



सत्यमेव जयते

भारत सरकार

Government Of India

विद्युत मंत्रालय

Ministry Of Power

पूर्वी क्षेत्रीय विद्युत समिति

Eastern Regional Power Committee

14 Golf Club Road, Tollygunje-70033 Website: www.erpc.gov.in

सं /NO. ERPC/EE/OPERATION/2024/ 1563

दिनांक/DATE: 07.02.2024

सेवा में /To

संलग्न सूची के अनुसार /As per list enclosed.

विषय : 24.01.2024 (बुधवार) को माइक्रोसॉफ्ट टीम्स ऑनलाइन मीटिंग प्लेटफॉर्म के माध्यम से आयोजित 211वीं ओसीसी बैठक का कार्यवृत्त - संबंध में।

Sub: Minutes of 211th OCC Meeting held on 24.01.2024 (Wednesday) through Microsoft Teams online meeting platform - reg.

महोदय/महोदया,
Sir(s)/Madam,

कृपया अपनी जानकारी और आवश्यक कार्रवाई के लिए 24.01.2024 (बुधवार) को माइक्रोसॉफ्ट टीम्स ऑनलाइन मीटिंग प्लेटफॉर्म के माध्यम से 10:30 बजे आयोजित 211वीं ओसीसी बैठक के संलग्न कार्यवृत्त देखें। यह ईआरपीसी वेबसाइट (www.erpc.gov.in) पर भी उपलब्ध है।

Please find enclosed **Minutes of 211th OCC Meeting** held on 24.01.2024 (Wednesday) through Microsoft Teams online meeting platform at 10:30 hrs for your kind information and necessary action. The same is also available at ERPC website (www.erpc.gov.in).

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

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

इसे सदस्य सचिव के अनुमोदन से जारी किया जाता है।

This issues with the approval of Member Secretary.

सम्मान /Regards,

आपका विश्वासी /Yours faithfully,

(S.Kejriwal)

SE (Operation)

एसई (ऑपरेशन)

LIST OF ADDRESSES:

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

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)।
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18. मुख्य अभियंता, एसएलडीसी, डीवीसी, हावड़ा (फैक्स नंबर 033-2688-5094)।
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20. कार्यकारी निदेशक, ईआरएलडीसी, पोसोको, कोलकाता, (फैक्स नंबर 033-2423-5809)
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22. महाप्रबंधक, खएसटीपीपी, एनटीपीसी, कहलगांव (फैक्स नंबर 06429-226082)
23. महाप्रबंधक, टीएसटीपीपी, एनटीपीसी, तालचेर, (फैक्स नंबर 06760-249053)
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25. महाप्रबंधक, पावरग्रिड, ईआर-I, पटना, (फैक्स नं.0612-2531192)
26. महाप्रबंधक (ओ एंड एम), पावरग्रिड, ओडिशा प्रोजेक्ट्स, साहिद नगर, भुवनेश्वर - 751 007
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35. एजीएम (ऑपरेशंस), मैथन पावर लिमिटेड।
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37. मुख्य विद्युत अभियंता, पूर्वी रेलवे, कोलकाता-700 001 (फैक्स नं.: 033-22300446)
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सीसी:

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



MINUTES
OF
211TH OCC MEETING

Date: 24.01.2024

Eastern Regional Power Committee

14, Golf Club Road, Tollygunge

Kolkata: 700033

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EASTERN REGIONAL POWER COMMITTEE

MINUTES OF 211TH OCC MEETING HELD ON 24.01.2024 (WEDNESDAY) AT 10:30 HRS

Member Secretary, ERPC chaired the 211th OCC meeting. On welcoming all the participants, he outlined the performance of ER grid during December 2023 and highlighted the following points:

- In December -2023, energy consumption of ER was **12,713.3 MU** which is **0.1 % more** than December -2022.
- In December -2023, Peak demand met of ER was **22,011 MW** which is **6.2% more** than December -2022.
The trend of energy consumption and Peak demand indicates rise in connected load compared to preceding year.
- During December -2023, **75.2 %** of the time, grid frequency was in IEGC band(49.90 Hz-50.05Hz)
- Thermal PLF of ER during December 2023 was **73.9 %**.
- Generating stations whose PLF was **more than 90%** during December -2023:

Utility	Generating station	PLF(%)
WBPDC	Bakreswar TPS	98
	Santalidih TPS	95
NTPC	Darlipalli STPS	99

- Transmission line (132 kV & above) commissioned during December -2023:
- **Trans-National Line:** 132KV-RAXAUL(NEW)- PARWANIPUR(Nepal) (Ckt-1 & Ckt-2) First Time charged by BSPTCL from Raxaul (New) end.
- **Coal stock position:**
 - There is marked improvement in coal stock position in Jharkhand(TVNL), Odisha(IB TPS) and WBPDC though it is still in sub-optimal range in some generating units especially WBPDC (Kolaghat TPS having only 17% stock) along with BRBCL (NTPC JV)(with 28% stock) and Raghunathpur TPP(DVC)(with 41% stock) need to diligently focus on building their actual coal stock as per their normative requirement.
 - WBPDC was advised to stress on coal stock building through possibility of import for avoiding coal crisis during April(High demand period) and also to update status of imported coal(if any) till date.
 - DVC was advised to sort out perennial coal shortage issue at Raghunathpur TPP thereby maintaining its coal stock at around 80% of normative requirement.

- Coal stock position (As on 20.01.2024) is detailed as follows:

SL.	Name of States/Power Stns.	% of Actual Stock vis-à-vis Normative Stock
1.	Jharkhand (TVNL)	43%
2.	Odisha/IBTPS	80 %
3.	WBPDC	34 % (Min. Kolaghat TPS-17%, Max.Sagardighi TPS-47 %)
4.	DVC	71 % (Min. Raghunathpur TPP-41 %; Max Chandrapura TPS - 116%)
5.	NTPC	77% (Min. BRBCL-28%; Max. Farakka STPS -116%)

- In this regard he highlighted that this is the most suited time to build coal stock keeping in view impending high demand season (Summer 2024) and thus advised all concerned GENCOs to strive for building optimum coal stock on sorting out various operational, commercial and administrative issues pertinent to coal linkage of respective generating units.
- Conservative transmission line availability with minimum allowed shutdown during Feb'2024 was pointed out amid predictable demand rise as well as onset of exam period in some ER states.
- He also urged NTPC to expedite COD declaration of the 2nd unit (660 MW) at North Karanapura TPP by sorting out the pending AGC linked communication issues.

ED, ERLDC at the outset underscored key challenges and noteworthy achievements made in realm of Eastern regional power sector as follows:

- Commissioning of 2 nos. 660 MW units by NTPC at Barh and North Karanapura respectively.
- FTC was given for 800 ckt km transmission line by ERLDC.
- Commissioning of 4 nos. bus reactors with two 125 MVAR reactors at important nodes namely Gokarna(WB) and Bidhannagar-I(WB)
- Resolution of connectivity issue of IBEUL through interim arrangement.
- Rigorous monitoring and subsequent commendable progress in work related to commissioning of 7th(interim) ICT at Subhasgram(PG).
- Powergrid was complimented for successful implementation and operationalization of upgraded AMR scheme in Eastern region.
- SLDCs:
 - West Bengal SLDC was complimented for being on the verge of completion of SAMAST project.
 - Bihar SLDC has already completed SAMAST project implementation.
 - DVC SLDC was appreciated for successful implementation of Chandrapura islanding scheme.
 - Improvement in receipt of SCADA data from Sikkim SLDC.
 - SLDC Odisha was commended for being involved in planning of transmission network for integration of Green Ammonia and hydrogen

- *Heartiest compliments were extended to all ER constituents for successful implementation of IEGC 2023 as well as new GNA regime.*

He also emphasized the significance of having skilled manpower in place across all SLDCs to successfully carry out manifold activities mandated in IEGC 2023.

1. PART-A: CONFIRMATION OF MINUTES

1.1. Confirmation of Minutes of 210th OCC Meeting held on 15th December 2023 physically at ERPC Secretariat, Kolkata

The minutes of 210th Operation Coordination Sub-Committee meeting held on 15.12.2023 was circulated vide letter dated 26.12.2023.

Members may confirm the minutes of 210th OCC meeting.

Deliberation in meeting

Members confirmed the minutes of 210th OCC meeting.

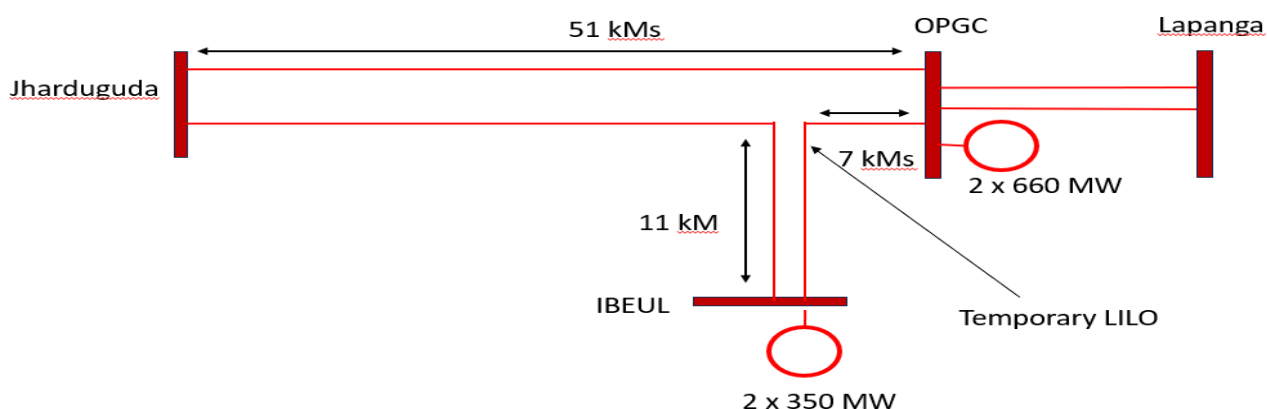
2. PART-B: ITEMS FOR DISCUSSION

2.1 Revival of 2X350 MW IBEUL-JSW, Jharsuguda: ERLDC

Following extensive discussions in ER-CMETS, OCC meeting of ERPC and a CEA meeting led by the chairperson, a temporary solution was agreed upon to reconnect the IBEUL power plant to the grid. As existing DTL viz 400 kV IBEUL- Jharsuguda is heavily damaged due to tower collapse and theft of conductor and restoration of same will require some time.

This temporary solution involves LILO connection on the existing 400 kV OPGC (Odisha) - Jharsuguda (PG) Circuit-2 at IBEUL. The line is owned by OGPTL (Indigrid). This temporary LILO connection will be permitted upto 30th March 2024 to facilitate commissioning activities at the IBEUL plant. However, commercial operation of the plant will only be allowed through the permanent 400 kV IBEUL- Jharsuguda Double Circuit (DTL) line, which is expected to be operational by the end of March 2024.

Sequence of event for reviving IBEUL Connectivity and Plant is attached as **Annexure B.1**.



ERLDC may update. Members may discuss.

Deliberation in meeting

ERLDC representative delivered a concise presentation encompassing detailed sequence of events from connectivity grant to IBEUL by CTU on 17.11.2023 till successful SPS commissioning by IBEUL on 14.01.2024.

IBEUL representative apprised the forum that new vendor has been engaged to expedite DTL construction which is expected to be completed by 30th March, 2024.

OCC advised IBEUL to share pertinent details of present work status and pending activities along with future action plan for the same to ERPC and ERLDC at the earliest.

2.2 Metering philosophy of 2X350 MW IBEUL-JSW, Jharsuguda & Odisha State: ERLDC

In the 210th OCC meeting, it was discussed that 400kV OPGC-Sundergarh -2 is to be LILO at IBEUL end on a temporary basis. In the interim arrangement shall be allowed only till 30.03.2024 or completion of DTL by M/S IBEUL, whichever is earlier, subsequent to which original ISTS line at LILO point shall be restored by IBEUL. The interim arrangement is shown below in Fig-1

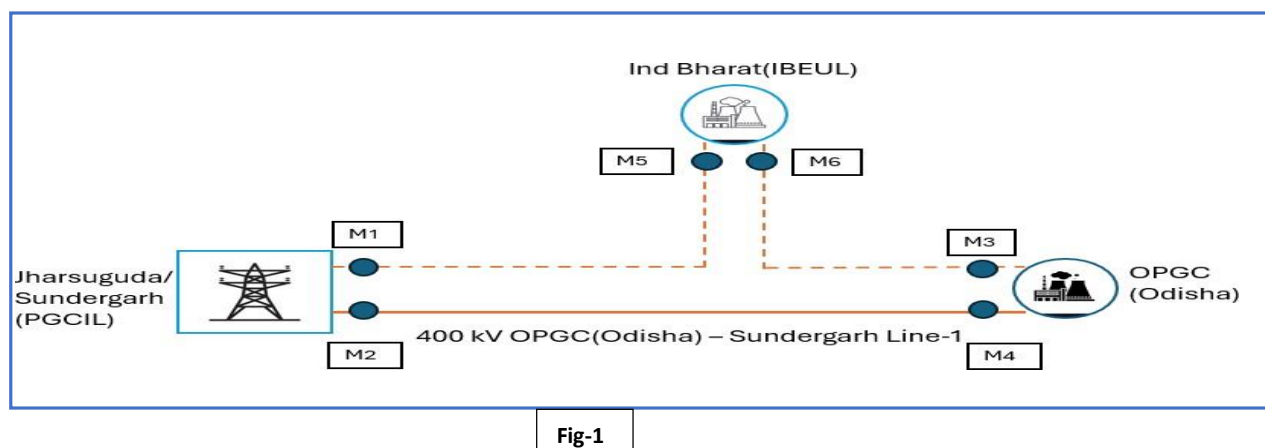


Fig-1

Accordingly, 400kV OPGC-Sundergarh -2 was made LILO at IBEUL. Prior to this, the drawl

of Odisha was taken considering the 400KV Sundergarh(PG) end meter data. After the LILO arrangement the proposed metering philosophy is as below-

1. IBEUL injection: summation of both meters at IBEUL end i.e., $\sum (M5 \text{ and } M6)$.
2. Gridco Drawl: summation of both meters at OPGC end i.e. $\sum (M3 \text{ \& } M4)$.

After the construction of a dedicated line by IBEUL i.e. 400 KV IBEUL-Sundergarh D/C , the injection of IBEUL shall be considered at 400kV Sundergarh-IBEUL at Sundergrh end. The final arrangement is shown below in Fig-2.

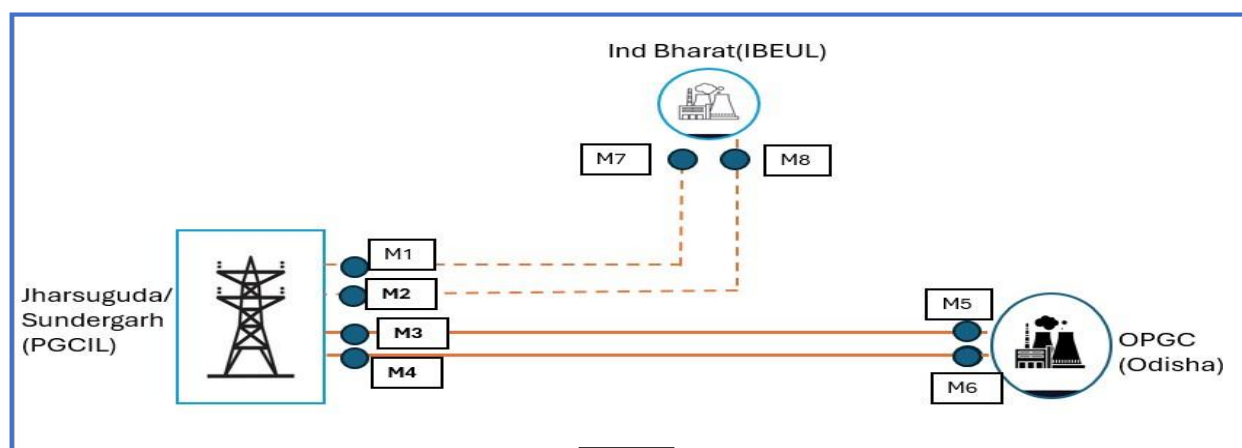


Fig-2

IBEUL injection: summation of both meters at Sundergarh end i.e., $\sum (M1 \text{ and } M2)$.

ERLDC may update. Members may discuss.

Deliberation in meeting

ERLDC representative briefly outlined the new metering methodology to be followed for OPGC Sundergarh line, detailed as follows:

- Till COD or commissioning of DTL (whichever is earlier) , infirm power injection or drawl by IBEUL shall be measured in meters M5 and M6 at IBEUL end while GRIDCO drawl shall be measured in meters M3 and M4 at OPGC end.
- After commissioning of DTL for IBEUL unit or its COD (whichever is earlier), IBEUL injection shall be measured in meters M1 and M2 at Sundergarh(PG) end while GRIDCO drawl shall be measured in meters M5 and M6 at OPGC end.

IBEUL representative intimated change in polarity of installed Genus meters as per advice of ERLDC for integrating both import and export data.

This Metering philosophy was accepted for implementation by both IBEUL and GRIDCO representatives and OCC also consented to the same.

2.3 SPS for LILO arrangement/Power evacuation of 350 MW IBEUL: ERLDC

W.r.t Agenda 2.9 of 210th OCC Meeting, SPS for IBEUL power evacuation has been implemented and tested successfully on 14.01.2024. However, communication is being done through OPGW with one channel only. JSW has given an undertaking that redundancy for SPS communication will be made available within 10 days. SPS as implemented is attached as **Annexure B.3**.

JSW & ERLDC may update. Members may discuss.

Deliberation in meeting

*ERLDC representative illustrated the intricate modalities followed in designing SPS logic (details attached at **Annexure B.3**) wherein current signals corresponding to MW values considering 0.95 p.f. have been set to initiate tripping of IBEUL unit with or without preset time delays. It was also apprised that the SPS logic though successfully implemented by IBEUL but currently operational through only one DTPC channel and thus reliability of the SPS scheme is compromised.*

IBEUL representative affirmed operationalization of redundant DTPC channel for SPS communication at the earliest after carrying out necessary simulation checks.

2.4 Approval for re-conductoring in 220kV Lines (more than 35 years in service) commissioned under CTS- Powergrid ER-II.

The transmission network build under CTS scheme was commissioned in mid of 1980's. List of lines are tabulated below: -

Sl. No.	Name of TL	Total Length of Line (in KM)	Route Length of Line (in KM) under POWERGRID	Name of conductor	Year of commissioning	Remarks
1	220kV D/C Birpara-Chukha TL	70	36	Zebra	1986	
2	220kV D/C Birpara-Alipurduar TL	57.5	57.5	Zebra	1987	
3	220kV D/C Siliguri-Kishanganj TL	108.26	108.26	Zebra	1986	
4	220kV D/C Dalkhola-Kishanganj TL	30.96	30.96	Zebra	1986	
5	220kV D/C Malda-Gazole TL	18.41	16.49	Zebra	1986	

6	220kV D/C Dalkhola- Gazole TL	99.24	97.52	Zebra	1986	
7	220kV D/C Birpara- Binaguri TL	80	80	Zebra	1986	
8	220kV D/C Siliguri- Binaguri TL	6	6	Zebra	1986	
9	220kV S/C Birpara- Malbase TL	41	38	Zebra	1988	
	Total		470.73			
10	220kV D/C Alipurduar- Salakati TL	101	101	Zebra	1987	Re-conductoring work is in progress under NERSS-XII

In most of the above-mentioned lines, the conductor damage from VD, MSCJ and repair sleeve, jumper, dead ends etc. have been noticed at several places. The damage might be occurring due to ageing of the conductors & earth-wire due to natural wear & tear. Also, conductor and earth wire getting snapped during seasonal temperature changes. Some snaps of sections of lines where breakage has been reported are enclosed.

The line tripping due to conductor & earth-wire snapping is gradually increasing. (2 Nos. conductor snapping incident occurred in 220kV Birpara-Binaguri Ckt-2 in the month of October-23 itself) In addition to the line outages which is severely deteriorating the transmission availability, it creates potential risk of any severe accident/hazard in the nearby area due to snapping of Conductor/Earth-wire. Further, any incident of conductor/earth-wire snapping at major crossings (Railway, NH X-ings) may lead to undesired safety hazard as well as damage to public/national property. List of tripping in said lines due to conductor & earth-wire breakage is enclosed.

All the above-mentioned lines are more than 35 years in service so have completed useful life as per CERC regulation. Considering the increase in conductor & earth-wire snapping incidents, the issue was taken up during 209th OCC Meeting. Upon detail discussion during the 209th OCC Meeting, OCC forum advised POWERGRID to submit a detailed survey report along with health assessment report of conductor installed in old 220kV Lines commissioned under CTS.

Accordingly, vide mail dated 12.12.2023, Powergrid ER-II has shared detail test report of old 220kV Line conductor carried out by NSIC Howrah along with detail survey report. From the test

report, it can be observed that the conductor sample has failed in mostly all technical parameters as tabulated below.

During 210th OCC Meeting, OCC forum technically agreed to the above proposal.

In view of above, it is proposed to consider the re-conductoring & earth-wire replacement of 220kV Lines commissioned under CTS under the ADDCAP 2024-2029 tariff block of Chukha Transmission System. A tentative cost for carrying out the re-conductoring work with HTLS conductor & Earth-wire replacement in above mentioned 9(Nine) lines 470.73 KM route length is approx. Rs. 281 Crores.

In 50th CCM meeting, Representative of ERPC highlighted the seriousness of re-conductoring & earth-wire replacement of 220kV Lines commissioned under Chukha Transmission System in view of the continuous increase in flow of power through these lines. Injection from Phunatsangchhu is also likely to be started shortly. Considering the facts reliability of the said lines of CTS is very important.

Representative of Powergrid submitted that the cost mentioned above is tentative and the final cost would be approved in CCM forum before further submission to CERC under ADDCAP 2024-2029 block.

Sl No.	Tests performed	Observation/Findings	Remarks
1	Freedom from defects (Visual Inspection)	Conductor found blackened & surface not smooth	Condition Poor
2	Surface Condition Test	Upon applying 50% of UTS Load, the diameter of the conductor measured at 4 places are more than the sum of minm. Specified diameter of the individual Al & Steel strands	Failed
3	Ultimate Breaking Load (Whole conductor & individual Aluminium Strands also)	Conductor strength found (114.25kN) way below the minm. UTS requirement of 130.32kN	Failed
4	D C Resistance test	Average value of resistance observed (0.12846 ohm/ KM) is way above the Max. allowable D C resistance (0.06868 ohm/ KM) of conductor as per TS.	Failed

Upon enquiring about the timelines for completion of project, representative of Powergrid submitted that nearly 24 months would be required from the date of approval and till commissioning of the lines.

CCM approved the re-conductoring work with HTLS conductor & Earth-wire replacement in above mentioned 9(Nine) lines 470.73 KM route length with approx. cost of Rs. 281 Crores. and further advised Powergrid to carry out the healthiness checkup work of tower members along with the re-conductoring work.

CCM referred the issue to the 51st TCC/ERPC meeting for further concurrence.

In 51st TCC Meeting, TCC agreed with the proposal for the re-conductoring work, including the replacement of Earth-wire (with OPGW), for the nine specified transmission lines, totalling 470.73

kms with an estimated cost of approximately Rs. 281 Crores and referred the agenda to 51st ERPC for further approval.

However, representative of CTU informed that the issue should be referred to CMETS along with CEA first for further study and ascertain the requirement of re-conductoring works and other necessary activities, if required.

In 51st ERPC Meeting, Powergrid was instructed to segregate the lines based on their criticality and to consider load patterns when deciding on HTLS conversions.

Only the critical lines should undergo HTLS conversion in a phased manner.

Powergrid was advised to submit a revised cost estimate accordingly, in the next TCC/ERPC meeting.

POWERGRID ER-II may explain & Members may discuss.

Deliberation in meeting

Powergrid ER-II representative stressed the necessity of reconductoring in all the nine proposed lines based on their frequent tripping and conductor ageing beyond 37 years.

West Bengal SLDC representative, on pointing out the substantial difference in cost between ACSR Zebra and HTLS conductors, submitted that every transmission line can't be upgraded to HTLS solely based on loading pattern of preceding year. He further requested to arrive at a decision only after carrying out relevant system study by CTU. It was also submitted that in the next 35 years, new generation and load centres might emerge. However, planning for such an extended period is challenging; therefore, we should focus on creating plans for the upcoming 5 years.

WBSETCL representative requested the forum that Powergrid should approach NLDC for PSDF grant towards proposed reconductoring job.

OCC decisions:

- *OCC urged Powergrid ER-II to reassess the reconductoring proposal by sequentially prioritizing the lines with proper justification based on strategic importance, load pattern, vulnerability to failure, frequency of conductor snapping, physical deformation of conductors and field survey so that the reconductoring job can be carried out in phased manner. Powergrid ER-II was further advised to submit an exhaustive report on the same.*
- *ERLDC was advised to put forth a comprehensive and holistic view with analysis of loading pattern of the proposed lines based on operational study. ERLDC representative affirmed of sharing detailed analysis of the proposed lines taking N-1 contingency and other network conditions into consideration.*
- *OCC suggested prioritizing the finalization of technical requirements for reconductoring, before determining the source of funding for it.*
- *OCC also opined to convene a special meeting at ERPC secretariat in physical mode comprising the concerned utilities to further deliberate and evolve a consensus on the issue.*
- *Powergrid ER-II and ERLDC were advised to share the necessary details with all concerned prior to the special meeting.*

2.5 Proposal for procurement of Reactor spares (cold spares) for Eastern Region – Powergrid ER-II.

In Eastern Region-II following Reactors are in service at present as POWERGRID asset:

STATE	VOLTAGE LEVEL	CAPACITY	IN SERVICE (In No)	Number of Spares available (In No)
WEST BENGAL	400 KV	125 MVAR	13	NIL
		80 MVAR	07	NIL
		63 MVAR	05	NIL
		50 MVAR	08	01 at Maithon
Odisha	400 KV	125 MVAR	15	01 at Angul
		80 MVAR	08	01 at Rourkela
		63 MVAR	07	NIL
		50 MVAR	06	01 at Rourkela
SIKKIM	400 KV	80 MVAR	02	NIL
	220 KV	31.5 MVAR	02	NIL
BIHAR	400 KV	125 MVAR	16	NIL
		80 MVAR	12	NIL
		63 MVAR	11	NIL
		50 MVAR	10	01 at Biharsharif
JHARKHAND	400 KV	125 MVAR	8	NIL
		80 MVAR	3	NIL
		63 MVAR	2	01 at Daltonganj
		50 MVAR	8	01 at Jamshedpur

However, apart from 400 KV, 50 MVAR Reactor at Maithon SS, no other spare Reactor are available till date. As per CEA spare norms (circulated in July-2020, refer page-18/19), for maintaining spares under GST regime, each state should be provisioned with respective sized Reactor. Accordingly, as per available sizing following Reactors are required at following locations: -

STATE	VOLTAGE	SIZE	STORAGE PLACE
WEST BENGAL	400 KV	125 MVAR	DURGAPUR SS
		80 MVAR	BINAGURI SS
		63 MVAR	BINAGURI SS

SIKKIM	400 KV	80 MVAR	RANGPO SS
	220 KV	31.5 MVAR	NEW MELLI SS
BIHAR	400 KV	125 MVAR	BIHARSARIFF SS
		80 MVAR	PATNA SS
		63 MVAR	MUZAFFARPUR SS
JHARKHAND	400 KV	125 MVAR	NEW RANCHI SS
		80 MVAR	RANCHI SS
ODISHA	400 KV	63 MVAR	ROURKELA SS

All above Reactors will be kept as regional spare and based upon urgency the same shall be utilised in ISTS system and as per CEA spare norms in state level.

Members may discuss and approve the technical requirements for further submission of cost data to subsequent meetings.

As per decision taken vide agenda point-B11 of 202nd OCC, forum agreed of the proposal for procurement of spare Reactor in ER as per CEA guideline. Further in minutes it is stated to update the detail cost implications in 49th CCM meeting, for deliberations.

Accordingly, details work out for tentative cost implications done and total value comes as, **Rs. 111,52,97,192/-** (RS. ONE HUNDRED AND ELEVEN CRORES FIFTY-TWO LACS NINETY-SEVEN THOUSAND ONE HUNDRED NINETY-TWO ONLY). Details cost break up given for reference purpose.

In the 49th CCM Meeting, West Bengal representative informed that the cost of keeping spare reactor for eastern Region is very high and procurement plan should be implemented in phase wise, so that financial burden on beneficiaries should be less. After detailed deliberation, CCM opined that the required number of spare reactors may be again deliberated in the OCC.

In 50th CCM meeting, Representative of ERPC submitted that the availability of spare reactors as per above-mentioned table is as per the CEA guidelines.

After detailed deliberations CCM advised for procurement of 125 MVA reactor for West Bengal, Bihar and Jharkhand and explore the possibilities for procurement of 63 MVAR Reactor in lieu of 50/80 MVAR Reactor for more redundancy.

CCM further advised Powergrid to submit the cost estimate in the upcoming TCC/ERPC meeting.

The issue was referred to the 51st TCC/ERPC Meeting.

POWERGRID ER-II may explain. Members may discuss.

Deliberation in meeting

Powergrid ER-II representative underlined CEA spares guidelines as the driving force behind putting up this agenda. It was submitted that CEA guidelines have been framed already taking into account failure rate and reliability of equipment. Non-feasibility of early restoration in event of outage amid non-availability of adequate spare reactors was also highlighted.

West Bengal SLDC representative submitted that CEA spare guidelines not being a regulatory mandate can't be mandatorily imposed on the constituents. He emphasized the burden imposed on end consumers due to overcompensation with reactors and over-redundancy with provision of spare reactors and thus requested considering the issue from techno-commercial perspective. He further pointed out the lack of any concrete study factoring in impact on voltage profile with reactors of various ratings in line with threshold limits as prescribed in CEA planning criteria. It was also submitted that operating procedure being different in different regions generalized guidelines can't be uniformly enforced across all regions.

He put forth the following justifications against provision of reactor spares:

- 1) Switching off lightly loaded lines can reduce bus voltage similar to using a 125/80/50 MVAR reactor, without causing system hazards. This makes excessive reactor installations and spare purchases unnecessary and costly for consumers.
- 2) In EHT sub-stations with more than one reactor, using a reactor from a station with higher voltage to replace a failed one will not affect the system. This allows flexibility until a new reactor is procured and installed.
- 3) Reactors maintained by the state have a low failure rate, with no permanent outages in over five years, suggesting that investing heavily in spares is not cost-effective.
- 4) In emergencies, a bus reactor can substitute for a line reactor failure. Our system has multiple 50/80 MVAR reactors available for such situations.
- 5) Dynamic studies are needed to check if TOV (Temporary Over Voltage) and switching over voltages stay within safe limits, both with and without line reactors of different capacities (50/63/80 MVAR).
- 6) Reactor maintenance is manageable, especially in winter. Opening one or two lightly loaded lines can handle reactor outages, making it easier than maintaining ICTs.
- 7) Regulatory guidelines vary by region, reflecting different grid challenges and consumer tariffs. Decisions should be based on financial and technical factors, including downtime management and the extent of VAR control measures, rather than a one-size-fits-all approach.

In this regard, WBSEDCL representative expressed serious concern on loading of most lines below SIL in winter, thereby imposing huge VAR charge on the consumers.

ERLDC representative, pointing out requirement of reactors at Alipurduar in absence of nearby generators for providing VAR support, also outlined the distinction between present requirement of reactors and provision of spare reactors.

OCC decisions:

- OCC suggested to explore feasibility of deploying 63 MVAR reactors in place of 50 MVAR capacity for optimization in spare requirement.
- OCC advised ERLDC to carry out detailed node-wise operational requirement study highlighting impact of modification in reactor rating.
- OCC also opined to convene a special meeting at ERPC secretariat in physical mode comprising the concerned utilities for further deliberation and consensus on the issue.

2.6 Requirement of OPTCL Power Line Crossings for reconductoring work of 400 KV D/C Rourkela-Sundargarh#1&3 POWERGRID Line: PGCIL ODISHA

Reconductoring work for package OH02 (i.e. Reconductoring Pkg. No. OH02 for reconductoring of Sundargarh (POWERGRID)-Rourkela (POWERGRID) 400kV D/C Twin Moose line 1 (Ckt 1 & 3)) with Twin HTLS conductor under ERES-XXIX Scheme is in progress since 18.10.2023. As on date, cumulative reconductoring work completed in Ckt -1 is 63.191 ckm out of total 141.503 ckm and in Ckt-3 is 56.710 ckm out of total 129.870 ckm.

In order to carry out balance reconductoring work, outage of following OPTCL lines are required for completion of OPTCL Powerline crossings.

- 220 KV D/C Budhipadar-Kuarmunda Line (Crossing at location no: 1084- 1085-1086) proposed plan for Xing on 17/01/2024 to 27/01/2024 on daily basis from 09:00 hrs to 17:00 hrs.
- 220 KV D/C Budhipadar-Tarkera Line (Crossing at location no: 1014- 1015) proposed plan for Xing on 17/01/2024 to 27/01/2024 on daily basis from 09:00 hrs to 17:00 hrs.
- 132 KV D/C Budhipadar-Rajgangpur Line (Crossing at location no: 1013- 1014) proposed plan for Xing on 17/01/2024 to 27/01/2024 on daily basis from 09:00 hrs to 17:00 hrs.
- 220 KV D/C Budhipadar-Tarkera Line (Crossing at location no: 944- 945) proposed plan for Xing on 17/01/2024 to 27/01/2024 on daily basis from 09:00 hrs to 17:00 hrs.
- 132 KV D/C Budhipadar-Rajgangpur-Kalunga Line (at location no: 944- 946) proposed plan for Xing on 17/01/2024 to 27/01/2024 on daily basis from 09:00 hrs to 17:00 hrs.

In this regard, communications made with ED (EHT-O&M), OPTCL-Burla letter dtd. 28.12.2023, DGM (EHT-O&M), OPTCL- Rajgangpur letter dtd. 08.12.2023 and MoM dtd. 01.01.2024 are enclosed for reference. Despite several follow ups, no confirmation has been received yet due to which reconductoring work in powerline crossings of OPTCL lines are pending.

PGCIL ODISHA may update. Members may discuss.

Deliberation in meeting

Powergrid Odisha representative briefly explained the agenda highlighted the necessity of completing works of 400 KV D/C Rourkela-Sundergarh at earliest as it forms part of important inter-regional link between Odisha (ER) and Western region. He also apprised that circuits-1&3 of the line are on same tower while circuits-2&4 on a different tower whose reconductoring shall be carried out after completion of circuits-1&3.

OPTCL representative submitted as follows:

- *Communication from Powergrid Odisha in this regard had been received and joint meeting with field personnel of OPTCL and PG(Odisha) was held on 01.01.2024 to identify the OPTCL lines to be put under shutdown for HTLS stringing of 400 KV D/C Rourkela-Sundergarh line (PG).*
- *Multiple 220 kV lines OPTCL including 220 kV D/C Budhipadar-Tarkera 220 KV D/C Budhipadar-Kuarmunda and 220 kV Budhipadar-Bamra are passing below while some 132 kV OPTCL lines including 132 KV D/C Budhipadar-Rajgangpur-Kalunga are passing in between tension points of 400 KV D/C Rourkela-Sundergarh line(PG).*

- Shutdown of only 132 kV lines instead of surrounding 220 kV lines(in charged condition) shall pose hindrance in reconductoring work for PG(Odisha) and will not serve the purpose.
- 220 kV D/C Budhipadar-Tarkera line shutdown can be granted only on completion of conductor replacement work in 220 kV D/C Tarkera-Rourkela(PG) line as Tarkera is largely dependent on Budhipadar and Rengali for reliable power supply. In absence of supply from Budhipadar , Rengali may not sustain the full load of Tarkera along with Rourkela Steel Plant, thereby compromising system redundancy.
- Reconductoring work of 220 kV D/C Tarkera-Rourkela(PG) line is expected to be completed by 1st week of March'24.

OCC decisions:

- OCC suggested PG(Odisha) to explore possibility of minimizing shutdown duration of OPTCL 220 kV and 132 kV lines.
- OCC advised PG(Odisha) to share the completion date of ongoing reconductoring work of 400 KV D/C Rourkela-Sundergarh line and thereafter possible line shutdowns of OPTCL shall be accordingly consented to.

2.7 Permanent outage of 105 MVA 400/220/33kV Y phase unit of ICT-1 at Jeypore SS to carry out 315 MVA ICT-1 replacement with new 500MVA,400/220/33kV Transformer: PGCIL ODISHA

4*105 MVA, 400/220/33 kV BHEL make ICT-1 at Jeypore was commissioned on 24.03.1990. The said equipment has completed its useful service life of more than 33 years. Based on the RLA assessment by CPRI, ICT-1 replacement with upgradation to 500MVA has been approved in the 45th ERPC meeting (MoM dtd. 11.04.2022 attached – Flag A) under the JTTS ADDCAP 2019-24 Block. Subsequently LOA have been issued to M/s Toshiba Transmission & Distribution Systems (India) Pvt. Ltd.

As per the approved POWERGRID scope of work, following preliminary works are to be carried out to make the front ready for the construction of the foundation for the new 500 MVA (TOSHIBA MAKE) ICT Transformer.

- Dismantling and dragging out of ICT-1 Y-ph unit.
- Demolition of existing ICT-1 Y-ph. Foundation.
- Foundation Construction for new 500MVA, 400/220/33 kV ICT.

As currently ICT-1 is under service; hence it is planned to carry out replacement work without taking shutdown of ICT-1. One unit (i.e. 1x 105MVA Y-phase unit) needs to be shifted from its location so that new foundation work can be started in its place. Proposed timelines for various activities for 500MVA ICT commissioning are as follows:

SL NO	ACTIVITY	TIMELINE
1	Dismantling and dragging out of 1x105 MVA Y-phase unit	1st February'24 to 7th February'24
2	Demolition of existing ICT-1 Y-phase Foundation	8th February'24 to 24th February '24

3	Construction of Foundation for new 500MVA, 400/220/33 kV TOSHIBA Make Transformer.	25th February'24 to 15th April'24
4	Erection & Commissioning of 500MVA, 400/220/33 kV TOSHIBA Make Transformer.	16th April'24 to 31st May 2024

PGCIL Submitted for approval of the permanent shutdown of 1x105 MVA Y-phase unit of ICT1 from 1st February 2024 to carry out foundation work for new 500 MVA, 400/220/33 kV (Toshiba Make) Transformer. The other three units (R-phase, B-phase and Spare phase) of existing 315 MVA (BHEL MAKE) ICT-1 will be in service till completion of foundation work for the new 500MVA Transformer.

PGCIL ODISHA may update. Members may discuss.

Deliberation in meeting

Powergrid Odisha representative briefly explained the agenda submitting that the ICT has completed 33 years in service, exceeding its useful life of 25 years.

He further apprised:

- *From 01.02.2024 to 15.04.2024, only 105 MVA Y-phase of the existing 315 MVA ICT bank shall be pulled out of service but the ICT shall continue in service through spare units, thus ICT availability will remain unhampered.*
- *500 MVA ICT foundation to be made after dismantling foundation for the Y-phase.*
- *Complete Shutdown of 315 MVA ICT shall be required to be availed from 16.04.2024 on completion of foundation works for 500 MVA ICT and on receipt of new 500 MVA ICT from Toshiba.*
- *Erection of new ICT planned from 16.04.2024 and to be completed by 31.05.2024.*
- *Remaining 315 MVA ICTs have their useful life remaining, thus no plan for immediate replacement of the same.*

OCC decisions:

OCC acceded to allowing shutdown of 105 MVA Y-phase of the existing 315 MVA ICT bank at Jeypore SS from 3rd February,2024 and thereafter complete shutdown of 315 MVA ICT bank may be availed after 15 days.

2.8 Permanent outage (DECAPPING) of 315 MVA 400/220/33kV ICT-2 at Rengali SS and Installation of New 500MVA ICT-2 (ADDCAP) under the JTTS ADDCAP 2019-24 Block: PGCIL ODISHA

315 MVA 400/220/33 kV BHEL make ICT-2 at Rengali SS was commissioned on 18.03.1990 and it has completed its service life of more than 33 years. Based on the RLA assessment by CPRI, ICT-2 replacement approval has been accorded in the 45th ERPC meeting (MoM attached – Flag A) under the JTTS ADD-CAP 2019-24 block. Subsequently LOA have been issued on dtd. 17.03.2023 to M/s Toshiba Transmission & Distribution Systems (India) Pvt. Ltd. (TOSHIBA INDIA). As per the approved POWERGRID scope of work, following preliminary works are to be

carried out to make the front ready for the Construction of the Foundation for the new 500 MVA (TOSHIBA MAKE) Transformer. • Dismantling and dragging out of existing 315 MVA ICT-2. • Demolition of existing 315 MVA ICT-2 foundation • Foundation construction/modification for new 500MVA, 400/220/33 kV ICT.

Proposed time lines for different activities for ICT replacement work are as follows:

S No	Activity	Timeline
1	Dismantling and dragging out of old 315 MVA ICT-2	01st Feb'24 to 07th Feb'24
2	Demolition of existing BHEL make 315 MVA ICT-2 foundation	08th Feb'24 to 20th Feb'24
3	Foundation construction/modification for new 500MVA, 400/220/33 kV ICT	21st February'24 to 31st March'24
4	Erection & Commissioning of 500MVA, 400/220/33 kV New TOSHIBA Make Transformer.	1st Apr'24 to 20th Apr'24

PGCIL Submitted for approval of the permanent shutdown of 315MVA ICT-2 from 1st Feb'24 till charging of new 500MVA ICT.

PGCIL ODISHA may update. Members may discuss.

Deliberation in meeting

Powergrid Odisha representative briefly explained the agenda submitting that the ICT has completed 33 years in service, exceeding its useful life of 25 years.

He further apprised:

- *Decision for replacing 315 MVA ICT with 500 MVA ICT was taken in 45TH TCC meeting and considering future demand requirement it has been decided to replace with 500 MVA ICT*
- *LOA for 500 MVA ICT has been placed to Toshiba in March'2023.*

OCC decision:

OCC, with due consultation with the stakeholders, granted shutdown of 315 MVA ICT-2 at Rengali SS from 15th March,2024.

2.9 Shutdown proposal of generating units for the month of February'2024-ERPC

Maintenance Schedule of Thermal Generating Units of ER during 2023-24 in the month of February '2024							
System	Station	Unit No.	Capacity (MW)	Period (as per LGBR 2023-24)		No. of Days	Reason
				From	To		
DVC	Mejia TPS	3	210	21.01.2024	14.02.2024	25	AOH-Blr, LPT, FGD
	Shutdown not availed as per 210th OCC						

	Bokaro-A TPS	1	500	15.02.2024	20.03.2024	35	COH- Blr, Turb, Gen
WBPDC	Kolaghat TPS	3	210	26.01.2024	14.02.2024	20	AOH/BOH
	Approved Date (As per 210th OCC)			02.02.2024	23.02.2024	21	AOH/BOH
NTPC	KhSTPS	7	500	10.01.2024	08.02.2024	30	Boiler Maintenance
	Shutdown not availed as per 210th OCC						
	Barh-II	5	660	20.01.2024	18.02.2024	30	BLR Modification Balance work
	Shutdown not availed as per 210th OCC						

Members may discuss.

Deliberation in meeting

DVC representative apprised of not availing shutdown of Bokaro –A TPS Unit-01 while affirmed revival of Mejia TPS Unit-03 by 31.01.2024 which was under forced outage since 10.01.2024. Planned shutdown of RTPS Unit-02 was sought for Boiler overhauling from 12.02.2024 to 07.03.2024 subject to revival of Mejia TPS unit-03 as per submitted timeline. Restoration of DSTPS U#2 by 09.02.2024 was also confirmed.

WBPDC representative , on acceding to already approved shutdown schedule of Kolaghat TPS Unit-03, apprised of rescheduling shutdown of Santaldih TPS U#5 from 26.01.2024 to 14.02.2024.

NTPC representative informed of adhering to already approved shutdown schedule of Kahalgaon TPS U#7 and Barh-II Unit-05.

OCC decision:

*The detailed shutdown schedule as approved by OCC is provided at **Annexure B.9.***

OCC advised all concerned generating units of ER to meticulously execute maintenance and overhauling related works in ongoing winter so that no planned shutdown entails to be availed from March 2024 to May 2024 in line with MOP guidelines.

2.10 Overhauling of Unit#6 (500 MW) of Kahalgaon-NTPC

As per approved LGBR 2023-24, overhauling of U#6 was scheduled from 12-08-2023 till 25-09-2023, which was further rescheduled to 01-03-2024 to 30-03-2023 in light of high demand period in September 2023. As per MOP guidelines dated 07-11-2023 no planned outages were to be taken from March to May 2024. Further LGBR data for 2024-25 was sent by NTPC on 08-09-2023.

As per above facts overhauling of Unit#6 of Kahalgaon may be included in LGBR 2024-25 as the unit has been running for near about 2 years since last overhauling in February 2022.

NTPC may update. Members may discuss.

Deliberation in meeting

Representative of NTPC requested for inclusion of Kahalgaon Unit#6 (500 MW) in planned shutdown schedule of LGBR 2024-25 with modified timelines.

OCC decision:

OCC opined to take up the issue in OCC meeting to be conducted in month of May'2024 for further deliberation while taking contemporary ER power scenario into consideration.

2.11 Islanding scheme study of Patna with NPGC by M/s Solvina - NTPC

M/s Solvina has been awarded the contract for studying islanding scheme of Patna with NPGC units. M/s Solvina has requested to carry out linearity test of generator and open loop testing of load and frequency response of generator. For above mentioned test, ramping up and down of units will be required as per conditions during the test. For implementation of study committee may allow scheduling as per requirements of test, further during test inhibition of SCED and TRAS, SRAS may also be allowed for the units.

NTPC may update. Members may discuss.

Deliberation in meeting

NTPC representative apprised of various recurrent tests to be conducted at NPGC for study of Patna islanding scheme involving unit operation from MTL to full load and back to MTL.

Upon enquiry from OCC, it was affirmed that the tests of variable duration need to be carried out frequently by M/S Solvina to ascertain generator frequency response

OCC decisions:

- *Considering the significance of implementing Patna islanding scheme, OCC granted consent for relaxation in SCED, TRAS and SRAS for NPGC while carrying out necessary tests and the same was agreed to by ERLDC.*

2.12 Exclusion of ramps given below minimum turndown level for calculation of ramp performance-NTPC

When Schedule of a station is below minimum turndown level, in such cases ramps given cannot be achieved due to technical constraint. Such ramps must not be included in calculation of ramp performance of a station.

NTPC may update. Members may discuss.

Deliberation in meeting

NTPC representative intimated the forum that the issue of ramp performance below minimum turndown level has already been sorted on receipt of clarification from ERLDC.

OCC acknowledged the same.

2.13 Minimum turndown Schedule issue of CERC order 18/SM/2023 - compliance: ERLDC

As per CERC order no 18/SM/2023 dated 18.12.2023, Discoms are allowed to requisite any quantum of power from its entitlement from the generator for D Day up to 1430 hrs on 'D-1' day. However, post 1430 hrs on 'D-1' day, requisition cannot be reduced below 55% of respective entitlement.

In this regard, ERLDC advised all stakeholders including SLDCs (Annexure B.13.A) regarding the compliance of said SM order. Also, NLDC informed that the rolling out of the corresponding locking features in Web based Scheduling Software would require some time. However, various instances of non-compliance with the direction have been observed. Instances are attached as **Annexure B.13.B**. Subsequently, ERLDC issued letter (**Annexure B.13.C**) to Bihar, West Bengal & Odisha about instances of the non-compliance and requested to adhere to the direction.

States are requested to follow the CERC direction.

ERLDC may update. Members may discuss.

Deliberation in meeting

ERLDC representative briefly spelled out the modifications incorporated in WBES portal to avoid downward revision of schedule below minimum turndown level(MTL) beyond 14:30 Hrs on D-1 day by imposing restriction on beneficiary requisition. Moreover, in case of Unit shutdown Despatch shall be based on SCED On bar Normative quantum thereby limiting SCED and TRAS despatch to on-bar quantum.

It was also apprised during the meeting that necessary modifications/changes made in WBES portal have gone live and an intimation mail has been sent to all concerned stakeholders detailing out the newly incorporated modifications and its necessary compliance thereof.

OCC decision:

OCC acknowledged the same.

2.14 Non-submission of digital proof for partial outage by NTPC: ERLDC

As per CERC order no 14/SM/2023 dated 30.09.2023, ISGS is permitted to revise DC due to partial outage, twice a day. Subsequently, CERC allowed 4 no of DC revisions in a day for partial outages with a monthly limit of 60 for thermal power plants. In this regard, the matter was discussed in the 209th OCC meeting under agenda point "Digital proof of downward DC revision" and it was decided that digital proof will be submitted to ERLDC with copy to ERPC on a weekly basis by next Wednesday.

However, no such compilation of digital proof is yet to be received from NTPC for its thermal plants other than Darlipalli and Kahalgaon for the week 8th to 14th January 2024. ERLDC communicated the list of instances to NTPC over mail on each Monday after completion of the week. Several reminder emails were also sent to NTPC in this regard. A list of instances and mail communication from ERLDC is attached in **Annexure B.14**.

NTPC may submit the digital proof as decided in the OCC forum.

ERLDC may update. Members may discuss.

Deliberation in meeting

ERLDC representative highlighted the non-receipt of digital proof against DC revision for partial outage from NTPC Kahalgaon-1, MTPS and Darlipalli generating units within stipulated timeframe.

NTPC representative, on acknowledging the same, assured to comply with timelines henceforth, for submitting digital proof against partial outage in their generating units.

ADDITIONAL AGENDA

2.15 Update on installation of 7th (Interim) 500 MVA ICT at 400 kV Subhashgram (PG): ERPC

As per the latest special weekly monitoring convened on 02.01.2024, Powergrid ER-II had confirmed the following:

MOU update:

- MOU has been signed between Powergrid and WBSEDCL on 26.12.2023.

Regarding ongoing works at Subhashgram (PG) and expected completion timeline:

- Piling work for the new foundation is expected to be completed by 01.02. 2024. Thereafter taking 15 days settling time into consideration, the plinth foundation shall be ready for the new 500 MVA ICT by 15.02.2024.
- Concrete foundation shall be put in place after completion of all piling works as well as on carrying out pile integrity test as per standard guidelines.
- Dismantling activity of spare 500 MVA ICT at Maithon (PG) has also started from 30.12.2023 and presently bushing dismantling is under progress which is expected to be

completed by 03.01.2024.

- 500 MVA ICT shall be placed on the new foundation at Subhashgram (PG) latest by 15.02.2024 after which no civil activity shall be left pending to be done.
- As the interim ICT was already commissioned earlier at Maithon (PG), all electrical activities including checking transformer oil quality shall take minimum time for completion as compared to commissioning a newly procured ICT.
- As per present progress in work, 500 MVA ICT is expected to be formally commissioned at Subhashgram (PG) by 15.03.2024.

ICT transportation Update:

- LOA for ICT transportation has been placed on 29.12.2023 with final awarded value of 4.18 crores.
- ICT transportation from Maithon (PG) is expected to commence from 5 th or 6 th of January,2024.

In 51 st TCC Meeting, Representative of Powergrid updated the following:

1. Kolaghat jetty is under construction. The same is expected to be completed by 23.01.2024

2. Loading of ICT from Maithon S/s is expected to commence from 14.01.2024.

TCC advised Powergrid to adhere to the timeline (expected timeline for commissioning of 500 MVA ICT by 15.03.2024) as submitted in the first monitoring meeting held on 28.11.2023.

TCC referred the agenda to 51 st ERPC.

In 51 st ERPC Meeting, ERPC noted and emphasized the importance of adhering to the schedule presented in the 1st monitoring meeting on 28th November 2023. ERPC further advised Powergrid to complete the commissioning of the 500 MVA ICT by 15th March 2024.

Deliberation in meeting

Powergrid ER-II representative apprised the following:

- *500 MVA ICT dismantling was completed on 03.01.2024 at Maithon(PG) and was filled with dry air.*
- *500 MVA ICT transportation has commenced from Maithon(PG) S/S on 23.01.2024 and has reached nearby rail gate.*
- *The ICT is expected to reach Kolaghat jetty within next 5 days and shall thereafter reach Budge Budge via waterways within another 3 days after seeking necessary clearance from Port Trust of India.*
- *Construction activities have been completed at Kolaghat jetty and height matching activities shall be carried out next on reaching of the consignment (500 MVA ICT)*
- *Preparatory activities for roll off of the ICT at Budge Budge jetty shall tentatively start from 25.01.2024.*
- *All piling works have been completed at Subhasgram(PG) and currently pile integrity test(PIT) is under progress. Piling work for ICT main block area has commenced from 22.01.2024.*

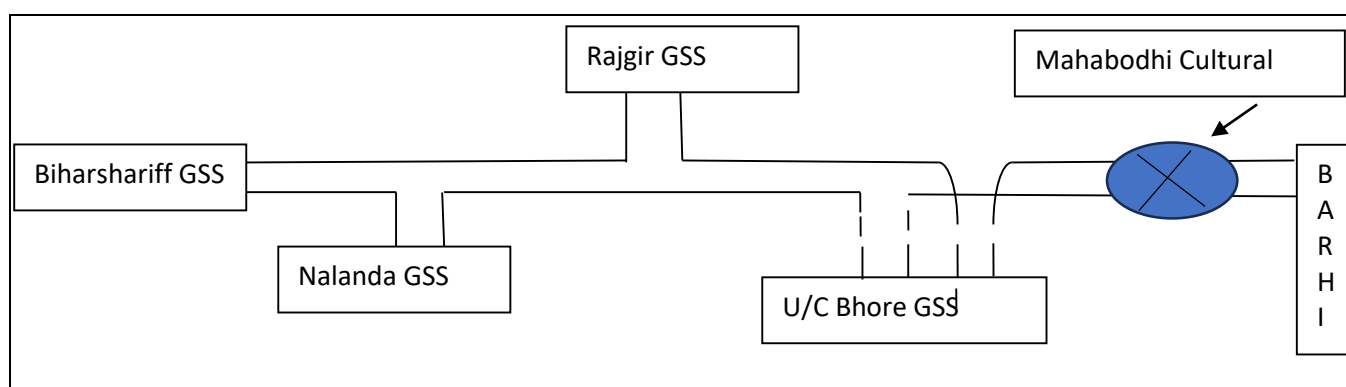
OCC commended the progress in activities for ICT transportation towards Subhasgram(PG) and reiterated the significance of adhering to the schedule of 500 MVA ICT(interim) commissioning as presented in the 1st monitoring meeting on 28th November 2023.

2.16 Charging Proposal of GSS Bhore- BSPTCL

Instant matter related to charging / commissioning of 132/33 KV GSS Bhore against NIT No.- 11/PR/BSPTCL/2021 as per request by executing Agency M/s KPM.

Following agenda for placing the matter in OCC has been drafted: -

- LILO of 132 KV D/C Barhi – Rajgir / Nalada Transmission Line at GSS Bhore has been approved in 1st meeting of ERPC held dated 14.02.2020 at Kolkata.
- Said GSS and Transmission line has been completed and GSS Bhore is ready for charging from GSS Rajgir & GSS Nalanda end.



- Further in 200th OCC meeting held dated 24.02.2023 it has been approved for dismantling of tower no.-218 & 237 due to construction of Mahabodhi Cultural Centre.
- Replacement of existing earth-wire between GSS Rajgir and LILO Point of GSS Bhore on 132 KV D/C Biharsharif – Nalanda – Rajgir – Barhi Transmission Line has been added in the scope of M/s Sterline against No.-79/PR/BSPTCL/2018 and it is expected to be completed within a month.
- Then data communication from GSS Bhore to SLDC will be done.
- Seeing the urgency of charging of GSS Bhore and code of conduct in the upcoming Indian General Election 2024 which is expected to be imposed within a month, it is requested to approve the charging proposal of GSS Bhore.

BSPTCL may explain. Members may Discuss.

Deliberation in meeting

Representative of Bihar explained the agenda in brief.

OCC granted consent to the charging proposal of GSS Bhore.

2.17 SEM Vs ABT data difference causing DSM loss to NTPC Darlipali- NTPC

The units are operated looking at ABT meter, where as the data in SEM meter is different from ABT at any particular instant. This is leading to DSM loss and details of meter data attached at **Annexure B.17** .

NTPC may update. Members may discuss.

Deliberation in meeting

*NTPC representative outlined the considerable financial loss incurred owing to considerable difference in SEM and ABT meter data as well as non-availability of SEM meter data in real time. Details of meter data attached at **Annexure B.17**.*

OCC decision:

- *OCC opined that the mismatch in meter data may be owing due to different technical specifications of different OEM meters.*
- *OCC thereby advised NTPC to replace some of the ABT meters with Genus make meters on pilot basis to check whether the difference still exists or not.*

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

3.1. ER Grid performance during December 2023.

The average and maximum consumption of Eastern Region and Max/Min Demand (MW), Energy Export for the month December-2023 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)
412 MU	438 MU 29.12.2023	22011 MW, 27.12.2023 at 10:20 Hrs.	13474 MW, 18.12.2023 at 04:09 Hrs.	4582	4502

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

Deliberation in meeting

The grid performance of ER for the month of December 2023 was highlighted.

3.2. Ensuring the healthiness of ADMS

State	Criteria for ADMS operation	Number of instances for which ADMS criteria satisfied	Number of instances for which detail received	Discussion regarding previous month performance	Update in 209 th OCC meeting
West Bengal	1. System Frequency < 49.7 Hz 2. WB over-drawl > 150 MW 3. Delay = 4 min	0	-	-	-
Jharkhand	1. System Frequency < 49.9 Hz 2. Jharkhand over-drawl > 25 MW 3. Delay = 3 min	241	Nil	-	-
DVC	1. System Frequency < 49.9 Hz	5	Nil	-	-

	2. DVC over-drawl > 150 MW 3. Delay = 3 min				
Odisha	1. System Frequency < 49.9 Hz 2. Odisha over-drawl > 150 MW 3. Delay = 3 min	9	Nil	-	-

Members may note.

Deliberation in meeting

Members noted.

3.3. Commissioning status of ADMS

Automatic demand management scheme (ADMS) has been already commissioned in West Bengal, DVC, Odisha and Jharkhand. However, for Bihar it is yet to be implemented, the last status as confirmed in the earlier meeting is as follows.

SI No	State/Utility	Logic for ADMS operation	Target Date
1	Bihar	F < 49.7 AND deviation > 12 % or 150 MW	

Bihar may update the status of the implementation of ADMS scheme.

Members may note.

Deliberation in meeting

Members noted.


3.4. Primary frequency response of generating units in ER

The availability of sufficient primary frequency response is one of the fundamental requirement of power system operation not only from reliability point of view but also from regulatory compliance point of view. Based on the assessed FRC re-testing of primary frequency response can be recommended. Therefore, the accurate and high-resolution data from generator end is extremely important in absence of which assessment of FRC is done as per low resolution ERLDC SCADA data. The plant wise data submission statistic for frequency event flagged by ERLDC upto 30.11.2023 is given below:

STATIONS	17.12.2023	05.01.2024
	13:01	05:16
ADHUNIK	Received	Pending
BARH	Pending	Pending
BRBCL	Pending	Pending
DARLIPALLI	Received	Pending
DIKCHU	Pending	Pending
FARAKKA	Pending	Pending
GMR	Received	Pending
JITPL	Pending	Received
KAHALGAON	Pending	Pending
MPL	Received	Received
NPGC	Received	Pending
TALCHER	Received	Pending
TEESTA III	Pending	Pending
TEESTA V	Pending	Pending
North Karanpura	Pending	Pending
ADHUNIK		
BARH		
BRBCL		
DARLIPALLI		
DIKCHU		
FARAKKA		
GMR		
JITPL		
KAHALGAON		
MPL		

STATIONS	17.12.2023	05.01.2024
	13:01	05:16
NPGC		
TALCHER		
TEESTA III		
TEESTA V		
North Karanpura		

In view of the same all utilities are once again requested to kindly look into the matter and take necessary action to ensure consistent.

 = Data received

Data submission for every frequency event flagged by ERLDC.

 = Data not received

Members may note.

Deliberation in meeting

Members noted.

4. PART-D: OPERATIONAL PLANNING

4.1. Anticipated power supply position during February 2024

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of February 2024 were prepared by ERPC Secretariat (**Annexure D.1**) on the basis of LGBR for 2023-24 and feedback of constituents, keeping in view that the units are available for generation and expected load growth etc.

Members may update.

Deliberation in meeting

*The updated anticipated power supply position for February 2024 is provided at **Annexure D.1***

4.2. Major Thermal Generating Units/Transmission Element outages/shutdown in ER Grid (as on 18-01-2024)

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	BARH	BIHAR	NTPC	1	660	Initially the unit was out due to Boiler Tube Leakage, from 00:00 Hrs. of 24/11/2023 the unit was taken under annual overhauling. Unit was out for capital overhauling till 05/01/2024. Unit is out for rotor replacement work w.e.f. 06/01/2024	19-Nov-2023
4	SOUTHERN	WEST BENGAL	CESC	1	67.5	Taken under shutdown from 00:00 hrs of 12.01.2024 for 20 days for carrying out condenser retubing job. Earlier it was under	29-Nov-2023

						RSD from 29.11.2023.	
5	NABINAGAR (BRBCL)	BIHAR	NTPC	1	250	Annual Overhauling	01-Dec-2023
6	DPL	WEST BENGAL	WBPDC	7	300	Previously out due to Flashin excitation system. Then taken for annual overhauling since 00:00 hrsof 13.12.2023.	12-Dec-2023
7	NABINAGAR (NPGC)	BIHAR	NTPC	2	660	Eco Flow Low during load reduction, later unit Annual Overhauling for 60 Days	15-Dec-2023
8	GMR	ODISHA	GMR- Infra	2	350	Capital Overhauling	16-Dec-2023
9	HEL HIRANMAYEE	WEST BENGAL	HEL	1	150	Coal Shortage	03-Jan-2024
1 0	TSTPP	ODISHA	NTPC	1	500	Annual Overhauling	04-Jan-2024
1 1	BUDGE-BUDGE	WEST BENGAL	CESC	2	250	Annual overhauling	04-Jan-2024
1 2	BANDEL TPS	WEST BENGAL	WBPDC	5	215	Unit Overhauling	05-Jan-2024
1 3	SAGARDIGHI	WEST BENGAL	WBPDC	3	500	Turbine shaft vibrationhigh	07-Jan-2024
1 4	MEJIA TPS	DVC	DVC	3	210	Tripped due to Generator Protection (inter- turn differential relay operated)	10-Jan-2024
1 5	BARAUNI TPS	BIHAR	NTPC	8	250	Boiler tube leakage	12-Jan-2024
1 6	DSTPS	DVC	DVC	2	500	Unit overhauling	13-Jan-2024
1 7	Sterlite	ODISHA	SEL	3	600	PA Fan Problem	14-Jan-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:

NIL

c) Hydro Unit Outage Report:

S. NO	STATION	STATE	AGENCY	UNIT NO	CAPACITY (MW)	REASON(S)	OUTAGEDATE
1	BALIMELA HPS	ODISHA	OHPC	3	60	The unit taken out under R&M since 08/07/2022 for 18 months.	08-Jul-2022
2	BALIMELA HPS	ODISHA	OHPC	4	60	The unit taken out under R&M since 08/07/2022 for 18 months.	08-Jul-2022
3	TLDP	WEST BENGAL	WBPDC	1	33	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
4	TLDP	WEST BENGAL	WBPDC	2	33		
5	TLDP	WEST BENGAL	WBPDC	3	33		
6	TLDP	WEST BENGAL	WBPDC	4	33		
7	TEESTA STG III Hep	SIKKIM	TUL	1	200		
8	TEESTA STG III Hep	SIKKIM	TUL	2	200		
9	TEESTA STG III Hep	SIKKIM	TUL	3	200		
10	TEESTA STG III Hep	SIKKIM	TUL	4	200		
11	TEESTA STG III Hep	SIKKIM	TUL	5	200		
12	TEESTA STG III Hep	SIKKIM	TUL	6	200		
13	DIKCHU Hep	SIKKIM	SKPPL	1	48		
14	DIKCHU Hep	SIKKIM	SKPPL	2	48		
15	TEESTA HPS	SIKKIM	NHPC	1	170		
16	TEESTA HPS	SIKKIM	NHPC	2	170		
17	TEESTA HPS	SIKKIM	NHPC	3	170		

18	INDRAVATI	ODISHA	OHPC	2	150	Capital Maintenance	23-Nov-2023
19	CHIMPLIMA HPS / HIRAKUD II	ODISHA	OHPC	1	24	Capital Overhauling	15-Dec-2023
20	BALIMELA HPS	ODISHA	OHPC	8	75	Annual Maintenance work	18-Dec-2023
21	RANGIT HPS	SIKKIM	NHPC	1	20	Capital maintenance	02-Jan-2024
22	RANGIT HPS	SIKKIM	NHPC	3	20	Special annual maintenance	02-Jan-2024
23	BURLA HPS/HIRAKUD I	ODISHA	OHPC	6	43.65	Maintenance work	06-Jan-2024

d) Long outage report of transmission lines (As on 15.01.2024):

Transmission Element / ICT	Outage From	Reasons for Outage
220/132KV 100 MVA ICT II AT LALMATIA	22.01.2019	Commissioning work of 220/132KV, 100MVA Transformer and its associated control Panel under progress.
220 KV PANDIABILI - SAMANGARA D/C	03.05.2019	Tower Collapsed during Cyclone FANI (Restoration project is entrusted upon PGCIL & 220kV Samangara-Pandiabili ckt-I&II are anti-theft charged from Pandiabili end from loc no.01 to loc no.74)
220/132KV 100 MVA ICT 3 AT CHANDIL	30.04.2020	Due to Fire hazard ICT damaged and burnt.
400/220KV 315 MVA ICT 4 AT JEERAT	09.04.2021	Due to Fire hazard ICT damaged and burnt. It was decided that 315MVA, 400/220KV spare ICT from Regional Pool at Malda to be replaced in place of defective 315 MVA ICT (4th) at Jeerat 400 KV S/S(WB). Work under progress.

220KV-FSTPP-LALMATIA-I	21.04.2021	Conductor stringing 12.965 km has been completed and Stringing between Tower Loc. no. 152 to 159 is under progress. Transmission line is idle charged between Lalmatia GSS end to Tower Loc.no.169
220KV-MUZAFFARPUR(PG)-GORAUL(BH)-1	11.06.2022	Main Bay is under breakdown due to flashing in GIS module
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 Destraining of conductor of both circuits and Earthwire between tension tower no. 218-237 in same line.
132KV-NALANDA-BARHI(DVC)-1	25.03.2023	
220KV-TSTPP-MEERAMUNDALI-2	10.06.2023	Tower collapse at loc no 41, 42 (from Meramundali end). Ckt1 charged through ERS.
400KV/220KV 315 MVA ICT 3 AT BIDHANNAGAR	31.08.2023	For jumpering of 220 kV dropper from strung bus at 315MVA ICT-3. 220KV side Bay of said ICT is under construction at Bidhannagar.
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-1 &3	26.10.2023	Reconductoring work
400KV-BINAGURI-BONGAIGAON-2	27.10.2023	Reconductoring work
220KV/132KV 160 MVA ICT 2 AT MALDA	30.11.2023	For shifting of the ICT- 2 from 132KV AIS to GIS
400KV-INDRAVATI(PG)-INDRAVATI(GR)	28-12-2023	Isolator problem at GRIDCO end
400KV-BINAGURI-TALA-1	11-12-2023	Maintenance Work
400KV-ALIPURDUAR (PG)-PUNASANGCHUN-JIGMELING-2	08-01-2024	To rectify polarity, change in Energy meterat Bhutan end

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 meeting

Members noted.

4.3. Commissioning of new units and transmission elements in Eastern Grid in the month of December-2023.

The details of new units/transmission elements commissioned in the month of December - 2023 based on the inputs received from beneficiaries:

NEW ELEMENTS COMMISSIONED DURING DECEMBER, 2023							
GENERATING UNITS							
SL · N O.	Location	OWNER/ UNIT NAME	Unit No/ Source	Capacity added (MW)	Total/ Installed Capacity (MW)	DATE	Remarks
NIL							
ICTs/ GTs / STs							
SL ·	Agency/ Owner	SUB- STATION	ICT NO	Voltage	CAPACITY (MVA)	DATE	Remarks

N O.				Level (kV)			
1	NTPC NORTH KARANP URA	NTPC NORTH KARANP URA SS	ST-2	400/11.5	120	18-12- 2023	ST-2 first time charged through tie bay
2	JUSNL	LATEHA R (JUSN L)	ICT-2	400/220	315	02-12- 2023	400/220 Kv 315 MVA ICT- 2 at latehar(JUSNL) charged on no load from 220 kv side.

TRANSMISSION LINES

SL N O.	Agency/ Owner	LINE NAME	Length (KM)	Conductor Type	DATE	Remarks
1	BSPTCL	132KV- RAXAUL(NEW)- PARWANIPUR(Nepa l)-1	26.8(India) + 15(Nepal)	ACSR Panther	26-12- 2023	Anti-theft charged from Raxaul (New) end upto Indian side location no 92
2	BSPTCL	132KV- RAXAUL(NEW)- PARWANIPUR(Nepa l)-2	26.8(Indi a)+ 15(Nepal)	ACSR Panther	26-12- 2023	Anti-theft charged from Raxaul (New) end upto Indian side location no 92

LILO/RE-ARRANGEMENT OF TRANSMISSION LINES

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

BUS/LINE REACTORS

SL NO.	Agency/ Owner	Element Name	SUB- STATION	Voltage Level (kV)	DATE	Remarks
1	JUSNL	LATEHAR(JUSNL) - 400KV - Bus 1	LATEH AR (JUSNL)	400	19-12- 2023	

HVDC /AC Filter bank / FACTS DEVICE associated System						
SL · N O.	Agency/ Owner	Element Name	SUB- STATION	Voltage Level (kV)	DATE	Remarks
NIL						
BAYS						
SL · N O.	Agency/ Owner	Element Name	SUB- STATION	Voltage Level (kV)	DATE	Remarks
1	JUSNL	400KV TIE BAY (Bay No-411) OF (CHANDWA(PG) -1 AND FUTURE) AT LATEHAR(JUSNL)	LATEHAR (JUSNL)	400	19-12-2023	
2	JUSNL	400KV MAIN BAY OF Chandwa (PG)-1 (Bay No-410) at LATEHAR(JUSNL)	LATEHAR (JUSNL)	400	19-12-2023	
3	JUSNL	400KV TIE BAY (Bay No-408) OF (CHANDWA(PG) -2 AND FUTURE) at LATEHAR(JUSNL)	LATEHAR (JUSNL)	400	19-12-2023	
4	JUSNL	400KV TIE BAY OF (315 MVA ICT 1 AND PATRATU-2) (Bay No-402) AT LATEHAR(JUSNL)	LATEHAR (JUSNL)	400	19-12-2023	
5	JUSNL	400KV MAIN BAY OF CHANDWA(PG) -2 AT LATEHAR(JUSNL)	LATEHAR (JUSNL)	400	19-12-2023	
6	JUSNL	400KV TIE BAY OF (315 MVA ICT 2 AND PRATU-1) (Bay No-405) AT LATEHAR(JUSNL)	LATEHAR (JUSNL)	400	19-12-2023	
7	JUSNL	400KV MAIN BAY OF	LATEHAR (JUSNL)	400	19-12-2023	

		Patratu#1(Bay No-404) at LATEHAR(JUSNL)				
8	JUSNL	220KV MAIN BAY OF 315 MVA ICT 2 (Bay No- 207) AT LATEHAR(JUSNL)	LATEHAR (JUSNL)	220	02-12-2023	FTC Done (No load charging from 220KV side)
9	JUSNL	220KV MAIN BAY OF 315 MVA ICT - 1(Bay No-205) AT LATEHAR(JUSNL)	LATEHAR (JUSNL)	220	02-12-2023	
10	NTPC NORTH KARANPURA	400KV TIE BAY OF (ST-2 AND FUTURE) (Bay No-408) AT NORTH KARANPURA	NTPC NORTH KARANPURA	400	18-12-2023	

Members may note.

Deliberation in meeting

Members noted.

4.4. UFR operation during the month of December 2023.

Frequency profile for the month as follows:

MONTH	MAX	MIN	% LESS IEGC BAND	% WITHIN IEGC BAND	% MORE IEGC BAND
	(DATE/TIME)	(DATE/TIME)			
Dec, 2023	50.41 Hz on 17-12-2023 at 06:04 hrs	49.53 Hz on 07-12-2023 at 09:17 hrs	7.8	75.2	17.0

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

Members may note.

Deliberation in meeting

Members noted.

ANNEXURE A

List Of Participants

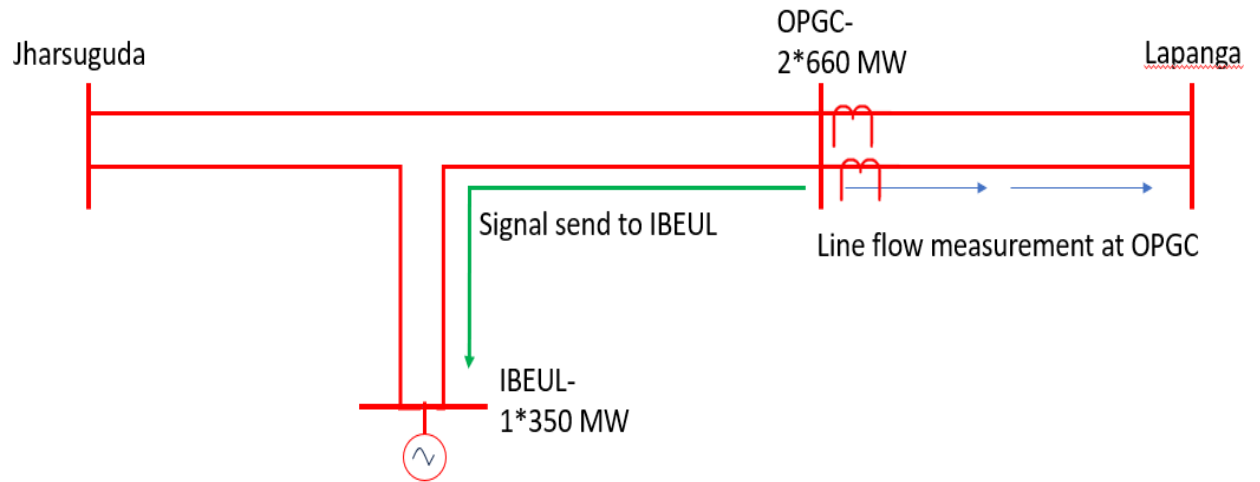
Name	First Join	Last Leave	In-Meeting Duration	Participant ID (UPN)
ERPC Kolkata	1/24/24, 10:28:34 AM	1/24/24, 2:15:18 PM	3h 46m 44s	ERPC@KolkataMST.onmicrosoft.com
Tenzin Dirji	1/24/24, 10:28:38 AM	1/24/24, 11:28:26 AM	59m 48s	
Dhanurjay Nikhandia {धनुर्जय निखण्डिया}	1/24/24, 10:28:39 AM	1/24/24, 3:24:51 PM	4h 56m 12s	60000765@powergrid.in
SMS SAHOO, DGM(Elect), OPTCL	1/24/24, 10:28:39 AM	1/24/24, 10:38:34 AM	9m 55s	
ED ERLDC	1/24/24, 10:28:39 AM	1/24/24, 2:31:59 PM	4h 3m 20s	
Aarif M (DIKCHU HEP)	1/24/24, 10:28:39 AM	1/24/24, 11:55:44 AM	1h 26m 4s	
Laldhari Kumar	1/24/24, 10:28:39 AM	1/24/24, 2:03:55 PM	3h 35m 15s	laldhari@erldc.onmicrosoft.com
WB SLDC	1/24/24, 10:28:39 AM	1/24/24, 2:22:52 PM	3h 54m 12s	
S.Kejriwal, ERPC	1/24/24, 10:28:39 AM	1/24/24, 2:15:14 PM	3h 46m 34s	
CE CPD WBSETCL	1/24/24, 10:28:40 AM	1/24/24, 2:37:58 PM	4h 9m 18s	
Dillip ERPC	1/24/24, 10:28:40 AM	1/24/24, 2:15:56 PM	3h 47m 15s	
Debarshi De (CESC) (Guest)	1/24/24, 10:28:40 AM	1/24/24, 2:15:13 PM	3h 46m 32s	
Soumya Mukherjee-HEL (Guest)	1/24/24, 10:28:40 AM	1/24/24, 2:06:49 PM	3h 38m 9s	
Jigme	1/24/24, 10:28:40 AM	1/24/24, 12:30:13 PM	2h 1m 33s	
Prasanna Kumar Sahoo	1/24/24, 10:28:40 AM	1/24/24, 2:15:16 PM	3h 46m 35s	PRASANNASAHOO@NTPC.CO.IN
Agniva Chatterjee ERPC (Guest)	1/24/24, 10:28:42 AM	1/24/24, 2:15:20 PM	3h 46m 37s	
P K De, ERPC	1/24/24, 10:29:00 AM	1/24/24, 2:15:15 PM	3h 46m 15s	
WBPDC (Guest)	1/24/24, 10:29:00 AM	1/24/24, 2:15:09 PM	3h 46m 8s	
Hanumantha Rao	1/24/24, 10:29:08 AM	1/24/24, 1:03:16 PM	2h 34m 8s	
Anand Gaurav	1/24/24, 10:29:23 AM	1/24/24, 6:15:05 PM	7h 45m 41s	
SLDC DVC	1/24/24, 10:29:26 AM	1/24/24, 10:35:08 AM	5m 41s	
Bilash Achari	1/24/24, 10:29:28 AM	1/24/24, 2:45:28 PM	4h 15m 59s	bilash.achari@erldc.onmicrosoft.com
Pinki Debnath/ERLDC	1/24/24, 10:29:39 AM	1/24/24, 2:05:13 PM	3h 35m 34s	
Rahul Anand	1/24/24, 10:30:21 AM	1/24/24, 2:15:19 PM	3h 44m 58s	RAHULANAND@NTPC.CO.IN
Mamidi Prasad {मामिडी प्रसाद}	1/24/24, 10:30:22 AM	1/24/24, 10:42:49 AM	12m 27s	60001672@powergrid.in
NITIN KATIYAR	1/24/24, 10:30:53 AM	1/24/24, 12:04:35 PM	1h 33m 41s	NITINKATIYAR@NTPC.CO.IN
Sudeep Kumar	1/24/24, 10:30:54 AM	1/24/24, 10:39:55 AM	9m 1s	
HIMADRI SEKHAR SARKAR	1/24/24, 10:31:10 AM	1/24/24, 2:15:33 PM	3h 44m 22s	himadri.sarkar@dvc.gov.in
teamsvisitor:4dd131983ae449bea989aaed	1/24/24, 10:31:20 AM	1/24/24, 2:16:48 PM	3h 45m 27s	
SLDC	1/24/24, 10:31:42 AM	1/24/24, 12:00:02 PM	1h 28m 20s	
Manas Das	1/24/24, 10:31:49 AM	1/24/24, 2:58:54 PM	4h 27m 4s	
N S MONDAL (Guest)	1/24/24, 10:32:17 AM	1/24/24, 2:15:07 PM	3h 42m 49s	
Anwesh Kumar	1/24/24, 10:32:33 AM	1/24/24, 2:09:24 PM	3h 36m 50s	
Sourav Mandal	1/24/24, 10:32:57 AM	1/24/24, 2:27:07 PM	3h 54m 10s	souravmandal@erldc.onmicrosoft.com
D.R.Dehuri	1/24/24, 10:33:01 AM	1/24/24, 2:15:23 PM	3h 42m 22s	
Jampa Tharchen	1/24/24, 10:33:03 AM	1/24/24, 2:55:02 PM	4h 21m 59s	
Thabira Pradhan {तबिरा प्रधान}	1/24/24, 10:33:08 AM	1/24/24, 10:35:58 AM	2m 49s	60031218@powergrid.in
Ankit Jain (Guest)	1/24/24, 10:33:38 AM	1/24/24, 1:39:02 PM	3h 5m 24s	
hommy	1/24/24, 10:34:37 AM	1/24/24, 2:21:40 PM	3h 43m 22s	
Gagan Kumar	1/24/24, 10:34:40 AM	1/24/24, 11:02:44 AM	28m 4s	
Amitabha Bhaumik	1/24/24, 10:34:40 AM	1/24/24, 4:01:06 PM	1h 44m 41s	ABHAUMIK@NTPC.CO.IN
V Premkumar	1/24/24, 10:34:40 AM	1/24/24, 1:48:10 PM	3h 13m 29s	VPREMKUMAR@NTPC.CO.IN
Debashis Chaki, CE, CPD, WBSETCL	1/24/24, 10:34:54 AM	1/24/24, 10:57:22 AM	22m 27s	
U.K.Mishra,OPTCL,Burla	1/24/24, 10:35:12 AM	1/24/24, 11:13:23 AM	38m 10s	
Saibal Ghosh	1/24/24, 10:35:22 AM	1/25/24, 4:15:46 PM	5h 40m 24s	saibal@erldc.onmicrosoft.com
Chandan Mallick	1/24/24, 10:35:28 AM	1/24/24, 2:16:40 PM	3h 41m 11s	chandan.mallick@erldc.onmicrosoft.com
Sunil Kumar Deshmukh	1/24/24, 10:35:40 AM	1/24/24, 11:30:16 AM	54m 35s	
Gulshan, Rongnichu	1/24/24, 10:35:45 AM	1/24/24, 11:50:21 AM	1h 14m 35s	
Srijit ERPC	1/24/24, 10:35:46 AM	1/24/24, 12:22:30 PM	1h 46m 43s	
Krishnamachari Kapil Kumbhar {कृष्णामचारी}	1/24/24, 10:35:48 AM	1/24/24, 11:20:48 AM	44m 59s	60065181@powergrid.in
SMS SAHOO, DGM(ELECT), OPTCL, BHL	1/24/24, 10:35:54 AM	1/24/24, 2:15:21 PM	3h 39m 26s	
Anup Das DD ERPC	1/24/24, 10:36:04 AM	1/24/24, 3:11:31 PM	4h 35m 26s	
Vinod Kumar	1/24/24, 10:36:32 AM	1/24/24, 10:39:17 AM	2m 44s	
R Das WBSETCL	1/24/24, 10:36:35 AM	1/24/24, 11:34:37 AM	58m 1s	
Akash Kumar Modi	1/24/24, 10:36:56 AM	1/24/24, 2:41:33 PM	4h 4m 37s	akmodi@erldc.onmicrosoft.com
Pranay Jena	1/24/24, 10:37:18 AM	1/24/24, 3:10:19 PM	4h 33m 1s	ppjena@KolkataMST.onmicrosoft.com
SASWAT	1/24/24, 10:38:23 AM	1/24/24, 12:08:22 PM	1h 29m 58s	
RACHANA MEENA	1/24/24, 10:38:35 AM	1/24/24, 1:36:36 PM	2h 58m 1s	RACHANAMEENA@NTPC.CO.IN
BSPHCL	1/24/24, 10:38:42 AM	1/24/24, 2:05:07 PM	3h 26m 25s	
Premkant	1/24/24, 10:39:41 AM	1/24/24, 2:15:45 PM	3h 36m 4s	
Sudeep Kumar	1/24/24, 10:39:47 AM	1/24/24, 1:27:12 PM	2h 47m 25s	
Atanu Mandal	1/24/24, 10:40:17 AM	1/24/24, 2:15:20 PM	3h 35m 2s	atanumandal@erldc.onmicrosoft.com
DE, CPD, WBSETCL	1/24/24, 10:40:48 AM	1/24/24, 11:40:59 AM	1h 11s	
Mingma	1/24/24, 10:41:22 AM	1/24/24, 1:10:01 PM	2h 28m 39s	

Name	First Join	Last Leave	In-Meeting Duration	Participant ID (UPN)
P K Panda (पी.के. पांडा)	1/24/24, 10:41:23 AM	1/24/24, 1:54:04 PM	3h 12m 40s	60041409@powergrid.in
GRIDCO LTD	1/24/24, 10:41:48 AM	1/24/24, 2:37:19 PM	3h 55m 30s	
SLDC DVC	1/24/24, 10:41:48 AM	1/24/24, 1:09:12 PM	2h 27m 23s	
M K Kirtania	1/24/24, 10:42:02 AM	1/24/24, 1:23:36 PM	2h 41m 33s	
PMC , BSPHCL	1/24/24, 10:42:25 AM	1/24/24, 2:15:13 PM	3h 32m 48s	
M.Prasad_POWERGRID	1/24/24, 10:42:35 AM	1/24/24, 2:01:01 PM	3h 18m 26s	
Srijit DD	1/24/24, 10:42:47 AM	1/24/24, 12:23:10 PM	1h 40m 22s	
DVC SLDC	1/24/24, 10:42:47 AM	1/24/24, 1:19:58 PM	2h 37m 11s	
Ayyappa Y	1/24/24, 10:44:14 AM	1/24/24, 12:21:50 PM	1h 37m 36s	
Prosun Kumar Mallik (प्रोसुन कुमार मल्लिक)	1/24/24, 10:44:27 AM	1/24/24, 12:09:50 PM	1h 25m 22s	60002317@powergrid.in
SOURABH JOSHI	1/24/24, 10:44:36 AM	1/24/24, 10:44:52 AM	16s	
Nihar Ranjan Nayak (निहार रंजन नायक)	1/24/24, 10:44:42 AM	1/24/24, 10:47:18 AM	2m 35s	60065043@powergrid.in
RAVIRANJAN SAHAY (रविरेनन सहाय)	1/24/24, 10:45:51 AM	1/24/24, 11:23:04 AM	37m 13s	60004189@powergrid.in
Guest	1/24/24, 10:46:22 AM	1/24/24, 1:28:50 PM	2h 42m 28s	
Raut Pravin	1/24/24, 10:46:56 AM	1/24/24, 4:25:10 PM	5h 38m 13s	rautpv@tatapower.com
Raju Kachhap, SLDC RANCHI	1/24/24, 10:52:44 AM	1/24/24, 11:16:27 AM	23m 43s	
Priya Kumar Sharma	1/24/24, 10:54:43 AM	1/24/24, 12:21:30 PM	1h 26m 46s	pk.sharma@sterlitepower.in
DEBABRATAPATEL	1/24/24, 10:54:57 AM	1/24/24, 1:58:16 PM	3h 3m 19s	DEBABRATAPATEL@NTPC.CO.IN
Sandeep Maurya, ERLDC	1/24/24, 10:55:44 AM	1/24/24, 12:56:40 PM	2h 56s	
WBSLDC	1/24/24, 10:57:35 AM	1/24/24, 1:14:58 PM	2h 17m 23s	
Debashis Chaki, CE, CPD, WBSETCL	1/24/24, 10:57:49 AM	1/24/24, 11:47:55 AM	50m 5s	
Saurav Kr Sahay	1/24/24, 10:58:24 AM	1/24/24, 12:28:30 PM	1h 30m 6s	saurav.sahay@erldc.onmicrosoft.com
teamsvisitor:a13f377c5eeb45d3870c9fba5f	1/24/24, 11:00:34 AM	1/24/24, 2:15:11 PM	3h 14m 37s	
Jeti Rabisankar	1/24/24, 11:00:48 AM	1/24/24, 2:11:09 PM	3h 10m 21s	jetir@tatapower.com
WBSEDCL (Guest)	1/24/24, 11:01:04 AM	1/24/24, 11:04:56 AM	3m 52s	
rabi MPL	1/24/24, 11:01:17 AM	1/24/24, 2:26:40 PM	3h 25m 22s	
"prabhat kumar CGM(SPTL)	1/24/24, 11:04:17 AM	1/24/24, 2:27:16 PM	3h 22m 59s	
Kritika Debnath	1/24/24, 11:07:58 AM	1/24/24, 12:51:23 PM	1h 43m 24s	kritika@erldc.onmicrosoft.com
WBSEDCL (Guest)	1/24/24, 11:08:30 AM	1/24/24, 11:30:35 AM	22m 5s	
Chandan kumar	1/24/24, 11:10:36 AM	1/24/24, 6:17:00 PM	7h 6m 24s	chandan@erldc.onmicrosoft.com
R K Pradhan (Guest)	1/24/24, 11:10:50 AM	1/24/24, 12:41:50 PM	1h 31m	
Pritam Goswami	1/24/24, 11:11:04 AM	1/24/24, 12:27:33 PM	1h 16m 29s	pg@sikkimurjalimited.in
G.M,EHT(O&M) Circle,Burla.	1/24/24, 11:12:59 AM	1/24/24, 2:15:24 PM	3h 2m 24s	
OHPC AK MOHANTY SGM (Guest)	1/24/24, 11:13:02 AM	1/24/24, 2:15:39 PM	3h 2m 36s	
Jaideep Lakhtakia	1/24/24, 11:13:03 AM	1/24/24, 2:10:38 PM	2h 57m 35s	jl@sikkimurjalimited.in
Gagan Kumar	1/24/24, 11:13:49 AM	1/24/24, 11:16:04 AM	2m 14s	
Gagan Kumar	1/24/24, 11:14:40 AM	1/24/24, 12:27:12 PM	1h 12m 31s	
Partha Ghosh (पार्थ घोष)	1/24/24, 11:15:53 AM	1/24/24, 2:25:25 PM	3h 9m 32s	60065079@powergrid.in
SLDC, JHARKHAND (Guest)	1/24/24, 11:16:12 AM	1/24/24, 2:15:16 PM	2h 59m 4s	
SLDC,DVC	1/24/24, 11:24:40 AM	1/24/24, 2:13:23 PM	2h 48m 42s	
WBSEDCL (Guest)	1/24/24, 11:31:08 AM	1/24/24, 2:15:22 PM	2h 44m 13s	
Dharmendra Lal	1/24/24, 11:36:32 AM	1/24/24, 1:40:32 PM	2h 3m 59s	DHARMENDRALAL@NTPC.CO.IN
DE, CPD, WBSETCL	1/24/24, 11:39:47 AM	1/24/24, 12:20:25 PM	40m 37s	
sanjaya odisha sldc	1/24/24, 11:41:54 AM	1/24/24, 2:26:47 PM	2h 44m 52s	
Jitendra Prasad Mallik	1/24/24, 11:42:33 AM	1/24/24, 2:21:51 PM	2h 25m 35s	
Ratnakar Padhy	1/24/24, 11:49:02 AM	1/24/24, 12:43:51 PM	54m 48s	p_ratnakar@erldc.onmicrosoft.com
Sourav Bera	1/24/24, 11:49:46 AM	1/24/24, 2:15:15 PM	2h 25m 28s	553409@TCS.com
SLDC,ODISHA	1/24/24, 12:02:26 PM	1/24/24, 2:15:16 PM	2h 12m 49s	
Rajib Sutradhar	1/24/24, 12:05:45 PM	1/24/24, 2:16:28 PM	1h 28m 11s	rajibsutradhar@erldc.onmicrosoft.com
ABHISHEK DAS	1/24/24, 12:17:15 PM	1/24/24, 2:15:36 PM	1h 14m 33s	678593@TCS.com
Diptikanta Panda (GMR)	1/24/24, 12:24:51 PM	1/24/24, 12:44:07 PM	19m 16s	
SASWAT	1/24/24, 12:44:47 PM	1/24/24, 3:35:26 PM	2h 50m 39s	
r k	1/24/24, 12:54:27 PM	1/24/24, 2:18:10 PM	1h 23m 43s	
Aarif M Dikchu Hep	1/24/24, 1:07:32 PM	1/24/24, 1:10:08 PM	2m 35s	
SAMIM MONDAL	1/24/24, 1:19:36 PM	1/24/24, 2:00:11 PM	40m 35s	
teamsvisitor:3c90621278594ae09edcbee2e	1/24/24, 1:21:17 PM	1/24/24, 5:35:34 PM	4h 14m 16s	
Mingma	1/24/24, 1:27:27 PM	1/24/24, 2:15:19 PM	47m 51s	
Ming	1/24/24, 1:36:53 PM	1/24/24, 1:51:17 PM	14m 24s	
Amrit J	1/24/24, 1:41:14 PM	1/24/24, 1:42:53 PM	1m 38s	
Amrit J	1/24/24, 1:44:53 PM	1/24/24, 1:49:50 PM	4m 56s	
Amrit J	1/24/24, 1:52:52 PM	1/24/24, 2:04:20 PM	11m 28s	
Arvind Kumar ESE SAMAST	1/24/24, 1:55:05 PM	1/24/24, 2:10:09 PM	15m 3s	
Sourav Das (IN)	1/24/24, 2:02:59 PM	1/24/24, 2:04:01 PM	1m 2s	sourav.d.das@pwc.com
SLDC,DVC	1/24/24, 2:10:34 PM	1/24/24, 2:23:42 PM	13m 8s	
Brajesh Kumar	1/24/24, 2:19:39 PM	1/24/24, 2:20:58 PM	1m 18s	BRAJESHKUMARPANDEY@NTPC.CO.IN
Soumya Mukherjee-HEL (Guest)	1/24/24, 2:33:27 PM	1/24/24, 2:34:14 PM	46s	
DANS	1/24/24, 2:36:30 PM	1/24/24, 2:38:00 PM	1m 29s	techsupport@dansenergy1.onmicrosoft.com
ABHILASH	1/24/24, 2:37:02 PM	1/24/24, 2:38:21 PM	1m 18s	

Annexure B.3

SPS Logic

Generation reduction/Tripping of Unit at IBEUL based on line flow of 400 kV Lapanga-OPGC D/c



S.no		Triggering Criteria (Current Based)*	Signal to IBEUL
1	Flow in 400 kV Lapanga-OPGC S/c (either line)	1440 A (950 MW) < Flow < 1520 A (1000 MW)	Alarm to <u>IndBharat</u> (IBEUL) to reduce load manually
2		1520 A (1000 MW) < Flow < 1550 A (1020 MW)	Trip Signal to IBEUL. Unit will trip after 10 minutes.
3		>1550 A (1020 MW)	Trip signal to IBEUL. Unit will trip after 10 seconds.

*SPS based on current measurement. MW values considered with .95 p.f.

ANNEXURE B.9

Approved Maintenance Schedule of Thermal Generating units in the month of February '2024

System	Station	Unit No.	Capacity(MW)	Period (as per LGBR 2023-24)		No. of Days	Reason	Approved period		No of days	Whether as per LGBR or not	Remarks
				From	To			From	To			
DVC	MEJIA	3	210	21.01.2024	14.02.2024	25	AOH-Blr, LPT, FGD	24.01.2024	31.01.2024	7	NO	APPROVED
DVC	Bokaro-A TPS	1	500	15.02.2024	20.03.2024	35	COH- Blr, Turb, Gen	-	-	-	NO	NOT AVAILED
DVC	RTPS	2	600	01.07.2023	28.08.2023	45	Boiler Overhauling	12.02.2024	07.03.2024	24	NO	APPROVED(SUBJECT TO REVIVAL OF MEJIA TPS UNIT-03)
NTPC	KhSTPS	7	500	10.01.2024	08.02.2024	30	Boiler Maintenance	-	-	-	NO	NOT AVAILED AS ALREADY AVAILED IN NOVEMBER'23
NTPC	Barh-II	5	660	20.01.2024	18.02.2024	30	BLR Modification Balance work	-	-	-	NO	NOT AVAILED
WBPDC	Kolaghat TPS	3	210	26.01.2024	14.02.2024	20	AOH/BOH	02.02.2024	23.02.2024	21	NO	APPROVED
WBPDC	Santalidih TPS	5	250	04.01.2024	23.01.2024	20	AOH	26.01.2024	14.02.2024	19	NO	APPROVED

ANNEXURE B.17

DSTPS, Odisha, comparison between ABT Meter vs SEM Meter data							
DATE	Block	ABT Freq Hz	SEM_Freq Hz	Freq Diff(ABT- SEM) Hz	ABT_AG MW	SEM_AG MW	AG_Diff(ABT- SEM) MW
14-01-2024	1	49.97	49.97	0.00	1494.92	1497.72	-2.80
14-01-2024	2	49.98	49.98	0.00	1509.9	1508.82	1.08
14-01-2024	3	50.00	49.99	0.01	1501	1503.25	-2.25
14-01-2024	4	50.01	50.01	0.00	1498.27	1503.24	-4.97
14-01-2024	5	50.02	50.02	0.00	1490.37	1492.12	-1.75
14-01-2024	6	50.01	50.01	0.00	1492.71	1492.16	0.55
14-01-2024	7	49.97	49.96	0.01	1488.34	1492.20	-3.86
14-01-2024	8	49.95	49.95	0.00	1496.69	1492.19	4.50
14-01-2024	9	49.98	49.98	0.00	1492.2	1492.17	0.03
14-01-2024	10	49.98	49.98	0.00	1486.65	1492.18	-5.53
14-01-2024	11	49.99	49.99	0.00	1492.66	1503.29	-10.63
14-01-2024	12	49.98	49.97	0.01	1497.19	1492.13	5.06
14-01-2024	13	49.99	49.98	0.01	1501.01	1503.27	-2.26
14-01-2024	14	49.98	49.98	0.00	1501.5	1503.27	-1.77
14-01-2024	15	50.00	50.00	0.00	1502.16	1502.93	-0.77
14-01-2024	16	50.01	50.00	0.01	1493.97	1497.67	-3.70
14-01-2024	17	49.99	49.99	0.00	1484.4	1492.16	-7.76
14-01-2024	18	50.01	50.01	0.00	1486.54	1481.01	5.53
14-01-2024	19	50.00	50.00	0.00	1480.42	1492.12	-11.70
14-01-2024	20	49.99	49.99	0.00	1493.22	1492.12	1.10
14-01-2024	21	50.01	50.01	0.00	1496.08	1497.68	-1.60
14-01-2024	22	50.02	50.02	0.00	1494.36	1497.77	-3.41
14-01-2024	23	49.99	49.99	0.00	1494.89	1492.17	2.72
14-01-2024	24	50.02	50.01	0.01	1495.43	1497.72	-2.29
14-01-2024	25	50.06	50.05	0.01	1471.64	1469.54	2.10
14-01-2024	26	50.03	50.02	0.01	1478.26	1480.39	-2.13
14-01-2024	27	50.03	50.03	0.00	1466.97	1469.67	-2.70
14-01-2024	28	50.05	50.04	0.01	1478.04	1480.84	-2.80
14-01-2024	29	50.02	50.01	0.01	1486.36	1480.87	5.49
14-01-2024	30	49.97	49.96	0.01	1489.81	1497.62	-7.81
14-01-2024	31	49.96	49.95	0.01	1509.89	1508.72	1.17
14-01-2024	32	50.01	50.00	0.01	1507.06	1508.69	-1.63
14-01-2024	33	50.01	50.00	0.01	1498.64	1503.12	-4.48
14-01-2024	34	49.89	49.88	0.01	1501.5	1503.15	-1.65
14-01-2024	35	49.94	49.94	0.00	1512.07	1514.27	-2.20
14-01-2024	36	49.99	49.99	0.00	1509.78	1503.13	6.65
14-01-2024	37	49.89	49.88	0.01	1519.29	1525.38	-6.09
14-01-2024	38	49.88	49.87	0.01	1510.29	1514.18	-3.89
14-01-2024	39	49.72	49.71	0.01	1507.91	1508.43	-0.52
14-01-2024	40	49.89	49.89	0.00	1518.69	1514.26	4.43
14-01-2024	41	49.88	49.87	0.01	1513.61	1514.27	-0.66
14-01-2024	42	49.92	49.92	0.00	1510.94	1514.25	-3.31
14-01-2024	43	49.98	49.98	0.00	1517.54	1519.79	-2.25
14-01-2024	44	50.02	50.02	0.00	1513.37	1514.13	-0.76

DATE	Block	ABT Freq Hz	SEM_Freq Hz	Freq Diff(ABT- SEM) Hz	ABT_AG MW	SEM_AG MW	AG_Diff(ABT- SEM) MW
14-01-2024	45	50.08	50.07	0.01	1455.24	1458.49	-3.25
14-01-2024	46	50.03	50.03	0.00	1461.42	1458.68	2.74
14-01-2024	47	49.99	49.99	0.00	1487.07	1492.05	-4.98
14-01-2024	48	50.02	50.01	0.01	1501.54	1503.18	-1.64
14-01-2024	49	50.08	50.06	0.02	1460.36	1458.64	1.72
14-01-2024	50	50.08	50.08	0.00	1461.39	1458.65	2.74
14-01-2024	51	50.03	50.02	0.01	1470.38	1480.92	-10.54
14-01-2024	52	50.02	50.02	0.00	1502.09	1503.14	-1.05
14-01-2024	53	50.06	50.06	0.00	1481.38	1480.36	1.02
14-01-2024	54	50.01	50.01	0.00	1503.02	1502.40	0.62
14-01-2024	55	50.01	50.01	0.00	1497.45	1502.83	-5.38
14-01-2024	56	50.02	50.02	0.00	1494.47	1491.77	2.70
14-01-2024	57	50.06	50.05	0.01	1486.19	1491.84	-5.65
14-01-2024	58	50.01	50.01	0.00	1495.12	1491.81	3.31
14-01-2024	59	50.01	50.01	0.00	1487.46	1491.85	-4.39
14-01-2024	60	49.97	49.97	0.00	1499.12	1497.54	1.58
14-01-2024	61	50.01	50.00	0.01	1486.99	1491.99	-5.00
14-01-2024	62	49.98	49.98	0.00	1496.55	1497.33	-0.78
14-01-2024	63	49.93	49.91	0.02	1510.01	1508.25	1.76
14-01-2024	64	49.88	49.88	0.00	1516.67	1525.32	-8.65
14-01-2024	65	49.89	49.87	0.02	1520.9	1514.22	6.68
14-01-2024	66	49.89	49.89	0.00	1514.26	1519.65	-5.39
14-01-2024	67	49.96	49.96	0.00	1506.17	1502.96	3.21
14-01-2024	68	49.97	49.97	0.00	1511.48	1514.32	-2.84
14-01-2024	69	50.04	50.03	0.01	1473.13	1475.44	-2.31
14-01-2024	70	50.04	50.04	0.00	1487.16	1486.56	0.60
14-01-2024	71	50.05	50.04	0.01	1470.48	1475.44	-4.96
14-01-2024	72	50.05	50.04	0.01	1470.98	1464.44	6.54
14-01-2024	73	50.07	50.06	0.01	1446.56	1447.76	-1.20
14-01-2024	74	50.00	50.00	0.00	1495.08	1503.41	-8.33
14-01-2024	75	49.99	49.99	0.00	1503.88	1503.40	0.48
14-01-2024	76	49.99	49.99	0.00	1508.34	1503.32	5.02
14-01-2024	77	49.99	49.98	0.01	1508.84	1514.46	-5.62
14-01-2024	78	49.94	49.94	0.00	1516.64	1520.01	-3.37
14-01-2024	79	49.90	49.90	0.00	1515	1520.04	-5.04
14-01-2024	80	49.99	49.98	0.01	1512.24	1514.45	-2.21
14-01-2024	81	49.98	49.97	0.01	1507.73	1503.18	4.55
14-01-2024	82	49.97	49.97	0.00	1519.46	1525.58	-6.12
14-01-2024	83	49.96	49.96	0.00	1517.23	1514.50	2.73
14-01-2024	84	49.98	49.97	0.01	1508.36	1514.50	-6.14
14-01-2024	85	49.82	49.81	0.01	1518.98	1514.47	4.51
14-01-2024	86	49.98	49.97	0.01	1518.32	1525.52	-7.20
14-01-2024	87	50.02	50.01	0.01	1497.18	1492.16	5.02
14-01-2024	88	50.03	50.03	0.00	1498.12	1497.66	0.46
14-01-2024	89	50.00	49.99	0.01	1495.39	1497.27	-1.88
14-01-2024	90	49.99	49.97	0.02	1508.32	1508.15	0.17
14-01-2024	91	49.99	49.99	0.00	1503.1	1508.53	-5.43
14-01-2024	92	50.00	50.00	0.00	1508.78	1508.81	-0.03
14-01-2024	93	50.01	50.01	0.00	1499.82	1503.27	-3.45
14-01-2024	94	50.03	50.03	0.00	1491.64	1492.19	-0.55
14-01-2024	95	50.05	50.05	0.00	1487.72	1486.65	1.07
14-01-2024	96	50.05	50.05	0.00	1478.27	1481.08	-2.81

Annexure D.1

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

1	BIHAR	Demand (MW)	Energy Requirement (MU)
	NET MAX DEMAND	5570	2747
	NET POWER AVAILABILITY- Own Sources	613	367
	Central Sector+Bi-Lateral	6488	3503
	SURPLUS(+)/DEFICIT(-)	1531	1123
2	JHARKHAND		
	NET MAXIMUM DEMAND	1820	1117
	NET POWER AVAILABILITY- Own Source	355	158
	Central Sector+Bi-Lateral+IPP	1053	568
	SURPLUS(+)/DEFICIT(-)	-412	-391
3	DVC		
	NET MAXIMUM DEMAND	3250	1975
	NET POWER AVAILABILITY- Own Source	5500	3163
	Central Sector+MPL	305	128
	Bi- lateral export by DVC	2500	1213
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	55	103
4	ODISHA		
	NET MAXIMUM DEMAND (OWN)	4400	2749
	NET MAXIMUM DEMAND (In Case of CPP Drawal)	5100	2999
	NET POWER AVAILABILITY- Own Source	2500	1601
	Central Sector	1915	1173
	SURPLUS(+)/DEFICIT(-) (OWN)	15	25
	SURPLUS(+)/DEFICIT(-) (In Case, 600 MW CPP Drawal)	-685	-225
5	WEST BENGAL		
	WBSEDCL		
5.1	NET MAXIMUM DEMAND	6235	3482
	NET MAXIMUM DEMAND (Incl. Sikkim)	6240	3485
	NET POWER AVAILABILITY- Own Source (Incl. DPL)	5603	2565
	Central Sector+Bi-lateral+IPP&CPP+TLDP	2665	1200
	EXPORT (To SIKKIM)	5	3
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	2028	280
5.2	CESC		
	NET MAXIMUM DEMAND	1570	680
	NET POWER AVAILABILITY- Own Source	700	360
	IMPORT FROM HEL	540	286
	TOTAL AVAILABILITY OF CESC	1240	646
	DEFICIT(-) for Import	-330	-34
	WEST BENGAL (WBSEDCL+CESC+IPCL)		
	(excluding DVC's supply to WBSEDCL's command area)		
	NET MAXIMUM DEMAND	7805	4162
	NET POWER AVAILABILITY- Own Source	6303	2925
	CS SHARE+BILATERAL+IPP/CPP+TLDP+HEL	3205	1486
	SURPLUS(+)/DEFICIT(-) BEFORE WBSEDCL'S EXPORT	1703	249
	SURPLUS(+)/DEFICIT(-) AFTER WBSEDCL'S EXPORT	1698	246
6	SIKKIM		
	NET MAXIMUM DEMAND	129	70
	NET POWER AVAILABILITY- Own Source	2	1
	Central Sector	56	12
	SURPLUS(+)/DEFICIT(-)	-71	-57
	EASTERN REGION		
	NET MAXIMUM DEMAND	22974	12820
	NET MAXIMUM DEMAND (In Case of CPP Drawal of Odisha)	23674	13070
	BILATERAL EXPORT BY DVC (Incl. Bangladesh)	1969	1213
	EXPORT BY WBSEDCL TO SIKKIM	5	3
	EXPORT TO B'DESH & NEPAL OTHER THAN DVC	642	431
	NET TOTAL POWER AVAILABILITY OF ER	28239	13870
	(INCLUDING CS ALLOCATION +BILATERAL+IPP/CPP+HEL)		
	SURPLUS(+)/DEFICIT(-)	5260	1047
	SURPLUS(+)/DEFICIT(-) (In Case, 600 MW CPP Drawal of Odisha)	4560	797