सत्यमेव जयते
भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
पूर्वी क्षेत्रीय विद्युत समिति
Eastern Regional Power Committee
14, गोल्फ क्लब रोड, टालीगंज, कोलकाता-700033
14 Golf Club Road, Tollygunj, Kolkata-700033
Tel. No.:033-24239651,24239658 FAX No.:033-24239652, 24239653 Web: **www.erpc.gov.in**

सं /**NO. ERPC/EE/OPERATION/2024/** 1513 **दिनांक/DATE: 03.12.2024**

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

विषय : 27 नवंबर 2024 (बुधवार) को ईआरपीसी सचिवालय, कोलकाता में भौतिक रूप से आयोजित 221वीं OCC बैठक का कार्यवृत्त - संबंध में।

Sub: Minutes of 221st OCC Meeting held on 27.11.2024 (Wednesday) physically at ERPC Secretariat, Kolkata - reg.

महोदय/महोदया,
Sir(s)/Madam,

कृपया अपनी जानकारी और आवश्यक कार्रवाई के लिए **27 नवंबर 2024 (बुधवार)** को **ईआरपीसी सचिवालय, कोलकाता में 10:30 बजे भौतिक रूप** से आयोजित **221वीं ओसीसी बैठक** के **संलग्न कार्यवृत्त** देखें। यह ईआरपीसी वेबसाइट (**www.erpc.gov.in**) पर भी उपलब्ध है।

Please find enclosed **Minutes of 221st OCC Meeting** held on **27.11.2024 (Wednesday) 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.

भवदीय /Yours faithfully

Mondal 03.12.2024

(N.S.Mondal)
Member Secretary/सदस्य सचिव

LIST OF ADDRESSES:

1. CHIEF ENGINEER (TRANS., O&M), BSPTCL, PATNA, (FAX NO. 0612-2504557/2504937)
2. CHIEF ENGINEER (System Operation), BSPTCL, PATNA, (FAX NO. 0612-2504557/2504937)
3. CHIEF ENGINEER, TRANSMISSION (O&M), JUSNL, RANCHI (FAX NO.-0651-2490486/2490863)
4. CHIEF ENGINEER, TVNL, DORANDA, RANCHI - 834102 (FAX NO. 06544-225414)
5. CHIEF LOAD DISPATCHER, SLDC, OPTCL, BHUBANESWAR (FAX NO.0674-2748509)
6. CHIEF GENERAL MANAGER (O&M), OPTCL, BHUBANESWAR
7. SR. GENERAL MANAGER (PP), GRIDCO, JANPATH, BHUBANESWAR (0674-2547180)
8. DIRECTOR (OPERATION), IB TPS, AT/PO BANHARPALI, JHARSUGUDA, (FAX NO. 06645-222225/222230)
9. GENERAL MANAGER, TTPS, TALCHER, (FAX NO. 06760-243212)
10. SR. GENERAL MANAGER (ELECTRICAL), OHPC LTD., BHUBANESWAR, (FAX NO.0674-2542102)
11. CHIEF ENGINEER, CLD, WBSETCL, HOWRAH, (FAX NO. 033-26886232)
12. CHIEF ENGINEER, CENTRAL PLANNING WING, WBSETCL, SALT LAKE (FAX NO.: 033-23591955)
13. CHIEF ENGINEER (PTR), WBSEDCL, SALT LAKE, KOLKATA (FAX:033-23345862)
14. CHIEF GENERAL MANAGER (OS), WBPDCL, KOLKATA-98 (FAX NO. 033-23393286/2335-0516)
15. GM, KOLAGHAT TPS, WBPDCL, KOLAGHAT (FAX NO.03228231280)
16. DGM (OPERATION), DPL, DURGAPUR, (FAX NO. 0343-2555052)
17. GM (SYS OPERATION), CESC, CHOWRINGHEE SQUARE, KOLKATA (FAX NO.033-22253756/22129871)
18. CHIEF ENGINEER, SLDC, DVC, HOWRAH (FAX NO. 033-2688-5094)
19. ADDL.CHIEF ENGINEER, SLDC, POWER DEPT., GOVT. OF SIKKIM, GANGTOK, (FAX NO. 03592-228186/201148/202284)
20. EXECUTIVE DIRECTOR, ERLDC, POSOCO, KOLKATA, (FAX NO. 033-2423-5809)
21. GENERAL MANAGER, FSTPP, NTPC, FARAKKA, (FAX NO. 03512-224214/226085/226124)
22. GENERAL MANAGER , KhSTPP, NTPC, KAHALGAON (FAX NO.06429-226082)
23. GENERAL MANAGER, TSTPP, NTPC, TALCHER, (FAX NO. 06760-249053)
24. GENERAL MANAGER (OS), POWERGRID, ER-II, KOLKATA(Fax no: 033-23572827)
25. GENERAL MANAGER , POWERGRID, ER-I, PATNA, (FAX NO.0612-2531192)
26. GENERAL MANAGER (O&M), POWERGRID, ODISHA PROJECTS, SAHID NAGAR, BHUBANESWAR – 751 007
27. EXECUTIVE DIRECTOR (O&M), NHPC, FARIDABAD (FAX No.:0129-2272413)

28. GENERAL MANAGER, TEESTA –V POWER STATION, NHPC, SINGTAM, EAST SIKKIM (FAX 03592 - 247377)
29. CHIEF ENGINEER, RANGIT POWER STATION, NHPC, P.O. RANGIT NAGAR, SOUTH SIKKIM (FAX NO.03595-259268)
30. SENIOR VICE PRESIDENT, PTC LTD., NBCC TOWERS, 15-BHIKAJI KAMA PLACE, NEW DELHI- 110066 (FAX NO. 011-41659504)
31. PLANT HEAD, ADHUNIK POWER & NATUARAL RESOURCES, JHARKHAND(FAX NO.: 0657-6628440)
32. AGM (OPERATION), MAITHON POWER LTD, DHANBAD (FAX: 08860004758)
33. VICE PRESIDENT(POWER), VEDANTA LIMITED, BHUBANESWAR- 751023 (FAX NO 0674-2302920)
34. CHIEF ELECTRICAL ENGINEER, EASTERN RAILWAY, KOLKATA-700 001 (FAX NO.: 033-22300446)
35. CHIEF ELECTRICAL ENGINEER, SOUTH EASTERN RAILWAY, KOLKATA-43 (FAX: 033-24391566)
36. DEPUTY DIRECTOR, EASTERN RPSO, SALT LAKE, KOLKATA- (FAX NO:033-23217075)
37. GENERAL MANAGER (O&M), NHPC LTD, FARIDABAD, FAX: 0129-2272413
38. ASSOCIATE VICE PRESIDENT, GMR KEL, BHUBANESWAR-751007. (FAX NO: 0674-2572794)
39. GM (SO & COMML), NTPC VVNL, NEW DELHI-110033. Fax:011-24367021
40. SHRI D. P. BHAGAVA, CHIEF CONSULTANT (O&M), TEESTA URJA LIMITED, NEW DELHI-110 001 (FAX:011-46529744)
41. SHRI BRAJESH KUMAR PANDE, PLANT HEAD, JITPL. (FAX:011-26139256-65)
42. DIRECTOR (NPC), CEA, NRPC BUILDING, KATWARIA SARAI, NEW DELHI- 110016
43. VP (OS), HALDIA ENERGY LIMITED, BARIK BHAWAN, KOKATA-700072, FAX: 033-22360955
44. GENERAL MANAGER(O&M),BRBCL,NABINAGAR,BIHAR-824003,FAX-06332- 233026

CC:

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

पतों की सूची:

1. मुख्य अभियंता (ट्रांस., ओ एंड एम), बीएसपीटीसीएल, पटना, (फैक्स नं. 0612- 2504557/2504937)।
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)
5. मुख्य लोड डिस्पैचर, एसएलडीसी, ओपीटीसीएल, भुवनेश्वर (फैक्स नंबर 0674-2748509)
6. मुख्य महाप्रबंधक (ओ एंड एम), ओपीटीसीएल, भुवनेश्वर
7. एसआर. महाप्रबंधक (पीपी), ग्रिडको, जनपथ, भुवनेश्वर (0674-2547180)
8. निदेशक (संचालन), आईबी टीपीएस, एटी/पीओ बनहरपाली, झारसुगुड़ा, (फैक्स नंबर 06645-222225/222230)
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)।
12. मुख्य अभियंता, केंद्रीय योजना विंग, डब्ल्यूबीएसईटीसीएल, साल्ट लेक (फैक्स नंबर: 033-23591955);
13. मुख्य अभियंता (पीटीआर), डब्ल्यूबीएसईडीसीएल, साल्ट लेक, कोलकाता (फैक्स:033-23345862)।
14. मुख्य महाप्रबंधक (ओएस), डब्ल्यूबीपीडीसीएल, कोलकाता-98 (फैक्स नंबर 033- 23393286/2335-0516)।
15. जीएम, कोलाघाट टीपीएस, डब्ल्यूबीपीडीसीएल, कोलाघाट (फैक्स नंबर 03228231280)
16. डीजीएम (ऑपरेशंस), डीपीएल, दुर्गापुर, (फैक्स नंबर 0343-2555052)
17. जीएम (एसवाईएस ऑपरेशन), सीईएससी, चौरंगी स्क्वायर, कोलकाता (फैक्स नंबर 033- 22253756/22129871)।
18. मुख्य अभियंता, एसएलडीसी, डीवीसी, हावड़ा (फैक्स नंबर 033-2688-5094)।
19. अपर मुख्य अभियंता, एसएलडीसी, विद्युत विभाग, शासन। सिक्किम, गंगटोक, (फैक्स नंबर 03592-228186/201148/202284)
20. कार्यकारी निदेशक, ईआरएलडीसी, पोसोको, कोलकाता, (फैक्स नंबर 033-2423-5809)
21. महाप्रबंधक, एफएसटीपीपी, एनटीपीसी, फरक्का, (फैक्स नंबर 03512- 224214/226085/226124)
22. महाप्रबंधक, खएसटीपीपी, एनटीपीसी, कहलगांव (फैक्स नंबर 06429-226082)
23. महाप्रबंधक, टीएसटीपीपी, एनटीपीसी, तालचेर, (फैक्स नंबर 06760-249053)
24. महाप्रबंधक (ओएस), पावरग्रिड, ईआर-II, कोलकाता (फैक्स नंबर: 033-23572827)
25. महाप्रबंधक, पावरग्रिड, ईआर-I, पटना, (फैक्स नं.0612-2531192)
26. महाप्रबंधक (ओ एंड एम), पावरग्रिड, ओडिशा प्रोजेक्ट्स, साहिद नगर, भुवनेश्वर - 751 007
27. कार्यकारी निदेशक (ओ एंड एम), एनएचपीसी, फरीदाबाद (फैक्स नंबर:0129-2272413)
28. महाप्रबंधक, तीस्ता-वी पावर स्टेशन, एनएचपीसी, सिंगतम, पूर्वी सिक्किम (फैक्स 03592 - 247377)।
29. मुख्य अभियंता, रंगीत पावर स्टेशन, एनएचपीसी, पी.ओ. रंगीत नगर, दक्षिण सिक्किम (फैक्स नंबर 03595-259268)
30. वरिष्ठ उपाध्यक्ष, पीटीसी लिमिटेड, एनबीसीसी टावर्स, 15-भीकाजी काम प्लेस, नई दिल्ली-110066 (फैक्स नंबर 011-41659504)।
31. प्लांट हेड, आधुनिक पावर एवं नेचुरल रिसोर्सेज, झारखंड (फैक्स नं.: 0657-6628440)।
32. एजीएम (ऑपरेशंस), मैथन पावर लिमिटेड।

33. उपाध्यक्ष (विद्युत), वेदांता लिमिटेड, भुवनेश्वर- 751023 (फैक्स नंबर 0674-2302920)।

34. मुख्य विद्युत अभियंता, पूर्वी रेलवे, कोलकाता-700 001 (फैक्स नं.: 033-22300446)

35. मुख्य विद्युत अभियंता, दक्षिण पूर्व रेलवे, कोलकाता-43 (फैक्स: 033-24391566)।

36. उप निदेशक, पूर्वी आरपीएसओ, साल्ट लेक, कोलकाता- (फैक्स नं: 033- 23217075)

37. महाप्रबंधक (ओ एंड एम), एनएचपीसी लिमिटेड, फरीदाबाद, फैक्स: 0129-2272413

38. एसोसिएट वाइस प्रेसिडेंट, जीएमआर केईएल, भुवनेश्वर-751007। (फैक्स नंबर: 0674-2572794)

39. जीएम (एसओ एवं सीओएमएल), एनटीपीसी वीवीएनएल, नई दिल्ली-110033। फैक्स:011-24367021

40. श्री डी. पी. भागवा, मुख्य सलाहकार (ओ एंड एम), टेस्टा ऊर्जा लिमिटेड, नई दिल्ली-110 001 (फैक्स:011-46529744)।

41. श्री ब्रजेश कुमार पांडे, प्लांट हेड, जीतपीएल। (फैक्स:011-26139256-65)

42. निदेशक (एनपीसी), सीईए, एनआरपीसी बिल्डिंग, कटवारिया सराय, नई दिल्ली-110016

43. उपाध्यक्ष (ओएस), हल्दिया एनर्जी लिमिटेड, बारीक भवन, कोकाता-700072, फैक्स: 033-22360955

44. महाप्रबंधक (ओ एंड एम), बीआरबीसीएल, नबीनगर, बिहार-824003, फैक्स-06332- 233026

<u>सीसी:</u>

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

ईआरपीसी:: कोलकाता

MINUTES
OF
221st OCC MEETING

Date : 27.11.2024

Eastern Regional Power Committee

14, Golf Club Road, Tollygunge

Kolkata: 700033

Contents

EASTERN REGIONAL POWER COMMITTEE

MINUTES OF 221st OCC MEETING HELD ON 27.11.2024 (WEDNESDAY) AT 10:30 HRS

Member Secretary, ERPC *chaired the* ***221st OCC*** *meeting. On welcoming all the participants, he outlined the performance of ER grid during* ***October-2024*** *and highlighted the following points:*

- *In* ***October-2024****, energy consumption of ER was* ***17456 MU*** *which is* ***11 % more*** *than* ***October-2023.***
- *In* ***October-2024****, Peak demand met of ER was* ***29827 MW*** *which is* ***13.8% more*** *than* ***October-2023****.*
- *During* ***October-2024****,* ***80.3 %*** *of time, the grid frequency was in IEGC Band (49.90Hz-50.05Hz).*
- *Thermal* ***PLF*** *of ER during* ***October-2024*** *was* ***80.3%.***
- *Some thermal generating units were lauded for maintaining PLF more than* ***90%****.Generating stations whose PLF was more than* ***90%*** *during* ***October-2024*** *are listed below:*

Utility	***Generating Stations***	***PLF %***
WBPDCL	*Sagardighi TPS*	*97*
	Santaldih TPS	*97*
NTPC	*Darlipali STPS*	*98*
	North karanpura TPP	*91*
	Talcher STPS	*93*
OPGC	*IB valley TPS*	*91*
HEL	*Haldia TPP*	*94*

- ***Coal stock position:***

Coal stock position (As on 24.11.2024) is as follows:

SL.	***Name of States/Power Stns.***	***% of Actual Stock vis-à-vis Normative Stock***
1.	*Jharkhand (TVNL)*	*57%*
2.	*Odisha/IBTPS*	*90%*
3.	*WBPDCL*	*8%(Min.Sagardighi TPS-5%, Max. Bakreswar TPS- 13 %)*
4.	*D.P.L. TPS*	*5%*
5.	*DVC*	*68%(Min. Durgapur Steel TPS-57%, Max Chandrapura TPS - 109%)*
6.	*NTPC*	*67% (Max. North karanpura TPP - 148% & Min. Barauni STPS - 17%)*

- ❖ *WBPDCL and DPL were advised to focus on building coal stock as per their normative requirement.*
- ❖ *He further highlighted the following:*
- ✓ *Ministry of Power vide letter dated 22.10.2024 has requested for allocation of power from NTPC's Generating Stations of SR and ER to Madhya Pradesh along with additional quantum of 500 MW from unallocated quota for the upcoming Rabi Crop season (Dec-2024 to March 2025).All ER beneficiaries may confirm possible surrender of their respective shares for the interim period.*
- ✓ *The 315 MVA ICT at 400 kV Rengali (PG) has been replaced with 500 MVA ICT on 11.10.2024 as the existing ICT had completed 32 years (exceeding useful life of 25 years).*
- ✓ *In respect of 220 kV Farakka-Lalmatia line which was under long outage since 21.04.2021(as per information received from SLDC Jharkhand):*
- *21 no.s of towers have already been restored and Conductor stringing of 50.3 km has been completed .Now LOA has been placed on 14.10.2024 for restoration of balance 21 towers(expected completion within 6 months).*
- *Presently 220 kV Farakka-Lalmatia line is anti-theft charged at 132 kV level (from loc. no. 241 to loc. 84).*
- ✓ *Forced outage of NTPC Barh Unit-04 due due to high vibration in bearing of HP turbine since 14.11.2024 and the same is expected to be revived by 29.11.2024 as confirmed by NTPC.*
- ❖ ***ED,ERLDC** at the outset highlighted the following:*
- ➢ *Alluding to the hearing dated 05.11.2024 held under Hon'ble CERC, significance of Resource adequacy monitoring was emphasized which could not be complied by majority states owing to shortage of manpower at SLDCs .*
- ➢ *Reference was cited to Ministry of Power (Govt of India) letter dated 30.10.2024 on **Workforce adequacy Guidelines for LDCs** that shall serve as benchmark for every LDC to be equipped with sufficient skilled human resource for enhanced operational capacity and efficient grid management.*
- ➢ *Capacity building program for all SLDCs has been conducted recently at ISB Hyderabad under the initiative of Grid India.*

1. PART-A: CONFIRMATION OF MINUTES

1.1. Confirmation of Minutes of 220th OCC Meeting held on 28th October 2024 physically at ERPC Secretariat, Kolkata

The minutes of 220th Operation Coordination Sub-Committee meeting held on 28.10.2024 was circulated vide letter dated 06.11.2024.

Members may confirm the minutes of 220th OCC meeting.

Deliberation in the meeting

All members confirmed the Minutes of 220th OCC meeting.

2. PART-B: ITEMS FOR DISCUSSION

2.1 Utilization and upgradation of STU-owned inter-regional lines at 132 kV and 220 kV level: NLDC

- The inter-regional transmission corridors have played an instrumental role in harnessing the diversity of demand and generation resources to enhance reliability and economy of operation.
- It is seen that several of these inter-regional links remain under-utilized due to commercial, or technical issues. It is important to mention that several of these lines are old and therefore in the absence of desired Renovation and Modernization (R&M), their availability is comparatively lower. The Operations and Maintenance (O&M) of lines becomes difficult as it requires coordination between two STUs that are in different regions. Also, there have been proposals to dismantle some of these lines in the recent past. With the rapidly increasing penetration of VRE sources in Northern, Western and Southern regions and ROW constraints in the construction of new transmission corridors, it is suggested to rejuvenate the existing lines by re-conductoring or by upgrading to higher voltage or utilising the Right-of-Way (ROW) for planning high capacity IR lines.
- Retaining and upgrading these inter-regional lines can provide significant benefits in the following areas:

✓ Addressing the future ROW issue
✓ Voltage and reactive power support
✓ Restoration of supply and provide black-start support
✓ Alignment with future demand and RE growth

Details of STU Owned Inter-Regional Lines at 132 kV & 220 kV Level attached at **Annex B.2.1**

Member may discuss.

Deliberation in the meeting

➢ *ERLDC informed the following :*
❖ *W.r.t ER-NR corridor:*
✓ *Most of the lines at 132 kV level are used in feeding radial loads except one 220 kV line in loop.*
✓ *Among these 132 kV Rihand-Nagar Untari and 132 kV Chandauli-Karmanasa lines are used for catering occasional supply to UP during shutdown or outage.*
✓ *132 kV Rihand-Garwah line used for supplying traction load radially.*
❖ *W.r.t ER-WR corridor*

✓ *220 kV Budhipadar-Raigarh S/C and 220 kV Budhipadar-Korba D/C lines were highlighted as critical for upgradation in view of high influx of RE from Western region in solar hours causing congestion in intra-state network of Odisha.*

❖ *W.r.t ER-SR corridor:*

220 kV Balimela-Upper Silleru remains idle charged in anti-theft mode.

❖ *It was also underscored that all these 132 kV inter-regional links are often under-utilized owing to ageing infrastructure and lack of inter-regional coordination posing maintenance challenges.*

OCC Decision

- *OCC opined in favor of reconductoring or upgrading these 132 kV lines(except those feeding radial loads) to higher voltage levels. 132 kV lines to be used for wheeling of RE power and 220 kV lines in loop should be considered for upgradation.Existing Right-of-Way (ROW) may be utilized for high-capacity transmission corridors addressing future ROW constraints, ensuring black start support and aligning with prospective RE integration in future.*
- *In view of most of these lines being more than 40 years old, OCC opined in favour of assessing tower healthiness besides conductor upgradation.*
- *ERLDC was advised to carry out comprehensive study on loading pattern of these STU owned inter-regional lines considering time horizon of last 5 years. Other critical inter-state as well as intra-state lines requiring upgradation may also be included in the study.*

2.2 Reconductoring of ISTS lines under Eastern Region Expansion Scheme-44:ERPC

❖ Several 220 kV transmission lines and substations were implemented in Indian grid along with cross border lines for importing power from Chukha Hydro Electric Plant in Bhutan. The generating station was commissioned in years 1986-88 and the transmission system is now more than 35 years old. Considering the age of conductors and increase in conductor snapping incidences, reconductoring of these transmission lines has become necessary.

❖ The matter was deliberated in various OCC forums as well as in 52nd TCC meeting of ERPC.

❖ In a meeting was convened by CEA under the chairpersonship of Member (Power System) on 27-08-2024, it was decided that matter of reconductoring of cross border lines will be separately taken up with Bhutan.

❖ However, reconductoring of ISTS portion of 220 kV corridor viz. Alipurduar (POWERGRID) – Falakata (WBSETCL) – Birpara (POWERGRID) – Binaguri (POWERGRID) – Siliguri (POWERGRID) – Kishanganj (POWERGRID) – Dalkhola (POWERGRID) – Gazole (WBSETCL) – Malda (POWERGRID), may be taken up under ISTS. Further, reconductoring of intra-state LILO portion of Birpara (POWERGRID) – Alipurduar (POWERGRID) 220 kV D/c line at Falakata (WBSETCL) and Dalkhola – Malda 220 kV D/c line at Gazol (WBSETCL) shall be carried out by WBSETCL matching with HTLS conductor of the main ISTS line in the matching timframe.

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

WBSETCL works associated with reconductoring of ISTS lines

- In the NCT(National Committee on Transmission) meeting dated 23.10.2024 , the following were decided:
- WBSETCL shall reconductor their following lines sections under intra-state scheme matching with completion of ISTS scheme namely ERES-44:
- ✓ About 4 km intra-state portion of Alipurduar (POWERGRID) Falakata (WBSETCL) 220 kV D/C line at Falakata end with HTLS conductor of ampacity 1250 A along with necessary upgradation of associated 220 kV bay equipment at Falakata (WBSETCL) end commensurate with rating of HTLS (1250 A).
- ✓ About 4 km intra-state portion of Birpara (POWERGRID) - Falakata (WBSETCL) 220 kV D/C line at Falakata end with HTLS conductor of ampacity 1250 A along with necessary upgradation of associated 220 kV bay equipment at Falakata (WBSETCL) end commensurate with rating of HTLS (1250 A).
- ✓ About 2 km intra-state portion of Dalkhola (POWERGRID) - Gazole (WBSETCL) 220 kV D/C line at Gazole end with HTLS conductor of ampacity 1250 A along with necessary upgradation of associated 220 kV bay equipment at Gazole (WBSETCL) end commensurate with rating of HTLS (1250 A).
- ✓ About 2km intra-state portion of Gazole (WBSETCL) - Malda (POWERGRID) 220 kV D/C line at Gazole end with HTLS conductor of ampacity 1250 A along with necessary upgradation of associated 220 kV bay equipment at Gazole (WBSETCL) end commensurate with rating of HTLS (1250 A).
- WBSETCL will LILO the Dhalkola - Gazole 220 kV D/C line with 1250 A HTLS under their intra-state scheme for establishment of 220 kV level at their existing 132/33kV Raiganj (WBSETCL) S/S.
- ISTS licensee and WBSETCL shall coordinate for reconductoring of their respective portion of the lines matching with completion schedule of this scheme.
- ➢ It is kindly requested that WBSETCL may note the scope of works (as provided in the minutes of NCT) and coordinate with POWERGRID for matching implementation of their works.
- ➢ The **progress report** may be shared on **monthly** basis to **CEA**, **ERPC** and **CTU**.
- MOM of NCT meeting dated 23.10.2024 along with CTU letter attached at **Annex-B.2.2**

WBSETCL and Powergrid may respond. Members may discuss.

Deliberation in the meeting

- ✓ *OCC was apprised of the decision in the NCT meeting(23.10.2024) on reconductoring of 220 kV network of Chukha Transmission system(CTS).*

✓ *Powergrid ER-II intimated:*

- ➢ *Tendering process of reconductoring works shall commence soon and NIT will be floated within a month.Award of contract shall take around 7-8 months.*
- ➢ *BOQ for reconductoring works is currently under progress wherein provision of TLA is included in view of increased incidents of autoreclosure and tripping in the thunder prone area of North Bengal.*
- ➢ *Most of the end-equipment connected to Chukha Transmission system have been upgraded.*
- ➢ *Shutdown requirement of the critical in-service 220 kV lines was highlighted.*

✓ *In absence of WBSETCL representative, the modalities of reconductoring works to carried out on part of WBSETCL matching with the timeframe of ISTS lines, could not be finalized.*

OCC Decision

- *OCC advised Powergrid ER-II to expedite the reconductoring works of CTS as per timeline approved in 24th NCT meeting(MOM attached at* ***Annex-B.2.2*****) and share monthly progress report of the same with CEA,CTU and ERPC.**
- *Powergrid was also advised to conduct a bilateral meeting with Bhutan authorities to streamline the reconductoring plan in portions of 220 kV lines within the territory of Bhutan. This has to be done prior to proceeding with the tendering process of reconductoring works.*
- *OCC opined that shutdown requests pertaining to reconductoring of CTS shall be treated on priority and to be approved to the best feasible extent so that reconductoring of CTS gets completed as per timeline approved in 24th NCT meeting.*
- *WBSETCL was advised to coordinate with Powergrid ER-II for carrying out reconductoring works on intra-state portions of 220 kV lines under CTS matching with the timeframe of ISTS lines.This is in compliance to decisions of 24th NCT meeting.*

2.3 Bus split operationalization at NTPC Kahalgaon: ERPC

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

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

1. Determination of underground cable conduit path for 400/132 kV ICT-3, 4 and 5 allocated for stage 2 supply.
2. Excavating the existing cable and relaying from Stage-1 132kV to New Stage-2 132 kV switchyard, where ICT 3 & 4 will be connected.
3. Laying of additional 22.8 ckt. km control cable for STs.
4. Jumpering of ICTs in 132kV & 400kV level.
5. Bay equipment testing.

- NTPC apprised that determination of underground power cables is one of the major challenges to proceed further with laying of cables between two 132kV switchyards. The tentative time to complete the ICT commissioning is **25th May 2025**.
- Meanwhile in view of increased fault level of NTPC Kahalgaon and to facilitate interim arrangement of standby ISTS connectivity to Godda Thermal Power project of M/s Adani Power (Jharkhand) Ltd. (APJL) with Indian grid, Bus splitting at 400KV Kahalgaon needs to be done on priority.

220th OCC deliberation:

- 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 immediarte effect.
- ✓ Upon completion of all pending interconnection and jumpering works , testing of all bay equiplment of ICT 3 & 4 needs to carried out on priority.
- ✓ Sustained operation of 400 kV system with sectionalizers closed in high fault scenario is detrimental to grid security.

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.

In compliance to 220th OCC decision, NTPC has submitted status i.r.o implementation of Committee recommendations as follows:

✓ **Healthiness of Bus CVTs:**

Based on daily monitoring results , secondary side voltages (110VAC) are indicated within acceptable range.

✓ **Constraints on Opening of 400kV Bus section breakers in present condition:**

- Post-opening of both 400kV bus sectionlizer breakers, Kahalgaon generation switchyard will operate as two separate 400kV switchyards with differing voltage and phasor angles [delta] with respect to each other.
- During closing of Station-Unit Tie, inadvertent power flow owing to angular difference between the 400kV sections, may result in equipment safety issues in 11 kV Auxiliary power network.
- For achieving smooth Live changeover between Station bus (derived from grid)and Unit bus as well as safety of the Auxiliary power network, it is necessary to derive Station Supply for stage-II through its own Step-up Switchyard (400kV Bus-3 & 4) so that Unit and Station bus Voltage Vectors are closely coupled together.
- A separate 132 kV station supply has been envisaged for stage-II (3XS00MW) by providing 2 nos. 400/132 kV Inter Bus transformer (ICT-3 & ICT-4) from 400kV Bus-3 & 4 under bus splitting scheme wherein power supply of all the station transformer of stage-II (ST-3,4 &5) are being shifted to new 132 kV switchyard of stage-II.

✓ **Status of Bus Splitting Package:**

- Identification of existing 132kV underground cable routes for Stage-II Station Transformers
- (ST-3, ST-4, and ST-5) is complete.

- Testing, revival of defective bay equipment, and jumper connection works are ongoing. c. Earthing work for ICT-3, ICT-4, and bay equipment is in progress.
- Required Control cables are being arranged by NTPC through internal resources and by the agency.
  Details of status enclosed at **Annex-B.2.3**

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

Deliberation in the meeting

NTPC submitted :

- ✓ *Layout of the existing cables has been mapped and the interface points between the old and new cabling systems have been identified*.
- ✓ *Excavation process is presently being undertaken to route the new cables.*
- ✓ *Due to considerable angular difference between individual 400 kV sections upon opening of sectionalizer breakers and consequent threat to equipment safety in 11 kV auxiliary network, this proposed interim arrangement could not be explored.*
- ✓ *Procurement of new control cables or sourcing them from in-house spares is being explored.*

OCC Decision

- *OCC advised NTPC to expedite the overall process of excavation, laying of new cables and procurement of control cables for timely completion of the bus splitting arrangement.*
- *NTPC was advised to share the monthly report on progress i.r.o bus splitting activities at 400 kV switchyard of NTPC Kahalgaon to ERPC/ERLDC.*

2.4 Proposal for retirement of 02 X 315 MVA ICTs against Kahalgaon Transmission System (KTPS) from Maithon SS: Powergrid ER-II

- Against KTPS system, 02 Nos 315 MVA, 400220 KV ICTs are commissioned at Maithon SS back in year 1991-1992. Subject ICTs continued to be in service till 2016, until vide ERSS-IX, both ICTs proposed for upgradation by 500 MVA ICTs in view of system requirement. During in service condition, both ICTs are subjected to tremendous load flow, and subsequently faced many loading related maintenance/forced maintenance activities.
- This includes major maintenance, like on-site repairing of 315 MVA ICT-1 was also carried out at Maithon SS around 2008-09 and after certain rectification with calculated way, ICT was in service until removed from service due to system augmentation.
- POWERGRID, has maintained both 315 MVA removed ICTs at its best, and even after elapsing 33 Years , both ICTs are tried to be maintained as per specified guidelines available.
- However, as it is imperative to say that, ageing has an effect on in service highly loaded ICTs and both are not different from that aspect. Moreover, recent test reports indicates deteoriating trends for both ICTs and having certain permanent ageing related deformities and can be more detrimental if subjected to Transportation.
- In view of above, and considering ageing related issues, both 315 MVA ICTs are proposed to be retired from books of KTPS w.e.f 01.11.2024. On approval necessary Decap intimation shall be circulated among beneficiaries.

Powergrid ER-II may explain. Members may discuss.

Deliberation in the meeting

Powergrid ER-II apprised:

- ✓ *Operational health of both 315 MVA ICTs has detoriated beyond repair.*
- ✓ *As evident from Furan analysis, Furan concentration has significantly increased in transformer oil indicating considerable damage to paper insulation of the windings and ageing of the ICT.*
- ✓ *500 MVA spare ICT is presently available at Maithon S/S.*

OCC Decision

- *OCC agreed to the proposal of decommissioning two no.s of 315 MVA ICTs against Kahalgaon Transmission System fom Maithon S/S. Intimation on Decap of this asset should be circulated among beneficiaries.*
- *OCC suggested to procure a 500 MVA transformer as a spare in place of a 315 MVA transformer and advised Powergrid to explore possibility of utilizing this 500 MVA ICT considering future load requirements.*

2.5 Proposal for procurement of 50 MVA, 132/66 KV Spare ICT for Gangtok SS: Powergrid ER-II

- At Gangtok SS of ER-II, 02 X 50 MVA, 132/66 KV ICTs are in service for catering the load of capital city of Gangtok and its associated area. In recent past during peak loading period (Nov-Feb), it is observed that each ICTs are almost loaded around 100% and N-1 criteria are not maintained. Apart, from 02 Nos in service ICT's, there is another 50 MVA spare ICT also available as cold spare at Gangtok SS.
- In view of above criticality, CTU has recommended for installation of 3rd 50 MVA ICT at Gangtok. Vide, project ERES-XXX, POWERGRID is presently executing the installation of 3rd ICT at Gangtok. However, as per project schedule, available spare ICT is now being used for installation as 3rd ICT of Gangtok SS and after installation of the subject ICT, no spare will be available further.
- To meet further contingency and CEA spare norms, it is prudent to have atleast 01 No spare ICT at Gangtok SS of same rating (50 MVA).
- In view of above, it is proposed for in-principal approval for procurement of 01 No 50 MVA ICT for Gangtok SS as Regional spare. Necessary cost implication shall be placed on subsequent CCM meeting for further deliberation.

Powergrid ER-II may explain. Members may discuss.

Deliberation in the meeting

Powergrid ER-II submitted:

- ✓ *Two existing 50 MVA ICTs at Gangtok S/S are loaded upto the rated capacity and N-1 criteria is violated.*
- ✓ *Installation of 3rd 50 MVA ICT is under progress as already recommended by CTU.*
- ✓ *After deployment of the 3rd ICT, no spare ICT will be available as per CEA spare norms to combat potential contingencies.*

Sikkim representative was not present in the meeting.

OCC Decision

- *OCC opined that views of Sikkim is necessary for proceeding with the procurement of spare ICT at Gangtok S/S as current load pattern along with future load growth in the state needs to be considered.*

- *It was decided to obtain comments from Sikkim in this regard.*

2.6 Implementation of SPS at Baripada : ERLDC

- In 216th OCC meeting dated 29th June 2024 it was decided that a suitable SPS would be required at Baripada to avoid large scale blackouts in Odisha system following the 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 necessary studies with SLDC Odisha and suggested the required SPS scheme. Subsequently, several meetings took place and SLDC Odisha was advised to expedite SPS implementation at Baripada. However, via letter ref no: GRIDCO/377/2024-SGM(TRADING) dated 11.11.2024 Odisha has expressed their difficulties in implementing the above scheme citing the following reasons (Letter enclosed in **Annexure-B.2.6**
  - Any load restriction is against the policy of the Government of Odisha, especially during peak summer.
  - Load restrictions cannot be en

  forced when there is no overdrawl by the State of Odisha.
  - The intra-state transmission network of Odisha has been built to cater to Odisha's own power

  However, during SPS design stage in every meeting, ERLDC clarified that SPS will act only when the issue arises due to drawl by Odisha and shared supporting study. The said SPS is a defense scheme, and is required to avoid larger blackout due to cascading effect. Considering the larger reliability aspect of Odisha system as well as concern raised by GRIDCO, members may discuss and take final decisions about implementation of Baripada SPS.

  ERLDC may explain.GRIDCO/SLDC Odisha may respond.Members may discuss.

Deliberation in the meeting

*ERLDC stated that the proposed SPS was aimed at safeguarding Odisha system in event of potential real time contingencies.But GRIDCO has formally expressed dissent on implementing this SPS at Baripada to prevent overloading of incoming feeders to Baripada(PG)(letter enclosed at **Annexure-B.2.6**)*

OCC Decision

- *In view of the concern raised by GRIDCO, it was decided to defer the implementation of the proposed SPS at Baripada.*
- *In event of any contingencies of ER grid or those affecting intra-state network of Odisha, SLDC Odisha shall abide by real time instructions of ERLDC for safeguarding grid security and reliability.*

2.7 No load charging for Rajarhat(PG) to New Town IIC circuit II for R,Y phase from Rajarhat(PG) end upto LA at New Town IIC end: WB SLDC

- This matter was already discussed in 221st OCC Outage Coordination meeting on 22/11/24. Necessity for no load charging of Rajarhat(PG)-New Town II C circuit II (for R,Y phase only) from Rajarhat(PG) end only upto LA of New Town IIC already explained in the said meeting. This said circuit has been out since 10/07/24 for the b-phase cable fault.
- The faulty B phase cable already is isolated at both ends. As, the repair of the b phase cable involves kits and spares(particularly for the jointing portion of two different sized

cables) from abroad, which is time consuming, so to keep the other two phase UG cables healthy, it's extremely necessary to keep those in no load charging condition.

- Key Focus Points of the Proposal are:

1. It is extremely needed to charge the healthy 2 phase cables to avoid damage, which is experienced in many cases by almost every TRANSCO of the country.
2. These are 220 KV UG cables with 1200 Amp capacity, which are not only extremely expensive, but the kit and other spares required at the jointing portion of two different sized cables(background already explained in the said meeting) of each phase are imported and need a huge time to bring those. Hence in case of any damage of R,Y phase healthy cables, normalisation of circuit II will be uncertain totally.
3. Power Grid already has conveyed their consent for charging R,Y phase from Rajarhat (PG) end for Rajarhat(PG)-New Town AAIIC circuit II after doing necessary protection related settings for the circuit at PG end.

☐ **Hence in view of above, the said no load charging may please be allowed within shortest possible time to reduce any possibility of damage of R, Y phase cables in respect of Rajarhat(PG)-New Town AAIIC circuit II.**

WB SLDC may explain and Powergrid ER-II may respond. Members may discuss.

Deliberation in the meeting

WB SLDC apprised :

- ✓ *Repair of the faulty cable(B phase) is getting delayed due to non-availability of the imported cable joiniting kit.*
- ✓ *Neither charging the cable at low voltage nor charging from WBSETCL end is feasible.*

Powegrid ER-II submitted:

- ✓ *Due to leading charging current drawn by the cable at no load, unbalance may be observed in Rajarhat ICTs between predominantly lagging load and cable charging current (leading).*
- ✓ *Earth fault setting of Rajarhat ICT may be required to be changed.*

OCC Decision

- *OCC consented to the proposal of no-load charging of R and Y phases of the Rajarhat(PG)-New Town II C (circuit II) on interim basis.In this regard, relay settings of Rajarhat ICTs may be reviewed and modified based on the charging current in two healthy phases of the cable.*
- *OCC requested WBSETCL to expedite the cable reparing works and to share progress status of the same with ERPC.*

2.8 Modification in the existing S/C LILO arrangement between Siliguri (PG) – NBU – NJP sub-stations: WB SLDC

☐ **Proposal:** In view of the congestion faced in 132 kV Siliguri (PG)- NBU single circuit since more than a year, it is desired to change the present S/C LILO arrangement between Siliguri (PG) – NBU – NJP sub-stations. Present arrangement is proposed to be changed to Siliguri (PG) – NBU D/C, sacrificing Siliguri (PG)-NJP circuit and NBU-NJP circuit.

☐ **Difficulties faced with present system:** Due to extreme uneven load sharing between Siliguri (PG) to NBU and Siliguri (PG) to NJP to NBU with a backdrop of high load rise in NBU, Ujanu, TCF etc buses, very often we face a load more than 80 MW in the single circuit between Siliguri (PG) to NBU segment. With single panther conductor, this loading

is extremely high and alarming. To combat real time challenges, we are compelled to shift the load of TCF phases to Islampur sources, which triggers low voltage problem for TCF phase I,II,III. Two important traction points Rangapani (TCF 1 source), Gunjaria (TCF 3 source) are facing huge low voltage problem after this shifting.

This problem aggravates much more in dry seasons with high load condition, when hydel push to NBU from RHP reduces to a significant extent.

☐ **Benefit of the scheme:**

1. Load sharing between Siliguri (PG)-NBU circuits will be more even, than present system, thereby reducing the congestion.
2. Underutilised ICTs at Siliguri (PG) sub-station will be loaded little more.
3. More step down from NJP 220/132 KV ICTs expected than its present under-utilised status.
4. At least 2 stages of TCF (May be all three stages even) can be put with NBU/NJP sources to ensure proper voltage at three stages.

To explain the scheme, a SLD is attached herewith.(**Annex B.2.8)**

WB SLDC may explain. Members may discuss.

Deliberation in the meeting

WB SLDC submitted :

- ✓ *Owing to uneven load sharing between 132 kV Siliguri(PG) to NBU and 132 kV Siliguri(PG) to NJP lines, severe congestion is encountered in 132 kV Siliguri(PG)- NBU S/C line(around 85 MW power flow)*
- ✓ *Low voltage issue is also experienced in some adjoining load centres during real time operation.*
- ✓ *In view of this , a modified scheme is proposed wherein both 132 kV lines i.e from Siliguri(PG) to NBU and from NBU to NJP will be discarded.*
- ✓ *Upon implementation of this rearrangement:*
- ☐ *Loading of 132 kV Siliguri(PG)- NBU D/C will be around 60 MW.*
- ☐ *Line length will alter marginally from the existing configuration, so no major relay settings modification will be required.*
- ☐ *Optimal utilization of the existing 160 MVA ICTs at Siliguri(PG) will be possible.*

Existing as well proposed scheme attached at ***Annex B.2.8***

Powergrid ER-II stated:

The proposed network modification works may be undertaken after completion of currently undergoing ADD-CAP works at 220 kV Siliguri (PG). WB SLDC agreed to the same.

OCC Decision

- *OCC granted in-principle consent to the proposed modification in the existing LILO arrangement between 220 kV Siliguri (PG) – NBU(132 kV) – NJP(220 kV) sub-stations.*
- *OCC also advised West Bengal SLDC/WBSETCL to intimate CMETS-ER forum of CTU along with relevant load flow study on this rearrangement in the 132 kV network.*

2.9 Commissioning of (2x500 MVA+ 2x160 MVA) 400/220/132 KV GIS Sub-Station at Bakhtiyarpur: BSPTCL

- In light of minutes of meeting for the 18" Standing Committee Meeting on Power System Planning in Eastern Region held on 13.06.2016 at Kolkata, approval for establishment of 400 KV GIS Substation at Bakhtiyarpur along with down-linking 220 KV & 132 KV transmission line has been accorded.
- The scope of work constitute the following:

a) Establishment of (2x500 MVA +2x160 MVA) 400/220/132 kV GIS S/S at Bakhtiyarpur
b) LILO of both circuits of 400 kV Barb- Patna (PG) line-1 (ckt-1 & 2) at Bakhtiyarpur
c) Bakhtiyarpur New) - Sheikhpura (New) 220 kV D/C line.
d) Bakhtiyarpur New) - Hathidah (New) 220 kV D/C line.
e) Bakhtiyarpur (New) - Fatuha (BSPTCL) 220 kV D/C line.
f) Bakhtiyarpur (New) - Harnaut (BSPTCL) 132 kV D/C line
g) Bakhtiyarpur (New) - Baripahari (BSPTCL) 132 kV D/C line.

- The work for construction of associated 132 KV, 220 KV & 400 KV transmission lines has been completed and are ready for charging.
- The work for construction of GIS Bakhtiyarpur is on the verge of completion and pre-commissioning.
- GIS testing is under progress. HV test of 400 KV GIS is under progress and likely to be completed by 30 November 2024.
- Relay testing of all voltage level viz. 400 KV, 220 KV & 132 KV has been completed.
- The GIS Bakhtiyarpur is to be energized with LILO of 400 KV Barh -- Patna (PG) line-1 ie. ckt-1 & ckt-2. LILO portion of 400 KV line has been completed and only jumpering at LILO tower is balance.
- Further, PGCIL vide their letter no. ER-1/PT/AM/BSPTCL/3186, dated 24.02.2021 has informed that line-1 (ckt-1 & 2) of 400 KV Barh -- Patna (PG) have earthwire in both the circuits.. Hence, establishment of communication and protection system through the proposed LILO of Barh - Patna (PG) line-1 (ckt-1 & 2) at GIS Bakhtiyarpur may be done by the following methodology:

a) BSPTCL may arrange to shift the existing 02 nos. of Analog PLCC Panels (ABB ETL-600) & 02 nos. panel housing DTPC equipments (Valiant make) installed at Barh (NTPC) for Patna - Barh ckt-1 & 2i.r.o Protection channel 1 & 2 respectively.

b) The 02 nos. Analog PLCC Panels (ABB ETL-600) shifted from NTPC (Bath) may be installed & commissioned at Baktiyarpur for upcoming 400 KV Baktiyarpur -- Patna ckt-I &2.

c) The 02 nos. panels housing DTPC equipments (Valiant make) shifted from NTPC (Barh) may be shifted and handed over to PGCIL at 400 KV Patna S/S.

- Owing to shifting of communication equipment mentioned above, Shutdown will be required at PGCIL (Patna) & NTPC (Barth) end.
- During the shutdown period, jumpering at LILO tower and modification in Relay settings in existing CRP at PGCIL (Patna) & NTPC (Bath) end will be done simultaneously.

- The tentative date of commissioning of GIS Bakhtiyarpur is scheduled by the end of December-2024.
- ✓ As such, Shutdown will be required tentatively w.e.f **15th December 2024**. Details enclosed at **Annex-B.2.9**

Deliberation in the meeting

OCC Decision

- *OCC consented to the shutdown of 400 kV Barh(NTPC)-Patna(PG) line (circuit-1 & 2) for 10 days from 15th December to 25th December 2024.*
- *BSPTCL was advised to expedite jumpering works in LILO portion and shifting of communication equipment (PLCC panels and DTPC equipment) so that the line may be reinstated to service as per approved timeline.*
- *To combat ROW issues, BSPTCL was advised to seek assistance from local administrative authorities.*

2.10 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.
- As per latest status, M/S Solvinia had submitted report on study of islanding scheme dated 08th May 2024. Thereafter based on comments received from ERLDC , replies were submitted by M/S Solvinia. NTPC had communicated the report to all concerned including SLDC Bihar.
- Some furter tests needed could not be carried out due to non-receipt of relevant data from Bihar.

NTPC and SLDC Bihar may update the present status along with future action plan.

Deliberation in the meeting

OCC Decision

- *ERLDC was advised to form a joint committee with SLDC Bihar,NTPC and Bihar DISCOMs for regular monitoring of implementation of Patna islanding scheme.A joint study on feasibility of this islanding scheme may also be carried out.*
  The status of the same may be updated in the subsequent OCC meetings.
- *OCC also advised that Patna islanding scheme must get implemented before Summer 2025.*

2.11 Provision of construction power supply for FGD and New Nabinagar 3 X 800 MW project from existing commercialized units of Nabinagar (3 X 660 MW): NTPC

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

NTPC updated that matter has already been taken up with Bihar& Bihar has agreed with the proposal for drawl of construction power from the existing 11 kV switchgear for FGD and New Nabinagar (3 X 800 MW) project. Accordingly, SBPDCL will install meter for billing purposes.

TCC Decision

TCC advised both NTPC & SBPDCL to settle the issues bilaterally and shall submit the final metering arrangement at Nabingar to ERPC/ERLDC.

- In line with decision of 52nd TCC, NTPC and Bihar had to jointly submit final metering arrangement for construction power supply to ERPC / ERLDC.
- Prior to 52nd TCC one meeting was held between NTPC and SBPDCL for taking decision in the matter. In the meeting both parties had agreed for the arrangement.
- As the contract for new 3 X 800 MW installation has been awarded, hence early finalization of metering arrangement is required. NTPC has submitted the drawing and line details alongwith application and associated challans to SBPDCL.
- Installation of SEM meter for adding the power to ex-bus export of NSTPS is also required.

The decision and execution in above matter requires urgent attention.

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

Deliberation in the meeting

OCC Decision

- *NTPC was advised to coordinate with SLDC Bihar and SBPDCL for finalizing the metering arrangement at and New Nabinagar (3 X 800 MW) project.In case of further delay in resolution, the matter may placed before OCC.*
- *SLDC Bihar was requested to extend all necessary assistance to NTPC in this regard in coordination with SBPDCL.*

2.12 Non-reporting of signals of BSPTCL Owned Bays (220kV GIS bays 212 -Goroul-2) at Muzaffarpur: Powergrid ER-I

- Faulty BCU of 220kV Goroul-2 GIS Bay (212) at Muzaffarpur has been replaced, but signal configuration is still pending. Due to the above, remote monitoring is affected i.r.o. Muzaffarpur Sub-station and we have to arrange local monitoring for the same.
- The issue was already discussed in 209th & 212th OCC for Goroul & Amnour Bays, out of which Amnour has been attended but for Goroul Bays the problem is still persisting and thus needs deliberation in this OCC for time bound resolution.

Powergrid ER-I may explain. Bihar may update on further course of action.

Deliberation in the meeting

- ➢ *Powergrid ER-I expressed serious concern on monitoring the unmanned 400 kV Muzaffarpur S/S due to non-reporting of signals from 220 kV bays owned by BSPTCL.*
- ➢ *BSPTCL apprised:*
- ✓ *Interoperability issue exists between different makes of BCU(Siemens and GE), posing challenges in signal configuration.*
- ✓ *Order has been placed for procurement of new BCU(GE make). New BCU shall be received at site, replaced and proper reporting of signals to RTAMC(Powergrid ER-I) shall commence within two months.*

OCC Decision

- *OCC advised BSPTCL to resolve the configuration issue with faulty BCU as per submitted timeline(2 months) in order to facilitate smooth monitoring of 400 kV Muzaffarpur S/S by RTAMC-ER I(Powergrid).*

2.13 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):

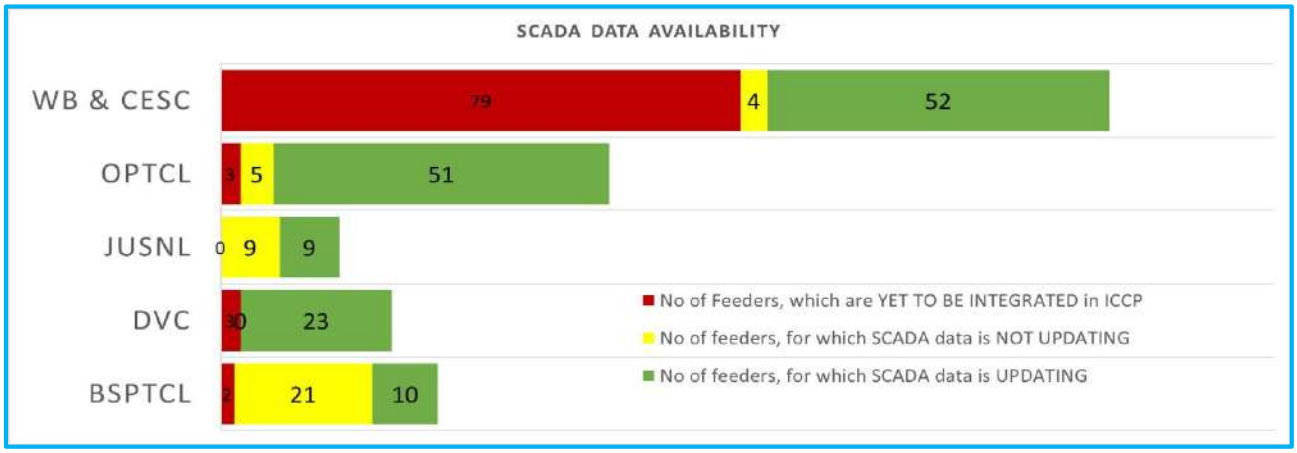
Utility	**Stage 3 & 4 feeder shifting to Stage 1 and 2**	**Updated in ERLDC UFLS Monitoring Display**	**New feeder Addition for Stage 1-4 for meeting new ULFS Quantum requirement**
Bihar	**Yet to be updated by BSPTCL**	Not Applicable	New feeders list communicated to ERLDC
Jharkhand	Completed as informed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

- *BSPTCL updated that UFR testing is pending but feeders have been identified in stages III and IV.*
- *SLDC Odisha informed:*
- ✓ *Load shifting from stage III & IV to Stage I & II has been completed.*
- ✓ *New feeders have been identified in stages –III & IV.*

WB SLDC apprised:
Identification of feeders in stages –III & IV is pending while procurement of new under-frequency relays is under process.

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 identify new feeders for implementing AUFLS in stage III & IV who have successfully implemented AUFLS in stage I & II by shifting load quantum from stage III & IV.List of new identified feeders in stage III & stage IV of AUFLS must be share with ERPC by all SLDCs.*
- *To ensure SCADA data mapping for all newly identified UFR feeders at ERLDC level & in case of non-availability of SCADA data, anticipated timelines for making availability of SCADA data must be communicated for all applicable UFR feeders.*
- *To ensure periodic testing of UFRs for ascertaining their healthiness in coordination with ERLDC and submit report to ERPC/ERLDC.*

2.14 Delay in implementation of load relief under AUFLS by IPCL: WB SLDC

- As per CEA framed guideline for increasing coverage of under frequency relay and was discussed and state wise target coverage figure was conveyed through OCC forum.
- As, first stage compliance for stage I, II was done by WBSEDCL and CESC. But no response received from M/S IPCL as yet. Though in the 216th / 217th OCC meetings, **IPCL representative was present and the decision was conveyed to them, through OCC meeting and then through state level meeting arranged by SLDC, WB**, but no update / initiative at IPCL part is observed as yet regarding introduction for load curtailment system through UFR at stage I, II.
- This is not only creating imbalance in treatment among DISCOMs, but also coming under non-compliance of NPC(National Power Committee) guidelines.

WB SLDC may elaborate.IPCL may please inform the status and explain the delay to inform the update. Members may discuss.

Deliberation in the meeting

OCC Decision

- ✓ *OCC opined that IPCL, being a state DISCOM of West Bengal, must also abide by NPC guidelines on AUFLS load relief quantum similar to other state DISCOMs and thus IPCL was advised to share with WB SLDC the identified feeders for AUFLS implementation in their command area.*
- ✓ *IPCL was also advised to positively update the status in subsequent meetings of OCC.*

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

Deliberation in the meeting

- ➢ *DVC apprised of availing shutdown of CTPS unit#7 in place of RTPS unit#2 and appealed for availing shutdown of BTPS-A unit#1 for 35 days from 25th March 2025.*
- ➢ *WBPDCL affirmed of not availing shutdown of Santaldih TPS Unit#5 and Bandel TPS units as per LGBR 2024-25.*
- ➢ *DPL informed of no requirement of shutdown of unit-7 as it has already underwent overhauling.*
- ➢ *OPGC requested shutdown of IB TPS Unit#2 from 05.01.2025 to 09.02.2025 for 35 days and it was acceded to by SLDC Odisha.*

OCC Decision

- *OCC granted consent to all the requested shutdown proposals except for BTPS-A of DVC. Shutdown request for BTPS-A of DVC may be be considered later on basis of prevailing system conditions in March 2025 .*
  The detailed shutdown schedule of generating units (for the period: Dec-2024 to Feb-2025) as approved by OCC is enclosed at ***Annex B.2.15****.*
- *All generating utilities were advised on carrying out maintenance activities of respective thermal generating units diligently in lean demand period (Dec-24 to Feb-25) to avert forced outage of the units in Summer 2025(peak demand period).*

2.16 Approval for carrying out inspection of 400KV LILO-2 installation of Vedanta Aluminium & Power Ltd, associated with 4X600MW TPP at Jharsuguda(odisha) under Regulation 30 of Central Electrical Authority (Measures Relating to Safety and Electrical Supply), Regulations:Vedanta

- Approval for energization of electrical installations of transmission lines (400KV LILO-1& LILO-2 PGCIL - TPP) associated with unit#1,2,3,4 of 4X600MW TPP at Jharsuguda, Orissa was granted on 10.09.2015 along with inspection validity till 10.09.2017
- In FY 2016, LILO-1 was converted to radial lines after Sundargarh Pooling station was commissioned and LILO-2 was disconnected from Vedanta end. Since then, LILO-2 has become idle condition and prone to theft of members/ conductors.
- To prevent further theft incidence of critical component of the said line, an inspection of the said line is mandatorily to caried out by CEI(CEA) which is prerequisite to apply for anti-theft charge from the nearest state utility DISCOM with 11 KV or 33KV power source.
- Relevant details enclosed at **Annex B.2.16**

Vedanta may explain. Members may discuss.

Deliberation in the meeting

Vedanta submitted:

- ✓ *To protect the essential assets of the aforementioned line, it is proposed to keep the line charged in anti-theft mode from state DISCOM end (11 kV or 33 kV level).*
- ✓ *Since the line is connected to ISTS network, it is necessary to obtain statutory clearance from Chief Electrical Inspector(CEA) prior to charging.*
- ✓ *Last inspection of the mentioned line was carried out by CEA in 2015.*

OCC Decision

OCC advised Vedanta to approach RIO(E) with mandatory safety/protection documents for necessary inspection of LILO-2 of 400 kV Rourkela-Raigarh D/C line(PG) prior to granting permission for anti-theft charging.

2.17 Utilizing the Asset in the Deployment of the OPGW Network: Powerlinks

Powerlinks Transmission Limited carries out O&M of EHV transmission line (220kV and 400kV) having towers spread across 3 states from West Bengal to Uttar Pradesh. In existing transmission infrastructure, of Powerlinks in Eastern Region, is hereby requested for installation of OPGW, which can be utilized for:

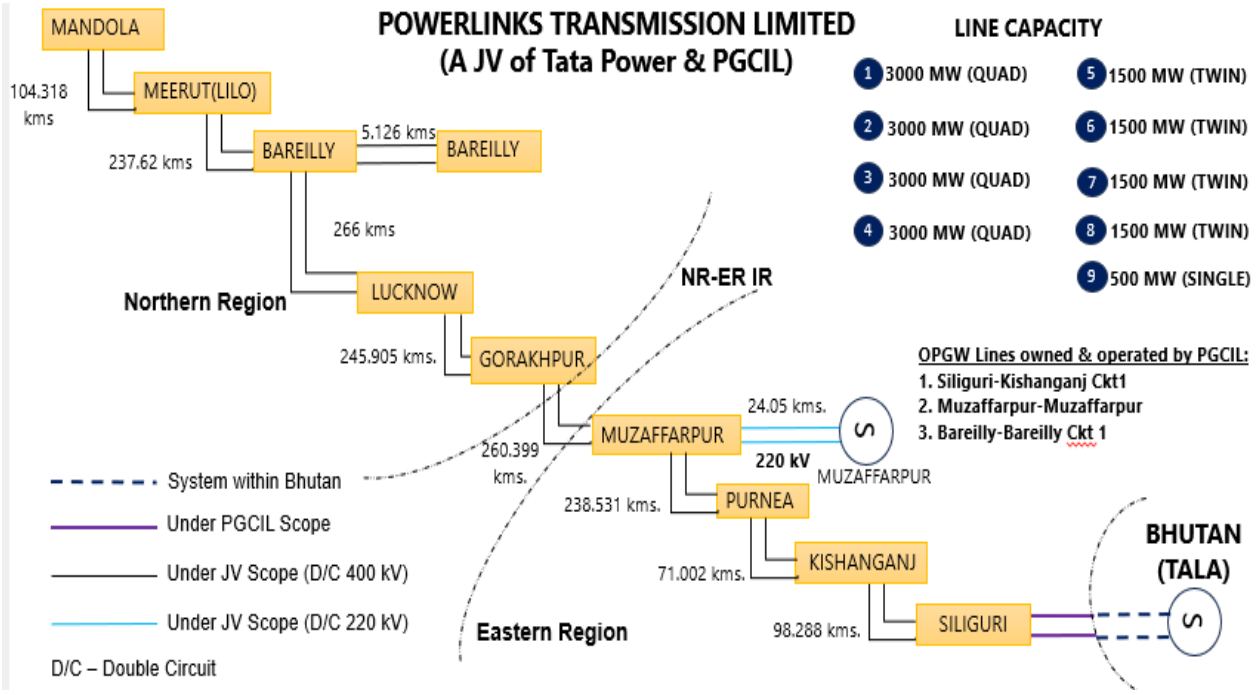
- ☐ System Integration - OPGW facilitates the integration of Supervisory Control and Data Acquisition (SCADA) systems, which are essential for real-time monitoring, automation and control of the electrical grid.
- ☐ High Speed communication/ Data Transmission - The optical fibers within the OPGW are used for high-speed data transmission, which supports a range of communication needs.
- ☐ Lightning Protection - OPGW is installed at the top of the transmission tower, where it can intercept lightning and safely divert it to the ground.
- ➢ **Also, as per the advisory by Central Electricity Authority dated 22.05.24 (reference attached), Central and State Sector utilities must prioritize the implementation of the OPGW laying across its transmission network to ensure compliance with regulatory requirements.**
- ➢ **Hence, to optimally utilize the existing transmission assets covering three states with a significant line length and adhere to the compliance with regulatory requirements, we propose to set up OPGW network in entire line length of Powerlinks Transmission Limited.**

Details of transmission lines owned and maintained by Powerlinks

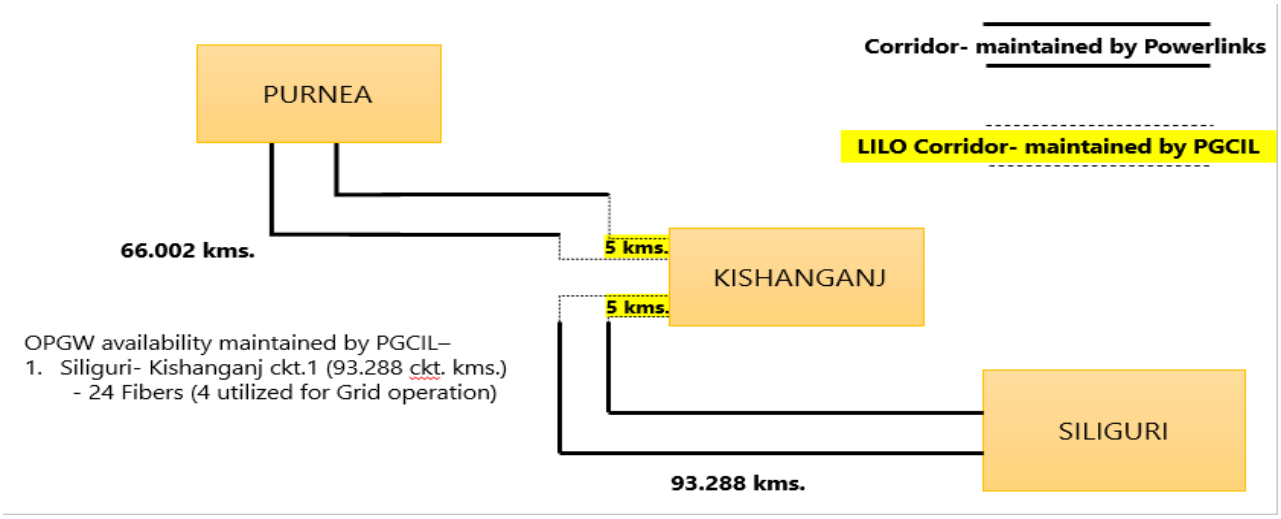
S.N.	Line name	Line Length (In KM)
1	Siliguri-Kishanganj Circuit-2	98.288
2	Kishanganj-Purnea Circuit 1	71.002
3	Purnea-Muzaffarpur Circuit 1	238.531
4	Muzaffarpur-Gorakhpur Circuit 1	260.399
	Total Length in ER region	**668.22 Km**

:

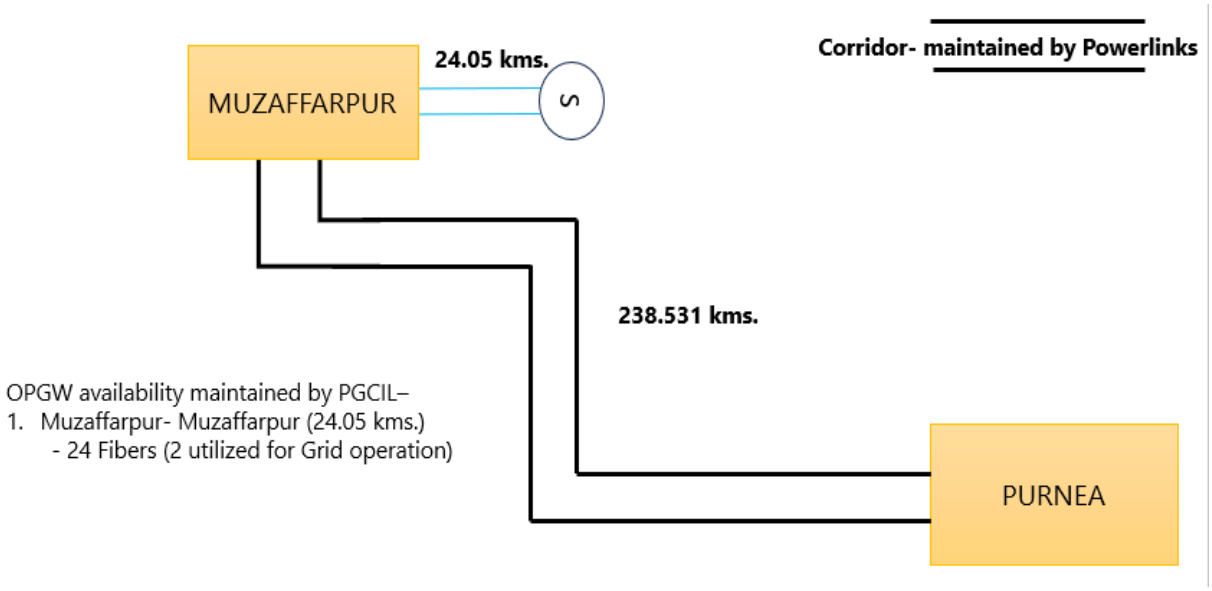
OVERVIEW



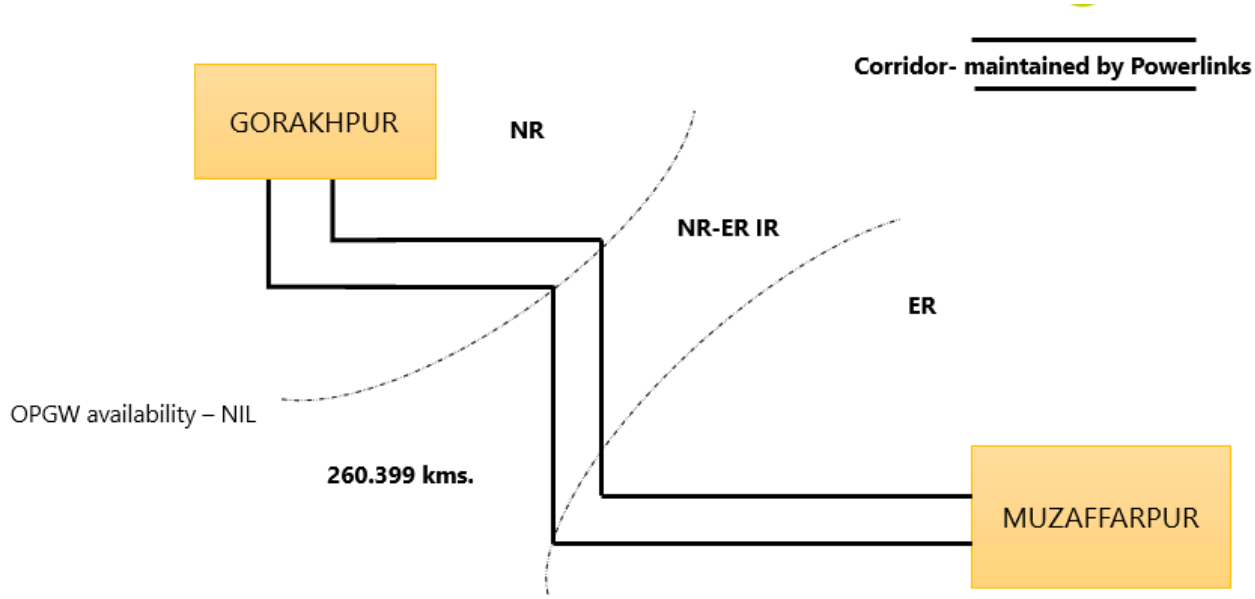
SECTION 1 (SILIGURI-PURNEA)



SECTION 2 (PURNEA-MUZAFFARPUR)



SECTION 3 (MUZAFFARPUR-GORAKHPUR)



Powerlinks may explain. Members may discuss.

Deliberation in the meeting

Powerlinks briefly explained the proposal of OPGW laying on 04 no.s of 400 kV lines in line with CEA guidelines.Presently there exists OPGW only on 400 kV Binaguri-Kishanganj line in the vicinity and OPGW needs to be laid on all other lines as mentioned above.

OCC Decision

- *Since the proposed laying of OPGW shall be carried out in RTM mode, technical requirement of the OPGW links for reliable communication needs to be ascertained.*
- *OCC referred the proposal to TeST meeting for further deliberation.*

2.18 Periodic Testing of power system elements: ERPC

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

Relevant portion of clause is as below:

Quote:

"

40. PERIODIC TESTING

……..

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

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

……"

Unquote

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

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

Power System Elements	***Tests***	***Applicability***
Synchronous Generator	*(1) Real and Reactive Power Capability assessment.* *(2) Assessment of Reactive Power Control Capability as per CEA Technical Standards 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*

All GENCOs and HVDC/FACTS owners may update.

Deliberation in the meeting

WBPDCL affirmed of sharing the testing plan by first week of December 2024.

OCC Decision

- *All GENCOs of ER were advised to furnish the testing plan i.r.o individual synchronous generators as per format(**Annex B.2.18**) within a week positively.*
- *ERLDC was requested to maintain a consolidated database on testing schedule of all generating utilities of ER.*

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

In compliance to **Disaster Management Plan for Power Sector (2022**) as drafted by **CEA**(as per Disaster Management Act 2005) and approved by Ministry of Power (Govt. of India) as well as in order to be prepared for any eventuality, periodic mock drill exercises are to be undertaken in various areas of generation, transmission and distribution of the power sector

by considering various crisis and disaster situations like an earthquake, floods etc. Depending on the vulnerability of the installations/plant, mock drills to handle such situations need to be undertaken. The utilities are also required to ensure that at least one mock drill exercise for every crisis/disaster situation to which the installation/plant is vulnerable is undertaken in each quarter. The adverse observations made on each event of Mock drill should be taken into account and it should be ensured to prevent occurrence of such undesirable events in the future.

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

- ✓ Availability of details pertaining to local district authorities, revenue authorities, law enforcement, fire management authorities, etc., across the townships
- ✓ Adequate vetting of personnel/organisation responsible for township security by local law enforcement agencies.
- ✓ Regular conduct of mock drills in the townships, especially evacuation drills with
- ✓ ambulance and drills for handling major fire accidents.

Letter from Joint Secretary(MOP) to all power/energy secretaries (states) enclosed at **Annex-B.2.19**.

Till now quarterly mock drill reports have been received from NHPC and WBPDCL. Mock drill reports regularly received only from WBPDCL.

☐ **Action points:**

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

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

All concerned utilities may update action plan.

Deliberation in the meeting

- ✓ *OCC was apprised of the Action taken report on Crisis management plan sought by Ministry of Power(***Annex-B.2.19)**. *Mock drill reports are being regularly received only from WBPDCL.*
- ✓ *NTPC affirmed of submitting consolidated report on mock drill exercises carried out in their respective generarting units by Dec 2024.*

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.*

ADDITIONAL AGENDA

2.20 Recovery of Net Deviation & Ancillary services pool account deficit for the period prior 16.09.2024.: WB SLDC

- In reference to the Net Deviation & Ancillary Services Pool Account Deficit Recovery Statement for the period prior to 16.09.2024 (Statement for Legacy Dues) issued by ERLDC vide letter dated 11.11.2024, the state of West Bengal has been billed an amount of INR 87,58,62,011, to be paid in twenty (20) equal instalments each of INR 4,37,93,101 from 11.11.2024 onwards. In case of delayed payment beyond ten (10) days from the instalment date, the drawee DICs shall be liable to pay simple interest @ 0.04% for each day of delay. The deadline of payment of the first instalment was 21.11.24.
- In the meantime, SLDC, WB has requested Hon'ble WBERC for issuance of necessary guidelines in this regard on 12.11.24. The matter was communicated to ERLDC on 18.11.24 with request for a time extension of at-least one month as the necessary guidelines from the Hon'ble WBERC in this regard is awaited. However, the request for time extension was not accepted by ERLDC and was communicated to SLDC, WB on 21.11.24.
- As per Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) Regulations, 2024, there is no provision for retrospective application of the Regulations. Hon'ble CERC vide order No. L-1/260/2021/CERC dated 15.10.24 approved the "Detailed Procedure for recovery of charges in case of deficit in the Deviation and AncillaryService Pool Account" in terms of Regulations 9(7) of the DSM Regulations applicable for recovery of charges in case of deficit for the period from 16.09.2024 to 31.03.2026.
- However, in the detailed procedure of NLDC following section
- "9. Recovery from the drawee DICs for the deficit in the pool for the period prior to 16.09.24 (Legacy dues)" has been included without proper consultation with the stake holders / DICs.
- The effective date of the **DSM Regulation 2024** is **16.09.2024** and is applicable prospectively. The detailed procedure formulated by NLDC as per the Reg (7) is also applicable prospectively.
- **It is pertinent to state that SLDC, WB has never received any intimation regarding the huge shortfall in DSM pool at national level (although Eastern Region is at surplus as per the letter received from ERLDC on 11.11.24)** which is payable by the DICs for the period prior to 16.09.2024. SLDC, WB has been paying the DSM charges as per the invoices raised in line with the extant Regulations.
- In view of the above, it is requested to the forum to take necessary action to raise the issue at the appropriate level **to defer the said notification with immediate effect** till such time the **stake holders/DICs arrive at a logical conclusion after**

detailed analysis, **review and justification of the methodology of recovery** of **Net Deviation & Ancillary services pool account deficit** for the period prior to16.09.2024.

WB SLDC may explain. Members may discuss.

Deliberation in the meeting

ERLDC stated:

- ✓ *Procedure of recovery of the deficit in Net Deviation & Ancillary services pool account from beneficiaries has been prepared by NLDC and subsequently approved by Hon'ble CERC.*
- ✓ *Majority Indian states have already complied with this except few states in ER and SR.*

WB SLDC submitted:

- ✓ *CERC regulation on DSM related matters has been put into effect from 16.09.2024. Detailed procedure for recovery of dues as formulated by NLDC in line with CERC regulations is also apllicable prospectively. Thus retrospective recovery of dues for the period prior to 16.09.2024 is not justified.*
- ✓ *Hon'ble WBERC has been approached seeking necessary guidelines in this regard but response from WBERC is still awaited.*
- ➢ *Bihar DISCOM also seconded the views of WB SLDC.*

OCC Decision

OCC opined that both WB SLDC and Bihar DISCOM may approach Hon'ble CERC by filing petition in this regard.

2.21 Request for allocation of power to Madhya Pradesh: MOP

- ❖ A letter dated 22.10.2024 from Ministry of Power addressed to the Chairperson, CEA (Copy enclosed for ready reference) through which the request of MPPMCL, Madhya Pradesh for providing allocation of power from NTPC's Generating Stations of Southern and Eastern Region to MP and temporary allocation of additional 500 MW power from unallocated quota for ensuing Rabi Crop season was communicated.
- ❖ Now, CEA has requested ERPC to work out possible quantum of power which can be allocated to the State of MP for the months of **December, 2024** to **March, 2025** to meet their additional electricity demand.
- ❖ Accordingly, all ER beneficiaries are requested to confirm keeping under consideration of the above, whether they will be able to surrender any power from their respective share. If yes, please communicate the quantum (MW) which you can surrender with duration. If not possible to surrender any share for the above purpose, kindly confirm that also.

ER beneficiaries may respond. Members may discuss.

Deliberation in the meeting

*All ER beneficiaries were sensitized of the communication from Ministry of Power, Govt. of India on allocation of power to Madhya Pradesh for catering agricultural loads in the ensuing Rabi crop season(**Dec-2024** to **March 2025).***

OCC Decision

OCC opined that all ER beneficiaries may explore possibility of surrendering their share in CGS or unallocated quota and intimate the same to ERPC within a week.If there is no possibility of suurendering their shares, beneficiaries must communicate this to ERPC. It was also suggested that surrendering power in lean demand period by beneficiaries and procuring

cheaper power from market as per their requirement may eventually lead to saving of variable cost(ECR).

2.22 Hydro unit outage: DANS Energy

Tashiding HEP - Unit 1

- ✓ Planned Shutdown Dates: 01-12-2024 to 14-01-2025 (45 days)
- ✓ Reason: Annual maintenance, major overhauling, and repair activities.

Jorethang Loop HEP - Unit 2

- ✓ Planned Shutdown Dates: 02-12-2024 to 15-01-2024 (45 days)
- ✓ Reason: Annual maintenance and major overhauling activities.

These shutdowns are essential to ensure the reliability and operational efficiency of the units. DANS Energy may update.

Deliberation in the meeting

DANS energy informed that due to prevailing winter season, water availability is not sufficient for full generation of their hydro units.

OCC Decision

OCC approved the aforementioned shutdown requests of the hydro generating units of Tashiding(unit-01) and Jorethang(unit-02) HEPs.

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

3.1. ER Grid performance during October 2024.

The average and maximum consumption of Eastern Region and Max/Min Demand (MW), Energy Export for the month October-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)
556.9 MU	624.8 MU, 01.10.2024	29827 MW, 01.10.2024 at 21:40 Hrs.	17717 MW, 26.10.2024 at 02:52 Hrs.	5405	5439

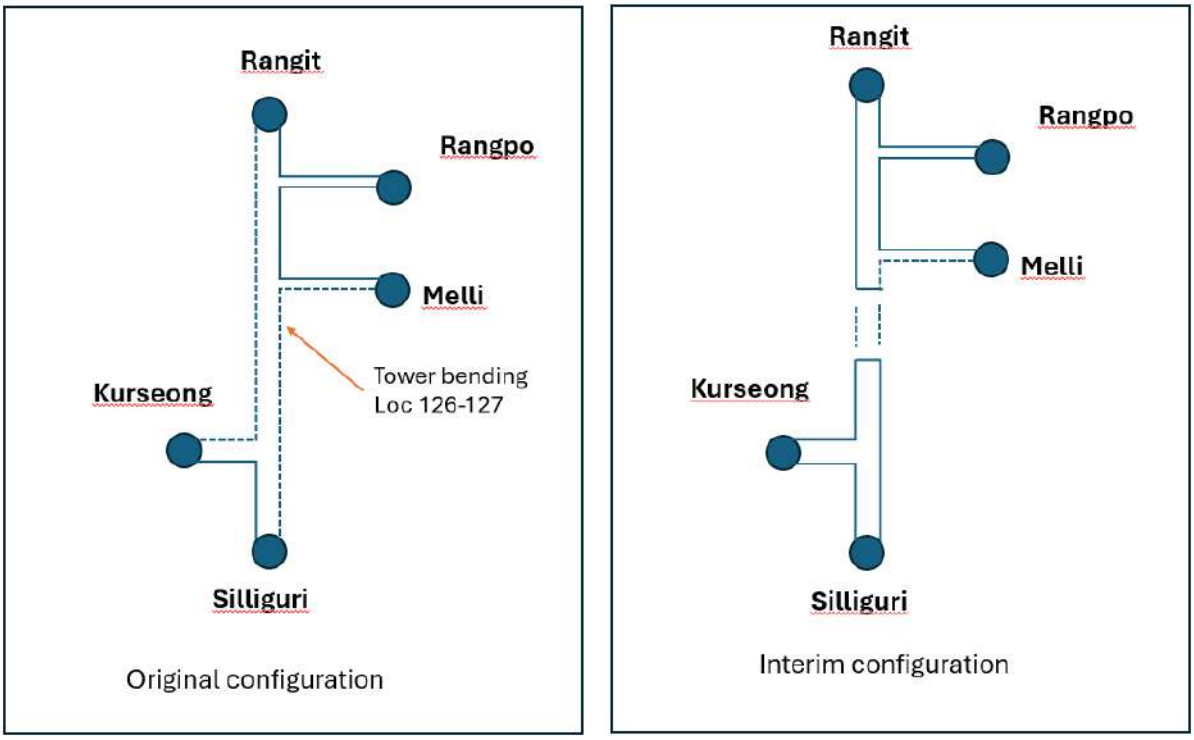
ERLDC/ERPC may highlight the performance of the ER grid.

Deliberation in the meeting

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

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

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



220th OCC deliberation:

- 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 submitted to ERPC/ERLDC every week.

SLDC Sikkim and Powergrid may update. Members may discuss.

Deliberation in the meeting

Powergrid ER-II updated:

- ✓ *Major constraints impeding timely restoration of the line as follows:*
- ❖ *Persistent ROW issues in tea garden adjoining the damaged tower location.*
- ❖ *Excessive tension of the conductor in vicinity of damaged tower no-127 due to power line crossing the span.*
- ❖ *Hill shanking observed around the affected area.*

- ✓ *Conductor and OPGW De-Stringing over the span 127-128 has been completed on 23.11.2024*
- ✓ *Dismantling of Tower No-127 is under progress and to be completed by 07.12.2024.*
- ✓ *Soil testing and piling works are presently being carried out. Based on soil testing results, new foundation works as well as rectification of Tower No-126 shall be taken up.*
- ✓ *Erection works shall commence from 1st week of January 2025.Tower No-127 to be erected by 06.01.2025 while rectification of Tower No-126 to be completed by 16.01.2025.*
- ✓ *Re-stringing in spans::127-128 and 126-127 to be completed by 25.01.2025 and 29.01.2025 respectively.*
- ✓ *Modification of jumpering to make original ckt of 132 KV Siliguri-Melli Ckt and may be tentatively taken into service by 30.01.2025.*
- ✓ *Modification of jumpering to make original ckt of 132 KV Siliguri-Kursioung Ckt and may be tentatively taken into service by 31.01.2025.*

OCC Decision

- *OCC requested Powergrid ER-II to expedite restoration activity of original configuration of 132 KV D/C Siliguri-Melli & Rangit-Kurseong Lines to the best feasible extent.*
- *OCC urged Govt. of Sikkim to extend all possible assistance to Powergrid ER-II in resolving the ROW issues and restoring damaged towers at the earliest.*

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

- **132 kV Chuzachen-Rangpo D/C** tripped more than **10 times** since **May'24** causing total generation loss occurred at Chuzachen HEP (110 MW) due to sequential tripping of both lines in three instances.
- In most of the trippings, **phase to phase** fault was reported with a distance of around **12 km** from **Rangpo**.
- A joint committee with members from Powergrid, Chuzachen HEP and Sikkim transmission wing, Dept. of Power (Sikkim) was constituted for joint site inspection. The committee submitted its report after visiting the site on 01.10.2024.
- Committee observations during the visit were as below:

✓ Critical tree infringement and bamboo trees between loc. 27-29 along the corridor.

✓ Severe infringement along with several flashover marks on the conductor and burnt trees along the corridor.

✓ Less ground clearance b/w loc. 28-29 for Ckt-1 (4.1 meter instead of minimum requirement of 6.1 meter).

- **The Committee recommended two new towers to be constructed between loc. 28-29 and 35-36 (one each) and hill cutting along the periphery of tower no. 27 to improve ground clearance.**
- Considering the severity of less ground clearance and potential of damage to human life, the recommended measures need to be implemented on an immediate basis.

220th OCC deliberation:

➢ 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 submitted to ERPC/ERLDC every week.

No update has been received from Sikkim in this regard.

Sikkim update. Members may discuss.

Deliberation in the meeting

In absence of Sikkim representative, the latest status could not be updated.

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

- HVDC Talcher-Kolar Pole-2 was operated at reduced capacity from March 24, 2024, due to problem with the R-phase converter transformer at the Talcher end. There was no spare converter transformer at Talcher and subsequently, it was decided to shift the spare converter transformer from HVDC Kolar to Talcher(PG)
- Since April'24, either pole of HVDC blocked 5 times out of which, in 4 times the other pole went to ground return mode instead of metallic return mode resulting in overloading of 400kV Talcher-Meeramundali D/C and generation backdown was done either manually or through operation of SPS.
- Meanwhile, power order of Talcher-Kolar poles was reduced to 1500MW from 2000MW due to which other critical lines of the region were getting overloaded. **Accordingly, Talcher generation was curtailed in the range of 800-900MW during peak hours for approximately 50 days in the summer, impacting both Eastern Region (ER) and Southern Region (SR) beneficiaries.** Later on, with decrease in ambient temperature HVDC Talcher-Kolar power order was restored and generation back down was withdrawn.
- **To mitigate the risk of similar power supply challenges experienced during summer 2024, Odisha(PG) may share the replacement plan of existing Converter Transformer.**

As per deliberation in **218th 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 October** & 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.

As per latest update from Powergrid Odisha:

- The Converter transformer has arrived at Talcher(PG) in the first week of October 2024.
- The transformer has not yet been charged owing to pending clearance from Powergrid Corporate.

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

Deliberation in the meeting

Powergrid Odisha apprised:

- ✓ *The Converter transformer has arrived at Talcher(PG) in the first week of October 2024 and presently oil filtration is under process.The same shall be ready for charging by end of November 2024.*
- ✓ *If this converter transformer is put into service, no spare will be available at HVDC Talcher or HVDC Kolar stations to deal with any contingency. So it is proposed to keep this converter transformer as hot spare (ready for service) that may be replaced within 5-6 days as per grid requirement.*

ERLDC submitted:
If the converter transformer is kept as hot spare as propsed bt Powergrid Odisha, it shall lead to backing down of generation at NTPC Talcher for at least one week.Consequently NTPC Talcher as well as ER beneficiaries will be adversely affected.

OCC Decision
OCC recommended Powergrid Odisha to keep the existing converter transformer as spare and put the new one into service at HVDC Talcher station.Powergrid Odisha agreed to propose the same to Powergrid Coprporate for obtaining necessary clearance at the earliest.

3.5. 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 August 2024** with timeline of completion of **4 months.**
West Bengal	Units of WBPDCL	-	West Bengal SERC notified WBERC (Ancillary Services) regulation, 2023 dated 26th December 2023. M/s WBPDCL 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 August 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 WBPDCL 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 WBPDCL 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

- *DVC updated that final procurement order for AGC has been placed.*
- *WBPDCL informed that the modalities of procurement are yet to be finalized with WB SLDC.*

OCC decision

- *OCC advised NTPC and Bihar to convene joint meeting for obtaining formal clearance from Bihar i.r.o AGC implementation.*
- *WBPDCL was advised to coordinate with WB SLDC and update the status in next OCC meeting.*

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

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

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

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

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.

Latest Forecast receipt status is shown below:

DATA RECEIPT STATUS BY 5th DAY FOR THE MONTH OF	Dec-24	REMARKS
Bihar	NO	
DVC	YES	Not as per format
Jharkhand	YES	Not as per format
Odisha	NO	
Sikkim	NO	
West Bengal	NO	

DATA RECEIPT STATUS BY 1ST WORKING DAY FOR THE WEEK	28.10.24 TO 03.11.2024	04.11.2024 TO 10.11.2024	11.11.24 TO 17.11.24	18.11.2024 TO 24.11.2024	25.11.2024 TO 01.12.2024	Remarks
Bihar	NO	NO	NO	YES	YES	Not as per format
DVC	YES	YES		YES	YES	Not as per format
Jharkhand	NO	YES	NO	YES	YES	As per format
Odisha	NO	NO	NO	NO	NO	
Sikkim	YES	YES	YES	YES	YES	As per format
West Bengal	NO	NO	NO	NO	NO	

DATE	Bihar	DVC	Jharkhand	Odisha	Sikkim	West Bengal
01-11-2024		YES	YES	YES	YES	YES
02-11-2024		YES	YES	YES	YES	YES
03-11-2024		YES	YES	YES	YES	YES
04-11-2024	YES	YES	YES	YES	YES	YES
05-11-2024	YES	YES	YES	YES	YES	YES
06-11-2024		YES	YES	YES	YES	YES
07-11-2024	YES	YES	YES	YES	YES	YES
08-11-2024	YES	YES	YES	YES	YES	YES
09-11-2024		YES	YES	YES	YES	YES
10-11-2024		YES	YES	YES	YES	YES
11-11-2024	YES	YES	YES	YES	YES	YES
12-11-2024	YES	YES	YES	YES	YES	YES
13-11-2024	YES	YES	YES	YES	YES	YES
14-11-2024	YES	YES	YES	YES	YES	YES
15-11-2024	YES	YES	YES	YES	YES	YES
16-11-2024	YES	YES	YES	YES	YES	YES
17-11-2024	YES	YES	YES	YES	YES	YES
18-11-2024	YES	YES	YES	YES	YES	YES
19-11-2024	YES	YES	YES	YES	YES	
Remarks			As per format		As per format	

Resource adequacy Data Receipt Status

DATA RECEIPT STATUS Y FOR THE MONTH OF	Dec-24	REMARKS
Bihar	NO	
DVC	NO	
Jharkhand	NO	
Odisha	NO	
Sikkim	NO	
West Bengal	NO	

DATA RECEIPT STATUS FOR THE WEEK OF	28.10.24 TO 03.11.2024	04.11.2024 TO 10.11.2024	11.11.24 TO 17.11.24	18.11.2024 TO 24.11.2024	25.11.2024 TO 01.12.2024
Bihar	NO	NO	NO	NO	NO
DVC	NO	NO	NO	NO	NO
Jharkhand	NO	NO	NO	NO	NO
Odisha	NO	NO	NO	NO	NO
Sikkim	YES	YES	YES	YES	YES
West Bengal	NO	NO	NO	NO	NO

DATE	Bihar	DVC	Jharkhand	Odisha	Sikkim	West Bengal
01-11-2024	NO	NO	NO	NO	YES	NO
02-11-2024	NO	NO	NO	NO	YES	NO
03-11-2024	NO	NO	NO	NO	YES	NO
04-11-2024	NO	NO	NO	NO	YES	NO
05-11-2024	NO	NO	NO	NO	YES	NO
06-11-2024	NO	NO	NO	NO	YES	NO
07-11-2024	NO	NO	NO	NO	YES	NO
08-11-2024	NO	NO	NO	NO	YES	NO
09-11-2024	NO	NO	NO	NO	YES	NO
10-11-2024	NO	NO	NO	NO	YES	NO
11-11-2024	NO	NO	NO	NO	YES	NO
12-11-2024	NO	NO	NO	NO	YES	NO
13-11-2024	NO	NO	NO	NO	YES	NO
14-11-2024	NO	NO	NO	NO	YES	NO
15-11-2024	NO	NO	NO	NO	YES	NO
16-11-2024	NO	NO	YES	NO	YES	NO
17-11-2024	NO	NO	YES	NO	YES	NO
18-11-2024	NO	NO	YES	NO	YES	NO
19-11-2024	NO	NO	YES	NO	YES	NO
Remarks			As per format		As per format	

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

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

Deliberation in the meeting

OCC decision

- *OCC advised all SLDCs for strictly adhering to the schedule of demand estimation as mandated in IEGC 2023, timely sharing with ERLDC in specified format as well as uploading of forecasting error on their respective websites.*

- *SLDCs who are submitting day ahead forecast were advised to also share the forecasting data for their respective control areas on weekly as well as monthly basis with ERLDC.*
- *All SLDCs were also urged to regularly furnish resource adequacy data besides demand forecast.*
- *SLDC Odisha was advised to expedite implementation of the demand forecasting software and positively update the status in next OCC.*

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

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

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 **18.11.2024)**

STATIONS	03.04.2024 05:29	06.04.2024 11:24	19.04.2024 10:28	23.04.2024 20:15	02.05.2024 14:41	10.05.2024 19:35	28.05.202 19:45	04.06.2024 10:26	04.06.2024 10:34	11.06.2024 14:10	17.06.2024 13:53	19.06.2024 12:42	16.07.2024 22:10	23.08.2024 12:34	13.09.2024 13:15	21.10.2024 16:49
FSTPP #STG 1 & 2	Pending	Pending	Pending	Pending	Pending	**Received**	Pending	**Received**	**Received**	**Received**	Pending	Pending	**Received**	**Received**	**Received**	**Received**
FSTPP # STG 3	Pending	Pending	Pending	Pending	Pending	**Received**	Pending	Pending	Pending	**Received**	Pending	Pending	PLANT OUT	**Received**	**Received**	**Received**
KhSTPP #STG 1	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending
KhSTPP #STG 2	Pending	**Received**	**Received**	**Received**	**Received**	**Received**	Pending	**Received**	Pending	Pending	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**
TSTPP #STG 1	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	Pending	**Received**	**Received**	**Received**	**Received**	Pending	**Received**	**Received**	**Received**	**Received**
Barh stage-1	Pending	Pending	Pending	Pending	Pending	Pending	Pending	**Received**	**Received**	**Received**	WRONG TIME STAMPED DATA SENT	**Received**	**Received 29.07**	**Received**	**Received**	**Received**
Barh stage-2	Pending	Pending	Pending	Pending	Pending	Pending	Pending	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**
BRBCL	Pending	Pending	**Received**	**Received**	**Received**	**Received**	Pending	Pending	Pending	Pending	Pending	Pending	Pending	**Received**	**Received**	**Received**
Darlipalli	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**
North Karanpura	Pending	Pending	Pending	Pending	Pending	**Received**	Pending	Pending	Pending	Pending	Pending	Pending	**Received**	**Received**	**Received**	**Received**
NPGC	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	Pending	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**
TEESTA V	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT
GMR	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	Pending	**Received**	**Received**	**Received**	Pending	**Received**	**Received**	Pending	**Received**
MPL	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**
ADHUNIK	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**
JITPL	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	Pending	Pending	Pending	**Received**
INDBHARAT	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending
TASHIDING	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending
TEESTA III	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT
DIKCHU	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT	PLANT OUT
Bihar	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending
Jharkhand	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending
DVC	Pending	Pending	Pending	Pending	Pending	Pending	Pending	**Received**	**Received**	Pending	Pending	Pending	Pending	Pending	Pending	Pending
OPTCL	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**	**Received**
WB	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending	Pending
Updated as on	**10.11.2024**															

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/1slvAOmQIEQVlMn0LnB78eKMa2sz2QYICZ-sPEpeV_jk/edit?usp=sharing

ERLDC may explain. Members may discuss.

Deliberation in the meeting

OCC decision:

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

3.8. Mock Black Start:ERLDC

- As per IEGC Reg. 34.3: A mock trial run of the procedure for different sub-systems including black-start of generating units along with grid forming capability of inverter-based generating station and VSC-based HVDC black-start support at least once a year under intimation to the concerned SLDC and RLDC.
- Also, diesel generator sets and other standalone auxiliary supply source to be used for black start shall be tested on a weekly basis and the test reports are to be shared to the concerned SLDC, RLDC and NLDC on a quarterly basis.
- As per IEGC Reg. 34.4: Simulation studies are to be carried out by each user in coordination with RLDC for preparing, reviewing and updating the restoration procedures considering the following:

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

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

Sl. No.	Name of Hydro Station	Schedule of Mock Black Start	Tentative date as on 12.11.2024	2024 Actual Date of Test
1	U. Kolab	Jun-24	Jan-24	
2	Balimela	Jul-24	Nov-24	
3	Rengali	Jun-24	Nov-24	
4	Burla	Jul-24	Jan-24	
5	U. Indravati	May-24	N/A	Sep-24
6	Maithon	Dec-24	2nd week of Dec-24	
7	TLDP-III	Oct-24	Nov-24 – Dec-24	
8	TLDP-IV	Oct-24	Nov-24 – Dec-24	
9	Subarnarekha	Sep-2024 4th week	1st week of Dec-24	

10	Teesta-V	N/A	N/A	N/A
11	Chuzachen	Oct-24	Yet to be informed	
12	Teesta-III	N/A	N/A	N/A
13	Jorethang	Dec-2024 3rd week	Yet to be informed	
14	Tashiding	2nd week of Dec 2024	Yet to be informed	
15	Dikchu	N/A	Yet to be informed	N/A
16	Rongnichu	Mar-24	Test already conducted	18th March and 20th March 2024
17	Mangdechu		Yet to be informed	

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

Deliberation in the meeting

OCC decision:

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

3.9. 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 November 18, 2024): No input received from Bihar and DVC.
- Bihar & DVC may update the Status.

Deliberation in the meeting

✓ *DVC has already submitted the ADMS feeder details to ERLDC.*

OCC decision:

- *Bihar was advised to share action plan with ERLDC for implementing additional 400 MW load under ADMS. Details must be shared positively within a week.*

3.10. FTC of Station Transformer-3: MPL

- MPL station transformer ST # 3 is scheduled for commissioning in month of Dec 24.

- This is for information to the forum.

Deliberation in the meeting

OCC noted.

4. PART-D: OPERATIONAL PLANNING

4.1. Anticipated power supply position during December-2024

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of December 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 December2 024 is provided at ***Annexure D.1.***

4.2. Major Thermal Generating Units/Transmission Element outages/shutdown in ER Grid (as on as on 19-11-2024)

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	KOLAGHAT	WEST BENGAL	WBPDCL	3	210	Due to ACW line leakage.	17-Nov-2024
4	Sterlite	ODISHA	SEL	1	600	Ash evacuation problem	19-Nov-2024
5	BARH	BIHAR	NTPC	4	660	Due to high vibration in HP turbine bearing no. 01	14-Nov-2024
6	BAKRESHWAR	WEST BENGAL	WBPDCL	3	210	Annual overhauling	15-Nov-2024
7	KHSTPP	BIHAR	NTPC	5	500	Annual overhauling	14-Nov-2024
8	KBUNL	BIHAR	NTPC	2	195	Capital overhauling	15-Nov-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

d)Long outage report of transmission lines (As on 19.11.2024):

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.
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-JHARSUGUDA-ROURKELA-4	01.04.2024	Reconductoring work
132KV-RANGPO-SAMARDONG-1	22-05-2024	Rangpo:Y-n fault with fault distance 0.157 kM 14.562kA Samardong: NA
220KV-RAJARHAT-NEW TOWN(AA-II)-2	10-07-2024	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 2 AT INDRAVATI.	09-09-2024	Tripped due to Over Flux protection operated
400KV/220KV 315 MVA ICT 1 AT NORTH KARANPURA	12-09-2024	Tripped on Differential protection
132KV-MADHEPURA (BH)-SAHARSA(PMTL)-1	23.09.2024	To control loading on 132kV Madhepura-Saharsa line
132KV-MELLI-SILIGURI-1	05-10-2024	S/d for inspection of tower of Loc.127 found twisted due to heavy landslide & heavy continuous rainfall in Soom Tea Garden under Darjeeling section. Line charged as 132 KV Siliguri-Melli II (Interim arrangement) at 19:20 hrs on 09-10-2024. This interim arrangement is obtained by horizontal jumpering at Loc-129 after disconnecting main jumper for both Rangit & Melli side.

132KV-RANGIT-KURSEONG-1	05-10-2024	S/d for inspection of tower of Loc.127 found twisted due to heavy landslide & heavy continuous rainfall in Soom Tea Garden under Darjeeling section. Line charged as 132 KV Siliguri-Melli II (Interim arrangement) at 19:20 hrs on 09-10-2024. This interim arrangement is obtained by horizontal jumpering at Loc-129 after disconnecting main jumper for both Rangit & Melli side..
400KV/220KV 315 MVA ICT 1 AT TSTPP	01-11-2024	Tripped on PRD protection
220KV-CHUKHA-BIRPARA-1	04-11-2024	ROW clearance and maintenance
400KV-JHARSUGUDA-ROURKELA-2	04-11-2024	Reconductoring Works in 400 KV Sundargarh-Rourkela Ckt-2
132KV-RANGPO-GANGTOK-2	04-11-2024	Reconductoring work by HTLS Conductor
220KV-TTPS-TSTPP-1	07-11-2024	Tower erection and stringing for Diversion of 220KV TTPS – Kaniha & 220KV Rengali PH-NALCO DC Line for TTPS Plant expansion work
400KV-ALIPURDUAR (PG)-PUNASANGCHUN-JIGMELING-1	11-11-2024	Tree cutting work.

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

Deliberation in the meeting

Members noted.

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

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

NEW ELEMENTS COMMISSIONED DURING October, 2024							
GENERATING UNITS							
SL. NO.	Location	Owner/ Unit name	Unit No / Source	Capacity added (MW)	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	JSW ENERGY (UTKAL) LTD	JSW ENERGY (UTKAL) LTD	ST-2	6.9kV/420kV	60/30/30 MVA	04-10-2024	

2	PGCIL	RENGALI(PG)	ICT 2 (Replacement)	400/220 KV	500 MVA	11-10-2024	The Previous ICT -II (315 MVA) has completed its 32 years old and hence completed its useful life of 25 years
3	PENTL(Powergrid ER NER Transmission Ltd)	BANKA (PG)	ICT 4	400/220 KV	500 MVA	25-10-2024	First time charged from 400 kV side on 20.10.2024 and charged on 220kV side on 25.10.2024
4	PENTL(Powergrid ER NER Transmission Ltd)	BANKA (PG)	ICT 5	400/220 KV	500 MVA	28-10-2024	

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
1	PGCIL	132 kV Rangit-Melli (interim) arrangement.	61 km	HTLS Panther	22-10-2024	Interim Arrangement of 132 kV Siliguri-Melli and 132 kV Rangit-Kurseong line by jumpering arrangements at Location no. 122/123 for providing second source to Melli.
2	PGCIL	132 KV Siliguri-Kurseong-II (interim) arrangement	93 km	HTLS Panther	09-10-2024	This interim arrangement is obtained by horizontal jumpering at Loc-129 after disconnecting main jumper for both Rangit & Melli side.
3	BSPTCL	220KV-BANKA (PG)-Goradih SS-1	32.667 Km	ACSR Zebra	31-10-2024	This arrangement is made functional using the bay of Havelikharagpur-Goradih Line-2 at Goradih SS.This is part of an interim arrangement for the utilization of 400/220kV ICTs at Banka Substation and is therefore permitted until September 2025.

BUS/LINE REACTORS

SL. NO.	Agency/ Owner	Element Name	SUB-STATION	Voltage Level (kV)	DATE	Remarks
1	PGCIL	125MVAR 400KV B/R-4 AT JAMSHEDPUR(PG)	JAMSHEDPUR(PG)	400	06-10-2024	

BUS

SL. NO.	Agency/ Owner	Element Name	SUB-STATION	Voltage Level (kV)	DATE	Remarks
1	PENTL(Powergrid ER NER Transmission Ltd)	220 KV Main Bus-I & II at Banka(PG)	Banka(PG)	220	25-10-2024	

BAYS

SL. NO.	Agency/ Owner	Element Name	SUB-STATION	Voltage Level (kV)	DATE	Remarks
1	MPL	400KV MAIN BAY OF ST-3 AT MPL (Bay No 419)	MPL SS	400	04-10-2024	First time charging of FGD DIA-6
2	PGCIL	400KV MAIN BAY OF 125MVAR B/R-4 AT JAMSHEDPUR SS	JAMSHEDPUR SS	400	06-10-2024	
3	PENTL(Powergrid ER NER Transmission Ltd	400KV MAIN BAY OF 500 MVA ICT 4 AT BANKA (PG)	BANKA (PG)	400	20-10-2024	
4	PENTL(Powergrid ER NER Transmission Ltd)	400KV TIE BAY OF 500 MVA ICT 4 AND FUTURE AT BANKA (PG)	BANKA (PG)	400	20-10-2024	
5	PENTL(Powergrid ER NER Transmission Ltd)	400KV TIE BAY OF 500 MVA ICT 5 AND FUTURE AT BANKA (PG)	BANKA (PG)	400	28-10-2024	
6	PENTL(Powergrid ER NER Transmission Ltd)	400KV MAIN BAY OF 500 MVA ICT 5 AT BANKA (PG)	BANKA (PG)	400	28-10-2024	
7	PENTL(Powergrid ER NER Transmission Ltd)	220KV MAIN BAY OF GORADIH-2 AT BANKA (PG)	BANKA (PG)	220	26-10-2024	
8	PENTL(Powergrid ER NER Transmission Ltd)	220KV MAIN BAY OF GORADIH-1 AT BANKA (PG)	BANKA (PG)	220	26-10-2024	
9	PENTL(Powergrid ER NER Transmission Ltd)	220KV BUS COUPLER BAY AT BANKA (PG)	BANKA (PG)	220	25-10-2024	
10	PENTL(Powergrid ER NER Transmission Ltd)	220KV MAIN BAY OF 500 MVA ICT 4 AT BANKA (PG)	BANKA (PG)	220	25-10-2024	
11	PENTL(Powergrid ER NER Transmission Ltd)	220kV MAIN BAY OF 500 MVA ICT 5 AT BANKA (PG)	BANKA (PG)	220	29-10-2024	
12	NTPC Kahalgaon	400 KV Tie Bay (4152) of Barh-1 and Banka-1 at 400KV NTPC Kahalgaon Switchyard.	NTPC Kahalgaon Switchyard	400	22-10-2024	400 kV KHSTPP- Banka- I Charged at 13:01 hrs (Through Tie bay at KHSTPP End).NTPC has upgraded the bay (4152) equipment(s) at the Kahalgaon switchyard to match the capacity of the Kahalgaon-Patna 400kV (Quad) D/C line, increasing the rating from 2000A to 3150A.
13	JSW ENERGY (UTKAL) LTD	400KV TIE BAY OF ST-2 and SUNDERGARH AT JSW ENERGY (UTKAL) LTD	JSW ENERGY (UTKAL) LTD	400	03-10-2024	FTC BAY CHARGED; ST 2 taken on load at 17:20 hrs of 04/10/2024.
14	JSW ENERGY (UTKAL) LTD	400KV MAIN BAY OF ST-2 AT JSW ENERGY (UTKAL) LTD	JSW ENERGY (UTKAL) LTD	400	03-10-2024	FTC BAY CHARGED; ST 2 taken on load at 17:20 hrs of 04/10/2024.

Members may note.

Deliberation in the meeting

Members noted.

4.4. UFR operation during the month of October 2024.

Frequency profile for the month as follows:

MONTH	MAX (DATE/TIME)	MIN (DATE/TIME)	% LESS IEGC BAND	% WITHIN IEGC BAND	% MORE IEGC BAND
October, 2024	50.39 Hz on 25-10-2024 at 13:03 hrs	49.58 Hz on 16-10-2024 at 17:58 hrs	4.86	80.28	14.86

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-A

Participants in 221st OCC Meeting

Venue: ERPC Conference Hall, Kolkata | Time: 10:30 Hrs. | Date: 27.11.2024 (Wednesday)

Sl.	Name	Designation	Organisation	Contact No.	E-mail Id	Signature
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2	R Sutradhar	Executive Director	ERLDC	9436302714	rajibsutradhar@grid-india.in	
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4	D.K. Khuntia	AD	ERPC	7683889161	dilip.khuntia.cea@gov.in	
5	P.K. DE	SE	ERPC	9831620142	SECOMML.ERPC@GOV.IN	
6	KUMARI SWATI	AD	ERPC	7903336191	Swati.cea@gov.in	
7	S.K. BAG	ACE	WBSLDC	7980098826	Sajalkbag74@gmail.com	
8	SHOUVIK BANERJEE	ACE, SLDC	WBSETCL	9434910379	svkbanerjee@yahoo.com	
9	ALOK KR GHOSH	GM(OS)	WBPDCL	8336904026		
10	MANOJ PODDER	AGM(OS)	WBPDCL	8336904077	mpodder@wbpdcl.co.in	
11	TANMAY PATHAK	ESE(P-I)	BSPTCL	7763818078	tanmay0909@gmail.com	
12	ARVIND KUMAR	ESE/SLDC	BSPTCL	7763817777	PLSES.ARVIND@GMAIL.COM	
13	Jayant Kumar Dubey	ESE(EA)	NBPDCL, Bihar	7320920591	cecom2.nbpdcl@gmail.com	
14	DEBARSHI DE	SM	CESC	9230521123	debarshi.de@rpg.in	
15	SATYA PRASAD NAYAK	HEAD: Elect. POWER PROJECT	VEDANTA LIMITED, JHARSUGUDA	9827512809	Satya.nayak@vedanta.co.in	

Participants in 221st OCC Meeting

Venue: ERPC Conference Hall, Kolkata | Time: 10:30 Hrs. | Date: 27.11.2024 (Wednesday)

Sl.	Name	Designation	Organisation	Contact No.	E-mail Id	Signature
16	DEBDAS MUKHERJEE	Sr. Mgr. (OS)	WBPDCL	9830052830	d.mukherjee@wbpdcl.co.in	
17	Palash Sen	Mgr(E)/Opn	DPL	8013843947	Palash_239@rediffmail.com	
18	Shabari Pramanick	CM (ERLDC)	ERLDC	9007058764	shabari.pramanick@gridindia.in	
19	Pinki Debnath	CM (ERLD	ERLDC	9007079914	pinkidebnath@grid-india.in	
20	Saurav Ko Sahay	DGM (MO)	ERLDC	9432013173	Saurav.Sahay@grid-india.in	
21	MANAS DAS	DGM (SO)	ERLDC, GRID-INDIA	9007070725	manasdas@grid-india.in	
22	Birendra Kumar	EEE	TTPS Lalpani (TVNL)	6299998789	bk20trnd@gmail.com	
23	Rakesh Kumar Pradhan	Ch. Mgr.	ERLDC, GRID-INDIA	9831337570	rkpradhan@grid-india.in	
24	Jyoti Krishna Panda	AEE (Comml.)	ERPC	9151621295	jkpanda15081@gmail.com	
25	SHUBHAYU DAS	ASSISTANT DIR.	ERPC	8917360785	shubhayudas5@gmail.com	Shubhayu Das.
26	Abhinaba Basu	EE	ERPC.	7070939184	abhinbasumo@gmail.com.	
27	Ankit Jain	CM	ERLDC	7005631857	ankitjain@grid-india.in	
28	Santosh Kumar panda.	manager.	SLDC.	6370134794	santosh.panda@dvc.gov.in.	
29	T P Sharma	CE	THP, DGPC	17603472	t.sharma777@tatapower.st	
30	Raju Kachhap	Sr. Manager	SLDC, Ranchi	7783087568	rajukachhap82@gmail.com	

Participants in 221st OCC Meeting

Venue: ERPC Conference Hall, Kolkata | Time: 10:30 Hrs. | Date: 27.11.2024 (Wednesday)

Sl.	Name	Designation	Organisation	Contact No.	E-mail Id	Signature
31	SUDEEP EKKA	Sr. Mgr (Engg.)	JUSNL	9717694926	sudeepekka448_bit@yahoo.co.in	27/11/24
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33	Kinley Tenzin.	Manager	CHP, DGPC	+975 77616346	k.tenzin301@drukgreen.bt	
34	PARTHA GHOSH.	DGM	ER-II	9434748263	partha.ghosh@powergrid.in	
35	Himanshu Kr. Anshu	Manager	POWERGRID, ER-I	9973757824	himanshukumar@powergrid.in	
36	M. Prasad	Head, PMV	DGPCL, DGPC	+975-17610621	m.prasad1900@drukgreen.bt	
37	Uttam Kumar	SRAM, SLDC	DVC	9163857386	uttamkumar@dvc.gov.in	
38	Brajesh Shukla	Regional Head (O&M)-ER	POWERLINKS	9800013837	brajesh.shukla@tatapower.com	
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40	Prasanna Kumar Sahoo	AGM	NTPC Ltd.	8118052430	Prasannasahoo@ntpc.co.in	
41	Sumeet Narang	Sr Mgr	NTPC	8005493953	Sumeetnarang@ntpc.co.in	
42	Akash Modi	Manager	ERLDC, GRID-INDIA	8584072082	akmodi@grid-india.in	
43	Gulshan Kr Singh	Dy. Manager	APNRL	9771433519	arya746@gmail.com.	
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45						

Annex-B.2.2

सत्यमेव जयते

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केंद्रीय विद्युत प्राधिकरण
Central Electricity Authority
विद्युत प्रणाली योजना एवं मूल्यांकन प्रभाग- II
Power System Planning & Appraisal Division-II

सेवा में /To

As per list of Addresses

विषय: ट्रांसमिशन पर राष्ट्रीय समिति (एनसीटी) की चौबीसवीं बैठक के कार्यवृत्त – के सम्बन्ध में ।

Subject: Minutes of the 24th Meeting of National Committee on Transmission (NCT) – regarding.

महोदया (Madam) / महोदय (Sir),

The 24th meeting of the National Committee on Transmission (NCT) was held on 23rd October, 2024, at CEA, New Delhi. Minutes of the meeting are enclosed herewith.

भवदीय/Yours faithfully,

22.11.2024

(बी.एस.बैरवा/ B.S. Bairwa)
मुख्य अभियन्ता (इंचार्ज) एवं सदस्य सचिव,एन.सी.टी./
Chief Engineer (I/C) & Member Secretary (NCT)

प्रतिलिपि / Copy to:

Joint Secretary (Trans), Ministry of Power, New Delhi-110001

List of Addresses:

1.	Chairperson, Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.	2.	Member (Power Systems), Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.
3.	Member (Economic & Commercial), Central Electricity Authority Sewa Bhawan, R.K. Puram, New Delhi – 110 066.	4.	Director (Trans), Ministry of Power Shram Shakti Bhawan, New Delhi-110001.
5.	Sh. Lalit Bohra, Joint Secretary Room no 602, Atal Akshay Urja Bhawan Opposite CGO Complex, Gate No. 2, Lodhi Road, New Delhi – 110003	6.	Chief Operating Officer, CTUIL, Floors No. 5-10, Tower 1, Plot No. 16, IRCON International Tower, Institutional Area, Sector 32, Gurugram, Haryana - 122001.
7.	Sh. Rajnath Ram, Adviser (Energy), NITI Aayog, Parliament Street, New Delhi – 110 001.	8.	CMD, Grid Controller of India, B-9 (1st Floor), Qutub Institutional Area, Katwaria Sarai, New Delhi – 110016
9.	Sh. Ravinder Gupta Ex. Chief Engineer CEA		

Table of Agenda

Minutes of the 24th meeting of National Committee on Transmission (NCT)

The 24th meeting of NCT was held on 23rd October, 2024 at CEA, New Delhi. List of participants is enclosed at **Annexure-I**. Agenda wise deliberations are given below:

1 Confirmation of the minutes of the 22nd and 23rd meeting of National Committee on Transmission.

1.1 The minutes of the 22nd meeting of NCT held on 23.08.2024 were issued on 01.09.2024 vide CEA letter No. CEA-PS-12-13/3/2019-PSPA-II. No comments have been received on the minutes.

1.2 The minutes of the 23rd meeting of NCT held on 02.09.2024 were issued on 09.09.2024 vide CEA letter No. CEA-PS-12-13/3/2019-PSPA-II. No comments have been received on the minutes.

1.3 Members confirmed the minutes of 22nd and 23rd meetings of NCT.

2 Status of the transmission schemes noted/approved/recommended to MoP in the 22nd and 23rd meetings of NCT:

2.1 Status of new transmission schemes approved/recommended:

Sr. No	Name of the Transmission Scheme	Noted/ Recommended/ Approved	Mode of Implementation	BPC	Award/ Gazette notification
22nd NCT Meeting					
1.	Transmission system for supply of power to Green Hydrogen/Ammonia manufacturing potential in Mundra area of Gujarat under Phase-I: Part B1 scheme (3 GW at Navinal S/s)"	Recommended	TBCB	PFCCL	Gazette Notified by MoP dated 12.09.2024
2.	Eastern Region Expansion Scheme-43 (ERES-43)	Approved	RTM	Not applicable	Informed to CTUIL vide letter dated 02.09.2024 CTUIL awarded the projects to the implementing agency on 02.09.2024
3.	Additional Transmission System Proposed for redundant power supply to Dholera area	Approved	RTM	Not applicable	
4.	Transmission System for Integration of Anantapur-II REZ - Phase-I (for 4.5 GW)	Recommended	TBCB	PFCCL	Gazette Notified by MoP dated 12.09.2024
5.	Transmission system for proposed Green Hydrogen / Green	Recommended	TBCB	RECPDCL	Gazette Notified by MoP dated 12.09.2024

Sr. No	Name of the Transmission Scheme	Noted/ Recommended/ Approved	Mode of Implementation	BPC	Award/ Gazette notification
	Ammonia projects in Tuticorin area)				
6.	Augmentation of transformation capacity by 3x500 MVA, 400/220 kV ICTs (6th - 8th) and 1x1500 MVA,765/400 kV ICT (4th) at Bidar PS	Approved	TBCB	RECPDCL	Gazette Notified by CEA on 25.09.2024
7.	Scheme for Requirement of Additional FOTE for redundancy at AGC locations in NER: Revised	Approved	RTM	Not applicable	Informed to CTUIL vide letter dated 02.09.2024 CTUIL awarded the projects to the implementing agency on 02.09.2024
8.	Optical Fibre Connectivity for NLDC new building, August Kranti Marg, New Delhi	Approved	RTM	Not applicable	
23rd NCT Meeting					
1.	Transmission System for Integration of Kurnool-IV REZ - Phase-I (for 4.5 GW)	Recommended	TBCB	RECDPCL	Gazette Notified by MoP dated 19.09.2024

2.2 Status of transmission schemes where modifications was suggested by NCT:

S. No.	Scheme where modifications was suggested	Status
1.	Modification in Transmission system for evacuation of power from Luhri Stage-I HEP	Informed to RECPDCL vide letter dated 02.09.2024
2.	Transmission system for evacuation of power from Shongtong Karcham HEP (450 MW) and Tidong HEP (150 MW)	Informed to RECPDCL vide letter dated 02.09.2024
3.	Modification in timeframe of one of the elements in the scope of "Transmission system for offshore windzone phase-1(500 MW VGF off coast of Gujrat for subzone B-3)	Informed to CTUIL vide letter dated 02.09.2024 CTUIL awarded the projects to the implementing agency on 02.09.2024
4.	Time extension for Communication Scheme "Requirement of additional FOTE of STM-16 capacity at Bhuj-II substation to cater connectivity of RE Gencos"	

3 Modifications in the earlier approved/notified transmission schemes:

3.1 Revision in SCOD of 400 kV D/C Jhatikara-Dwarka line under REZ Phase-III Part-D Phase-II scheme

3.1.1 Representative from CTUIL stated that the implementation of the 400 kV D/C Jhatikara-Dwarka line, along with two 400 kV bays each at Jhatikara and Dwarka

under "Transmission system for evacuation of 20 GW REZ power from Rajasthan under phase-III, Part-D, Phase-II" was allocated to POWERGRID under RTM mode with completion schedule of 18 months vide MoP OM Ref. No. 15/3/2018-Trans-Part(5) dated 06.11.2023. POWERGRID vide letter dated 29.12.2023 requested an extension of the implementation timeline to at least 24 months due to technical and execution challenges and proposed changing the conductor configuration from quad to Twin HTLS on Monopole structure.

3.1.2 NCT in its 17th meeting held on 31.01.24 directed CTUIL to re-survey of the scheme through implementing agency so as to arrive at the optimum requirement of monopole/narrow base tower towers, and work out the revised estimated cost. Further, NCT in its 19th meeting held on 29.04.2024 approved the scope modifications in the Jhatikara – Dwarka 400 kV D/c line under Rajasthan REZ Ph-III, Part-D- Ph-II Scheme. Tentative implementation time-frame of 18 months from MOP OM-06/11/23 was unchanged. CTUIL vide letter Ref. No. CTUIL/OM/14/19 NCT dated 29.05.2024 informed that the scope of project was revised and conductor configuration was changed to Twin HTLS, However, the implementation timeline remains unchanged. POWERGRID on 06.06.2024, once again requested an extension of project timelines to at least 24 months from the fresh allocation date of 29.05.2024, instead of 18 months from original allocation date.

3.1.3 Subsequently, in a meeting chaired by Secretary (Power) on 01.07.2024, POWERGRID was advised to proceed with inviting tender based on 18 months' timelines for the implementation of Rajasthan Phase-II, Part-D, Phase-II scheme. In compliance with the directives, POWERGRID floated the tender and the award is expected by November, 2024 with a project completion timeline of February 2026.

3.1.4 Director (SO), Grid-India stated that 765/400 kV Jhatikara ICTs and 400 kV lines from Jhatikara were N-1 non-compliant during summer of 2024. In case of further delay in 400 kV D/C Jhatikara - Dwarka line, severe constraints are expected in the existing 400 kV Jhatikara – Dwarka and 400 kV Jhatikara – Bamnouli lines with further RE capacity addition in Rajasthan etc. The loading of these lines emerged as N-1 non-compliant during high demand season of NR and the same may lead to RE curtailment in future. Requirement of any augmentation in the Delhi intra-state system also needs to be examined. Chairperson, CEA directed that the above issues shall be studied in a holistic manner in the transmission Resource Adequacy Plan of Delhi.

3.1.5 After deliberations, NCT approved the revised SCOD for 400 kV D/C (Twin HTLS) Jhatikara-Dwarka line under "Transmission system for evacuation of 20 GW REZ power from Rajasthan under phase-III, Part-D, Phase-II" scheme as 28th February, 2026 (31st December 2025 on best effort basis).

3.2 Change in scope of Transmission system for evacuation of power from Rajasthan REZ Ph-V (Part-1: 4 GW) [Sirohi/Nagaur] Complex

3.2.1 The transmission system for evacuation of power from Rajasthan REZ Ph-V (Part-1:4 GW) (Sirohi/Nagaur complex) was recommended in the 21st NCT meeting held on 06.08.2024. Subsequently, the scheme was notified by MoP vide Gazette dated

29.08.2024. The scheme involves 5x500 MVA, 400/220 kV ICTs along with 6 Nos. 220 kV line bays at Sirohi S/s for RE interconnection at Sirohi S/s. The scheme is currently under bidding by RECPDCL.

3.2.2 Representative from CTUIL stated that connectivity up to 2100 MW was agreed to be granted at Sirohi S/s. Out of this, 1400 MW was agreed to be granted at 220 kV level through 5 Nos. of 220 kV line bays and balance 700 MW was agreed to be granted at 400 kV level (1 No. bay). It is to mention that out of above 700 MW, earlier 400 MW was agreed to be granted at 220 kV level of Sirohi S/s, however due to additional application of 300 MW, considering cumulative quantum (700 MW), it was proposed to be granted at 400 kV level. Further, it is proposed to add the following transmission element as part of Transmission system for evacuation of power from Rajasthan REZ Ph-V (Part- 1) (Sirohi Complex)

- 1 No. of 400 kV line bay at Sirohi S/s for RE interconnection

3.2.3 As total connectivity granted at Sirohi S/s on 220 kV level is 1400 MW through 5 Nos. of 220 kV line bays (out of 6 Nos.), 1 No. of 220 kV line bay which is part of the above scheme shall remain unutilised. Additionally, for RE evacuation requirement of 1400 MW at 220 kV level, through 4 Nos. of 400/220 kV ICTs (out of 5 Nos.), 1 No. of 400/220 kV ICT which is part of the above scheme shall remain unutilised. In view of the above, it is proposed to delete the following elements from Transmission system for evacuation of power from Rajasthan REZ Ph-V (Part- 1) (Sirohi Complex)

- 1 No. of 220 kV line bay at Sirohi S/s
- 1x500 MVA, 400/220 kV ICT at Sirohi S/s along with transformer bays

3.2.4 The original cost of scheme is Rs 5027.61 Cr. With above modifications of scope, cost shall reduce only by Rs 40.75 Cr which is about (-) 0.81 % of original cost of package.

3.2.5 Representative of RECPDCL stated that NIT for the scheme was issued on 26.09.2024. The bid submission deadline is 29.11.2024 while SPV transfer is targeted in December 2024.

3.2.6 After Deliberations, NCT approved the revised scope of Transmission system for evacuation of power from Rajasthan REZ Ph-V (Part-1: 4 GW) [Sirohi/Nagaur] Complex as follows:

Sl. No.	**Original scope of the transmission scheme**	**Revised scope of the transmission scheme**
1. Transmission system for immediate Evacuation of Power from Sirohi S/s (2 GW)		
1	5x500 MVA, 400/220 kV ICTs at Sirohi S/s along with transformer bays • 400/220 kV 500 MVA ICTs- 5 Nos. • 400 kV ICT bays-5 Nos. • 220 kV ICT bays- 5 Nos.	**4x500 MVA, 400/220 kV ICTs at Sirohi S/s along with transformer bays** • **400/220 kV 500 MVA ICTs- 4 Nos.** • **400 kV ICT bays-4 Nos.** • **220 kV ICT bays- 4 Nos.**
2	6 Nos. 220 kV line bays at Sirohi S/s	**5 Nos. 220 kV line bays at Sirohi S/s**

Sl. No.	Original scope of the transmission scheme	Revised scope of the transmission scheme
	for RE interconnection • 220 kV line bays – 6 Nos.	**for RE interconnection** • **220 kV line bays – 5 Nos.**
3	220 kV Sectionalizer bay (1 set) along with 220 kV BC (2 Nos.) bay and 220 kV TBC (2 Nos.) bay at Sirohi S/s	• 220 kV Sectionalizer bay (1 set) • 220 kV BC (2 Nos.) bay and 220 kV TBC (2 Nos.) bay
4	-	**1 No. 400 kV line bays at Sirohi S/s for RE interconnection** • **400 kV line bay – 1 No.**
	Note: There will be no change in other elements of the transmission scheme w.r.t agreed in the 21st NCT meeting/ MoP Gazette dated 29.08.2024.	

3.3 **Bid process for selection of Bidder as Transmission Service Provider (TSP) to establish "Augmentation of transformation capacity at Bhuj-II PS (GIS)" and "Transmission system strengthening to facilitate evacuation of power from Bhadla/Bikaner complex"**

3.3.1 The transmission scheme "Augmentation of transformation capacity at Bhuj-II PS (GIS)" was agreed in the 16th meeting of National Committee on Transmission held on 30.11.2023 under TBCB route with estimated cost of Rs. 428 crores and implementation timeframe of 21 months. Gazette was notified on 23.01.2024 with PFCCL as BPC. The RFP for the transmission scheme was issued on March 29, 2024. RFP bid submission originally scheduled on May 31, 2024 had been extended to August 20, 2024 on request from the bidders. Out of the two bidders who purchased the RFP documents for the subject transmission scheme, only one bidder i.e. Power Grid Corporation of India Limited submitted the bid on August 20, 2024. The bid was again extended and on August 27, 2024 also only one bidder i.e. Power Grid Corporation of India Limited submitted the bid. As there was only one bid, PFCCL vide letter dated 04.09.2024 sought the guidance from MoP on the matter. MoP vide letter dated 09.10.2024 referred the matter to National Committee on Transmission (NCT) for deliberation in the next NCT meeting and submit the recommendations to the Ministry.

3.3.2 Another transmission scheme "Transmission system strengthening to facilitate evacuation of power from Bhadla/Bikaner complex)" was approved in the 19th meeting of National Committee on Transmission held on 29.04.2024 under TBCB route with estimated cost of Rs. 198.75 crores and implementation timeframe of 18 months. Gazette was notified on 18.06.2024 with PFCCL as BPC. The RfP for the subject transmission scheme was issued on August 01, 2024. RFP bid submission was originally scheduled on October 04, 2024. RfP documents for the subject transmission scheme have been purchased by only one bidder, i.e. Power Grid Corporation of India Limited. Accordingly, bid submission for the project has already been extended three

(03) times and latest date of bid submission is 25th October, 2024. Subsequently, no bid has been received on the due date.

3.3.3 CTU stated that above strengthening schemes are getting delayed due to above bid issues.

3.3.4 As per clause 9.6 of "Tariff based Competitive-bidding Guidelines for Transmission Service" issued by Ministry of Power (MoP) on August 10, 2021, there have to be minimum two qualified bidders for conducting the bid process.

3.3.5 It was mentioned that in case of single bid is received, clarity is not available in TBCB Guidelines. Members opined that to save time of rebidding, certain provisions need to be worked out. It was discussed that whether the project can be awarded in case of single bid if the cost discovered is of the level of estimated tariff.

3.3.6 After deliberations, following was agreed:

A. For the project costing less than Rs. 500 crore

a) In case, no bid or single bid is received, the BPC may extend the bid process for 7 more days. After the extended period, the BPC may open the bid. If single bid is received, steps given in subsequent paragraphs need to be followed.

b) Based on estimated cost by the Cost Committee constituted by CEA and the norms provided in CERC tariff regulations, the levelised tariff for the project shall be calculated by the BPC.

c) If the quoted transmission charges by the bidder are lower than levelised tariff estimated by the BPC, the bidder may be declared as successful bidder and Letter of Intent (LoI) may be issued.

d) In case, the quoted transmission charges by the bidder are higher than the estimated levelised tariff by the BPC, the bidding process may be annulled and matter may be referred by the BPC to the Government. The Government may give exemption to the transmission project from competitive bidding and allocate the same under Regulated Tariff Mechanism (Section-62 of the Electricity Act, 2003).

e) If no bids are received, even after extension, the bidding process may be annulled by BPC and the matter may be referred by the BPC to the Government. The Government may give exemption to the transmission project from competitive bidding and allocate the same under Regulated Tariff Mechanism (Section-62 of the Electricity Act, 2003).

B. For the project with estimated cost of more than Rs. 500 crore, if only one bid is received, BPC may not open the bid and refer the matter to the Government. In case no bids are received, the bid process would be annulled and the matter shall be referred to the Government.

C. For making the enabling provisions, “Tariff based Competitive-bidding Guidelines for Transmission Service-2021” needs to be modified.

3.4 Change in the implementation timeframe of Transmission System for evacuation of RE power from Raghanesda area of Gujarat – 3 GW under Phase-I

3.4.1 Representative from CTUIL stated that Transmission System for evacuation of RE power from Raghanesda area of Gujarat – 3 GW under Phase-I was recommended in the 20th NCT meeting held on 25.06.2024 under TBCB route with PFCCL as BPC and implementation time frame of 30 months from SPV transfer. Applications for cumulative 3050 MW linked with Ph-I 3 GW scheme have been received at Raghanesda S/s, out of 3050 MW applications, start date of connectivity required for 4 nos. of applications (connectivity quantum of 1150 MW) is from Dec'26 (JSW Neo Energy Limited: 400 MW & ACME: 400 MW) to Mar'27 (Sunsure Solarpark RJ One Pvt. Ltd.: 350 MW).

3.4.2 CTUIL proposed to change the implementation timeframe of the subject scheme from 30 months from SPV transfer to 24 months from SPV transfer so that the substation can come up earlier matching with requirement of above RE developers.

3.4.3 Representative of PFCCL informed that the RfP was issued on 14.09.2024 while the bid submission date is 19.11.2024.

3.4.4 After deliberations, it was decided that the implementation timeline of Transmission System for evacuation of RE power from Raghanesda area of Gujarat – 3 GW under Phase-I may be kept as 30 months and need not be changed.

4 New Transmission Schemes:

4.1 Eastern Region Expansion Scheme-44 (ERES-44)

4.1.1 Representative of CTUIL stated that several 220 kV transmission lines and substations were implemented in Indian grid along with cross border lines for importing power from Chukha Hydro Electric Plant in Bhutan. The generating station was commissioned in years 1986-88 and the transmission system is now more than 35 years old. Considering the age of conductors and increase in conductor snapping incidences, reconductoring of these transmission lines has become necessary. The matter was also deliberated in ERPC forum.

4.1.2 As the system involved cross border links also, a meeting was convened by CEA under the chairpersonship of Member (Power System) on 27-08-2024, wherein it was decided that matter of reconductoring of cross border lines will be separately taken up with Bhutan. However, reconductoring of ISTS portion of 220 kV corridor viz. Alipurduar (POWERGRID) – Falakata (WBSETCL) – Birpara (POWERGRID) – Binaguri (POWERGRID) – Siliguri (POWERGRID) – Kishanganj (POWERGRID) – Dalkhola (POWERGRID) – Gazole (WBSETCL) – Malda (POWERGRID), may be taken up under ISTS. Further, reconductoring of intra-state LILO portion of Birpara (POWERGRID) – Alipurduar (POWERGRID) 220 kV D/c line at Falakata (WBSETCL) and Dalkhola – Malda 220 kV D/c line at Gazol (WBSETCL) shall be carried out by WBSETCL matching with HTLS conductor of the main ISTS line in the matching timframe.

4.1.3 Director (SO), Grid-India stated that it is necessary that the intra-state portion of lines (under the jurisdiction of WBSETCL) is also re-conductored in the matching time-frame of that of the ISTS portion. Without the reconductoring of the intra-state portion, the benefits of reconductoring of the ISTS part cannot be realized. He further suggested that as intra-state portion is quite less compared to the inter-state portion, the intra-state part may also be re-conductored under ISTS at the cost of WBSETCL in matching timeframe.

4.1.4 It was suggested that reconductoring of Intra state portion of WBSETCL by an ISTS licensee may lead to commercial complications, therefore, reconductoring of intra state LILO portion may be carried out by the owner of the asset i.e. WBSETCL in matching timeframe.

4.1.5 After deliberations, NCT approved Transmission scheme "Eastern Region Expansion Scheme-44 (ERES-44))" as mentioned below:

4.1.5.1 Summary of the scheme is given below:

Sl. No.	**Name of the scheme and tentative implementation timeframe**	**Estimated Cost (₹ Cr)**	**Remarks**
1.	Eastern Region Expansion Scheme-44 (ERES-44) Tentative implementation timeframe: 18 months (15 months on best effort basis) from the date of allocation of project	385.77	Approved under RTM through POWERGRID

4.1.5.2 Detailed scope of the scheme is given below:

Sl. No.	**Scope of the Transmission Scheme**	**Capacity (MVA) / Circuit km (ckm) / Nos.**
(i)	Reconductoring of ISTS portion of Alipurduar (POWERGRID) – Falakata (WBSETCL) 220 kV D/c line with HTLS conductor of ampacity 1250 A	54 ckm
(ii)	Reconductoring of ISTS portion of Falakata (WBSETCL) – Birpara (POWERGRID) 220 kV D/c line with HTLS conductor of ampacity 1250 A	54 ckm
(iii)	Reconductoring of Birpara (POWERGRID) – Binaguri (POWERGRID) 220 kV D/c line with HTLS conductor of ampacity 1250 A	160 ckm
(iv)	Reconductoring of Binaguri (POWERGRID) – Siliguri (POWERGRID) 220 kV D/c line with HTLS conductor of ampacity 1250 A	12 ckm
(v)	Reconductoring of Siliguri (POWERGRID) – Kishanganj (POWERGRID) 220 kV D/c line with HTLS conductor of ampacity 1250 A	216 ckm
(vi)	Reconductoring of Kishanganj (POWERGRID) – Dalkhola (POWERGRID) 220 kV D/c line with HTLS conductor of ampacity 1250 A	62 ckm
(vii)	Reconductoring of ISTS portion of Dalkhola (POWERGRID) – Gazole (WBSETCL) 220 kV D/c line with HTLS conductor of ampacity 1250 A	195 ckm
(viii)	Reconductoring of ISTS portion of Gazole (WBSETCL) –	33 ckm

Sl. No.	Scope of the Transmission Scheme	Capacity (MVA) / Circuit km (ckm) / Nos.
	Malda (POWERGRID) 220 kV D/c line with HTLS conductor of ampacity 1250 A	
(ix)	Upgradation of associated 220 kV bay equipment at Alipurduar (POWERGRID)	Replacement of Wave Traps of Alipurduar (POWERGRID) – Falakata (WBSETCL) 220 kV D/c line commensurate with rating of HTLS.
(x)	Upgradation of associated 220 kV bay equipment at Birpara (POWERGRID)	Replacement of Wave Traps of Falakata (WBSETCL) – Birpara (POWERGRID) and Birpara (POWERGRID) – Binaguri (POWERGRID) 220 kV D/c lines commensurate with rating of HTLS.
(xi)	Upgradation of associated 220 kV bay equipment at Binaguri (POWERGRID)	Replacement of Wave Traps of Birpara (POWERGRID) – Binaguri (POWERGRID) and Binaguri (POWERGRID) – Siliguri (POWERGRID) 220 kV D/c lines commensurate with rating of HTLS.
(xii)	Upgradation of associated 220 kV bay equipment at Siliguri (POWERGRID)	Replacement of Wave Traps of Binaguri (POWERGRID) – Siliguri (POWERGRID) and Siliguri (POWERGRID) – Kishanganj (POWERGRID) 220 kV D/c lines commensurate with rating of HTLS.
(xiii)	Upgradation of associated 220 kV bay equipment at Dalkhola (POWERGRID)	Replacement of Wave Traps of Kishanganj (POWERGRID) – Dalkhola (POWERGRID) and Dalkhola (POWERGRID) – Gazole (WBSETCL) 220 kV D/c lines commensurate with rating of HTLS.
(xiv)	Upgradation of associated 220 kV bay equipment at Malda (POWERGRID)	Replacement of Wave Traps of Gazole (WBSETCL) – Malda

Sl. No.	Scope of the Transmission Scheme	Capacity (MVA) / Circuit km (ckm) / Nos.
		(POWERGRID) 220 kV D/c line commensurate with rating of HTLS.
(xv)	Supply and installation of OPGW along with terminal equipment at both ends of Siliguri (POWERGRID) – Kishanganj (POWERGRID) 220 kV D/c (HTLS) line	108 km

Note:

(a) WBSETCL shall reconductor their following lines sections under intra-state scheme matching with completion of ISTS scheme namely ERES-44:

- *About 4 km intra-state portion of Alipurduar (POWERGRID) – Falakata (WBSETCL) 220 kV D/c line at Falakata end with HTLS conductor of ampacity 1250 A along with necessary upgradation of associated 220 kV bay equipment at Falakata (WBSETCL) end commensurate with rating of HTLS (1250 A).*
- *About 4 km intra-state portion of Birpara (POWERGRID) – Falakata (WBSETCL) 220 kV D/c line at Falakata end with HTLS conductor of ampacity 1250 A along with necessary upgradation of associated 220 kV bay equipment at Falakata (WBSETCL) end commensurate with rating of HTLS (1250 A).*
- *About 2 km intra-state portion of Dalkhola (POWERGRID) – Gazole (WBSETCL) 220 kV D/c line at Gazole end with HTLS conductor of ampacity 1250 A along with necessary upgradation of associated 220 kV bay equipment at Gazole (WBSETCL) end commensurate with rating of HTLS (1250 A).*
- *About 2km intra-state portion of Gazole (WBSETCL) – Malda (POWERGRID) 220 kV D/c line at Gazole end with HTLS conductor of ampacity 1250 A along with necessary upgradation of associated 220 kV bay equipment at Gazole (WBSETCL) end commensurate with rating of HTLS (1250 A).*

(b) WBSETCL will LILO the Dhalkola – Gazole 220 kV D/c line with 1250 A HTLS under their intra-state scheme for establishment of 220 kV level at their existing 132/33kV Raiganj (WBSETCL) S/s.

(c) ISTS licensee and WBSETCL shall coordinate for reconductoring of their respective portion of the lines matching with completion schedule of this scheme.

4.2 Transmission system for Evacuation of Power from RE Projects in Rajgarh (1500 MW) SEZ in Madhya Pradesh-Phase III

4.2.1 Representative of CTUIL stated that 2.5 GW REZ potential has been identified at Rajgarh (MP).

i. Phase-I of 1.5 GW involves establishment of Pachora PS with 3x500 MVA 400/220 kV ICTs and Pachora PS – Bhopal 400 kV D/c line which has been implementation by M/s G R Infraprojects Ltd. (Commissioned).

ii. Phase-II (1 GW) involves ICT augmentation (4th, 5th & 6th) Pachora PS along with Pachora PS – Ujjan (MPPTCL) 400 kV D/c line which is presently under implementation by M/s G R Infraprojects Ltd. with SCOD of 14.02.2026.

4.2.2 He further stated that in view of applications received for cumulative capacity of ~4000 MW at Pachora PS till July-2024, it was found prudent to expand the substations to its full capacity so as to accommodate applications being received

beyond 2.5 GW at Pachora PS. Out of 1508 MW applications received for Rajgarh Ph-III system, RE projects for 1321 MW have been agreed for grant with start date of March 2027. For additional 187 MW applications received in July 2024 are under process and shall also be granted with start date of March 2027.

4.2.3 To evacuate the power from these areas, CTUIL proposed a transmission scheme broadly consisting of augmentation at Pachora PS and Pachora PS – Rajgarh(PG) 400 kV D/c line. CTUIL also mentioned that with the augmentation at Pachora PS, the substation will be closed for further connectivity.

4.2.4 After deliberations, NCT recommended the transmission scheme "Transmission system for Evacuation of Power from RE Projects in Rajgarh (1500 MW) SEZ in Madhya Pradesh-Phase III" to enable evacuation of upto 4000 MW Power from RE Projects in Rajgarh (i.e. 1500 MW beyond 2500 MW) SEZ in Madhya Pradesh as mentioned below:

4.2.4.1 Summary of the scheme is given below:

Sl. No.	Name of the scheme and tentative implementation timeframe	Estimated Cost (₹ Cr)	Remarks
1.	Transmission system for Evacuation of Power from RE Projects in Rajgarh (1500 MW) SEZ in Madhya Pradesh-Phase III **Tentative implementation timeframe**: Implementation timeframe of elements at Sl. No. 1, 2a, 3 & 4 shall be 24 months from date of SPV Transfer & for element at Sl. No. 2b shall be 31.03.2028 in matching timeframe of RE generator (Purvah Green Power Pvt. Ltd.: 297 MW)	1079	Recommended under TBCB route with RECPDCL as BPC

4.2.4.2 Detailed scope of the scheme is given below:

Sl. No.	Scope of the Transmission Scheme	Capacity
1.	Creation of New 220 kV Bus Section (3rd) with 220 kV Bus Sectionaliser and 400/220 kV, 3x500 MVA ICT augmentation (7th, 8th & 9th) at Pachora PS terminated on 220 kV Bus Section (3rd)	500 MVA 400/220 kV ICT – 3 Nos. 400 kV ICT bay – 3 Nos. (on Section-II) 220 kV ICT bay – 3 Nos. (on Section-III) 220 kV Bus Sectionaliser bays – 1 set 220 kV BC & TBC – 1 Nos. each
2.	**2a**. 3 Nos. 220 kV line bays for RE interconnection on Bus Section (3rd)	3 Nos. on Sec-III
	2b. 1 Nos. 220 kV line bay for RE Interconnection of Purvah Green Power Pvt. Ltd. on Bus Section (3rd)	1 No. on Sec-III
3.	Pachora PS – Rajgarh(PG) 400 kV D/c line (Quad ACSR/ AAAC/ AL59 Moose equivalent) along with associated line bays at both ends and 50 MVAr Switchable Line Reactors (Sw LR) on each ckt at both ends	Line length: 180 km. 400 kV line bays: 4 Nos. (2 at Rajgarh(PG) & 2 at Pachora PS) 420 kV, Switchable Line Reactors (Sw LRs): 4 Nos. (2 at Rajgarh(PG) & 2 at Pachora PS) Switching equipment for 400 kV line reactor – 4 Nos. (2 at Rajgarh(PG) & 2 at Pachora PS)
4.	Installation of 1x125 MVAR, 420 kV bus	125 MVAr, 420 kV Bus reactor – 1 Nos.

Sl. No.	Scope of the Transmission Scheme	Capacity
	reactor at Pachora PS (400 kV Bus Section-II)	400 kV Bus reactor bay: 1 Nos.

4.3 Transmission system for Evacuation of Power from RE Projects in Neemuch (1000 MW) SEZ in Madhya Pradesh-Phase II

4.3.1 Representative of CTUIL stated that applications for cumulative capacity of 1970 MW has been received at Neemuch PS till July 24, it was found prudent to expand the substations to its full capacity so as to accommodate applications being received beyond 1 GW at Pachora PS. CTUIL proposed transmission scheme consisting of augmentation a Neemuch PS, creation of 400/220 kV Handiya substation, Neemuch PS – Pachora PS 400 kV D/c line, Pachora PS – Handiya 400 kV D/c line and LILO of Khandwa(PG) – Itarsi(PG) 400 kV D/c (Twin Moose) line at Handiya S/s etc. CTUIL also mentioned that with the augmentation at Neemuch PS, the substation will be closed for further connectivity.

4.3.2 After deliberations, NCT recommended the scheme "Transmission system for Evacuation of Power from RE Projects in Neemuch (1000 MW) SEZ in Madhya Pradesh-Phase II" to enable Evacuation of upto 2000 MW Power from RE Projects in Neemuch (i.e. 1000 MW beyond 1000 MW) SEZ in Madhya Pradesh as mentioned below:

4.3.2.1 Summary of the scheme is given below:

Sl. No.	Name of the scheme and tentative implementation timeframe	Estimated Cost (₹ Crore)	Remarks
1.	Transmission system for Evacuation of Power from RE Projects in Neemuch (1000 MW) SEZ in Madhya Pradesh-Phase II Implementation timeframe: 24 months from date of SPV transfer	2393	Recommended under TBCB route with PFCCL as BPC

4.3.2.2 Detailed scope of the scheme is given below:

Sl.No.	Scope of the Transmission Scheme	Capacity
1.	Creation of New 220 kV Bus Section-II at Neemuch PS with Augmentation of transformation capacity by 3x500 MVA, 400/220 kV ICTs (3rd, 4th & 5th) at Neemuch S/s along with associated bays.	500 MVA 400/220 kV ICT – 3 Nos. 400 kV ICT bay – 3 Nos. 220 kV ICT bay – 3 Nos. (on Sec-II) 220 kV Bus Sectionaliser bays – 1 set 220 kV BC & TBC – 1 Nos. each
2.	4 Nos. 220 kV Line bays at Neemuch PS for RE interconnection	220 kV Bays – 4 Nos. on Sec-II
3.	Neemuch PS – Pachora PS 400 kV D/c line (Quad ACSR/ AAAC/ AL59 Moose equivalent) along associated Line bays and 50 MVAr Switchable Line Reactor (Sw LR) on each ckt at both ends	Line length: 190km. 400 kV Line bays: 4 Nos. (2 at Neemuch PS & 2 at Pachora PS) 420 kV, Switchable Line Reactors (Sw LRs): 4 Nos. (2 at Neemuch PS & 2 at Pachora PS) Switching equipment for 400 kV

		line reactor – 4 Nos. (2 at Neemuch PS & 2 at Pachora PS)
4.	Establishment of 2x500 MVA, 400/220 kV S/s at Handiya alongwith 2x125 MVAr 420 kV Bus Reactors **Future provision (space for):** ➢ 400 kV line bays along with switchable line reactors– 6 Nos. (Sec-II) ➢ 400/220 kV ICT along with bays - 4 Nos. (1 Nos. on Sec-I & 3 Nos. on Sec-II) ➢ 400 kV Bus Reactor along with bays: 2 Nos. (Sec-II) ➢ 220 kV line bays: 8 Nos. (on Sec-II) ➢ 400 kV Sectionalization bay: 1 set ➢ 220 kV Sectionalization bay: 1 set ➢ 220 kV TBC & BC: 1 Nos.	400/220 kV ICTs: 2 Nos. 400 kV ICT Bays: 2 Nos. 220 kV ICT Bays: 2 Nos. 400 kV Line bays: 6 Nos. 220 kV line bays for MPPTCL – 8 Nos. 125 MVAr, 420 kV Bus reactor – 2 Nos. 400 kV Bus reactor bay: 2 Nos. 220 kV TBC bay – 1 Nos. 220 kV BC bay – 1 Nos.
5.	Pachora PS – Handiya 400 kV D/c line (Quad ACSR/ AAAC/ AL59 Moose equivalent) along with associated bays at Pachora PS end and 50 MVAr Switchable Line Reactor (Sw LR) on each ckt at both *ends*	Line length: 190 km. 400 kV bays: 2 Nos. (at Pachora PS) 420 kV, Sw LRs: 4 Nos. (2 at Handiya & 2 at Pachora PS) Switching equipment for 400 kV line reactor – 4 Nos. (2 at Handiya & 2 at Pachora PS)
6.	LILO of Khandwa(PG) – Itarsi(PG) 400 kV D/c (Twin Moose) line at Handiya S/s	LILO route length : 22 km (88 ckm) The Khandwa(PG) – Itarsi(PG) 400 kV D/c line is of Twin Moose configuration and LILO shall be of similar conductor configuration
7.	Installation of 1x125 MVAR, 420 kV bus reactor (2nd) at Neemuch PS	125 MVAr, 420 kV Bus reactor – 1 Nos. 400 kV Bus reactor bay: 1 Nos.
Note: TSP of Neemuch & Pachora PS shall provide space for above scope of work		

4.4 **North Eastern Region Expansion Scheme-XXI Part-B (NERES-XXI Part-B)**

4.4.1 Representative from CTUIL stated that the existing 132 kV Badarpur (POWERGRID) switching station was commissioned in 1999 and shall be completing 25 years in service by 2024. POWERGRID the owner of the substation has informed that they are facing issues in O&M of the switching station and to improve the reliability it would be prudent to upgrade the switching station from single main and transfer bus scheme to double main transfer bus scheme by converting from Air Insulated Switchgear (AIS) to Gas Insulated Switchgear (GIS).

4.4.2 Further, towards adoption of new technology in the Indian Grid, it was proposed that the upgradation could be carried out as Green GIS instead of conventional GIS owing to the following benefits:

- Green GIS is a new technology in which Sulfur Hexafluoride (SF_6) gas is not used and this technology is being adopted by several countries in the world.
- This would help in the reduction of usage of Green House Gas and would be a step towards achieving sustainable development targets.

4.4.3 The scheme was taken up for deliberations in the 15th meeting of NCT held on 25-08-2023, wherein it was decided to review the scheme subsequently. The scheme was thereafter discussed in the 16th meeting of NCT held on 30-11-2023, it was decided to defer the scheme at present and take it up after additional discussions on new technology such as major benefits of Green GIS, availability of Green GIS vendors in India, additional cost implication (conventional GIS vis-à-vis Green GIS) etc.

4.4.4 Director (SO), Grid-India suggested that instead of going for green GIS for complete station, some portion of the station (limited number of bays) may be considered for green GIS. Also, stations in other regions where green GIS might be more suitable due to environmental conditions may also be considered as potential candidates for green GIS.

4.4.5 After deliberations, it was decided that a committee with members from CEA, CTUIL and POWERGRID to be constituted to survey the green GIS literature, technical aspects, undertake visit of the substation, exploring possible solutions etc. The committee shall submit its recommendations within 06 months.

4.5 Upgradation of ±800 kV, 6000 MW Raigarh-Pugalur HVDC system for enhancement of reverse power capacity upto 6000 MW from existing 3000 MW

4.5.1 Raigarh-Pugalur ± 800 kV, 6000 MW HVDC system is capable of transferring 6000 MW of power from Raigarh to Pugalur. However, its reverse power capacity i.e. Pugalur to Raigarh is 3000 MW.

4.5.2 Representative of CTUIL stated that enhancement of reverse power capacity upto 6000 MW from existing 3000 MW has been approved in 52nd SPRC meeting held on 03.08.2024 at an indicative cost of Rs 1000 Cr (including cost of system studies) and required AC system strengthening at Pugalur (estimated cost of Rs 400 crores) & Raigarh (estimated cost of Rs 1800 Crores)

4.5.3 Further, SRPC vide letter dated 02.09.2024 recommended CTUIL to take up the matter to NCT at the earliest.

4.5.4 Director (SO), Grid-India stated that until the adequate AC system is available on both ends, the HVDC capacity of 6000 MW in reverse direction can’t be utilized even after the proposed HVDC upgradation.

4.5.5 CTU stated that as confirmed by POWERGRID vide e-mail dated 10.10.2024, there is no space available at both Raigarh (Kotra) and Dharamjaygarh S/s for augmentation of AC system to enable reverse power flow on Raigarh- Pugalur HVDC beyond 3000 MW. AC System augmentation at Raigarh (Kotra) S/s in WR is not possible and if at all reverse flow of more than 3000 MW is required with N-1 compliance, it would require an elaborate exercise of shifting certain Thermal generating stations from Raigarh (Kotra) S/s to a new substation which would be cumbersome and shall entail significant costs as well as consent from thermal generating stations which are already connected at Raigarh (Kotra) S/s. Further, it was also informed that with the reversal

of HVDC from 3000 MW to 6000 MW, no enhancement in TTC/ATC between SR-NEW Grid is expected looking into the very less sensitivity of the HVDC in TTC/ATC. .

4.5.6 After deliberations, it was decided that a committee will be formed comprising members from CEA, CTUIL, POWERGRID, Grid-India, SRPC and WRPC. The committee shall carry out comprehensive study and propose comprehensive plan including AC system strengthening in Southern Region and Western Region along with the total scheme cost. The comprehensive plan may again be put up to SRPC before bringing it to NCT.

4.6 **Augmentation of transformation capacity at KPS3 (GIS) S/s under Khavda Phase-V Part B3 scheme**

4.6.1 Representative from CTUIL stated that KPS3 S/s with 3x1500 MVA ICTs on Section-I is under implementation by M/s KPS3 Transmission Ltd. (Subsidiary of POWERGRID). 1x1500 MVA Addl. ICT at Section-I is also being implemented by M/s POWERGRID (under RTM) under Khavda Ph-IV Part E3 scheme. Further, Section-II of KPS3 is being established by M/s Khavda IV A Power Transmission Ltd. (Subsidiary of Adani Energy Solutions Ltd.) with SCOD of Aug-26 with 3x1500 MVA ICTs and 3 Nos. 400 kV bays at Bus Section-II for RE interconnection. Out of above bays, 2 bays had been allocated to M/s SRPL (1250 MW) & NHPC (600 MW).

4.6.2 Applications for cumulative 3290 MW have been received at KPS3 (Sec-II) which require 3 Nos. 400 kV bays. 1 No. 400 kV bay is already being implemented under Khavda Phase-IV Part A scheme. Balance 2 nos. 400 kV bays along with addl. 1x1500 MVA ICT at KPS3 (Sec-II) are required to be implemented after considering N-1 compliance of already planned 765/400 kV ICTs at KPS3 (Sec-II). The proposed 765/400 kV ICT & 400 kV bays would facilitate immediate injection of power at KPS3 (Section-II). CTUIL also informed that the substation will be closed for further applications.

4.6.3 NCT directed CTUIL to explore the possibility for Battery Energy Storage System (BESS) for optimizing transmission infrastructure at Khavda as well as other RE potential Zones. Consideration of Storage may facilitate integration of additional RE Capacity.

4.6.4 After deliberations, NCT approved the transmission scheme “Augmentation of transformation capacity at KPS3 (GIS) S/s under Khavda Phase-V Part B3 scheme” under RTM mode as follows

4.6.4.1 Summary of the scheme is given below:

Sl. No.	Name of the scheme and tentative implementation timeframe	Estimated Cost (₹ Crore)	Remarks
1.	Augmentation of transformation capacity at KPS3 (GIS) S/s under Khavda Phase-V Part B3 scheme	252	Approved under RTM through M/s Khavda IV A Power

	Implementation timeframe: 24 months from the date of allocation		Transmission Ltd. (Subsidiary of Adani Energy Solutions Ltd.) (i.e. TSP of KPS3 (Sec-II))

4.6.4.2 Detailed scope of the scheme is given below:

S.N.	Scope of the Transmission Scheme	Capacity
1.	Augmentation of transformation capacity at KPS3(GIS) by 1x1500 MVA, 765/400 kV ICT on Bus section-II (8th) along with 1 No. 400 kV line bay for termination of 1st ckt out of 400 kV D/c line being implemented by AGEL (Appl. No. 2200000953) for 1530 MW	• 765/400 kV ICT – 1 (1x1500 MVA) • 765 kV ICT bay – 1 (+1 no. bay for dia completion with Switchable Line Reactor (SLR) provision in future bay) on Bus section-II • 400 kV ICT bay – 1 (+ 1 no. bay for dia completion and termination of the proposed Line for RE interconnection) on Bus section-II
2.	1 Nos. 400 kV line bay on KPS3 400 kV Bus Section-II for termination of 2nd ckt out of 400 kV D/c line being implemented by AGEL (Appl. No. 2200000953) for 1530 MW	400 kV line bays – 1 no. (+ 1 no. bay for dia completion with the provision to terminate future 400/220 kV ICT)
Note: TSP of KPS3 (GIS) shall provide space for above scope of work.		

4.7 Supply and Installation of additional Fiber Optic Test Equipment (FOTE) and Ethernet cards at Automatic Generation Control (AGC) and Critical Nodes of SR Region.

4.7.1 Representative of CTUIL stated that as per CEA, Manual of Communication Planning in Power System Operation 2022, CTU for high availability requirements for Power System Communication, redundancy with route diversity for critical links shall be maintained. Additional FOTE and redundant Ethernet ports are required at all AGC operated generating stations, in view of resource disjoint and criticality of AGC operation for grid operation purpose.

4.7.2 After deliberations, NCT approved the communication scheme “Supply and Installation of additional FOTE and Ethernet cards at AGC & Critical Nodes of SR Region” under RTM mode as follows

4.7.2.1 Summary of the scheme is given below:

SI No.	Name of the scheme and tentative implementation timeframe	Estimated Cost (₹ Cr)	Remarks

1.	Supply and Installation of additional FOTE and Ethernet cards at AGC & Critical Nodes of SR Region Tentative implementation timeframe**:** 12 months from date of allocation of project	1.02	Approved under RTM through POWERGRID

4.7.2.2 Detailed scope of the scheme is given below:

(i) Supply and installation of 3 nos. FOTE with STM 16 capacity at following locations:

SI.No.	Station Name	No of FOTE	Remark
1.	Simhadri-1	1	For AGC purpose
2.	NP KUNTA	1	Shortage of ports
3.	NLC-TPS-2 Stage 1	1	For AGC purpose
Total		**3**	

(ii) Supply and installation of 10 Nos. ethernet cards at following locations:

SI.No.	Station Name	Ethernet Cards required
1	Ramagundam -I	2
2	Ramagundam -II	
3	Ramagundam -III	
4	NTPC Vallur	2
5	NTPL Tuticorin	1
6	NTPC Kudgi	2
7	NLC - TPS 2 Exp	1
8	NLC - TPS 1 Exp	1
9	NNTPS new Neyveli	1
Total		**10**

4.8 Requirement of Additional FOTE at various ISTS nodes in ER due to exhaustion of existing capacity

4.8.1 Representative of CTUIL stated that the transmission scheme “Requirement of Additional FOTE at various ISTS nodes in ER” with capacity utilisation of approximately 90% and above and few other important stations is required.

4.8.2 After deliberations, NCT approved the communication scheme “Requirement of Additional FOTE at various ISTS nodes in ER due to exhaustion of existing capacity” under RTM mode as follows

4.8.2.1 Summary of the scheme is given below:

SI No.	Name of the scheme and tentative implementation timeframe	Estimated Cost (₹ Cr)	Remarks

1.	Requirement of Additional FOTE at various ISTS nodes in ER due to exhaustion of existing capacity Tentative implementation timeframe**:** 12 months from date of allocation of project	9.78	Approved Under RTM through POWERGRID

4.8.2.2 Detailed scope of the scheme is given below:

a) Conversion of 13 nos. STM 16 FOTE to STM 64 FOTE
b) Conversion of 4 nos. STM 4 FOTE to STM 16 FOTE by utilizing four (4) Nos. FOTEs freed from upgradation of STM 16 FOTE to STM 64 FOTE

S. No.	**Node Name(with approx 90% capacity exhausted)**	**Upgradation/replacement required**	**Detail of Card/Equipment required for upgradation**	**Estimated Cost (Rs.)**
1	Kasba	STM 16 to STM 64	Existing Equipment Cannot be upgraded. New STM 64 SDH Equipment Required	74 Lakhs
2	ERLDC	STM 16 to STM 64		74 Lakhs
3	Jeerat	STM 16 to STM 64		74 Lakhs
4	Subhashgram	STM 16 to STM 64		74 Lakhs
5	Farakka	STM 16 to STM 64		74 Lakhs
6	Kahalgaon	STM 16 to STM 64		74 Lakhs
7	Saharsa	STM 16 to STM 64		74 Lakhs
8	Binaguri	STM 16 to STM 64		74 Lakhs
9	Purnea	STM 16 to STM 64		74 Lakhs
10	Kishenganj	STM 16 to STM 64		74 Lakhs
11	Sasaram	STM 16 to STM 64		74 Lakhs
12	AB380 Repeater	STM 16 to STM 64		74 Lakhs
13	Allahabad	STM 16 to STM 64		74 Lakhs
Total Cost for conversion of 13 nos. of STM 16 equipment to STM 64:A				**9.62 Cr**
14	Gaya	STM 4 to STM 16	Upgradation to be done by utilizing four Nos. of STM 16 equipment freed in above list after upgradation to STM 64.	4 Lakhs
15	Essar Chandwa	STM 4 to STM 16		4 Lakhs
16	Darbhanga(KPTL)	STM 4 to STM 16		4 Lakhs
17	Arrah	STM 4 to STM 16		4 Lakhs
Total Cost for conversion of 04 Nos. of STM 4 equipment to STM 16: B				**16 Lakhs**
Total Cost for conversion of 13 Nos. of STM 16 to STM 64 and 04 nos. of STM4 equipment to STM 16: A+B				**9.78 Cr**

4.9 Deployment of FOTE (SDH Equipment) and amplifier solutions at Alipurduar S/s end for OPGW based communication and Teleprotection for 400 kV lines from Punatsangchhu-II Hydroelectric Project (PHEP-II), Punatsangchhu-I Hydroelectric Project (PHEP-I) and Jigmeling of Bhutan to Alipurduar, India

4.9.1 Representative of CTUIL stated that to ensure the accurate coordination of devices between SDH at one end i.e Alipurduar, India and MPLS-TP at other end i.e., Punatsangchhu-II, as well as to cater to cybersecurity issue of the Indian Grid, the proposed scheme for Alipurdwar S/s end needs to be implemented.

4.9.2 After deliberations, NCT approved the communication scheme "Deployment of FOTE (SDH Equipment) and amplifier solutions at Alipurduar S/s end for OPGW based communication and Teleprotection for 400kV lines from PHEP-II, PHEP-I and Jigmeling of Bhutan to Alipurduar, India" under RTM mode as follows

4.9.2.1 Summary of the scheme is given below:

SI No.	Name of the scheme and tentative implementation timeframe	Estimated Cost	Remarks
1.	Deployment of FOTE (SDH Equipment) and amplifier solutions at Alipurduar S/s end for OPGW based communication and teleprotection for 400kV lines from PHEP-II, PHEP-I and Jigmeling of Bhutan to Alipurduar, India Tentative implementation timeframe**:** 6 months from date of allocation	₹ 65 lakhs	Approved Under RTM through POWERGRID

4.9.2.2 Detailed scope of the scheme is given below:

a) One (1) set of STM-4 SDH equipment along with panel supporting minimum five directions with MSP (Multiplex Section Protection 1+1) & equipped with E1 and Ethernet interfaces.
b) Six (6) sets of 175 km Amplifiers solutions: 2 directed towards Punatsangchhu-II (PHEP-II), 2 directed towards Punatsangchhu-I (PHEP-I) and 2 directed towards Jigmeling.

Note: POWERGRID to coordinate with Bhutan ends while procuring the equipment to avoid any non-compatibility issues

5 Grid-India Presentation on Performance of the National Grid in Q1 and Q2 of FY 2024-25

5.1.1 Representative of Grid-India made a presentation on performance of the National Grid in Q1 and Q2 of FY 2024-25. Copy of presentation is attached at Annex-II. Major points highlighted during the presentation are given in subsequent paragraphs.

5.1.2 **Large number of generation loss events in NR RE Complex:** NLDC representative informed that there have been more than 55 events between January 2022 and September 2024 involving RE generation loss of more than 1000 MW. Around 13 such generation loss events (>500 MW) have occurred between April – September 2024.

One of the major reasons for these grid events has been the non-compliance of the RE plants against CEA's standards. The details of the non-compliance and measures being taken by Grid-India to address the issues were explained by NLDC representative in the meeting.

5.1.3 **Oscillations in NR RE complex and issues with performance of STATCOMs:** NLDC representative informed that low frequency oscillations (3-4 Hz) are being observed in NR RE complex on a regular basis. The oscillations start during morning hours with increase in solar generation and are mainly observed in voltage and reactive power. The non-standardization of PPC delays is one of the potential reasons for these oscillations.

He further informed that currently 05 Nos. STATCOMs are operational in NR RE complex. These STATCOMs have been installed to provide the fast dynamic reactive power support to the grid during any contingency. The response time of the installed STATCOMs shall be less than 30 ms as per their control manuals.
However, following observations in the performance of STATCOMs (as visible in DR as well as PMU plots) in NR RE complex has been observed:

- High response time (sluggish response) during faults leading to injection of reactive power post clearance of fault
- Automatic gain reduction by stability controller of the STATCOMs on hunting detection, possibly leading to enhancement in magnitude of oscillations

The problem of amplification of oscillations with reduction of STATCOM gain in voltage control mode has been analyzed with measurement (TFR) data and simulation results for a large data set. Detailed analysis in this regard was also shared with CEA, CTUIL, POWERGRID and OEM.

It is observed that oscillations damp out when the STATCOMs are being operated in Fixed 'Q' mode. This mode of operation, however, defeats the purpose of providing STATCOMs for fast dynamic reactive power support.

The performance issues being observed in the current STATCOMs necessitate proper tuning of the STATCOM controllers. Also, necessary modifications in the RfP of upcoming STATCOMs is required based on the current experience.

NCT directed that a committee may be constituted with members from CEA, CTUIL, Grid-India, Power Grid and all the STATCOM OEMs to deliberate the performance

related issues and the possible remedial measures. The matter to be coordinated by GM Division, CEA in consultation with PS Wing, CEA.

5.1.4 **17th June 2024 Load Loss Event in Northern Region and Reactive Power Planning for Bulk Loads (Electrolyzers and Data Centers):** Director (SO), Grid-India explained the 17th June 2024 grid event of simultaneous tripping of both bipoles of the +/-800 kV HVDC Champa (WR) – Kurukshetra (NR) link led to a substantial load reduction (~16.5 GW) in the northern region. The event started with the tripping of the aforementioned HVDC link and triggered a series of events starting from the sudden voltage drop across the stations in the Northern region and subsequent stalling and tripping of certain portion of load.

He further informed that the Ministry of Power constituted a Committee under the Chairmanship of Member (GO&D), CEA to analyze the event. The committee, in its suggestions, recommended the planning of suitable dynamic reactive power compensation near load centers.

He further stated that the event (especially the stalling of load) was replicated in simulation studies with proper load modelling. As the load behavior is changing, the existing philosophy for modelling of loads in the planning and operational studies need to be reviewed. Without proper load modelling in the studies, it would be difficult to capture such phenomenon in the studies. The standards for protection settings of loads, especially 1-ph and 3-ph motor loads, also needs to be reviewed.

Further, as a large quantum of electrolyzer and data center load is also envisaged to be connected at ISTS level in near future, it is important that adequate reactive power compensation is planned nearby such ISTS load feeding stations.

He suggested that the following activities may be taken up on priority:

- Study of load behavior and consideration of same in the simulation studies
- Planning of dynamic reactive power compensation at both inter-state and intra-state level near major load centers
- Review of the standards specifying standards for protection settings of loads, especially 1-ph and 3-ph motor loads
- Planning of suitable reactive power compensation at large ISTS stations being planned for feeding large electrolyzer and data center loads

Chairperson, CEA directed that the reactive power planning study at all the major load centers shall be taken up on priority. Grid India was advised to identify important BIS standards/committees in this regard and CEA/Stakeholders may take up with BIS.

He further directed that two separate committees comprising of members from CEA, CTUIL and Grid-India may be constituted for comprehensive study of performance, control strategy, reactive power requirements etc. of electrolyzer and data center loads respectively so that suitable reactive power compensation could be planned. The characteristics and load pattern/behaviour of electrolysers would be coordinated by ET&I Division, CEA and of data centres would be coordinated by PDM&LF Division, CEA.

5.1.5 **Evacuation of large quantum of RE under T-GNA:** NLDC representative informed that a large quantum of RE generation (~5700 MW) is being evacuated under T-GNA due to the delay in the commissioning of associated transmission system. There is possibility of certain RE curtailment if the commissioning of the associated transmission system is not expedited.

5.1.6 **Flexibility and Ramping Requirement:** NLDC representative informed that persistent high frequency was observed in the India's grid during solar hours on few days in the month of August 2024. The high RE generation and the limited flexibility to further reduce the thermal generation to accommodate the RE generation was one of the major factors for this high frequency operation. Further, as the thermal generating units are required during non-solar hours, these units cannot be taken out of service during the high frequency operation period.

Another challenge is being faced in meeting the ramping requirement during evening hours where the flexibility requirements have increased significantly due to the increasing demand ramp up coupled with the simultaneous decline in solar generation. There is an urgent requirement of fast ramping resources in the grid to meet the flexibility requirements in coming days.

5.1.7 **Constraints in Maharashtra system during high export from Southern Region:** Director (SO), Grid-India stated that the congestion is being faced in export of power from SR during high RE periods. To relieve the congestion, 765 kV Narendra – Pune D/C was planned with commissioning schedule of July 2024. However, the line is delayed and revised date of commissioning is December2024.

He further stated that even after commissioning of 765 kV Narendra – Pune D/C, constraints in western Maharashtra would still remain in export of power from SR. There is an urgent requirement for expediting the planned transmission system augmentation in western Maharashtra area.

Chairperson, CEA directed that the augmentation works in Maharashtra and other critical areas shall be monitored on priority.

Summary of the deliberations of the 24th meeting of NCT held on 23rd October, 2024

I. Modification in the earlier approved/notified transmission schemes:

1. Revision in SCOD of 400 kV D/C Jhatikara-Dwarka line under REZ Phase-III Part-D Phase-II scheme

NCT approved the revised SCOD for 400 kV D/C (quad) Jhatikara-Dwarka line under "Transmission system for evacuation of 20 GW REZ power from Rajasthan under phase-III, Part-D, Phase-II" scheme as 28th February, 2026 (31st December 2025 on best effort basis).

2. Change in scope of Transmission system for evacuation of power from Rajasthan REZ Ph-V (Part-1: 4 GW) [Sirohi/Nagaur] Complex

NCT approved the revised scope of Transmission system for evacuation of power from Rajasthan REZ Ph-V (Part-1: 4 GW) [Sirohi/Nagaur] Complex as follows:

Sl. No.	Original scope of the transmission scheme	Revised scope of the transmission scheme
1. Transmission system for immediate Evacuation of Power from Sirohi S/s (2 GW)		
1	5x500 MVA, 400/220 kV ICTs at Sirohi S/s along with transformer bays • 400/220 kV 500 MVA ICTs- 5 Nos. • 400 kV ICT bays-5 Nos. • 220 kV ICT bays- 5 Nos.	**4x500 MVA, 400/220 kV ICTs at Sirohi S/s along with transformer bays** • **400/220 kV 500 MVA ICTs- 4 Nos.** • **400 kV ICT bays-4 Nos.** • **220 kV ICT bays- 4 Nos.**
2	6 Nos. 220 kV line bays at Sirohi S/s for RE interconnection • 220 kV line bays – 6 Nos.	**5 Nos. 220 kV line bays at Sirohi S/s for RE interconnection** • **220 kV line bays – 5 Nos.**
3	220 kV Sectionalizer bay (1 set) along with 220 kV BC (2 Nos.) bay and 220 kV TBC (2 Nos.) bay at Sirohi S/s	• 220 kV Sectionalizer bay (1 set) • 220 kV BC (2 Nos.) bay and 220 kV TBC (2 Nos.) bay
4	-	**1 No. 400 kV line bays at Sirohi S/s for RE interconnection** • **400 kV line bay – 1 No.**
	Note: There will be no change in other elements of the transmission scheme w.r.t agreed in the 21st NCT meeting/ MoP Gazette dated 29.08.2024.	

II. ISTS Transmission schemes, costing between Rs 100 Crore to Rs 500 Crore, approved by NCT:

1. The transmission schemes approved by NCT under RTM route is given below:

Sl. No.	Name of Transmission Scheme	Implementation Mode	Implementation timeframe	Estimated Cost (₹ Cr)

1.	Eastern Region Expansion Scheme-44 (ERES-44)	RTM through POWERGRID	18 months (15 months on best effort basis) from the date of allocation	385.77
2.	Augmentation of transformation capacity at KPS3 (GIS) S/s under Khavda Phase-V Part B3 scheme	RTM through M/s Khavda IV A Power Transmission Ltd. (Subsidiary of Adani Energy Solutions Ltd.) (i.e. TSP of KPS3 (Sec-II))	24 months from the date of allocation	252

The broad scope of above schemes are given below

Sl. No.	**Name of Scheme & Tentative implementation timeframe**	**Broad Scope**
1.	Eastern Region Expansion Scheme-44 (ERES-44) **Implementation timeframe: 18 Months (15 months on best effort basis) from the date of allocation of project**	1. Reconductoring of ISTS portion of Alipurduar (POWERGRID) – Falakata (WBSETCL) 220 kV D/c line with HTLS conductor of ampacity 1250 A (54 ckm) 2. Reconductoring of ISTS portion of Falakata (WBSETCL) – Birpara (POWERGRID) 220 kV D/c line with HTLS conductor of ampacity 1250 A (54 Km.) 3. Reconductoring of Birpara (POWERGRID) – Binaguri (POWERGRID) 220 kV D/c line with HTLS conductor of ampacity 1250 A (160 ckm) 4. Reconductoring of Binaguri (POWERGRID) – Siliguri (POWERGRID) 220 kV D/c line with HTLS conductor of ampacity 1250 A (12 ckm) 5. Reconductoring of Siliguri (POWERGRID) – Kishanganj (POWERGRID) 220 kV D/c line with HTLS conductor of ampacity 1250 A. (216 ckm) 6. Reconductoring of Kishanganj (POWERGRID) – Dalkhola (POWERGRID) 220 kV D/c line with HTLS conductor of ampacity 1250 A (62 ckm) 7. Reconductoring of ISTS portion of Dalkhola (POWERGRID) – Gazole (WBSETCL) 220 kV D/c line with HTLS conductor of ampacity 1250 A (195 ckm) 8. Reconductoring of ISTS portion of Gazole (WBSETCL) – Malda (POWERGRID) 220 kV D/c line with HTLS conductor of ampacity 1250 A (33 ckm) 9. Upgradation of associated 220 kV bay equipment at

		Alipurduar (POWERGRID) 10. Upgradation of associated 220 kV bay equipment at Birpara (POWERGRID) 11. Upgradation of associated 220 kV bay equipment at Binaguri (POWERGRID) 12. Upgradation of associated 220 kV bay equipment at Siliguri (POWERGRID) 13. Upgradation of associated 220 kV bay equipment at Dalkhola (POWERGRID) 14. Upgradation of associated 220 kV bay equipment at Malda (POWERGRID) 15. Supply and installation of OPGW along with terminal equipment at both ends of Siliguri (POWERGRID) – Kishanganj (POWERGRID) 220 kV D/c (HTLS) line (108 km)
2.	Augmentation of transformation capacity at KPS3 (GIS) S/s under Khavda Phase-V Part B3 scheme **Implementation timeframe:** 24 months from the date of allocation	1. Augmentation of transformation capacity at KPS3(GIS) by 1x1500 MVA, 765/400 kV ICT on Bus section-II (8th) along with 1 Nos. 400 kV line bay for termination of 1st ckt out of 400 kV D/c line being implemented by AGEL (Appl. No. 2200000953) for 1530MW *2.* 1 No. 400kV line bay on KPS3 400 kV Bus Section-II for termination of 2nd ckt out of 400 kV D/c line being implemented by AGEL (Appl. No. 2200000953) for 1530 MW Note: TSP of KPS3 (GIS) shall provide space for above scope of work.

(Detailed scope as approved by 24th NCT and subsequent amendments thereof)

III. ISTS Transmission schemes, costing greater than ₹ 500 Crore, recommended by NCT to MoP:

The ISTS transmission schemes recommended by NCT to MoP are given below:

Sl. No.	Name of Transmission Scheme	Implementation Mode	Tentative Implementation timeframe	BPC	Estimated Cost (₹ Crs)
1.	Transmission system for Evacuation of Power from RE Projects in Rajgarh (1500 MW) SEZ in Madhya Pradesh-Phase III	TBCB	Implementation timeframe of elements at Sl. No. 1, 2a, 3 & 4 shall be 24 months from date of SPV transfer & for element at Sl. No. 2b shall be 31.03.2028 in	RECPDCL	1079

			matching timeframe of RE generator (Purvah Green Power Pvt. Ltd.: 297 MW)		
2.	Transmission system for Evacuation of Power from RE Projects in Neemuch (1000 MW) SEZ in Madhya Pradesh-Phase II	TBCB	24 months from date of SPV transfer	PFCCL	2393

The broad scope of the above ISTS schemes to be notified in Gazette of India is as given below:

Sl. No.	**Name of Scheme & Tentative implementation timeframe**	**Broad Scope**	**Bid Process Coordinator**
1.	Transmission system for Evacuation of Power from RE Projects in Rajgarh (1500 MW) SEZ in Madhya Pradesh-Phase III **Implementation timeframe:** Implementation timeframe of elements at Sl. No. 1, 2a, 3 & 4 shall be 24 months from date of SPV transfer & for element at Sl. No. 2b shall be 31.03.2028 in matching timeframe of RE generator (Purvah Green Power Pvt. Ltd.: 297 MW)	1. Creation of New 220 kV Bus Section (3rd) with 220 kV Bus Sectionaliser and 400/220 kV, 3x500 MVA ICT augmentation (7th, 8th & 9th) at Pachora PS terminated on 220 kV Bus Section (3rd) 2. **2(a)** 3 Nos. 220 kV line bays for RE Interconnection on Bus Section (3rd) **2(b)** 1 Nos. 220 kV line bay for RE Interconnection of Purvah Green Power Pvt. Ltd. on Bus Section (3rd) 3. Pachora PS – Rajgarh(PG) 400 kV D/c line (Quad ACSR/ AAAC/ AL59 Moose equivalent) along with associated line bays at both ends and 50 MVAr Switchable Line Reactors (Sw LR) on each ckt at both ends (180 Km) 4. Installation of 1x125 MVAR, 420 kV bus reactor at Pachora PS (400 kV Bus Section-II)	RECPDCL
2.	Transmission system for Evacuation of Power from RE Projects in Neemuch (1000 MW) SEZ in Madhya Pradesh-Phase II	1. Creation of New 220 kV Bus Section-II at Neemuch PS with Augmentation of transformation capacity by 3x500 MVA, 400/220 kV ICTs (3rd, 4th & 5th) at Neemuch S/s along with associated bays. 2. 4 Nos. 220 kV Line bays at Neemuch	PFCCL

	Implementation timeframe: 24 months from date of SPV transfer	PS for RE interconnection 3. Neemuch PS – Pachora PS 400 kV 400 kV D/c line (Quad ACSR/ AAAC/ AL59 Moose equivalent) along with associated line bays and 50 MVAr Switchable Line Reactors (Sw LR) on each ckt at both ends (190 km) 4. Establishment of 2x500 MVA, 400/220 kV S/s at Handiya with 2x125MVAr 420 kV Bus Reactors **Future provision (space for):** • *400 kV line bays along with switchable line reactors– 6 Nos. (Sec-II)* • *400/220 kV ICT along with bays - 4 Nos. (1 Nos. on Sec-I & 3 Nos. on Sec-II)* • *400 kV Bus Reactor along with bays: 2 Nos. (Sec-II)* • *220 kV line bays: 8 Nos. (on Sec-II)* • *400 kV Sectionalization bay: 1 set* • *220 kV Sectionalization bay: 1 set* • *220 kV TBC & BC: 1 Nos.* 5. Pachora PS – Handiya 400 kV 400 kV D/c line (Quad ACSR/ AAAC/ AL59 Moose equivalent) along with associated bays at Pachora PS end and 50 MVAr Switchable Line Reactors (Sw LR) on each ckt at both ends (190 km) 6. LILO of Khandwa(PG) – Itarsi(PG) 400 kV D/c (Twin Moose) line at Handiya S/s (22 km) 7. Installation of 1x125 MVAR, 420 kV bus reactor (2nd) at Neemuch PS *Note: TSP of Neemuch & Pachora PS shall provide space for above scope of work*	

(Detailed scope as approved by 24th NCT and subsequent amendments thereof)

IV. ISTS communication schemes approved by NCT:

Sl. No.	Name of Transmission Scheme	Implementation Mode	Implementation timeframe	Estimated Cost (₹)
1	Supply and Installation of additional FOTE and Ethernet cards at AGC & Critical Nodes of SR Region	RTM through POWERGRID	12 months from the date of allocation	1.02 Cr
2	Requirement of Additional FOTE at various ISTS nodes in ER due to exhaustion of existing capacity	RTM through POWERGRID	12 months from date of allocation	9.78 Cr
3	Deployment of FOTE (SDH Equipment) and amplifier solutions at Alipurduar S/s end for OPGW based communication and Teleprotection for 400 kV lines from PHEP-II, PHEP-I and Jigmeling of Bhutan to Alipurduar, India	RTM through POWERGRID	6 months from date of allocation	65 Lakhs

(Detailed scope as approved by 24th NCT and subsequent amendments thereof)

Annexure-I

List of participants of the 24th meeting of NCT

CEA:

1. Sh. Ghanshyam Prasad, Chairperson, CEA & Chairman, NCT
2. Sh. Ajay Talegaonkar, Member (E&C)
3. Sh. A.K. Rajput, Member (Power Systems)
4. Sh. Ishan Sharan, Chief Engineer (PSPA-I)
5. Sh. Y.K. Swarnkar, Chief Engineer (PSPM)
6. Sh. B.S. Bairwa, Chief Engineer (I/C) (PSPA-II)
7. Sh. Rahul Raj, Director (PSPA-II)
8. Sh. B.S. Meena, Director (PSPM)
9. Sh. Pranay Garg, Deputy Director (PSPA-II)
10. Sh. Manish Maurya, Deputy Director (PSPA-II)
11. Sh. Manish Kumar Verma, Assistant Director (PSPA-II)

MoP:

1. Sh. Om Kant Shukla, Director (Trans.)

MNRE:

1. Sh. Himanshu Prabhakar, Under Secretary

SECI:

1. Sh. Vineet Kumar, DGM
2. Sh. R.K. Agarwal, Consultant

CTUIL:

1. Sh. P C Garg, COO
2. Sh. Ashok Pal, Deputy COO
3. Sh. K K Sarkar, Sr GM
4. Sh. P.S. Das, Sr GM
5. Sh. Rajesh Kumar, Sr GM
6. Sh. Anil Kumar Meena, GM
7. Sh. Kashish Bhambhani, GM
8. Sh. Bhaskar Wagh, DGM
9. Sh. Pratyush Singh, DGM
10. Sh. Venkatesh Gorli, Chief Manager
11. Sh. Anupam Kumar, Manager

GRID India:

1. Sh. Rajiv Porwal, Director (SO)
2. Sh. Rahul Shukla, Chief Manager
3. Sh. Priyam Jain, Chief Manager
4. Sh. Raj Kishan, Deputy Manager
5. Sh. Gaurab Dash, Deputy Manager

RECPDCL

1. Sh. Satyabhan Sahoo, GM (Tech)

PFCCL

1. Sh. Deepak Kumar, AM

Expert Member

1. Sh. Ravinder Gupta, Ex Chief Engineer, CEA

POWERGRID

1. Sh. Anand Shankar, CGM
2. Sh. Sanjeev Kr. Chaudhary, Sr. GM
3. Sh. YKPN Singh, GM

***

Annexure-B.2.6

ଗ୍ରିଡ୍‌କୋ ଲିମିଟେଡ୍

GRIDCO Limited

(A Govt. of Odisha Undertaking)

Regd. Office: Janpath, Bhubaneswar-751022, ODISHA

Phone: 0674-2540098/2540877 Fax: 2541904/2543031; Web: www.gridco.co.in

CIN: U40109OR1995SGC003960

No. GRIDCO/377/2024-SGM(TRADING)/ 1639 Dt. 01/01/2024

From:

Director (Trading & Business Development),
GRIDCO, Bhubaneswar- 751022

To

Executive Director,
ERLDC, Kolkata - 700033

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

Ref: *Discussions held in the 216th OCC meeting dated 21.06.2024 and 220th OCC meeting dated 28.10.2024*

Dear Sir,

It is understood that deliberations have been held in recent OCC meetings for implementation of SPS at Baripada for trimming of about 300 MW load in and around Baripada & Balasore Grid Sub-Station command area to control the power flow on 400 kV Jamshedpur – Baripada ISTS line, irrespective of over drawl of Odisha under any situation.

However, under the present circumstances, GRIDCO is not in a position to give concurrence to the above proposed SPS due to the following reasons:

- Any load restriction is against the policy of the Government of Odisha especially during peak summer.
- Load restrictions cannot be enforced when there is no over drawl by the State of Odisha.
- The intra state Transmission network of Odisha has been built to cater to Odisha's own power demand and not to wheel any additional inter-state power (power flowing to other States).

Thus, it is requested to kindly review the proposal & continue support healthy Grid Operation for Odisha. However, our SLDC will continue to follow RLDC's instruction & guidelines to mitigate exigencies on Real time.

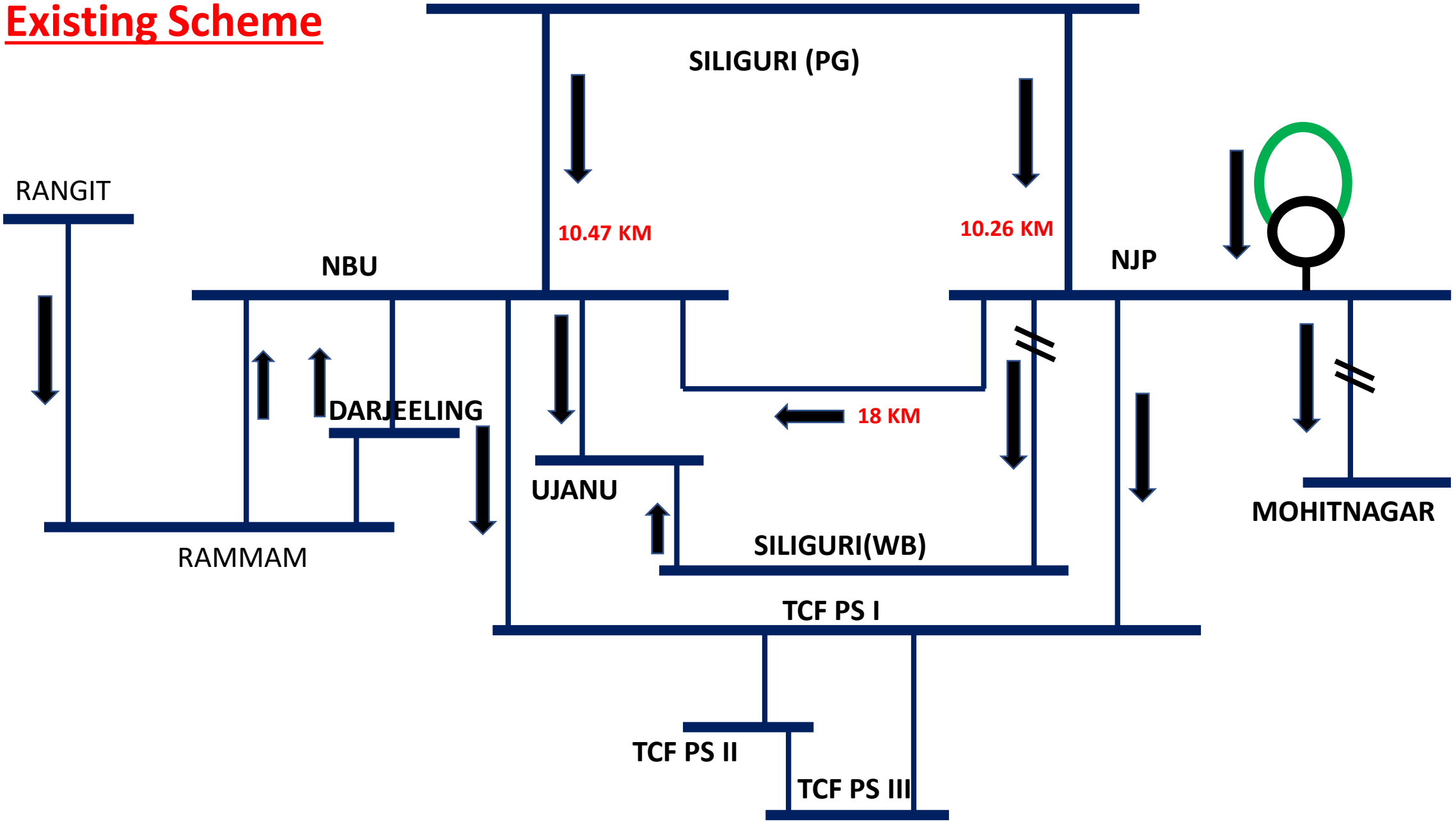
Yours faithfully,

Director (Trading & B.D)

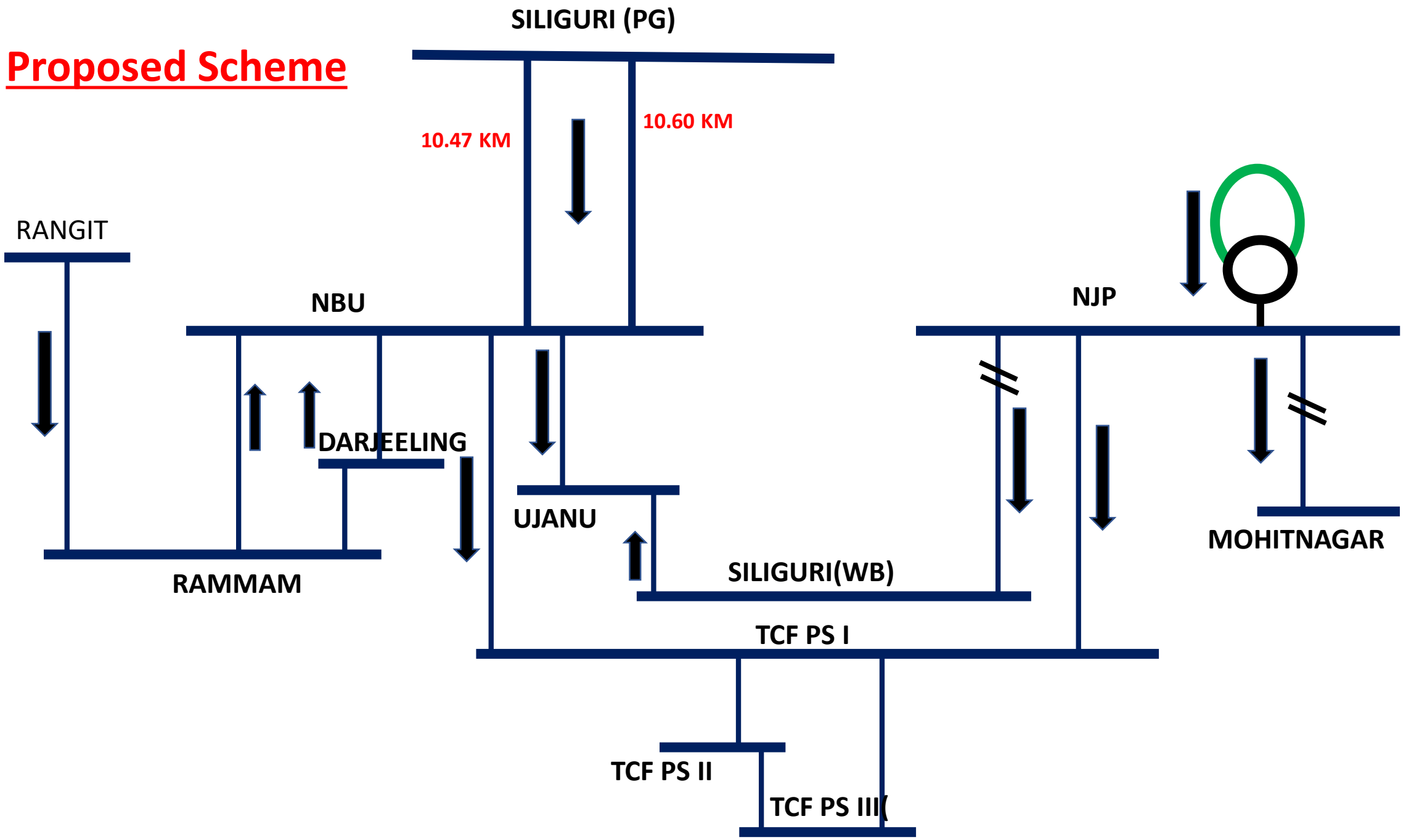
C.C.
1. Member Secretary (ERPC), Kolkata-700033
2. Director (SLDC), Bhubaneswar

Annex B.2.8

Existing Scheme



Proposed Scheme



Annex B.2.15

Approved Maintenance Schedule of Thermal Generating Units of ER during 2024-25 for the months of December'2024 to February 2025												
System	Station	Unit No.	Capacity (MW)	Period as per LGBR 2024-25		No. of Days	Period proposed in OCC		No. of Days	Whether as per LGBR or Not	Reason	Remarks
				From	To		From	To				
DVC	BTPS-A	1	500	25-12-2024	28-01-2025	35	25-03-2025	28-04-2025	35	NO	COH-Blr, Turb, Gen & HMI upgradation	Not Approved , may be discussed later
	Mejia TPS	1	500	01-01-2025	28-01-2025	28	_	_	_	NO	AOH- Boiler,LPT	NOT TO AVAIL
		7	210	01-01-2025	25-01-2025	25	_	_	_	NO	Boiler RLA & overhauling	NOT TO AVAIL
		5	250	01-08-2024	04-09-2024	35	25-12-2024	28-01-2025	35	NO	COH-Blr, Turb, Gen, FGD & De Nox	Approved
		3	210	01-07-2024	25-12-2024	178	07-02-2025	23-03-2025	45	NO	Boiler Overhauling & ESP Augmentation	Approved
	CTPS	8	250	01-09-2024	05-10-2024	35	15-12-2024	11-01-2025	28	NO	AOH-Blr, Turb, Gen & De Nox	Approved
	KTPS	1	500	01-12-2024	28-12-2024	28	_	_	_	NO	AOH- Boiler,LPT	NOT TO AVAIL
IPP	GMR	2	350	12-12-2024	31-12-2024	20	12-12-2024	31-12-2024	20	YES	BOH	Approved
	MPL	2	525	01-10-2024	14-11-2024	45	22-11-2024	06-01-2025	46	NO	NOx, COH	Approved
CESC	Budge Budge TPS	1	250	05-11-2024	19-11-2024	15	29-11-2024	13-12-2024	15	NO	AOH/ Boiler License Renewal	Approved
		3	250	07-12-2024	31-12-2024	25	27-12-2024	20-01-2025	25	NO	Annual Inspection and Minor preventive maintenance	Approved
HEL	Haldia TPP	1	300	10-01-2025	12-01-2025	3	_	_	_	NO	Annual Inspection	NOT TO AVAIL
		2	300	21-11-2024	05-12-2024	15	15-12-2024	17-12-2024	3	NO	Annual Inspection	Approved
BRBCL	Nabinagar TPS	2	250	08-01-2025	21-02-2025	45	08-01-2025	21-02-2025	45	YES	Boiler, HP, IP, LP OH & Generator rotor thread out	Approved
OPGC	IBTPS	3	660	01-02-2025	20-02-2025	20	_	_	_	NO	Annual Maintenance	NOT TO AVAIL
		2	660	01-08-2024	09-09-2024	40	05-01-2025	09-02-2025	36	NO	Annual Maintenance	Approved
NTPC	Barh-II	5	660	01-02-2025	07-03-2025	35	01-02-2025	07-03-2025	35	YES	Boiler + TG Bearing Inspection	Approved
	KhSTPS	2	210	05-07-2024	03-08-2024	30	10-02-2025	11-03-2025	30	NO	Boiler + Boiler RLA + Boiler Acid cleaning	Approved
	KhSTPS	3	210	10-02-2025	11-03-2025	30	_	_	_	NO	Boiler + Boiler RLA + Boiler Acid cleaning	NOT TO AVAIL
	FARAKKA	1	200	01-12-2024	14-01-2025	45	01-12-2024	14-01-2025	45	YES	Boiler +Turbine capital OH	Approved
		2	200	01-02-2025	22-02-2025	22	01-02-2025	22-02-2025	22	YES	Boiler + Turbine bearings inspection	Approved
NPGCL	New Nabinagar STPS	3	660	06-12-2024	23-02-2025	80	06-12-2024	23-02-2025	80	YES	Boiler modification	Approved
WBPDCL	Kolaghat TPS	5	210	07-02-2025	13-03-2025	35	07-02-2025	19-02-2025	13	YES	Boiler License renewal	Approved
	Sagardighi TPS	4	500	31-12-2024	03-02-2025	35	31-12-2024	03-02-2025	35	YES	AOH	Approved
	Bakreswar TPS	3	210	19-11-2024	22-12-2024	34	19-11-2024	19-12-2024	31	NO	AOH	Approved
	Santaldih TPS	6	250	26-08-2024	29-09-2024	35	25-11-2024	30-12-2024	36	NO	AOH	Approved

NOTE: **All the generating units are advised to strictly abide by the approved maintenance schedule for the period from Dec'24 to Feb'25 .**

Annex B.2.18

Sl No.	Station	Total Install Capacity	*Unit No*	Unit Size	Type of Fuel	GT			Owner	Type/	Make	CoD	Last Periodic Testing Date					Next palnned Periodic Testing Date				
						Rating(MVA)	Voltage Ratio	Present Tap (Total Tap)		Mode of Fuel transport			Real and Reactive Power Capability assessment.	Assessment of Reactive Power Control Capability as per CEA Technical Standards for Connectivity	Model Validation and verification test for the complete Generator and Excitation System model including PSS	Model Validation and verification of Turbine/Governor and Load Control or Active Power/ Frequency Control Functions.	Testing of Governor performance and Automatic Generation Control.	Real and Reactive Power Capability assessment.	Assessment of Reactive Power Control Capability as per CEA Technical Standards for Connectivity	Model Validation and verification test for the complete Generator and Excitation System model including PSS	Model Validation and verification of Turbine/Governor and Load Control or Active Power/ Frequency Control Functions.	Testing of Governor performance and Automatic Generation Control.
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PIYUSH SINGH, IAS
संयुक्त सचिव
JOINT SECRETARY

भारत सरकार
GOVERNMENT OF INDIA
विद्युत मंत्रालय
MINISTRY OF POWER
श्रम शक्ति भवन, रफी मार्ग
SHRAM SHAKTI BHAWAN, RAFI MARG
नई दिल्ली - 110001
NEW DELHI - 110001

Tel : 011-23714367
Email: singhp7@nic.in

Annex-B.2.19

DO. No. 22-1306/5/2020-OM

18th November, 2024

Respected Sir, / Madam,

The Crisis Management Plan (CMP) for Power Sector is reviewed regularly by Secretary (Security), Cabinet Secretariat. The last review meeting was held on 31.10.2023 wherein Secretary (Security) emphasized on the aspects of security of townships of power utilities and suggested to undertake the following measures:

i. Availability of details pertaining to local district authorities, revenue authorities, law enforcement, fire management authorities, etc., across the townships
ii. Adequate vetting of personnel/organisation responsible for township security by local law enforcement agencies.
iii. Regular conduct of mock drills in the townships, especially evacuation drills with ambulance and drills for handling major fire accidents.

2. Accordingly, CEA vide letter dated 13.12.2023 requested States and CPSUs to take appropriate action on the aforementioned suggestion to ensure prompt and effective handling of any crisis / emergency situation. (**Copy of letters attached**)

3. Action Taken Report on the implementation of the decision taken in above-mentioned meeting of Crisis Management Plan is required to be sent to the Cabinet Secretariat. I would, therefore, request you to kindly update us on the action taken on the aforementioned suggestions by November 25, 2024 positively.

With Regards,

Yours sincerely,

(Piyush Singh)

Chief Secretaries / Principal Secretaries (Energy / Power) of all the States/UTs

Copy to:-

Shri A. Balan, Member (Planning), Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi – 110066.

RIGHT TO INFORMATION

25.11.24 SE(O) AD(O)

स्वच्छ भारत
एक कदम स्वच्छता की ओर

Annexure D.1

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

1	**BIHAR**	**Demand (MW)**	**Energy Requirement (MU)**
	NET MAX DEMAND	5150	2905
	NET POWER AVAILABILITY- Own Sources	391	394
	Central Sector+Bi-Lateral	5248	4752
	SURPLUS(+)/DEFICIT(-)	489	2241
2	**JHARKHAND**		
	NET MAXIMUM DEMAND	1930	1159
	NET POWER AVAILABILITY- Own Source	422	208
	Central Sector+Bi-Lateral+IPP	1400	848
	SURPLUS(+)/DEFICIT(-)	-108	-103
3	**DVC**		
	NET MAXIMUM DEMAND	3100	2115
	NET POWER AVAILABILITY- Own Source	5500	3363
	Central Sector+MPL	180	211
	Bi- lateral export by DVC	2500	1801
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	80	-341
4	**ODISHA**		
	NET MAXIMUM DEMAND (OWN)	4400	2604
	NET MAXIMUM DEMAND (In Case of CPP Drawal of 900 MW(peak) and average drawl of 700 MW)	5300	2897
	NET POWER AVAILABILITY- Own Source	2511	2728
	Central Sector	1919	1447
	SURPLUS(+)/DEFICIT(-) (OWN)	30	1571
	SURPLUS(+)/DEFICIT(-) (I(In Case of CPP Drawal of 900 MW(peak) and average drawlm of 700 MW)	-870	1278
5	**WEST BENGAL**		
	WBSEDCL		
5.1	NET MAXIMUM DEMAND	5500	3327
	NET MAXIMUM DEMAND (Incl. Sikkim)	6721	3331
	NET POWER AVAILABILITY- Own Source (Incl. DPL)	5307	3019
	Central Sector+Bi-lateral+IPP&CPP+TLDP	2382	1685
	EXPORT (To SIKKIM)	5	4
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	968	1372
5.2	**CESC**		
	NET MAXIMUM DEMAND	1400	722
	NET POWER AVAILABILITY- Own Source	460	341
	IMPORT FROM HEL	440	288
	TOTAL AVAILABILITY OF CESC	900	629
	SURPLUS(+)/DEFICIT(-)	-500	-93
	WEST BENGAL (WBSEDCL+CESC+IPCL)		
	(excluding DVC's supply to WBSEDCL's command area)		
	NET MAXIMUM DEMAND	6900	4049
	NET POWER AVAILABILITY- Own Source	5767	3360
	CS SHARE+BILATERAL+IPP/CPP+TLDP+HEL	2822	1973
	SURPLUS(+)/DEFICIT(-) BEFORE WBSEDCL'S EXPORT	1684	1283
	SURPLUS(+)/DEFICIT(-) AFTER WBSEDCL'S EXPORT	1689	1279
6	**SIKKIM**		
	NET MAXIMUM DEMAND	127	64
	NET POWER AVAILABILITY- Own Source	44	61
	Central Sector	198	135
	SURPLUS(+)/DEFICIT(-)	115	132
	EASTERN REGION		
	NET MAXIMUM DEMAND	21607	12896
	NET MAXIMUM DEMAND ((In Case of CPP Drawal of 800 MW(peak) and average drawl of 700 MW)	22507	13189
	BILATERAL EXPORT BY DVC (Incl. Bangladesh)	2500	1801
	EXPORT BY WBSEDCL TO SIKKIM	5	4
	EXPORT TO B'DESH & NEPAL OTHER THAN DVC	642	478
	NET TOTAL POWER AVAILABILITY OF ER	26550	17678
	(INCLUDING CS ALLOCATION +BILATERAL+IPP/CPP+HEL)		
	SURPLUS(+)/DEFICIT(-)	1796	2499
	SURPLUS(+)/DEFICIT(-) (In Case of CPP Drawal for Odisha)	896	2206