchronization. • SPS implementation pending. • DTL to be tentatively completed by Nov 24. 	<p>For Unit-2 commissioning: Generator voltage build up done and is ready for synchronization once SPS gets implemented.</p> <p>For DTL commissioning:</p> <ul style="list-style-type: none"> ✓ <u>Foundation works</u> : 99.5% completed (only one site remaining) ✓ <u>Erection works:</u> 96% completed

			✓ <u>Stringing works: 87.7 %</u> completed.
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OCC Decision

- OCC stressed on thermal capacity addition as imperative to keep pace with escalating demand pattern and thereby advised all concerned generating utilities to expedite commissioning and COD of the respective generating units. The committed timelines as mentioned above must be adhered for all individual units.
- IBEUL was advised to expedite DTL commissioning activities (erection of remaining 8 towers and stringing of remaining 8 km of the line with resolution of pending ROW issues) so as to strictly adhere to the earlier committed timeline of November 2024. Fortnightly progress report on DTL commissioning must be shared with ERPC/ERLDC.

2.11 Generation target for FY 2025-26: ERPC

THERMAL

- As you are aware, 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 (**Annex B.2.11**).

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.

HYDRO

Generation Target for HE Stations for the year **2025-26** is under finalization wherein generation from **Chukha, Tala, Kurichu, Mangdechhu, Punatsangchhu-II (to be commissioned) HE stations** in Bhutan is to be considered since energy from these HE stations would be imported to India.

Month-wise generation targets (as per **Annex-B.2.16** attached) and expected energy import from these HE Stations in Bhutan.

All Thermal GENCOs of ER and Bhutan may update. Members may discuss.

Deliberation in the meeting

DGPC(Bhutan) representative affirmed the receipt of generation target details from most hydro stations and the same shall be shared with ERPC within a week after internal review.

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.
- OCC requested Bhutan to furnish the Hydro generation target for FY 2025-26 within a week so that Hydro generation target for India may be finalized by CEA.

2.12 Shutdown proposal of generating units for the month of November'2024-ERPC

Maintenance Schedule of Thermal Generating Units of ER during 2024-25 in the month of November'2024							
System	Station	Unit No.	Capacity (MW)	Period (as per LGBR 2024-25)		No. of Days	Reason
				From	To		
DVC	Mejia TPS	6	250	20-11-2024	24-12-2024	35	COH-Boiler RLA, turbogen.& FGD
CESC	Budge Budge TPS	1	250	05-11-2024	19-11-2024	15	AOH/Boiler License Renewal
HEL	Haldia TPP	2	300	21-11-2024	05-12-2024	15	AOH
NTPC	Barh-I	2	660	15-11-2024	05-01-2025	52	Boiler + Generator + Condenser
	KhSTPS	5	500	10-11-2024	09-12-2024	30	Boiler + Boiler RLA + LP
	KBUNL-II	4	195	10-11-2024	24-12-2024	45	Capital OH
WBPDCCL	Bakreswar TPS	3	210	19-11-2024	22-12-2024	34	AOH

Members may discuss.

Deliberation in the meeting

- DVC informed of availing shutdown of Mejia TPS unit#5 from 10.11.2024 for 35 days for capital overhauling.
- WBPDCCL apprised that Bakreswar TPS Unit#3 shall remain out of service since 19.11.2024 for 30 days and shutdown of Santaldih TPS Unit#6 will be availed from 25.11.2024 for 35 days.

OCC Decision

- OCC granted consent to all the requested shutdown proposals. The detailed shutdown schedule as approved by OCC forum is provided at **Annexure B.2.12**
- OCC advised all generating utilities of ER to share a consolidated outage plan for the lean demand period (i.e December 2024 to February 2025) to aid in smooth monitoring and reduce occurrence of forced outage in Summer 2025.

2.13 Shut Down request (OCB) of 400 KV D/C New Purnea-Muzaffarpur TL (Ckt-1 & Ckt-2) for Carrying out re-routing and dismantling of old towers near Purnea & Samastipur (Bihar) respectively: POWERLINKS

Background:

- 400kV New Purnea-Muzaffarpur TL (POWERLINK Line) at river crossing Tower no 97(DA+6) & 439 (DB+9) have got Most vulnerable due to change in course of River Choti Koshi & Rivar Bagmati. The locations are situated in the Right bank of River Koshi & Bagmati(Samastipur). The Tower foundations are 400kV Double Circuit Quad conductor towers structures . Presently, the locations are less than 10 mtr & 20 mtrs respectively from the river banks. During last season monsoon heavy soil erosion has been observed from the river banks.
- Considering the vulnerability of the existing tower foundation, as a permanent measure, we are shifting the DA+6 & DB+9 FS Foundation towers on Pile Foundation. Presently Pile Foundation work has been completed by Powerlinks in same alignment of existing line. Photos, SLD showing the condition of locations and its present status is being presented in the ppt presentation for understanding & consideration of Re-routing work at both locations.
- However, during of re-routing activity, (Old tower dismantling DA+3 & DB+6, New Tower erection (DB+6 & DB+9) Destranging from old tower(93-99 &438-440) & Restranging on new Pile tower) we will require OCB- basis S/D of both circuits of 400kV D/C New Purnea-Muzaffarpur TL (Ckt-1 & Ckt-2) tentatively from 15th Nov'24 to 10th Dec'24 on OCB basis till final line charging .

Approval sought:

- OCB s/d of 400 KV D/C New Purnea-Muzaffarpur TL (Ckt-1 & Ckt-2) would be required for carrying out diversion of line at new Pile Loc No.-97 (DB+6)-Purnea-Madhepura) & Loc no 439(DB+9) Samastipur-Bihar.
- The said locations are most vulnerable due to change in course of river Koshi Dhar & Bagmati- near to Purnea Bihar & Samastipur (BR)respectively.

- 3- For Risk mitigation measure, PTL has constructed the New Pile foundations just 35 mtrs & 20 mtrs away from existing towers in the same line alignment of existing line. Pile foundation has been completed in July'24 in all respects.
- 4- PO for re-routing work at both locations 97 & 439 in same line at Purnea & Samastipur has been Placed & gangs will be Mobilized from 27th Oct'24.
- During the Dismantling of old tower, De-stringing of existing spans, Erection & stringing on new Pile towers, S/d would be required on OCB.
- The s/d would be required tentatively from 15th Nov-24 to 10th Dec'24 on OCB for 25 days approx . The period has been chosen as during this period Hydro generation would be minimum & Post festive time workable situation after flood normalization in Bagmati & Chhoti Koshi rivers.

POWERLINKS may explain. Members may discuss.



Before- Photographs of Tower no. 97



After- Photographs of Tower no. 97 (Tower protection by using Bamboo piling & Geo Bags)





Tower no 439- Bagmati River- Samastipur Bihar



POWERLINKS may explain. Members may discuss.

Deliberation in the meeting

- *Powerlinks briefly put forth the background and justification behind the proposal of availing S/D of 400 KV D/C New Purnea-Muzaffarpur TL on continuous basis from 15th Nov'24 to 10th Dec'24(35 days) for carrying out re-routing/line diversion works by dismantling of old towers followed by erection/stringing on new pile towers.*
- *ERLDC raised concern on granting this S/D request as 400 kV Malda-New Purnea D/C line has also been approved for shutdown during the same period. So simultaneous planned outage of two important 400 kV lines in same area may pose threat to real time grid reliability.*

OCC Decision

- *ERLDC was advised to confirm the readiness of Powergrid ER-I in availing the S/D of 400 kV Malda-New Purnea D/C as per approved schedule. In case Powergrid ER-I is not availing the approved S/D during same period, consent may be granted to Powerlinks to avail S/D from 15.11.2024 to 10.12.2024 on continuous basis.*
- *In case Powergrid ER-I is poised to avail S/D of 400 kV Malda-New Purnea D/C as per approved timeline, OCC advised ERLDC to conduct necessary load flow study for consideration of this shutdown proposal.*

2.14 Shutdown request for FTC of Station Transformer: MPL

- In order to cater the to power requirement of FGD of both the units, a new Station Transformer (ST#3) has been installed.
- A new Dia has come up in the 400Kv Switchyard to accommodate the new transformer.
- On 4th of this month, successful test charging of the new Dia from Bus-II side has been done.
- Testing and Commissioning activities of the transformer is on the verge of completion, and we intend to charge the same by end of this calendar year.
- In case of fault during first time of charging of the transformer, we intend to take a precautionary measure of limiting the fault current for safeguarding our assets, the two generators.

- The proposed measure is to first time charge the new transformer through Dhanbad Line#2 with change in configuration at NKTL Sub-station end for increasing the fault impedance.
- Details enclosed at **Annex-B.2.14**

MPL may explain. Members may discuss.

Deliberation in the meeting

OCC Decision

MPL was advised to review the proposal.

2.15 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

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

52nd TCC Decision:

- ❖ SLDC, Odisha was directed to take up the matter with DISCOM to identify the feeder list and shifting of load at the earliest to implement AUFLS.
- ❖ Director, SLDC Odisha agreed to coordinate with concerned DISCOM and **update in next OCC.**

TCC advised all SLDCs :

- ❖ To expedite the process of implementation of AUFLS in stage I & II by shifting load quantum from stage III & IV at the earliest time possible.
- ❖ Explore the identification of new feeders to incorporate AUFLS in stage III & IV who have successfully implemented AUFLS in stage I & II by shifting load quantum from stage III & IV.
- ❖ To share the list of newly identified feeders with ERPC Secretariat within One Month for information.
- ❖ To ensure SCADA data mapping from 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.

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):

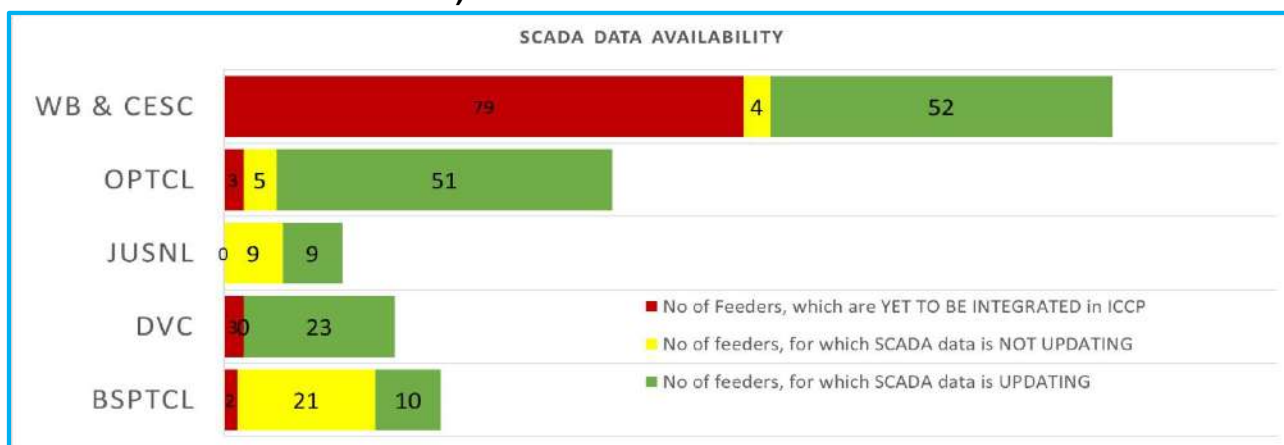
Utility	Stage 3 & 4 feeder shifting to Stage 1 and 2	Updated in ERLDC UFLS Monitoring Display	New feeder Addition for Stage 1-4 for meeting new ULFS Quantum requirement
Bihar	Yet to be updated by BSPTCL	Not Applicable	New feeders list communicated to ERLDC
Jharkhand	Completed as informed by SLDC	Updated as per list provided	New feeders list yet be shared
DVC	Completed as informed by SLDC	Updated as per list provided	New feeders list yet be shared
Odisha	Yet to be updated by Odisha	Not Applicable	New feeders list yet be shared

West Bengal- WBSEDCL	Completed as informed by SLDC	Updated as per list provided	New feeders list yet be shared
West Bengal- CESC	Yet to be updated by CESC	Not Applicable	New feeders list yet be shared

Based on the above, updated AUFLS stage wise loads available post shifting of Stage 3 & 4 feeders to Stage 1 & 2 by various states are as follows:

Utility	Stage 1		Stage 2		Stage 3		Stage - 4		Total	
	Old Scheme	Oct 2024	Old Scheme	Oct 2024	Old Scheme	Oct 2024	Old Scheme	Oct 2024	Old Scheme	Oct 2024
Bihar	126	126	118	118	153	153	85	85	481	481
Jharkhand	54	88	64	105	35	33	73	0	227	227
DVC	122	169	145	203	147	100	138	80	552	552
Odisha	181	181	183	183	184	184	186	186	735	735
WBSEDCL	316	416	284	458	265	153	273	111	1138	1138
CESC	65	65	90	90	125	125	120	120	400	400

By Oct'24, SCADA data availability of feeders identified for AUFLS (as per information available at ERLDC SCADA data) is shown below:



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

Deliberation in the meeting

OCC Decision

OCC advised all SLDCs:

- To validate the AUFLS stage wise loads available post shifting of Stage 3 & 4 feeders to Stage 1 & 2 as follows:

Utility	Stage 1		Stage 2		Stage 3		Stage - 4		Total	
	Old Scheme	Oct 2024	Old Scheme	Oct 2024	Old Scheme	Oct 2024	Old Scheme	Oct 2024	Old Scheme	Oct 2024
Bihar	126	126	118	118	153	153	85	85	481	481
Jharkhand	54	88	64	105	35	33	73	0	227	227
DVC	122	169	145	203	147	100	138	80	552	552

Odisha	181	181	183	183	184	184	186	186	735	735
WBSEDCL	316	416	284	458	265	153	273	111	1138	1138
CESC	65	65	90	90	125	125	120	120	400	400

- To explore the identification of new feeders to incorporate AUFLS in stage III & IV who have successfully implemented AUFLS in stage I & II by shifting load quantum from stage III & IV.
- To ensure SCADA data mapping from 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 UFR to ascertain their healthiness and submit report to ERPC/ERLDC.
- SLDC Odisha was instructed to expedite finalization of feeder list and shifting of load to stage –I & II of AUFLS in coordination with concerned DISCOM.
- CESC, BSPTCL and SLDC Odisha were advised to update the status of shifting of UFLS quantum from stage III & IV to stage I & II at the earliest.

2.16 Update on Patna Islanding scheme: ERPC

It was decided that Patna islanding scheme will be formed with Units of NPGCL along with loads of Pana city.

NTPC may update the present status.

Deliberation in the meeting

OCC Decision

Since there was no further update, the issue was referred to the next OCC meeting .

2.17 Ensuring Successful Implementation of various decision support tools in New SCADA/EMS project for grid monitoring and reliable operation.: ERLDC

- Present SCADA/EMS in SLDCs and ERLDC has State Estimator (SE) and Real-Time Contingency Analysis (RTCA) which are important for real time decision support for providing any planned outage or accessing impact of any forced outage on the grid. Presently SE and RTCA is functioning only at ERLDC and are not properly functional in SLDCs. At ERLDC it's truncated at 220 kV levels due to poor reliability of data at 132 kV levels. Major reasons for non-working of SE and RTCA at SLDCs and truncation at ERLDC at 220 kV level are non-availability of reliable data and telemetry of 132 kV substations specially breaker/isolator status. However, ERLDC is supporting states so that these can be made functional to some extent.
- Now new SCADA/EMS system implementation under ULDC Phase III has already commenced in Eastern Region. The new SCADA/EMS system includes several additional decision-support tools apart from SE/RTCA for real-time operations, of which some of prominent ones are listed below:
 - Automatic Demand Management System (ADMS)
 - Load Forecasting
 - Transmission Loss Sensitivity Factors (TLSF)
 - Network Sensitivity Applications (LODF, GSDF, LSDF)
 - Optimal Power Flow (OPF)
 - Short Circuit Analysis (SCA)
 - Transmission Line/Corridor Capability Monitor (TCM) for Real time ATC/TTC calculation
 - Dynamic Security Assessment (DSA)

- Successful integration of these tools at SLDCs as well as ERLDC hinges on accurate data and telemetry from 132 kV and above substations in the Eastern region.
- In month of sept 2024, three times SE and RTCA function at ERLDC was hampered due to data availability issues as quoted below. It can be seen that, how analog as well digital status input can impact decision support tools non-availability during real time grid operation.

Date	Description of SCADA/EMS Data Issue	Impact on SE/RTCA Performance at ERLDC
01-09-2024	GT data of Unit 5 and 6 of NTPC Kahalgaon was erroneous	Non-Satisfactory result in RTCA
21-09-2024	Incorrect Status data of 400 kV Saharsha-Kishanganj ckt 1	Non-Satisfactory result in RTCA
10-10-2024	Garbage data received from 220 kV Conca_GR-Budhipadar Ckt 2 (at Conca_GR end)	SE got diverged, RTCA could not be run

In view of the above, following points may be discussed:

- SCADA data telemetry monitoring and compliance status for all 132 kV and above substations in OCC and TEsT meeting of Eastern region.
- Action taken by state utilities for ensuring reliable data and telemetry of 132 kV and above substations to SLDCs (and onward to ERLDC and NLDC)
- Ensuring integration of all required digital and analog data during new SAS/RTU upgradation work to ensure function of these tools at SLDC level.

ERLDC may explain. Members may discuss.

Deliberation in the meeting

ERLDC outlined the additional features of new SCADA/EMS projects and their pivotal role in reliable grid operation.

OCC Decision

- *OCC advised all STUs/state Transcos to ensure reliable data telemetry from all 132 kV stations (specially isolator/breaker status) to aid in smooth functioning of State Estimator (SE) and Real-Time Contingency Analysis (RTCA) tools in SCADA.*
- *In view of the new SCADA/EMS project equipped with additional features for real time operation, all SLDCs were advised for integration of all digital and analog data to ERLDC.*

2.18 RTU and SAS Upgradation in Eastern region: ERLDC

- The report on “Replacement/up-gradation of old RTUs in Eastern Region” for Real Time data transfer to ERLDC Main and Back-up Control Center over IEC104 protocol was approved by ERPC in 36th ERPC meeting held at Bhubaneswar on 14th September 2017. The contract for replacement/up-gradation of old RTUs in Eastern Region was awarded subsequently by POWERGRID on 31st December 2020. POWERGRID agreed to replace the old RTUs on priority basis as per the list submitted by ERLDC.

- Out of the approved **39** RTU/SAS upgrades at substations, **31** has already been completed and data of the same has been integrated with ERLDC. However, RTU/SAS upgrade for remaining given substations are required to be expedited to ensure project completion.

S. No	Region	Name of Substations	Required upgradation of RTU/SAS	Present Status of Work
1	ER-I	Sasaram HVDC	SIEMENS make SAS	To be replaced
2	ER-II	Durgapur*	AlstomRTU-S900	To be replaced
3	ER-II	Siliguri 220 kV	AlstomRTU-C264	To be replaced
4	ER-II	Subhasgram*	AlstomRTU-C264	To be replaced
5	ER-II	Rangpo	SIEMENS make SAS	To be replaced
6	ER-II	Maithon	AlstomRTU-S900	To be replaced
7	ER-I	Purnea 400 kV	AlstomRTU-S900	To be replaced
8	Orisha Project	Talcher HVDC*	AlstomRTU-S900	In Progress

Some of the ISGSs and IPPs substations as given in table are still reporting in IEC 101 protocol and there is a need to expedite on the required fiber optic communication and subsequent RTU upgradation activity by respective owners:

SI No.	Substation Name	Voltage (kV)	Level	Protocol Reporting	Ownership	Availability of Fiber Optic communication
1	BRBCL-NTPC	400	1	IEC101	NTPC	Yes
2	Teesta 3	400	2	IEC101	SUL	Yes
3	Dikchu	400	3	IEC101	Geenko	Yes
4	JITPL	400	4	IEC101	JITPL	Under Process
5	Chujachen	132		IEC101	GI Hydro Pvt Ltd.	No

ERLDC may explain. Members may discuss.

Deliberation in the meeting

- Powergrid ER-II stated:
Except Durgapur S/S, RTUs at all other stations shall be upgraded latest by 2025. SAS will be implemented at Durgapur S/S and made operational latest by 2026.
- Station-wise update from Powergrid ER-II summarized as follows:

S. No	Region	Name of Substations	Required upgradation of RTU/SAS	Present Status of Work
1	ER-I	Sasaram HVDC	AlstomRTU-S900	Work in progress. Expected completion by Dec-2024.
2	ER-II	Durgapur*	AlstomRTU-S900	SAS supplied at Siliguri S/S was diverted to Durgapur S/S. However, Durgapur S/s is going to be made fully automated under 2024-29 upgradation scheme in which data reporting to ERLDC has been envisaged. SAS material at Durgapur is proposed to be kept as spare purpose.
3	ER-II	Siliguri 220 kV	AlstomRTU-C264	Already commissioned in SAS through other project. SAS supplied in this project diverted to Durgapur upon ERPC approval.
4	ER-II	Subhasgram*	AlstomRTU-C264	Work was held up due to non-availability of shutdown. Work will be resumed in 1st week of Nov-2024. Expected completion by Dec-2024.
5	ER-II	Rangpo	SIEMENS make SAS	No SAS upgradation work will be done. Only router cum firewall will be installed.
6	ER-II	Maithon	AlstomRTU-S900	Work is in progress. Expected completion by Nov-2024.
7	ER-I	Purnea 400 kV	AlstomRTU-S900	Work in progress. Expected completion by Dec-2024.
8	Odisha Project	Talcher HVDC*	AlstomRTU-S900	Only protocol converter to be installed which is in Progress.

OCC Decision

- OCC advised Powergrid to expedite the RTU upgradation works to the best feasible extent and the associated shutdown requests shall be considered on priority in monthly transmission outage meeting.
- BRBCL(NTPC) along with other IPPs(Teesta 3,Dikchu,JITPL,Chujachen) were directed to execute RTU upgradation and fibre optic communication works on priority to facilitate seamless data transfer to ERLDC (Main and backup) via IEC 104 protocol.

2.19 Periodic Testing of power system elements: ERLDC

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.*

.....”

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.

All GENCOs and HVDC/FACTS owners may update.

Deliberation in the meeting

ERLDC highlighted:

In absence of periodic testing being carried out for the specified power system elements, the accuracy of simulation models in system study is compromised , thus adversely impacting short term as well as long term operational planning.

➤ *In this regard, DVC and WBPDCCL affirmed of furnishing the testing plan as per timeline.*

OCC Decision

- *OCC advised all generating utilities(thermal and hydro) as well as owners of HVDC/FACTS devices to strictly adhere to the IEGC 2023 guidelines and thereby submit the testing plan for their respective elements to ERPC **within a week**.*
- *Details of tests to be carried out as per IEGC 2023 is summarized below for reference:*

Power Elements	System	Tests	Applicability
Synchronous Generator		(1) Real and Reactive Power Capability assessment. (2) Assessment of Reactive Power Control Capability as per CEA Technical Standards forConnectivity (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
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2.20 Performing Resource adequacy exercise by SLDCs as per IEGC: ERLDC

- IEGC clause no 31. 2(b) & 31.4 mandates all SLDCs to assess resource adequacy and furnish time block-wise information of all intra-state entities for the following day to respective RLDCs regarding demand estimation, availability of internal generation & contracted capacity, planned procurement through Tertiary reserve, and planned procurement in the Market.
- CERC directed all SLDCs and RLDCs via order 9/SM/2024 dated 7th October 2024 to furnish the details of operational planning undertaken as mentioned in 31(4) (a) of IEGC by 16.10.2024. For ensuring the compliance of the Hon'ble Commission's directions, ERLDC conducted a meeting with all SLDCs on 09.10.2024.
- Resource Adequacy is important for ensuring reliability in every time horizon. Therefore, all SLDCs are requested to submit the Resource Adequacy data in the prescribed format to RLDC as per IEGC timeline.

ERLDC may explain. All SLDCs are requested to share the resource adequacy data to ERLDC.

Deliberation in the meeting

ERLDC highlighted:

- *The significance of Resource adequacy(RA) study in quantifying the deficit that cannot be met from firm contracts as well as assessing uncertainty in demand, RE growth rate, hydro inflows ,Unit forced outages and capacity derating.*
- *Month ahead, week ahead ,Day ahead and intra-day resource adequacy assessment done based on individual states' own generation from all sources(Thermal,Hydro,Gas,RE,etc) along with various means of grid drawl including ISGS,GNA,TGNA,DAM,REMC and RTM.*
- *Inputs sought from SLDCs for RA study summarized as:*
- ✓ *Block wise Demand estimation(including RE i.e Solar/Wind forecast for the control area)*
- ✓ *Block wise Availability and Injection schedule of internal generation(intra-State entity) along with planned outage & derating of units(if any).*
- ✓ *Contracts(GNA,T-GNA)*
- ✓ *Planned procurement through Tertiary reserve, other bilateral or collective transactions.*

OCC Decision

OCC advised all SLDCs to furnish the relevant details for resource adequacy assessment to ERLDC in compliance to IEGC 2023 and CERC Suo-Motu Petition No. 9/SM/2024 dated 7th October 2024.

ADDITIONAL AGENDA

2.21 Preponement of commissioning of new 220/132KV 1X200MVA (4th) ICT at Ara:POWERGRID ER-I

Implementation timeframe for 'installation of new 220/132KV, 1X200MVA (4th) ICT at Ara (POWERGRID) S/s' under 'Eastern Region Expansion Scheme-XXXVI (ERES-XXXVI)' was 18 months from the issue of OM by CTUIL i.e. 20.10.2024 as per CTUIL Office Memorandum vide ref. no C/CTU/AI/00/12th CCTP dated 21.04.2023.

However, said ICT was put into commercial operation w.e.f. 18.08.2024 for improving the performance, safety & security of the grid and considering load requirement at Ara. Trial Run certificate issued by GRID-INDIA is enclosed herewith.

POWERGRID ER₁ may update. Members may discuss

Deliberation in the meeting

OCC noted.

2.22 Pending LAN port opening for AMR Phase5 Implementation work: POWERGRID ER-II

For the ongoing AMR Phase5 implementation work in Eastern Region, majority of the new locations were LAN enabled and Meter data reporting to ERLDC via LAN. Following are the locations where LAN ports are yet to be opened. It is requested to the concerned utility to complete the LAN port opening immediately and share the port details with PGCIL/ERLDC.

Utility	Sub Station	Remarks
BGCL	BGCL DUMRAON NEW	Port opening process is WIP
NTPC	DULANGA CMP	Port opening process is WIP
WBSETCL	KLC BANTALA	Port opening process is WIP
DFCCIL	DURGAWATI	Port opening still pending
NTPC	NPGC (NTPC)	Port opening still pending
NTPC	NORTH KARANPURA	Port opening still pending

POWERGRID ER-II may update. Concerned utilities may update. Members may discuss.

Deliberation in the meeting

OCC Decision

OCC advised all concerned utilities to carry out LAN port opening process at the earliest to aid in seamless data reporting to ERLDC via LAN. The respective port details should also be

shared with Powergrid/ERLDC. This is essential for successful implementation of AMR phase-5 project in ER and should be taken up on priority.

2.23 Update on feasibility of data reporting at 1 min interval in existing AMR of ER: ERPC

In **219th OCC** :

“Powergrid had submitted:

For implementing this 01 min instantaneous MW data collection, TCP/ IP based meters will be mandatory that shall pose significant escalation in cost implications for ER constituents.”

As per **219th OCC** decision:

“OCC observed divergence in views on requirement of instantaneous MW data reporting to SLDCs. Since significant cost implications have been involved in the existing AMR project, OCC opined to ascertain the the feasibility of instantaneous MW data reporting at 1 min interval in existing AMR system from TCP/IP meters. Powergrid was advised to share report on pilot study of the same in next OCC.”

POWERGRID ER-II may update. Members may discuss.

Deliberation in the meeting

Powergrid ER-II stated:

- ✓ *AMR was originally envisaged for post-despatch analysis and not for purpose of real time grid operation.*
- ✓ *New 15 min Secure meters have been configured with 5 min block i.e they are capable of reporting and reading data at 5 min interval. All existing time drifted meters will be replaced with new Secure meters.*
- ✓ *Existing daisy chain mechanism of AMR is not compatible with data reporting in 1 min interval. Instantaneous 1 min data can be fetched only via TCP/IP meters connected in star topology(i.e meters directly to DCU).*
- ✓ *As per pilot study carried out by Powergrid, 20 seconds delay is observed in data reporting at 1 min interval for a single meter and this time delay shall increase further with increase in number of meters.*
- ✓ *A one-day workshop on AMR system is planned to be organized shortly as advised in the last OCC.*

OCC advised all members to actively participate in the workshop on AMR.

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

3.1. ER Grid performance during September 2024.

The average and maximum consumption of Eastern Region and Max/Min Demand (MW), Energy Export for the month September-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)
587 MU	647.6 MU, 20.09.2024	30843 MW, 22.09.2024 at 23:01 Hrs.	16972 MW, 16.09.2024 at 06:09 Hrs.	3275	3213

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

Deliberation in the meeting

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

3.2. Update on Flexible operation of Coal based Thermal Power Plants: ERPC

- ◆ As per gazette notification dated 30.01.2023 issued by CEA regarding flexible operation of coal fired thermal generating units, ramp rate of 2% between 55-70% along with a ramp rate of 3% above 70% was mandated within one year of notification of the regulations,i.e by Jan 2024.
- ◆ The SOP for operating at 55% load with recommendation for necessary training of the plant operators, was also circulated.
- ◆ Relevant communication in this regard was also passed on to State Electricity regulatory Commissions as well as principal secretaries of concerned states outlining measures for execution of CEA regulations.
- ◆ As per above mentioned regulations, coal based thermal generating units, whose implementation shall be as per phasing plan specified by CEA.Implementation plan for unit operation at 40% minimum load in phased manner(pilot+4 phases
- ◆ This phased implementation has been notified, with specific targets and timelines for compliance.
- ◆ A comprehensive report published by CEA on flexible operation coal based thermal power plants highlighting various challenges as well as mitigation plan for achieving 40% minimum technical load

❖ **Regarding 55% Minimum Technical Load (MTL)**

Thermal GENCOs may share details w.r.t the following:

- a) Whether the target of achieving 55% Technical Minimum Load (MTL) has been met & if not, the reasons for the same & tentative date for achieving the same.
 - b) Whether the specified ramp rates outlined in the regulations i.e., 3% for 100-70% load & 2% for 70-55% load have been adhered to, if not, the reasons & tentative date for achieving the same.
 - c) How many operators have been trained in your organisation? (May treat this matter as Most Urgent)
- Further, it is requested that attendees bring duly filled progress report (**Annexure- B.2.1.4**) as per enclosed format on the date of meeting.

❖ **Regarding 40% Minimum Technical Load (MTL) & status of units under pilot phase (May,2023-March,2024).**

Phase	Sector	Organization	Name of Project	Unit No.	Capacity (MW)	Region
Pilot	Central	DVC	MEIJA TPS	8	500	ER
Pilot	State	WBPDC	SAGARDIGHI TPS	3	500	ER

Thermal GENCOs may share details w.r.t the following:

- ❖ Whether the target of achieving 40% Technical Minimum Load (TML) has been met and if not, the reasons for the same and tentative date for achieving.
- ❖ Whether the specified ramp rates outlined in the regulations, i.e., **3% for 100-70% load, 2% for 70%-55% load, 1% for 40%-55%** have been adhered to. If not, the reasons for behind and tentative date for achieving the target.
- ◆ It is observed that **most of the plant in ER not achieving 55% despite making full use of available resources**. Even though there is a national need for providing tertiary down services, these left out margin are not being used by state sector generators which are not running at 55%.
- ◆ It is essential to address the challenges faced by **intra-state generators** in operating flexibly **up to 55%** and develop an immediate action plan to enhance this flexibility.
- ◆ Without reducing these state generators to the 55% TM, decommitting units from ISGS could lead to a serious shortage during non-solar hours.

As per deliberation in **52nd TCC**:

Regarding 55% Minimum Technical Limit (MTL):

- ❖ WBPDC updated that all the thermal generating units including that of Kolaghat, are technically capable to operate at 55% MTDL ,But in absence of appropriate regulations of WBERC, generating units not operating at 55% MTL or below on sustained basis.
- ❖ On behalf of DPL, He informed that DPL Unit #8 is capable of operating at the desired MTL(55%).
- ❖ ED, ERLDC apprised that they have already highlighted the matter to WBERC & WBERC has assured to come up with appropriate regulation to incentivize generators.
- ❖ NTPC, DVC & CESC representatives submitted that all their thermal generating units are technically capable of operating at 55% MTDL on sustained basis.

- ❖ OPGC updated that all Units are technically capable to operate at 55% MTL.
- ❖ Chief Engineer, GM division,CEA suggested that the thermal units make it mandatory to include the Flexibilization with required ramp rates as per CEA/MOP directives.

Regarding 40% Minimum Technical Load (MTL):

WBPDCCL updated that Sagardighi unit#3 trial run was already done at 40% MTL for a short duration of time & the exact response in continuous operation with specified ramp rates is yet to be ascertained.

- ❖ He further submitted that the unit#3 will be fully capable of operating at 40% MTL at desired ramp rate as per CEA Guidelines by November 2024 after some fine tuning of Governor system by M/S BHEL .
- ❖ DVC updated that the detail report on successful trial operation at 40% MTL of Mejia Unit#8 highlighting the issues faced during trial run, is already shared with CEA & ERPC. However,they are waiting for feedback from M/S BHEL & the same will be updated in the next OCC.
- ❖ OPGC submitted that their 660MW units are technically capable to operate at 40-45% MTL. However, in 210MW units having tube mill boilers, part load operation at 40-45% is not feasible without oil support.
- ❖ GMR also informed that their units are technically capable to operate at 45% MTL without oil support.

TCC decision:

- TCC opined that it would not be prudent to compromise with secure and stable grid operation for commercial considerations.It was further observed that in view of rapid RE capacity addition , flexible operation of existing thermal units is extremely crucial.
- As per MOP letter, TCC suggested all states to take up with respective SERCs for implementation of necessary regulations to facilitate flexible operation of intra-state generating units.
- TCC advised the Generators selected under pilot phase as well as phase-1 to expedite their execution process & complete all the required modification within the stipulated timeframe given by CEA.
- TCC advised DVC and WBPDCCL to take up with BHEL for expediting technical feasibility of sustained operation at 40% MTL.
- TCC opined for regular follow-up of status in OCC.

Thermal GENCOs may update. Members may discuss.

Deliberation in the meeting

➤ *WBPDCCL updated:*

Capability testing of Sagardighi Unit #3 to operate at 40 % of MTDL has been successfully completed. The unit could support suatained operation at 40 % MTDL for around 2 hours without oil support.

➤ *DVC updated:*

Mejia TPS Unit#8 could successfully operate at 40% MTDL for about 18-20 mins without oil support.

OCC Decision

- OCC advised all generating utilities to ensure stable operation of the respective generating units upto 40% MTL as per CEA phasing plan.

3.3. Update on Implementation of AGC in Intra-state generating units: ERLDC

- ◆ AGC is now operational at most ISGS plants across India, which together have a total installed capacity exceeding 70 GW. However, the dispatchable margin provided through AGC and Secondary Reserve Ancillary Services (SRAS) remains insufficient for maintaining frequency within the IEGC band. With the increasing penetration of renewable energy, managing frequency is expected to become more challenging in the future. Therefore, it is crucial to enhance frequency control and stability through increased participation from intra-state AGC.
- ◆ In response to this need, efforts are underway to encourage more intra-state generators to join the SRAS scheme. Feasibility reports have been prepared, and stakeholder meetings have been held with DVC, West Bengal, and Bihar to explore potential solutions and address any concerns.
- ◆ Present status of **Intra-state AGC integration** process is as follows:

SLDC/State	Generator name	Unit Capacity (MW)	Status
Bihar	Barauni unit # 8 & 9	2x250	Pending discussion between NTPC Barauni, SLDC Bihar and its DISCOM for mutually agreeing to Mechanism for recovery of one-time cost of AGC implementation and Mechanism for Sharing of gains which is to be fixed bilaterally.
DVC	Mejia-B, DSTPS and Koderma	(2x500) (2x500) (2x500)	Final procurement order was awarded to Siemens on 7th September 2024 with timeline of completion of 4 months .
West Bengal	Units of WBPDC	-	West Bengal SERC notified WBERC (Ancillary Services) regulation, 2023 dated 26th December 2023. M/s WBPDC refers to WBSERC for implementing the AGC server at WBSLDC after which plants will be connected to SLDC one by one.

As per deliberation in 52nd TCC:

- ❖ DVC apprised that final procurement order was awarded to Siemens on 7th September 2024 for all identified six Units & it is expected that within 4 months AGC implementation will be completed.
- ❖ NTPC representative informed that NOC for implementing AGC in its Barauni unit # 8 & 9 is yet to be received from SLDC, Bihar & also discussion is pending between NTPC Barauni, SLDC Bihar and its DISCOM for mutually agreeing to cost recovery and gain sharing mechanism.
- ❖ RED, NTPC mentioned that since the need for AGC Implementation in its Barauni unit # 8 & 9 is principally agreed & for this, a formal clearance from Bihar is required. They will resolve the issue by joint meeting.
- ❖ ED, ERLDC requested SLDC, Odisha to organize a meeting with OPGC to formulate a methodology so that OPGC units can be integrated with AGC.
- ❖ SLDC, Odisha submitted that attempt has been made by OPGC but OEM has not yet responded.
- ❖ OPGC suggested to have a special meeting with M/S BHEL & SLDC, Odisha to finalize the modalities of Implementation of AGC & will update the status within one month.
- ❖ WB SLDC submitted that another meeting shall be convened with WBPDCCL to resolve contractual issues and decide next course of action.

TCC Decision:

- TCC appreciated efforts of DVC in initiating AGC implementation process
 - SLDC Bihar and Bihar DISCOMs were advised to resolve the pending issues with NTPC bilaterally for AGC implementation at the earliest.
 - SLDC Odisha was advised to organize meeting with OPGC and ERLDC to resolve AGC implementation in OPGC units.
 - WB SLDC was advised to resolve contractual issues with WBPDCCL bilaterally for expediting AGC implementation.
 - TCC advised all the concerned utilities to expedite the execution process & complete the AGC Implementation as early as possible.
 - Status of AGC implementation to be updated regularly in OCC meetings.
- All concerned may update the status. Members may discuss.

Deliberation in the meeting

Since there was no further update on status of AGC implementation, the issue was referred to the next OCC meeting.

3.4. Changes incorporated in ERLDC Operating Procedure: ERLDC

Few changes have been incorporated in ERLDC Operating Procedure in October 2024 which are as follows:

1. In Annexure 6.4, the cumulative and state-wise capacity for PRAS in the Eastern Region has been added in a tabular form.
2. A “List of Annexures” has been added as an index in the annexure.

Revised Operating procedures (Rev no. 3) uploaded on ERLDC website.

Link of the operating procedure:

<https://app.erlhc.in/Content/Upload/System%20Study/Operating%20Procedure/ER%20Operation%20Procedure%202024-25%20Rev-3.pdf>

Link of annexures to the operating procedure:

<https://app.erlhc.in/Content/Upload/System%20Study/Operating%20Procedure/ANNEXURE%20of%20OPERATING%20PROCEDURE%202024-25%20Rev-3.pdf>

Attached at **Annex-B.2.16.1** and **Annex-B.2.16.2**.

Members may note.

Deliberation in the meeting

ERLDC apprised of the alterations made in the Eastern Region operating procedure in October 2024.

Members noted.

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

- ❖ On **20th April'24**, ERLDC received one mail from HVDC Talcher stating the requirement of replacement of the R-phase converter transformer necessitating restriction of the power order of HVDC Talcher bi-pole to **1500MW** till the replacement. It was also informed that the spare Converter Transformer of HVDC Kolar is being diverted from HVDC Kolar to HVDC Talcher and is expected to reach HVDC Talcher by **31st May 2024**.
- ❖ 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.
- ❖ Further, while availing the planned shutdown of Pole-2 on 28.04.2024, the other pole didn't go to metallic return mode as the automatic changeover sequence failed and remained in Ground return mode for around 15 minutes.

As per deliberation in **217th OCC**:

- ❖ The updated status as per latest communication from Powergrid Odisha dated 22.07.2024:
 - Cumulative distance travelled from Kolar is 929 kms against total distance 1910 kms. Balance distance pending to be travelled is 981 kms.
 - He further mentioned that the Converter Transformer may tentatively be reached at site by **last week of September** & after reaching at site, it will take another 15 days to complete the commissioning process.

OCC Decision

OCC advised PowerGrid Odisha to expedite the transport of the converter transformer so that it can be commissioned at the earliest to improve stability & reliability of Grid.

Powergrid Odisha may update the present status of the Converter Transformer. Members may discuss.

Deliberation in the meeting

Powergrid Odisha updated:

- ✓ *The converter transformer has reached HVDC Talcher station. Presently air circulation and erection of bushings is under progress.*
- ✓ *The converter transformer shall be charged by November 2024.*

OCC advised Powergrid Odisha to expedite the process and furnish the latest status to ERPC/ERLDC on regular basis.

3.6. 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. If any data is not received or is incomplete, ERLDC resorts to using Scada data (low resolution) to calculate the performance of the respective control area.

Therefore, timely submission of primary response data is crucial for compliance with the **IEGC**.

As per deliberation in **215th OCC**:

- All generators whose data submission against frequency events flagged by ERLDC is pending (detailed above in agenda) were advised to submit the necessary FRC data to ERLDC at the earliest.
- All generators were also 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.

In line with the provisions of IEGC 2023, GRID-INDIA has been assessing the **Frequency Response Characteristics (FRC)** for grid events involving load/generation loss of more than 1000 MW or change in frequency by more than 0.1 Hz. In the month of **July-2024 five of such event was reported**. The Plant-wise average response as observed through 10 second SCADA data available at ERLDC & data received from generators is show in the table below. It may be noted that many power plants' performance was poor / below average and data received status also very poor from most of the plants. Respective plants/State control area may explain reasons behind deficiency in performance and all utilities may follow the timeline.

219th 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 **17.10.2024**)

STATIONS		03.04.2024	06.04.2024	19.04.2024	04.06.2024	04.06.2024	11.06.2024	17.06.2024	19.06.2024	16.07.2024	23.08.2024	13.09.2024
		05.29	11.24	10.28	10.26	10.34	14.10	13.53	12.42	22.10	12.34	13.15
FTSTPP #STG 1 & 2	ISGS	Pending	Pending	Pending	Received	Received	Received	Pending	Pending	Received	Received	Received
FTSTPP # STG 3	ISGS	Pending	Pending	Pending	Pending	Pending	Received	Pending	Pending	Pending	Received	Received
KHSTPP #STG 1	ISGS	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending
KHSTPP #STG 2	ISGS	Pending	Received	Received	Received	Pending	Pending	Received	Received	Received	Received	Received
TSTPP #STG 1	ISGS	Received	Received	Received	Received	Received	Received	Received	Pending	Received	Received	Received
Barh stage-1	ISGS	Pending	Pending	Pending	Received	Received	Received	Received	Received	Received 29.07	Received	Received
Barh stage-2	ISGS	Pending	Pending	Pending	Received	Received	Received	Received	Pending	Received	Received	Received
BRBCL	ISGS	Pending	Pending	Received	Pending	Pending	Pending	Pending	Pending	Received	Received	Received
Daripalli	ISGS	Received	Received	Received	Received	Received	Received	Received	Received	Received	Received	Received
North Karanpura	ISGS	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Received	Received	Received
NPGC	ISGS	Received	Received	Received	Received	Received	Received	Received	Received	Received	Received	Received
TEESTA V	ISGS	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	Pending	Pending	Pending
GMR	CPP	Received	Received	Received	Received	Received	Received	Received	Pending	Received	Received	Pending
MPL	CPP	Received	Received	Received	Received	Received	Received	Received	Received	Received	Received	Received
ADHUNIK	CPP	Received	Received	Received	Received	Received	Received	Received	Received	Received	Received	Received
JITPL	CPP	Received	Received	Received	Received	Received	Received	Received	Received	Received	Pending	Pending
INDBHARAT	CPP	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending
TASHIDING	CPP	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending
TEESTA III	CPP	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	Pending	Pending	Pending
DIKCHU	CPP	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	Pending	Pending	Pending
TALCHER STG2	ISGS	Received	Received	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending
Bihar	SITAT E	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending
Jharkhand	SITAT E	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending
DVC	SITAT E	Pending	Pending	Pending	Received	Received	Pending	Pending	Pending	Pending	Pending	Pending
OPTCL	SITAT E	Received	Received	Received	Received	Received	Received	Received	Received	Received	Received	Received
WB	SITAT E	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending

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.

3.7. 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.

219th 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.
- ♦ SLDCs who are submitting day ahead forecast were advised to also share the forecasting data on weekly as well as monthly basis with ERLDC.

- ◆ SLDC Odisha was advised to expedite implementation of the demand forecasting software.
- ◆ Besides day ahead forecast, West Bengal SLDC was also advised to share weekly and monthly forecast respectively for their control area.
- 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.

The latest Forecast receipt status is shown below:

As on 17.10.2024	Forecast Receipt Status		
Entity Name	Day Ahead	Week Ahead	Month Ahead
Jharkhand	Regular	Regular	Regular
West Bengal	Regular	Not Received	Not Received
DVC	Regular	Regular	Received (1 st Time)
BIHAR	Regular	Regular	Regular
SIKKIM	Regular	Regular	Regular
ODSHA	Regular	Not Received	Not Received

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 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 i.e SLDC Odisha and West Bengal SLDC.
- ❖ SLDC Odisha was advised to expedite implementation of the demand forecasting software and positively update the status in next OCC.

3.8. Mock Islanding test: ERLDC

As per IEGC cl. 29(11), Mock drills of the islanding schemes are to be carried out annually by the respective RLDCs in coordination with the concerned SLDCs and other users involved in the islanding scheme. In case a mock drill with field testing is not possible to be carried out for a particular scheme, simulation testing shall be carried out by the respective RLDC.

Presently, the following islanding schemes are present in the Eastern Region:

Station/System	State/Country	Installed Capacity (MW)
CHPC	Bhutan	84
CESC	West Bengal	750 (3 x 250 MW)
NALCO	Odisha	1200
ICCL	Odisha	258 (2 x 54 MW + 1 x 30 MW + 2 x 60 MW)
RSP	Odisha	255 (2 x 60 MW + 3 x 45 MW)
Bhushan Power & Steel	Odisha	506
Aryan ISPAT and power Ltd.	Odisha	18
Maithon Ispat Limited	Odisha	30
Hindalco	Odisha	467.5
IMFA	Odisha	258 (2 X 54 MW+ 1 X 30 MW + 2 X 60 MW)
VAL	Odisha	1215 (9 X 135 MW)
Bakreswar Islanding Scheme	West Bengal	1050 (5 x 210 MW)
Tata Power Haldia Islanding Scheme	West Bengal	120 (2 x 45 MW+ 1 x 30 MW)
Bandel Islanding Scheme	West Bengal	215
Narbheram Power & Steel Pvt. Ltd (Dhenkanal) Islanding Scheme	West Bengal	8
CTPS Islanding Scheme	DVC	500

*CTPS Islanding Scheme was inadvertently missed in the last two agendas.

- ◆ These islanding schemes shall be reviewed and augmented depending on the assessment of critical loads at least once a year or earlier if required.

- ◆ Therefore, all the concerned SLDCs are requested to coordinate with respective users and share a plan for conducting a Mock test or in case a mock test not possible then may share the following data for conducting simulation studies:
 1. **Update Network (in PSSE file)**
 2. **Update LGBR details of the island node wise (in PSSE file)**
 3. **Machine dynamic data as per FTC documents of ERLDC**
 4. **Islanding logic**

Letters have already been issued to the SLDCs regarding the sharing of the above information, but any response is yet to come. It is again requested that all the concerned SLDCs may expedite.

Deliberation in the meeting

OCC Decision:

- *OCC advised all the Concerned SLDCs to share plan to conduct Annual Mock Islanding test with ERLDC at the earliest possible as mandated in **IEGC 2023. {cl. 29(11)}***
- *In case of non-feasibility of mock test, OCC advised SLDCs on sharing following details of respective users with ERLDC for carrying out simulation studies:*
 - *Update Network (in PSSE file)*
 - *Update LGBR details of the island node wise (in PSSE file)*
 - *Machine dynamic data as per FTC documents of ERLDC*
 - *Islanding logic*

3.9. 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.

Till now quarterly mock drill reports have been received

□ Action points:

As per deliberation of **1st MEETING ON REGIONAL DISASTER MANAGEMENT (EASTERN REGION)** dated **09.07.2024**:

- ◆ 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.

All concerned utilities may update action plan.

Deliberation in the meeting

As on date, mock drill reports have been regularly received from NHPC and WBPDC.

OCC Decision

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.

3.10. Commissioning Status of ADMS: ERLDC

- ◆ The automatic demand management scheme (ADMS) has been already commissioned in West Bengal, DVC, Odisha, and Jharkhand and partially implemented by Bihar.
- ◆ In the 216th OCC meeting the forum advised Bihar to share detailed action plan for implementation of additional 400 MW load under ADMS.
- ◆ It was also advised by the forum that DVC to share revised feeder list with ERLDC in which ADMS to be implemented after operationalization of Chandrapura islanding scheme.
- ◆ **Current Status (as of October 17, 2024):** No input received from Bihar and DVC.
- ◆ **Bihar & DVC may update the Status.**

Deliberation in the meeting

OCC Decision

SLDC Bihar was directed to update the ADMS commissioning status i.r.o additional 400 MW load with ERLDC .OCC urged the receipt of update positively prior to next OCC.

4. PART-D: OPERATIONAL PLANNING

4.1. Anticipated power supply position during November-2024

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of November 2024 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 November 2024 is provided at **Annexure D.1**

4.2. Major Thermal Generating Units/Transmission Element outages/shutdown in ER Grid (as on as on 15-10-2024)

a) Thermal Generating Stations outage report:

SL No	STATION	STATE	AGENCY	UNIT NO	CAPACITY (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	6	250	Boiler Tube Leakage	13-Oct-2024
4	Sterlite	ODISHA	SEL	2	600	Ash Evacuation Problem	13-Oct-2024
5	BAKRESH WAR	WEST BENGAL	WBPDC	4	210	for MS safety V/V passing and profuse leakage developed at the dummy door of BOFA	15-Oct-2024
6	NABINAGAR (BRBCL)	BIHAR	NTPC	1	250	Generator Protection Operated	15-Sep-2024
7	ADHUNIK	JHARKHAND	APNRL	2	270	Boiler Tube Leakage	14-Oct-2024
8	BARH	BIHAR	NTPC	1	660	Abnormal sound from Boiler	15-Oct-2024
9	MEJIA TPS	DVC	DVC	1	210	Annual Overhauling	14-Sep-2024

10	Sterlite	ODISHA	SEL	1	600	Annual overhauling	21-Sep-2024
11	GMR 3	ODISHA	GMR-Infra	3	350	Annual Overhauling	13-Oct-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
NIL							

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	1-6	200x6	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				
3	TEESTA STG III Hep	SIKKIM	TUL				
4	TEESTA STG III Hep	SIKKIM	TUL				
5	TEESTA STG III Hep	SIKKIM	TUL				
6	TEESTA STG III Hep	SIKKIM	TUL				
7	DIKCHU Hep	SIKKIM	SKPPL	1-2	48x2	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	DIKCHU Hep	SIKKIM	SKPPL				
9	TEESTA HPS	SIKKIM	NHPC	1-3	170x3	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
10	TEESTA HPS	SIKKIM	NHPC				
11	TEESTA HPS	SIKKIM	NHPC				
12	CHIPLIMA HPS / HIRAKUD II	ODISHA	OHPC	1	24	Capital Overhauling	15-Dec-2023

13	BALIMELA HPS	ODISHA	OHPC	1	60	Heavy leakage of water from discharge ring	16-Sep-2024
14	BALIMELA HPS	ODISHA	OHPC	4	60	Due to tripping of all emanating lines of Balimela HPS, later excitation problem found	05-Oct-2024

d)Long outage report of transmission lines (As on 15.10.2024):

Transmission Element / ICT	Outage From	Reasons for Outage
220/132KV 100 MVA ICT II AT LALMATIA	22.01.2019	Commissioning work of 220/132KV, 100MVA Transformer and its associated control Panel under progress.
220/132KV 100 MVA ICT 3 AT CHANDIL	30.04.2020	Due to Fire hazard ICT damaged and burnt.
220KV-FSTPP-LALMATIA-I	21.04.2021	Transmission line is idle charged between Lalmatia GSS end up to Tower loc no 94 (50.30km)
220KV-WARIA-BIDHANNAGAR-1 & 2	08.06.2022	To control overloading of 220 kV Waria-DSTPS (Andal) D/C line
400/220KV 315 MVA ICT 2 AT PATRATU	27.09.2022	ICT tripped on few occasions due to Buchholz later DGA violation found, internal fault in transformer to be rectified. (DGA violation)
132KV-BARHI-RAJGIR-1	25.03.2023	Dismantling of tower no. 227, 228, and 229 crossing the premises of Mahabodhi Cultural centre along with Destringing 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-RANGPO-DIKCHU-1	04.10.2023	Hand tripped from Rangpo 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-KHSTPP-BANKA (PG)-1	24.02.2024	Switchyard bay updation work
400KV-JHARSUGUDA-ROURKELA-3&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	Rectification of gas leakage problem from B-Ph breaker pole; Line declared under breakdown after charging attempt after return of shutdown
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 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	

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 September -2024.

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

NEW ELEMENTS COMMISSIONED DURING SEPTEMBER, 2024

GENERATING UNITS

SL. NO.	Location	Owner/ Unit name	Unit No / Source	Capacity (MW)	added	Total/Installed Capacity (MW)	DATE	Remarks
NIL								

ICTs/ GTs / STs

SL. NO.	Agency/ Owner	SUB-STATION	ICT NO	Voltage Level (kV)	CAPACITY (MVA)	DATE	Remarks
1	PGCIL	BIRPARA	2 (Replacement)	220/132 KV	160	24-09-2024	First time Charging after Replacement of ICT-II(Against failed 160 MVA ICT-II, available spare of Siliguri SS has been diverted to Birpara SS)

TRANSMISSION LINES

SL. NO.	Agency/ Owner	Line Name	Length (KM)	Conductor Type	DATE	Remarks
NIL						

LILO/RE-ARRANGEMENT OF TRANSMISSION LINES

SL. NO.	Agency/ Owner	Line Name/LILO at	Length (KM)	Conductor Type	DATE	Remarks
NIL						

BUS/LINE REACTORS

SL. NO.	Agency/ Owner	Element Name	SUB-STATION	Voltage Level (kV)	DATE	Remarks
1	BGCL	125MVAR 400KV B/R-1 AT NAUBATPUR(BH)	NAUBATPUR(BH)	400	16-09-2024	
2	BGCL	125MVAR 400KV B/R-2 AT NAUBATPUR(BH)	NAUBATPUR(BH)	400	16-09-2024	
3	PGCIL	125MVAR 400KV B/R-3 AT ALIPURDUAR (PG)	ALIPURDUAR (PG)	400	24-09-2024	

BUS

SL. NO.	Agency/ Owner	Element Name	SUB-STATION	Voltage Level (kV)	DATE	Remarks
NIL						

BAYS

SL. NO.	Agency/ Owner	Element Name	SUB-STATION	Voltage Level (kV)	DATE	Remarks
1	BGCL	400KV MAIN BAY OF 125MVAR B/R-1 AT NAUBATPUR(BH)	NAUBATPUR (BH)	400	16-09-2024	
2	BGCL	400KV TIE BAY OF (125MVAR B/R-1 AND 125MVAR B/R-2) AT NAUBATPUR(BH)	NAUBATPUR (BH)	400	16-09-2024	
3	BGCL	400KV MAIN BAY OF 125MVAR B/R-2 AT NAUBATPUR(BH)	NAUBATPUR (BH)	400	16-09-2024	
4	PGCIL	400KV MAIN BAY OF 125MVAR B/R-3 AT ALIPURDUAR (PG)	ALIPURDUAR (PG)	400	24-09-2024	
5	JUSNL	400KV TIE BAY OF (PVUNL -2 AND FUTURE) AT PATRATU	PATRATU	400	19-09-2024	
6	JUSNL	400KV TIE BAY OF PVUNL -1 AND FUTURE 3 AT PATRATU	PATRATU	400	19-09-2024	
7	JUSNL	400KV MAIN BAY OF PVUNL - 2 AT PATRATU	PATRATU	400	19-09-2024	
8	JUSNL	400KV MAIN BAY OF PVUNL - 1 AT PATRATU	PATRATU	400	19-09-2024	

Members may note.

Deliberation in the meeting

Members noted.

4.4. UFR operation during the month of September 2024.

Frequency profile for the month as follows:

MONTH	MAX	MIN	% LESS IEGC BAND	% WITHIN IEGC BAND	% MORE IEGC BAND
	(DATE/TIME)	(DATE/TIME)			
September 2024	50.38 Hz on 14-09-2024 at 13:11 hrs	49.46 Hz on 16-09-2024 at 18:25 hrs	6.1	77.1	16.8

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

Members may note.

Deliberation in the meeting

Members noted.

Annex B.2.2

Committee Report on Operationalization of Bus Splitting scheme at 400 KV Kahalgaon, NTPC Switchyard

Members Present

ERPC	ERLDC	NTPC
Sh. Shyam Kejriwal (Director)	Sh. Pritam Mukherjee (Manager)	Sh. D.K.Patra (AGM-EMD)
Sh. Dilip Khuntia (Asth. Director)	Sh. Gitesh Patel (Dy. Manager)	Sh. Gautam Ranjan (DGM-EMD)
		Sh. Rahul Anand (DGM-OS)

Purpose of the visit: To assess status of 400 KV bus splitting scheme at NTPC Kahalgaon switchyard as per decision taken in 219th OCC held on 24.09.2024, a committee comprising of members from ERPC and ERLDC visited NTPC Kahalgaon on 17-10-2024. 400kV Bus splitting at NTPC Kahalgaon has become extremely important to mitigate the high fault level at NTPC Kahalgaon as well as to facilitate standby ISTS connectivity to Godda Thermal power plant by LILO of 400kV Kahalgaon A – Maithon B line at Godda.

Observations of the Committee and Submissions of NTPC:

1. The Committee visited the site and observed that the 400 KV bus at Kahalgaon is splitted using sectionalizer, however the sectionalizer is kept closed due to operational constraints on account of non-availability of separate 132 KV bus system to feed the station auxiliaries of Stage II.
2. Presently ICT 1& 2 connected to old 132 KV bus at Stage-I is catering to the total requirement of station auxiliaries of Stg-1 and Stg-2 through Station Transformers 1 to 5.
3. The Committee also observed that the following works have been completed:
 - Erection & Commissioning of New Bus bar protection, bus section equipments & C/R panel
 - Segregation of CVT w.r.to new Bus connection for respective feeders.
 - Erection of New 132 KV Swyd for St-II: 9 bays (interconnections and jumpering work pending)
 - Erection and testing of 2 nos. 400/132 KV, 200 MVA ICTs (tests to be done again before charging)
 - Erection and commissioning of Associated firefighting system for ICTs.
 - Erection and commissioning of Battery chargers, Associated Battery banks and DCDB.



Erection works of ICT 3 & 4 completed

4. Major works pending for charging of ICTs and bus splitting are as follows:
 - 132KV cable laying (Length- 3 Km approx.)
 - 132KV cable glanding and termination
 - Supply and laying of remaining control cables (Length- 22.5 Km Approx.)
 - 400KV Swyd ICT bay equipment testing and final commissioning
 - 132KV Swyd bay equipment testing and final commissioning

5. On the possibility of opening of Bus Sectionalizers in the current network configuration, NTPC representative submitted that there is significant voltage difference between the buses (sometimes of the order of 8-10kV) based on availability of units & line loadings of outgoing 400kV feeders. This voltage difference may bring the transformed voltage difference at Auxiliary bus between ST & UAT beyond the tolerance limit. NTPC apprehended that in case of opening of both bus sectionalizers at the existing condition, following are the cases when the changeover from unit transformer to station transformer and vice versa in STG#II, may cause tripping of running auxiliaries and subsequently tripping of Units.

a. After unit is brought back from shutdown condition, during initial period the auxiliaries are supplied through respective station transformer (132/11kV) and after unit is synchronized the supply is changed over to 11 KV unit transformer (21.5/ 11kV). As per existing condition where the station supply to stage II will be from ICT of stage I, the changeover may not take place smoothly & in some instances change over may cause large circulating currents and thus spurious tripping of Units.

b. In running unit when overlapping/fast bus changeover is required to be taken place, difference in voltages in both the 11 KV system may inhibit bus change over causing Unit trip.

Hence such an arrangement may not be feasible considering reliable operation of Stage-II Units.

6. On the submission of NTPC, Committee observed that such voltage difference on the synchronised bus (with sectionalizer closed) should not be possible except for the voltage drop due to contact resistance of the sectionalizer breaker. The committee felt that there may be some issue in Bus CVT accuracy. It was also observed that since there is voltage difference even in the synchronised mode of operation, the apprehension of NTPC in split bus condition is not getting addressed with respect to 11kV auxiliary bus changeover event.

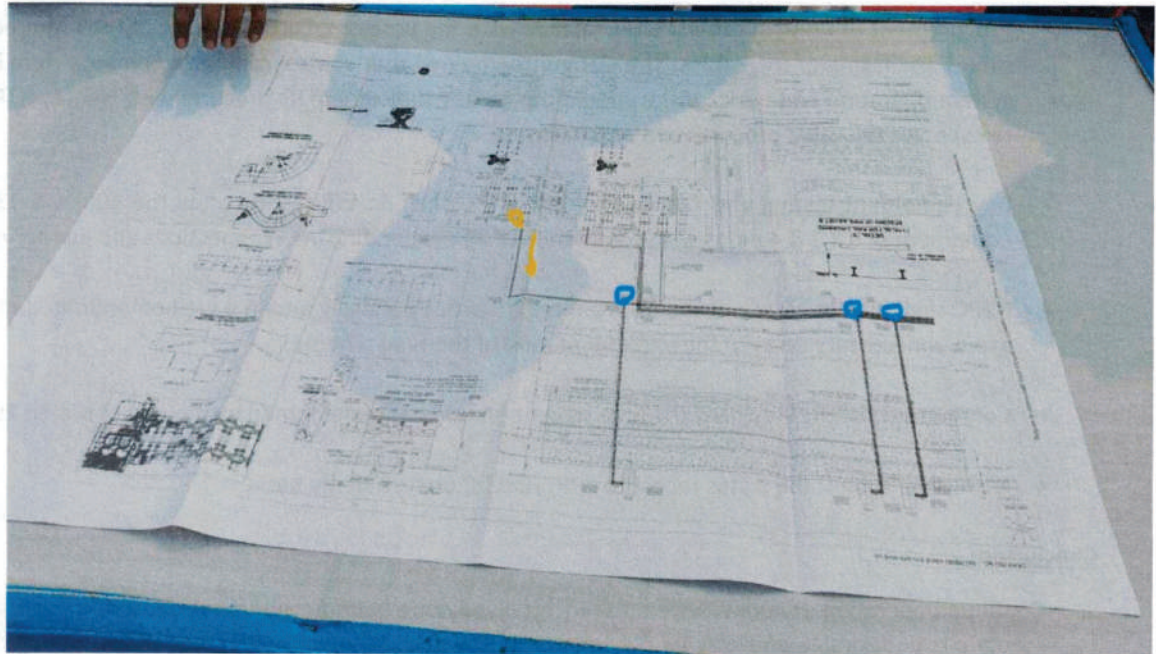
Recommendations of the Committee:

For opening of Bus Sectionalizer in the existing configuration, the Committee recommends the following:

- NTPC shall recheck the healthiness 400kV bus CVTs and ensure correctness of existing voltage difference.
- In case the voltage difference persists after Bus splitting, NTPC may explore the possibility of tap changing of Station Transformer for voltage matching.
- Optimisation of excitation control of both the Stages.
- In this regard, NTPC shall consult with its OS and Engineering team & carry out a study of exploring the possibilities to operationalize bus splitting mechanism.
- Study results shall be shared with ERPC/ERLDC **within 15 days** of issuance of this report based on which further decision shall be taken to open the bus sectionalizer.

For permanent configuration (Split bus operation with separate 132kV supply for Stage II), the Committee recommends the following:

- **Laying and termination of 132kV Cables:** NTPC shall immediately commence the laying of new 132kV cables from the 132kV bay in switchyard till the point of interconnection with the old 132kV cable. For identification of location of old 132kV cable interconnection, NTPC shall earmark and initiate excavation around a suitable area. After the co-ordinates are located, old 132kV inside the PVC conduit shall be taken out and the new 132kV shall be laid. In case there is any difficulty in taking out the old cable, NTPC shall explore an alternate path for laying of new 132kV cable. All the cable glanding and termination works shall be completed.



Lay out of ST power cable from 132 KV OLD & NEW Switchyard.



View from Newly commissioned 132 KV SY towards ST.


Note:

1. Blue indication in the First picture shows the interfacing point of ST Power cable towards 132KV new & old S/Y.
2. Orange indication highlights the position as given in the second picture.


- **Procurement of Control cables:** NTPC shall initiate the process of procurement of the required control cables and laying of the cables. The Committee opined that control cable is a common item in power system operation and hence there should not be any difficulty in its procurement. Hence, NTPC needs to expedite the cable procurement and its laying.
- **Bay Equipment testing and Commissioning:** NTPC shall do the testing of all the 400kV & 132kV bay equipment of ICT 3 & 4 along with completion of all the pending interconnections and jumpering works.
- NTPC shall plan to carry out the above three activities parallelly and in a well-co-ordinated manner to avoid unnecessary delay in the implementation of the final scheme.
- Committee is of the view that the final scheme should be implemented by the end of March 2025.
- NTPC shall submit the status report to ERPC/ERLDC on fortnightly basis.

Conclusion:

Continued operation of 400kV System in synchronised node (with Sectionalizers closed) in high fault level scenario is undesirable and may be detrimental to the grid. Secondly, with rising power demand and the necessity of providing standby connectivity to Godda thermal power station, LILO of 400kV Kahalgaon A – Maithon B at Godda has already been envisaged. This LILO can be facilitated only if the 400kV bus at NTPC Kahalgaon is operated at split bus mode to mitigate the impact of high fault level. Hence, based on the above recommendations, **NTPC shall explore to open the bus sectionalizer under existing network configuration after due consultation and study (study results shall be shared with ERPC/ERLDC within 15 days of issuance of this report).** Simultaneously, NTPC shall expedite to complete the pending works and ensure the implementation of 400kV Bus splitting scheme by the end of March 2025.


25/10/2024

Shyam Kejriwal
(Director, ERPC)


25/10/2024

Preetam Mukherjee
(Manager, ERLDC)


25/10/24

D.K. Patra
(AGM, NTPC)



पूर्वी क्षेत्रीय भार प्रेषण केन्द्र / Eastern Regional Load Despatch Centre

कार्यालय : 14, गोल्फ क्लब रोड, टॉलिंगंज, कोलकाता - 700033

Office : 14, Golf Club Road, Tollygunge, Kolkata - 700033

CIN : U40105DL2009GOI188682, Website : www.erldc.in, Tel.: 033 23890060/0061

Ref. No: ERLDC/SO/SPS/ 724

Date: 08-10-2024

To

Sri B. B. Mehta,
The Director cum CLD,
SLDC, OPTCL,
Bhubaneswar-751017

Sub: Implementation of SPS at Baripada to prevent overloading of incoming feeders to Baripada (PG) in exigency condition.

Dear Sir,

This is in reference to your letter no: CLD(OS)-364/2335(3) dtd. 05-10-2024 in which certain clarifications were sought for SPS implementation at Baripada. The point wise clarifications/ information has been provided as below:

• **Probable restoration time after SPS operation:**

The proposed SPS is to avoid cascade tripping followed by black-out in some part of Odisha system in case of multiple contingencies.

Restoration of these loads at the earliest will be top priority for both RLDC as well as SLDC. However, it would depend on the initiating contingencies as well as other real time situation. All probable efforts will be made to ensure quickest possible restoration of the loads.

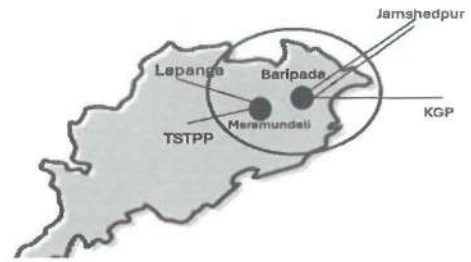
- **Is the overloading of the network is due to drawl of Odisha or due to high RE injection from WR & SR?**
- **Is it possible to regulate these line flows by RE curtailment?**

Odisha is connected to ISTS network via a number of tie lines, these tie lines carry the required power from outside Odisha electrical system to Odisha load centres.

How much flow will be there in the tie lines depends mainly on the following factors:

- Load distribution in Odisha system.
- Network topology in Odisha as well as ISTS Network.
- ISGS generation despatch in ER as well as all over India.

In Odisha, more than 60% demand is concentrated in the circled part, and it is mainly supplied from Baripada, Lapanga and Talcher. Whenever multiple infeed lines from Talcher or Lapanga side trip, automatically Baripada tie lines draw more power and this in turn would overload the infeed lines of Baripada.



India's vision for 2030 is a mosaic of renewable energy dominance with a significant focus on green growth to fight climate change and enable energy transition. India has announced a resolute target in COP26 to achieve 500GW of non-fossil fuel capacity by 2030, to meet 50% of energy requirement from renewable energy sources by 2030. The despatch scenario of generating plants is changing with increasing share of RE power which are must-run for economic reasons and to achieve climatic goals. As Eastern Region is dominated by coal thermal based power stations with very little RE, generation within the region is backed down during solar hours to accommodate RE in WR, NR, SR and this has altered the power flow pattern in the transmission system of ER including inter regional power flow.


However, the sensitivity of the specified transmission lines to all-India renewable energy dispatch is very low. To lower the minimal line loading, a significant amount of renewable energy would need to be curtailed, which isn't a practical solution. Curtailing RE generation would have minimum impact on overloading of said lines. Moreover, curtailment of RE generation is last resort.

- **Any long-term planning in pipeline?**

Following upcoming elements are under implementation/ advanced planning and are likely to reduce loading of incoming feeders at Baripada and may help removing SPS

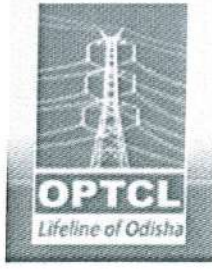
- Talcher stage-III generation project along with 400kV Talcher-III – Meramundali B D/C line and 400kV Talcher-III – Pandiabili D/C line
- Establishment of 765 kV Paradeep (ISTS), 765kV New Dubri (OPTCL) substation along with 765kV Angul(PG)-765kV New Dubri-765kV Paradeep (ISTS) D/C line.
- Reconductoring of 400kV Talcher-Meramundali D/C with HTLS conductor.
- Establishment of ± 800 kV, 6000MW HVDC Bipole from Bikaner complex in Rajasthan to Begunia in Odisha along with transmission lines to Paradeep (ISTS), Gopalpur(ISTS), Khuntuni(OPTCL), Mendhasal(OPTCL)- [Under planning]

In view of the above, it is requested that implementation of SPS at Baripada may be expedited to save the larger part of Odisha from outage in case of multiple contingencies.


(Rajib Sutradhar)
Executive Director

Copy to:

1. The Member Secretary, ERPC, Kolkata – For kind information
2. The Director (Operation), OPTCL, Bhubaneshwar – For Kind information



ରାଜ୍ୟ ବିଦ୍ୟୁତ୍ ଭାର ପ୍ରେରଣ କେନ୍ଦ୍ର
OFFICE OF THE CHIEF LOAD DESPATCHER, SLDC
ODISHA POWER TRANSMISSION CORPORATION LIMITED

GRIDCO Colony, P.O.-Mancheswar Rly. Colony, Bhubaneswar-751017, FAX-0674- 2748509

CIN – U40102OR2004SGC007553

email id: cld_slcd@sldcorissa.org.in

No. CLD (OS) – 364 /

2335 (3)

Dt. 05. 10 . 2024

From:

Sri B. B. Mehta,
The Director cum CLD,
SLDC, OPTCL,
Bhubaneswar-17

To

The Executive Director,
ERLDC, Kolkata - 33

Sub: Implementation of SPS in Odisha System to prevent over loading of 400KV lines between Jamshedpur and Baripada PGCIL in exigency condition.

Ref: (i) This Office letter no. – CLD (OS) – 364 / 2302⁽³⁾ dt.01.10.2024.
(ii) Discussion held in the meeting through VC on dt.03.10.2024 on the above subject.

Dear Sir,

This is in continuation with the discussion held during VC meeting on dt.03.10.2024 as referred above.

SLDC has taken cognizant of technical requirement for providing load relief in Odisha to control power flow through 400 KV lines between Jamshedpur and Baripada PGCIL. The matter has been deliberated at management level & thereby they have requested to provide clarification / information / guidance for:

- Probable restoration time after SPS Operation.
- Is Over +Loading of above network due to Over Drawl of Odisha?
- Or is it due to rise in RE injection at SR & WR?
- Is it feasible to regulate this flow by curtailing RE injection causing this problem?
- Any long term initiatives of new / strengthening of transmission element in pipe line?

Sir, as designated additional load restriction to be concurred by DISCOM, Management needs clarification for the subject matter.

Request to guide further in the matter.

Thanking You,

Yours faithfully;

Director cum CLD

Copy forwarded to the:

1. The Member Secretary, ERPC, Kolkata – for kind information.
2. The Director (Operation), OPTCL, Bhubaneswar for information.

Annex B.2.5



सेंट्रल ट्रांसमिशन यूलिटी ऑफ इंडिया लिमिटेड
(पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड के स्वामित्व में)
(भारत सरकार का उद्यम)

CENTRAL TRANSMISSION UTILITY OF INDIA LTD.
(A wholly owned subsidiary of Power Grid Corporation of India Limited)
(A Government of India Enterprise)

Ref: CTU/E/Conn-INT-1A/2200000648

Date: 20-08-2024

Shri Pritpal Singh

DGM

Ind-Barath Energy (Utkal) Limited

JSW Centre Bandra Kurla Complex

Bandra East, Mumbai, Maharashtra

Subject: Intimation for In-principle grant of ISTS Connectivity of 350MW to M/s Ind-Barath Energy (Utkal) Limited for its thermal generation project (Unit#2) in Odisha

Dear Sir,

This is with reference to your application no. 2200000648 dated 15-03-2024 for grant of 350MW ISTS Connectivity under GNA Regulations, 2022 to M/s Ind-Barath Energy (Utkal) Limited (IBEUL) for its Unit#2 (350MW) thermal generation project in Odisha. The said application was discussed in the 30th CMETS-ER held on 26-04-2024 wherein it was decided that the matter may be referred to CEA for finalisation of the ISTS arrangement for said grant of Connectivity. Subsequently, a meeting was convened by CEA on 24-05-2024 wherein following was agreed:

- (i) IBEUL shall submit the progress of construction/commissioning of Unit #2 and the dedicated line to CEA. All efforts to be made by IBEUL to complete the DTL on urgent basis.
- (ii) OPTCL and ERLDC shall submit the system studies to CEA / CTU by 28th May 2024.
- (iii) Matter will be discussed again after examination of the studies.

Thereafter, another meeting was convened by CEA on 26-07-2024, wherein following was decided:

- (a) ISTS Connectivity to Unit#2 of IBEUL may be granted with the existing interim arrangement as provided for Unit#1. Final connection to ISTS shall remain with the IBEUL – Sundargarh (Jharsuguda) 400 kV D/c dedicated transmission line.
- (b) Synchronization of IBEUL Unit#2 can be allowed after implementation of SPS. SPS to be implemented with the logic that Main CBs of IBEUL and Jharsuguda circuits at OPGC end to be opened whenever loading on OPGC-Lapanga 400kV D/c line reaches to 850 MW per circuit. Tie CB of IBEUL and Jharsuguda circuits at OPGC end shall remain closed so as to form IBEUL – Jharsuguda 400 kV 2nd line.
- (c) IBEUL to complete the work of DTL by November 2024. CEA shall monitor the status of DTL fortnightly. M/s IBEUL to send fortnightly progress reports to CEA, ERPC, CTU, ERLDC, and OPTCL

(d) After commissioning of the DTL, the interim connection to ISTS provided to M/s IBEUL (2x350MW) as well as SPS shall be removed

Keeping in view the decisions taken in the above meeting at CEA, in the 33rd CMETS-ER held on 29-08-2024 it was agreed to grant 350MW Connectivity to M/s IBEUL for its thermal generation project (Unit#2) in Odisha through existing ISTS (no augmentation).

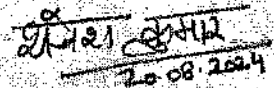
In view of the above and based on the deliberations in the 33rd CMETS-ER meeting, intimation for In-principle grant of 350MW Connectivity to M/s IBEUL for its thermal generation project (Unit#2) in Odisha is enclosed herewith. It may be noted that M/s IBEUL, shall abide by all the rules and regulations as notified by CERC and amended from time to time.

You may contact at the following address for submission of applicable Conn-BGs:

Sr. General Manager (BCD & Regulatory)
Central Transmission Utility of India Ltd
Saudamini, Plot No. - 2, Sector - 29,
Near IFFCO Chowk, Gurugram - 122001
Tel: 0124-2823133

Thanking you,

Yours sincerely


20.08.2024

Rajesh Kumar

Sr. General Manager (TP-III & CP)

Encl.: as above

Copy to:

1. Chief Engineer I/c (PSP&A-II) Central Electricity Authority Sewa Bhawan, R.K.Puram New Delhi-110066	2. Member Secretary Eastern Regional Power Committee 14, Golf Club Road, Tollygunge Kolkata-700033
3. Director (SO) Grid Controller of India Limited 9th Floor, IFCI Towers, 61, Nehru Place, New Delhi-110016	4. Executive Director Eastern Regional Load Despatch Centre 14, Golf Club Road, Jubilee Park, Golf Gardens, Tollygunge, Kolkata, West Bengal - 700095
5. CMD Damodar Valley Corporation DVC Towers, VIP Road Kolkata-700054	6. CMD Odisha Power Transmission Corporation Ltd. (OPTCL) Bhoinagar Post Office, Jan path Bhubaneswar-751022
7. CMD Bihar State Power Transmission Company Ltd. (BSPTCL) Vidyut Bhavan, 4th floor, Bailey Road Patna-800021	8. CMD Jharkhand Urja Sancharan Nigam Limited (JUSNL) Engineering Building, HEC, Dhurwa Ranchi -834004
9. Principal Chief Engineer cum Secretary Power Department Government of Sikkim Gangtok, Sikkim	10. Managing Director West Bengal State Electricity Transmission Company Ltd. (WBSETCL) Vidyut Bhavan, 8th Floor, A-Block Salt Lake City, Kolkata-700091

INTIMATION FOR IN-PRINCIPLE GRANT OF CONNECTIVITY UNDER REGULATIONS 7.1 and 7.2		
A General		
1.	Intimation No	CTU/E/Conn-INT-1A/2200000648
	Date	20-08-2024
2.	Ref. Application No.	2200000648
	Date	15-03-2024
3.	Name of the Applicant	Ind-Barath Energy (Utkal) Limited
4.	Address for Correspondence	JSW Centre Bandra Kurla Complex Bandra East, Mumbai, Maharashtra
5.	Location of the Generating Station	Sundargarh
	Latitude	21.657 N
	Longitude	83.923 E
	State	Odisha
6.	Nature of the Applicant	Generating station(s), including REGS(s), without ESS (Thermal)
B Connectivity Details		
7	ATS/Network Expansion Required	
7a	Associated Transmission System (ATS) Including broad design features	Not Applicable
i.	Scheme details	Not Applicable
ii.	Scheduled commissioning date of ATS	Not Applicable
iii.	Estimated Cost of ATS	Not Applicable
7b	Network expansion system (NES)	
i.	Scheme details	Existing ISTS
ii.	Scheduled commissioning date of NES	Not Applicable
8	ISTS Connectivity details	
i.	Point at which connectivity is granted	765/400kV Sundargarh (Jharsuguda) (ISTS) S/s
ii.	Voltage level of allocated terminal bay	400kV
iii.	Terminal bay at ISTS end already available	Yes
iv.	Terminal bay at ISTS end to be constructed under ISTS	No

[Handwritten Signature]

INTIMATION FOR IN-PRINCIPLE GRANT OF CONNECTIVITY UNDER REGULATIONS 7.1 and 7.2		
v.	Bay no. and SLD	421 & 424 and SLD annexed at Annexure-II
vi.	Capacity (MW) for which connectivity is granted	350MW
vii.	Likely Start date of Connectivity	27-09-2024
9	Dedicated Transmission Line (DTL)	IBEUL – Sundargarh (Jharsuguda) 400kV D/c (Twin Moose) line along with associated bays at both end (under the scope of M/s IBEUL)*
C Bank Guarantees to be submitted		
i.	Amount of Conn-BG1	Rs. 50 lakhs
ii.	Amount of Conn-BG2	Nil
iii.	Amount of Conn-BG3 @2 lakh/MW	Rs. 7 Cr.
D Details of Communication System		
i.	Details of Communication System	As per Annexure-I.

*The line is already under construction for connection of Unit#1 (350MW) to ISTS, as per grant of Connectivity.

Note: Connectivity is granted to the ISTS with following:

1. Conn-BG1 and Conn-BG3 shall be furnished within 1 (one) month of this intimation, failing which the application for Connectivity shall be closed, and the application fee shall be forfeited. No extension of time shall be granted to furnish the requisite bank guarantee, and in such case this in-principle grant of Connectivity shall be revoked under intimation to the Connectivity grantee/applicant.
2. One-time GNA charges shall be furnished one month prior to the start date of Connectivity upon grant of final grant of Connectivity. In case of non-fulfilment of the same, the treatment shall be as per applicable CERC Regulations.
3. The Grantee shall abide by all provisions and its amendments thereof or re-enactment of:
 - i) Electricity Act, 2003;
 - ii) CERC (Connectivity and General Network Access to the Inter-State transmission System) Regulations, 2021 and corresponding Detailed Procedure for Connectivity and GNA;
 - iii) CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020

27/09/24

- iv) CEA (Technical Standards for Connectivity to the Grid) Regulations, 2007;
- v) CEA (Technical Standards for construction of Electrical Plants and Electric Lines) Regulations, 2022;
- vi) CEA (Grid Standard) Regulations, 2010;
- vii) CEA (Safety requirements for construction, operation and maintenance of Electrical Plants and Electrical Lines) Regulations, 2011;
- viii) CEA (Measures relating to Safety and Electricity Supply) Regulations, 2010;
- ix) CEA (Installation and Operation of Meters) Regulations, 2006;
- x) CEA (Technical Standards for Communication System in Power System Operations) Regulations, 2020;
- xi) CERC (Communication System for Inter –State transmission of Electricity) regulations, 2017;
- xii) CERC (Indian Electricity Grid Code) Regulations, 2023.
- xiii) CEA (Cyber Security in Power Sector) Guidelines, 2021;
- xiv) CEA (Manual of communication planning in Power System operation), March 2022
- xv) CERC Guidelines on "Interface Requirements" Issued in 2024 under the CERC (Communication System for Inter-State transmission of electricity) Regulations, 2017.

Any other applicable Act / Rules / Guidelines / Standards / Regulations / Procedures etc.

4. The applicant shall keep the CTU and RLDC/NLDC indemnified at all times and shall undertake to indemnify, defend and keep the CTU, RLDC/NLDC harmless from any and all damages, losses, claims and actions including those relating to injury to or death of any person or damage to property, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and; all other obligations by or to third parties, arising out of or resulting from the Connectivity.
5. Towards monitoring of the projects, Connectivity grantee shall comply with Regulations 11 of GNA Regulations 2022, else suitable action shall be taken up as per applicable CERC Regulations. Format for furnishing the progress (through on-line facility) of the project is provided at **FORMAT-CONN-STATUS-CG** on CTU website.
6. Considering Right-of-Way near substation for termination of number of 400/220kV dedicated transmission lines, the connectivity grantees may coordinate among themselves for implementation of 400/220kV lines (as applicable) through multi circuit tower near the substation entry for about 2-3 kms stretches.



7. Depending on the topology and transmission system requirement, CTU may plan the Connectivity of any generating station(s) at terminal bay of an ISTS substation already allocated to another Connectivity applicant/grantee (such as through Loop-in Loop-out (LILLO) of DTL) or at switchyard of a generating station having Connectivity to ISTS for connection and Injection of power. In such cases, an agreement (model agreement as per **FORMAT-CONN-SHARE**) shall be duly signed within one (1) month of the intimation regarding the sharing of DTL and/or terminal bay between the applicants/grantee for sharing the terminal bay / switchyard / dedicated transmission line, failing which the Intimations for grant of Connectivity of applicants / grantee shall be liable for revocation.

8. Instruction regarding submission of Technical data for signing of Connectivity Agreement :

- a. Connectivity grantee shall comply with CEA (Technical Standards for Connectivity to the Grid) Regulations, 2007 & amendment(s) thereof and shall have to furnish technical data and requisite compliance as per **FORMAT-CONN-TD-1 / FORMAT-CONN-TD-2 / FORMAT-CONN-TD-3** (as applicable) of Detailed Procedure to CTU within thirty (30) days from final grant of Connectivity for signing of "Connectivity Agreement viz. **FORMAT-CONN-CA-5**".
- b. If the submitted Technical Data is tentative, then the Connectivity Agreement as per **FORMAT-CONN-CA-5** shall be signed within thirty (30) days of submission of the tentative Technical Connection Data. In such case, the final technical data shall be provided at least one (1) year prior to physical connection.
- c. After receipt of final data, CTU shall scrutinize the submitted data within thirty (30) days, and inform regarding discrepancies (if any). Upon rectification of all discrepancies by entity, CTU within thirty (30) days shall intimate the connection details as per **FORMAT-CONN-TD-4**. Thereafter the Connectivity Agreement as per **FORMAT-CONN-CA-5** shall be signed within thirty (30) days. If Connectivity Agreement as per **FORMAT-CONN-CA-5** has already been signed with tentative data, then **FORMAT-CONN-TD-4** shall become an integral part of already signed **FORMAT-CONN-CA-5**. Physical connection to ISTS shall be permitted only after signing of **FORMAT-CONN-CA-5**.
- d. Subsequent to issuance of **FORMAT-CONN-TD-4**, if there is any change in technical connection data provided by the applicant, it shall submit the revised technical data to CTU with full justification following which CTU shall process the same for revision

21/12/11

in **FORMAT-CONN-TD-4** within thirty (30) days after receipt of complete data. Such request shall be allowed only once at least three (3) months prior to physical connection to ISTS. However, upon physical interconnection with ISTS, revised technical data, if any, shall be provided to CTU for information and record.

Place: Gurugram

Date: 20-08-2024

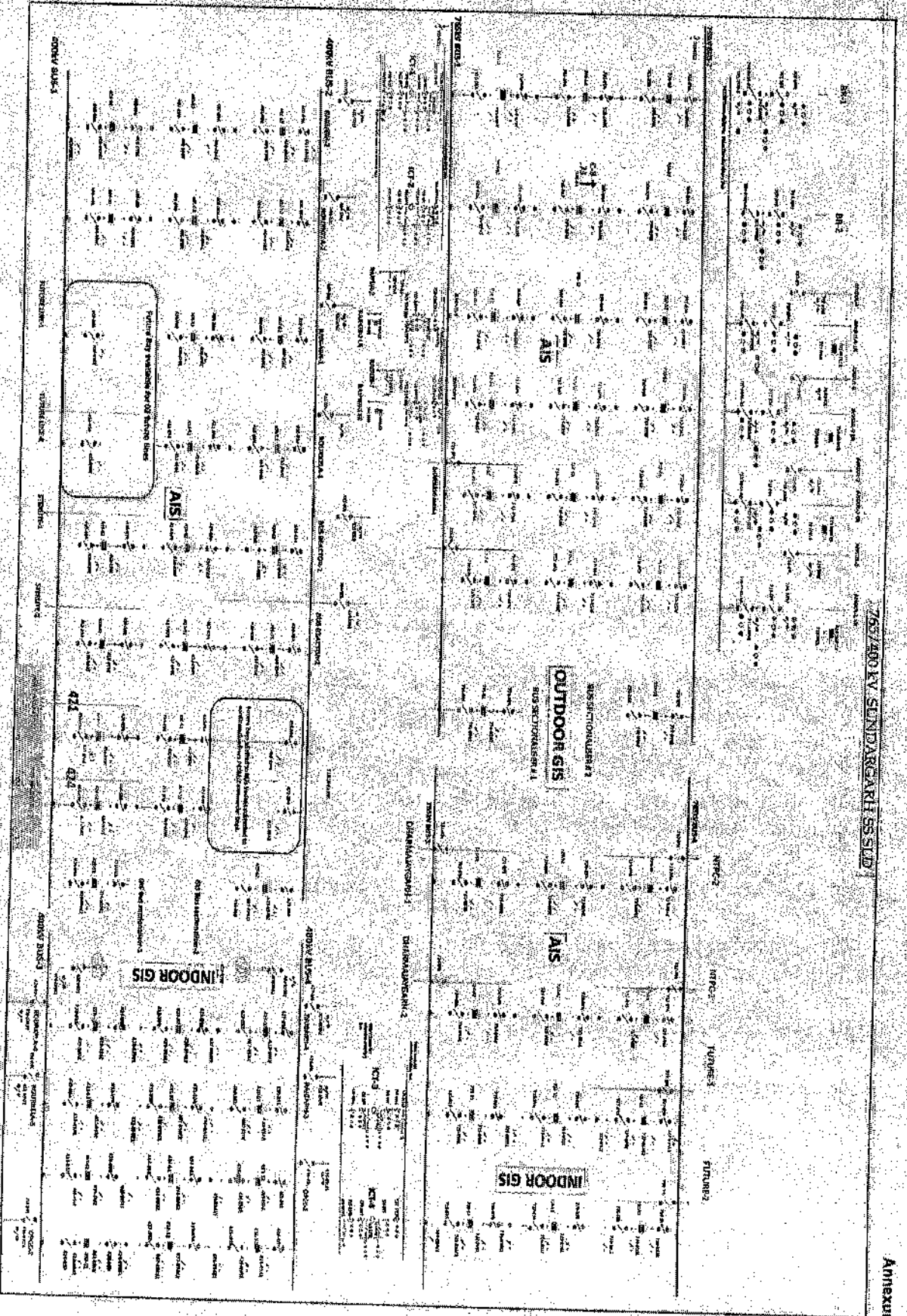
Rajesh Kumar
20.08.2024

Name: Rajesh Kumar

Designation: Senior General Manager

Details of communication system

1. Connectivity grantee shall utilize interim communication system for Unit#2 similar to as provided for Unit#1.
2. For DTL connection of IBEUL unit #2, below mentioned may be implemented:
 - a) Connectivity grantee shall provide Fibre Optic based communication system comprising OPGW cable (having minimum 12 Fibers) & hardware fittings for the dedicated transmission line and with FOTE (STM-16) terminal equipment, FODP, and approach cables at the Generating station. At ISTS station, the OPGW shall be terminated in Junction box to be mounted at Terminal Gantry by the Connectivity grantee. The FOTE equipment, FODP and approach cable at ISTS station are to be provided by the bay owner, however, the grantee shall provide suitable optical interface as per link budget and all necessary support to bay owner for successful commissioning of the communication system. The communication system shall facilitate telemetry data communication, voice communication and tele-protection. Wherever transmission line is routed through multi-circuit towers, an OPGW of 48 Fibers shall be considered in Multi-Circuit Portion. Further, the Connectivity grantee also needs to provide Phasor Measurement Units (PMU) as per CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022 and the signal list shall be as per the Annexure-I Part-B of CERC Guidelines on "Interface Requirements" issued in 2024 and amendments thereof.
 - b) Applicant to provide the dual channel (2+2) to the Main Control Centre & Backup Control Centre as per guidelines of the CERC Interface requirements of Communication system clause 4.1 issued in 2024.
 - c) Applicant to provide Next Generation Firewall as per the specification/ features at CTU website.



ANNEXURE B.2.12

APPROVED MAINTENANCE SCHEDULE OF THERMAL GENERATING UNITS

SYSTEM	STATION	UNIT NO.	CAPACITY(MW)	PERIOD (AS PER LGBR 2024-25)		NO. OF DAYS	REASON	APPROVED PERIOD		NO. OF DAY S	WHETHER AS PER LGBR OR NOT	REMARKS
				FROM	TO			FROM	TO			
DVC	Mejia TPS	5	250	01.08.2024	04.09.2024	35	COH	10.11.2024	15.12.2024	35	NO	APPROVED
IPP	MPL	2	525	01-10-2024	14-11-2024	45	NOx, COH	22.11.2024	06.01.2025	45	NO	APPROVED
CESC	Southern TPS	2	67.5	13-10-2024	27-10-2024	15	PG Test/ Boiler License Renewal	02-11-2024	16-11-2024	14	YES	APPROVED
	Budge Budge TPS	1	250	05-11-2024	19-11-2024	15	AOH/ Boiler License Renewal	29.11.2024	13.12.2024	14	NO	APPROVED
	Budge Budge TPS	2	250	02-01-2025	08-01-2025	07	Annual Inspection and Minor preventive maintenance	3.11.2024	12.11.2024	9	NO	APPROVED
HEL	Haldia TPP	2	300	21-11-2024	05-12-2024	15	AOH	–	–	–	NO	NOT AVAILED
NTPC	Barh-I	2	660	15-11-2024	05-01-2025	52	Boiler + Generator + Condenser	–	–	–	NO	NOT AVAILED
	KhSTPS	5	500	10-11-2024	09-12-2024	30	Boiler + Boiler RLA + LP	15.11.2024	15.12.2024	30	NO	APPROVED
	KBUNL-II	4	195	10-11-2024	24-12-2024	45	Capital OH	15.11.2024	30.12.2024	45	NO	APPROVED
WBDCL	Bakreswar TPS	3	210	19-11-2024	22-12-2024	34	AOH	19.11.2024	19.12.2024	30	NO	APPROVED
	Santaldih TPS	6	250	26-08-2024	29-09-2024	35	AOH	25.11.2024	30.12.2024	35	NO	APPROVED

Annexure D.1

Updated Anticipated Peak Demand (in MW) of ER & its constituents for November 2024

1	BIHAR	Demand (MW)	Energy Requirement (MU)
	NET MAX DEMAND	5665	2772
	NET POWER AVAILABILITY- Own Sources	391	345
	Central Sector+Bi-Lateral	5349	4641
	SURPLUS(+)/DEFICIT(-)	75	2214
2	JHARKHAND		
	NET MAXIMUM DEMAND	1935	1124
	NET POWER AVAILABILITY- Own Source	410	205
	Central Sector+Bi-Lateral+IPP	1383	827
	SURPLUS(+)/DEFICIT(-)	-142	-92
3	DVC		
	NET MAXIMUM DEMAND	3250	2050
	NET POWER AVAILABILITY- Own Source	5800	3210
	Central Sector+MPL	250	234
	Bi- lateral export by DVC	2600	1770
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	200	-376
4	ODISHA		
	NET MAXIMUM DEMAND (OWN)	4500	2880
	NET MAXIMUM DEMAND (In Case of CPP Drawal of 900 MW(peak) and average drawl of 700 MW)	5400	3384
	NET POWER AVAILABILITY- Own Source	2564	1500
	Central Sector	1937	1382
	SURPLUS(+)/DEFICIT(-) (OWN)	0	0
	SURPLUS(+)/DEFICIT(-) (I(In Case of CPP Drawal of 900 MW(peak) and average drawlm of 700 MW)	-899	-502
5	WEST BENGAL		
	WBSEDCL		
5.1	NET MAXIMUM DEMAND	6716	3669
	NET MAXIMUM DEMAND (Incl. Sikkim)	6721	3673
	NET POWER AVAILABILITY- Own Source (Incl. DPL)	5307	2941
	Central Sector+Bi-lateral+IPP&CPP+TLDP	2382	1715
	EXPORT (To SIKKIM)	5	4
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	968	982
5.2	CESC		
	NET MAXIMUM DEMAND	1800	780
	NET POWER AVAILABILITY- Own Source	460	367
	IMPORT FROM HEL	541	280
	TOTAL AVAILABILITY OF CESC	1001	647
	SURPLUS(+)/DEFICIT(-)	-799	-133
		-799	-133
	WEST BENGAL (WBSEDCL+CESC+HPCL) (excluding DVC's supply to WBSEDCL's command area)		
	NET MAXIMUM DEMAND	8516	4449
	NET POWER AVAILABILITY- Own Source	5767	3308
	CS SHARE+BILATERAL+IPP/CPP+TLDP+HEL	2923	1995
	SURPLUS(+)/DEFICIT(-) BEFORE WBSEDCL'S EXPORT	174	853
	SURPLUS(+)/DEFICIT(-) AFTER WBSEDCL'S EXPORT	169	849
6	SIKKIM		
	NET MAXIMUM DEMAND	118	64
	NET POWER AVAILABILITY- Own Source	46	96
	Central Sector	199	131
	SURPLUS(+)/DEFICIT(-)	126	163
	EASTERN REGION		
	NET MAXIMUM DEMAND	24424	13195
	NET MAXIMUM DEMAND ((In Case of CPP Drawal of 800 MW(peak) and average drawl of 700 MW)	25324	13482
	BILATERAL EXPORT BY DVC (Incl. Bangladesh)	2458	1770
	EXPORT BY WBSEDCL TO SIKKIM	5	4
	EXPORT TO B'DESH & NEPAL OTHER THAN DVC	642	462
	NET TOTAL POWER AVAILABILITY OF ER (INCLUDING CS ALLOCATION +BILATERAL+IPP/CPP+HEL)	27221	17398
	SURPLUS(+)/DEFICIT(-)	-308	1967
	SURPLUS(+)/DEFICIT(-) (In Case of CPP Drawal for Odisha)	-1208	1680