



ON MS TEAMS ONLINE PLATFORM

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Eastern regional Power Committee, Kolkata
AGENDA FOR 51st TCC MEETING

Date: 11th January,2024(Thursday) at 10:30 Hrs

MS TEAMS ONLINE PLATFORM

1. PART-A

1.1. Confirmation of Minutes of 50th TCC Meeting held on 10th August 2023 physically at Lonavala, Maharashtra

The minutes of 50th TCC meeting held on 10.08.2023 at Lonavala, Maharashtra was circulated vide letter no. ERPC/ TCC & ERPC COMMITTEE/2023/755 dated 29.08.2023.

Observations received from CTU on 50th TCC & ERPC MOM have been detailed hereunder:

Agenda Sr. No. as per 50th ERPC MoM	Agenda	50th TCC MoM	50th ERPC MoM	Remark
B 1.5	Establishment of 400/132kV, 2x315MVA New Laxmikantpur substation of WBSETCL under intra-state scheme through LILO of one circuit of Jeerat New (PMJTL) Subhashgram (POWERGRID) 400KV D/C (Quad) line	<p>TCC agreed with the proposal of connectivity of proposed New Laxmikantapur substation through LILO of one circuit of Jeerat New -Subhashgram 400kV D/C (Quad) to be implemented as intrastate system. WBSETCL agreed to comply with connectivity as well as grid standard regulations of CEA and to ensure proper communication and protection systems for the LILO portion of the line.</p> <p>The issue was referred to ERPC for concurrence so that the same may be referred to NCT for approval.</p>	<p>ERPC endorsed the views of TCC and agreed for the proposed LILO of 400 kV New Jeerat-Subhashgram S/C line at New 400/132 kV New Laxmikantpur Substation of West Bengal.</p> <p>WBSETCL was advised to ensure installation of OPGW in LILO portion of line and installation of necessary communication equipment at their end in coordination with ISTS licensee.</p>	<p>For LILO of one circuit of 400kv D/C (Quad) line New Jeerat-Subhashgram at Laxmikantpur by WBSETCL: Further for the integration of communication link if any additional card/interface/ equipment etc. shall be required at ISTS ends i.e. Jeerat New and Subhashgram same shall also be provided by WBSETCL in coordination with station owners.</p>

B 1.7	Establishment of 765/400kV, 2x1500MVA S/s at Duburi under intra-state by OPTCL through LILO of Angul (POWERGRID) – Paradeep (ISTS) 765kV D/C ISTS line-Agenda by CTU	<p>The suggestion of NCT on various aspects of LILO of 765 kV Anugul-Paradip D/C line by OPTCL for its 765 kV S/s of Duburi was deliberated as follows:</p> <p>Regarding operational issue, Odisha representative submitted that there is no such operational issues associated with the proposed scheme. He stated that the matter was already discussed in CMETS meeting and it was opined that the scheme may be implemented as per the given proposal. They clarified that they would take all the necessary measures and extend necessary cooperation for resolving any operational issues if arises in future. OPTCL submitted that they would comply with CEA grid standard and connectivity rules and would ensure proper communication and protection systems for the LILO part of the line.</p> <p>Regarding capacity utilisation of main ISTS to cater intrastate demand at Duburi, the forum viewed that OPTCL is going to implement 765 kV Kolabira-Duburi D/C line under intrastate system to meet their demand at Duburi. The proposed 765 kV Kolabira-Duburi line would also provide an alternate path for meeting the demand at</p>	<p>ERPC endorsed the views of TCC on the points raised by NCT regarding LILO proposal of 765 kV Angul-Paradip D/C line at New Duburi S/s of OPTCL and agreed with the above proposal of LILO of ISTS lines at 765 kV New Duburi S/s.</p> <p>OPTCL was advised to ensure installation of OPGW in LILO portion of line and installation of necessary communication equipment at their end in coordination with ISTS licensee.</p>	<p>Further for the integration of communication link if any additional card/interface/ equipment etc. shall be required at ISTS ends i.e. Angul (POWERGRID) and Paradeep (ISTS) same shall also be provided by OPTCL in coordination with station owners.</p>
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		Paradip. With above observations, TCC recommended the proposal of OPTCL for LILO of 765 kV Angul-Paradip D/C line at Duburi S/s under intrastate system. The matter was referred to ERPC for concurrence.		
B 1.8	Eastern Region Expansion Scheme-XXXVIII-- Agenda by CTU	The matter regarding dismantling and scraping of line section of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC as part of the scheme to control fault level at Ranchi S/s was deliberated and TCC agreed with the proposal of deducting the scrap value from final cost of the scheme which is to be implemented by ISTS licensee. TCC referred the issue to ERPC for approval.	After discussion, ERPC approved the following: > Dismantling and scraping of 1355m section of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC at Ranchi end from location 433 to 438 under ERES-XXXVIII to control the fault level at 400 kV Ranchi S/s. > The scrap value of dismantled assets is to be deducted from final cost of the scheme which is to be implemented by ISTS licensee and accordingly, the tariff of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line of DVC will remain unaffected.	ISTS licensee shall also take care of communication link while shifting of Ranchi (POWERGRID) – Raghunathpur (DVC) 400kV D/c (Quad) line to New Ranchi(PG)-Raghunathpur. It includes laying of OPGW on new transmission line section, approach cables at Ranchi and integration of existing OPGW with OPGW of the proposed section to ensure integrity of all existing communication links. This input of communication is missing in ERPC MoM and it may be added.

Members may confirm the minutes of 50th TCC meeting

2. PART-B: ITEMS FOR DISCUSSION

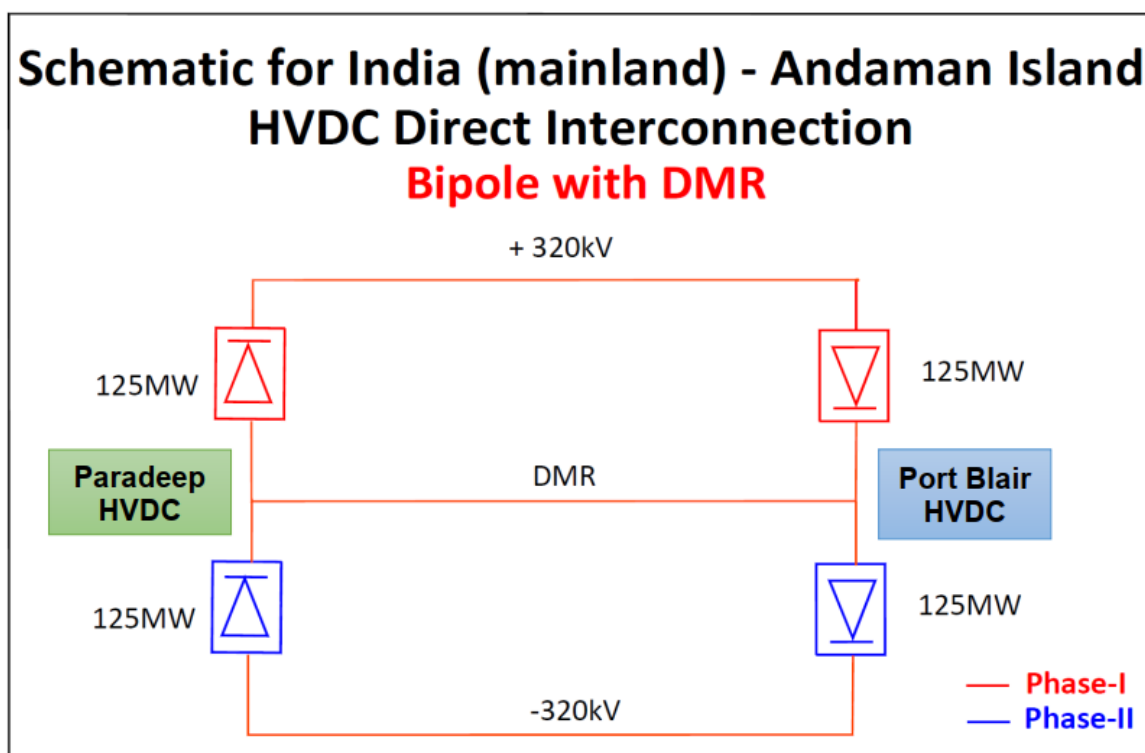
2.1 Establishment of Paradeep-Andaman HVDC Interconnection as ISTS-CTU

A meeting was convened under Hon'ble Minister of Power regarding power supply in Andaman & Nicobar islands. Thereafter, to meet the power requirement through clean/green energy and to meet the target of greening the islands, a HVDC link was proposed in a meeting

under chairmanship of Chairperson, CEA on 07.06.2023 where it was decided that CTU shall finalize undersea cable scheme for connection of Andaman to National Grid. CTU/CEA shall process this case quickly and shall be placed before NCT for approval.

CTUIL vide letter dated 17.11.2023 has informed that a new ISTS scheme namely “Paradeep-Andaman HVDC Interconnection” which includes establishment of $\pm 320\text{kV}$, 250 MW HVDC bipole link through undersea cable from Paradeep, Odisha to Port Blair, Andaman & Nicobar Island was agreed in 24th Consultation Meeting for Evolving Transmission Schemes in ER(CMETS-ER) held on 31.10.2023 and requested for further deliberation/recommendations on the scheme by ERPC. The details of the scheme is enclosed at **Annexure B.1**.

The said scheme is proposed to be taken up on priority in ERPC forum for necessary approval/recommendation in line with provisions under MOP’s office order no:15/3/2018-Trans-Pt(5) dated 28.10.2021 regarding “ Re-constitution of National committee on transmission(NCT)-reg”



Estimated Cost: 15,950 Cr

Impact on the ATC in %: 4.856 %

CTU may explain. TCC may discuss/concur.

2.2 Requirement of Additional FOTE for redundancy at AGC locations in Eastern Region-CTU

CTU has studied the existing ISTS communication system based on the inputs and feedback received from POSOCO and other constituents. Thereafter, the regular ISTS Communication Planning Meeting for Eastern Region was convened by CTUIL on 27.07.2023 and subject agenda was deliberated.

In line with MoP office order no. 15/03/2017-Trans-Pt (1) dated 09.03.2022 regarding “Guidelines on Planning of Communication System for Inter-State Transmission System (ISTS)- reg”, as per clause 5 for Category (B) Communication Schemes/Packages proposed by CTUIL for upgradation/modification of existing ISTS Communication System shall be put up to RPC for their views. RPC to provide their views on the Schemes/Packages proposed by CTUIL within 45 days of receipt of the proposal from CTUIL.

Clause 5 for category (B) is stipulated below:

“Communication Schemes/Packages proposed by CTUIL for upgradation/modification of existing ISTS Communication System, standalone projects, adoption of new technologies shall be put up to RPC for their views. RPC to provide their views on the Schemes/Packages proposed by CTUIL within 45 days of receipt of the proposal from CTUIL”.

In consideration of above, it is requested that ERPC may forward their views in respect of the proposed scheme at the earliest, so that the scheme may be taken up promptly for consideration in the NCT meeting along with the views of ERPC.

The proposed scheme was deliberated in the 3rd & 4th Communication Planning meeting (CPM)) of CTUIL held on 26.12.2022 & 27.07.2023 respectively where in POWERGRID confirmed the quantity of additional FOTE required at AGC locations as per **Annexure B.2.1**.

The agenda for this scheme was also deliberated in 12th ER TeST meeting held on 09.11.2022 .This scheme after ERPC approval/review shall be put up to NCT for approval.

The proposed scheme along with MOM of 3rd & 4th Communication Planning meeting (CPM)) of CTUIL and MOM of 12th ER TeST meeting attached at **Annexure B.2.2**

CTU may explain. TCC may deliberate/concur.

2.3 Requirement of Additional FOTE at various ISTS nodes in ER due to exhaustion of existing capacity-CTU

CTU has studied the existing ISTS communication system based on the inputs and feedback received from POSOCO and other constituents. Thereafter, the regular ISTS Communication Planning Meeting for Eastern Region was convened by CTUIL on 27.07.2023 and subject agenda was deliberated.

In line with MoP office order no. 15/03/2017-Trans-Pt (1) dated 09.03.2022 regarding “Guidelines on Planning of Communication System for Inter-State Transmission System (ISTS)- reg”, as per clause 5 for Category (B) Communication Schemes/Packages proposed by CTUIL for upgradation/modification of existing ISTS Communication System shall be put up to RPC for their views. RPC to provide their views on the Schemes/Packages proposed by CTUIL within 45 days of receipt of the proposal from CTUIL.

Clause 5 for category (B) is stipulated below:

“Communication Schemes/Packages proposed by CTUIL for upgradation/modification of existing ISTS Communication System, standalone projects, adoption of new technologies

shall be put up to RPC for their views. RPC to provide their views on the Schemes/Packages proposed by CTUIL within 45 days of receipt of the proposal from CTUIL”.

In consideration of above, it is requested that ERPC may forward their views in respect of the proposed scheme(**Annexure-B.3.1**) at the earliest, so that the scheme may be taken up promptly for consideration in the NCT meeting along with the views of ERPC.

In Eastern region, the communication network has STM16 link capacity at most of the places, however at few links/nodes have STM 4 or lesser capacity. For the few links /nodes, the capacity has been utilised for more than 75 percent. The detail of such nodes/links was intimated by POWERGRID(enclosed as **Annexure-B.3.2**) which are having congestion in terms of traffic/bandwidth so that planning for capacity enhancement of the node/link may be done.

4th Communication Planning meeting (CPM) deliberation:

CEA suggested that the upgradation of capacity may be taken up considering change of technology to MPLS. CTUIL welcomed the suggestion and stated that the MPLS implementation shall take longer time in view of committee report and subsequent approvals. In view of this, out of the above links provided by POWERGRID only links with congestion of approximately 90% and above & few other important stations shall be taken up on priority for upgradation.

Accordingly, the list of nodes in ER with capacity utilisation of approximately 90% and above & few other important stations is enclosed as **Annexure-B.3.3**.

As per list, capacity upgradation of four numbers of STM4 FOTE(Fiber Optic Terminal Equipment) to STM-16 FOTE and thirteen nos. of STM16 FOTE to STM 64 FOTE is required.

CTU may explain. TCC may deliberate/concur.

2.4 Revised connectivity for redundant path of Teesta-III- CTU

Presently, Teesta III is connected through Teesta III -Rangpo PLCC link.

First Fibre path for Teesta III is under implementation through Teesta III-Rangpo ckt 2 under ER-Additional Requirement Project.

The ckt 1 of Teesta-III-Rangpo line is LILOed at Dikchu HEP. The OPGW on Dikchu HEP - Rangpo portion is already planned for Teesta III – Rangpo ckt 1.

The ownership of these lines are as follows:

Teesta-III – Rangpo: TVTL & POWERGRID

LILO point L to LILO Line up to DIKCHU HEP:

Proposed connectivity of Teesta- III – LILO point L: TVTL & POWERGRID

Members may confirm.

Thus, the Redundant Fibre path for Teesta-III was planned by laying of OPGW on Teesta III- Dikchu HEP portion (approx. 26km line length) of Teesta III – Rangpo ckt1. This agenda is discussed in 12th ERPC TeST and in 47th ERPC dated 25/11/22(MoM attached as Annexure IV) & 49th ERPC 24/03/23.

However, as per MoM dtd 18.07.2023(attached as Annexure V) regarding scheduling of power from Dikchu HEP in Sikkim under GNA regulation 2022, it is understood that connectivity of Dikchu HEP with ISTS is an interim arrangement and shall be eliminated on readiness of intra state transmission system (expected by Dec 2023).

Further, in 24th CMETS-ER MoM dated 31st Oct 23, readiness of above said intra state transmission system was updated as 29th Feb 24(expected date).

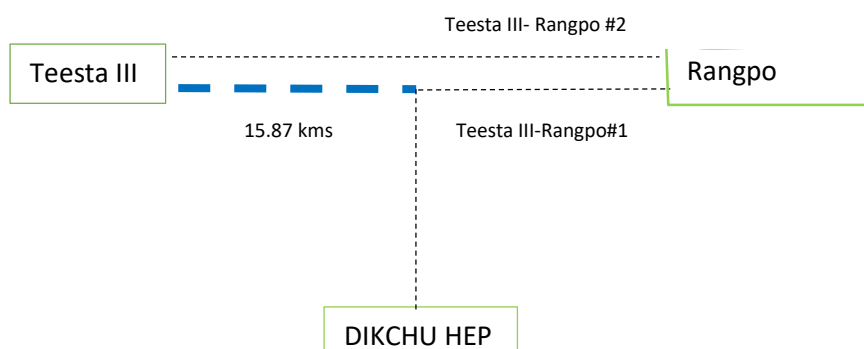
Accordingly, the connectivity of OPGW for protection path of Teesta III is revised. Now, OPGW is proposed on Teesta III to LILO point for Dikchu HEP (15.87 km) on Teesta III-Rangpo ckt

The revised diagram for the scheme is as below:

Redundant path Connectivity of Teesta III



Schematic diagram of FO connectivity of Teesta III



Legends:

— — —: under this proposed scheme

-----: OPGW proposed under different scheme

In the 4th CPM of ER dated 27/07/23(MoM attached as **Annexure –B.4**), POWERGRID stated that they are already implementing this scheme. They further stated that suggestion of removal of Dikchu HEP to LILO point Transmission line by Dec 2023 will hamper the DOCO and recovery of the investment made for this scheme. ERLDC stated that they will also look up into the matter and revert.

In view of above, feasibility of provision of OPGW from Teesta III to LILO point may be deliberated.

CTU may explain. TCC may deliberate/concur.

2.5 Scheme for OPGW laying work on 400kV Bokaro-Kodarma line in Eastern Region-CTU

CTU has studied the existing ISTS communication system based on the inputs and feedback received from POSOCO and other constituents. The subject mentioned agenda was deliberated in the 47th ERPC meeting held on 25.11.2022. Thereafter, the regular ISTS Communication Planning Meeting for Eastern Region was convened by CTUIL on 27.07.2023 and subject agenda was deliberated. The agenda was also given for upcoming TeST meeting. However, now the scheme based on the said agenda is being proposed by CTUIL as under:

‘OPGW laying work on 400kV Bokaro-Kodarma line in Eastern Region’

In line with MoP office order no. 15/03/2017-Trans-Pt (1) dated 09.03.2022 regarding “Guidelines on Planning of Communication System for Inter-State Transmission System (ISTS)- reg”, as per clause 5 for Category (B) Communication Schemes/Packages proposed by CTUIL for upgradation/modification of existing ISTS Communication System shall be put up to RPC for their views. RPC to provide their views on the Schemes/Packages proposed by CTUIL within 45 days of receipt of the proposal from CTUIL.

Clause 5 for category (B) is stipulated below:

“Communication Schemes/Packages proposed by CTUIL for upgradation/modification of existing ISTS Communication System, standalone projects, adoption of new technologies shall be put up to RPC for their views. RPC to provide their views on the Schemes/Packages proposed by CTUIL within 45 days of receipt of the proposal from CTUIL”.

In consideration of above, it is requested that ERPC may forward their views in respect of the scheme attached at **Annexure-B.5** at the earliest, so that the scheme may be taken up promptly for consideration in the NCT meeting along with the views of ERPC.

CTU may explain. TCC may deliberate/concur.

2.6 Extension of AMC of WAMS Analytics supplied by IIT Bombay under Unified Real Time Dynamic State Measurement(URTD SM) Phase-I--POWERGRID

WAMS Analytics (6 nos) were installed in NLDC, RLDCs and SLDCs under URTDSM Phase-I Project. The WAMS analytics were commissioned at the control centres progressively by December 2021 and the maintenance services were provided by IIT Bombay. The maintenance services include providing support for maintenance of software, developing bug fixes and training.

The URTDSM phase-1 project is planned to be in operation till 2026 but the AMC contract of WAMS Analytics is expiring soon.

In view of above, it is proposed to hold a special RPC meeting of all regions to discuss the issue of extension of AMC contract of WAMS Analytics. The matter is also being taken up with IIT Bombay and they have agreed in principle for the same.

POWERGRID may explain. TCC may deliberate/concur.

2.7 Seeking Project Appraisal from ERPC for PSDF Grant for Renovation and Modernization of intra-state transmission systems for relieving congestion in the state of West Bengal-WBSETCL

Intra-state transmission networks of West Bengal have constraints in meeting the demand for power in several pockets/ regions within the State of West Bengal. Whereas new lines/ connectivity could not be established due to severe ROW problem, replacement of existing conductor by high performance conductor has been envisaged to relieve the congestion.

The use of High Temperature and Low Sag (HTLS) Conductors is an attractive method of increasing transmission line thermal rating. The conventional ACSR Conductors are able to withstand a continuous temperature of 75 deg C to 85 deg C. In case of emergency, for a short duration the conductors can work up to 105 deg C without any sign of deformation. In order to increase the thermal rating of existing lines, one method involves replacing ACSR conductors with special "High-Temperature Low-Sag" (HTLS) conductors having approximately the same diameter as the original ACSR but being capable of operation at temperatures as high as 250 deg C, with less thermal elongation than ACSR. Ideally, these special HTLS conductors can be installed and operated without the need for extensive modification of the existing structures and foundation. With the use of this new generation HTLS conductor, power carrying capacity will be raised almost double from its existing capacity.

Following projects have been considered in present proposal:

a) Replacement of existing ACSR Zebra Conductor by high capacity HTLS Conductor along with replacement of 220 KV Feeder and TBS bay CT of the following transmission lines:

1. KTHP-Food Park 220 KV D/C Transmission Line (R.L. \approx 51.0 KM).
2. Food Park-Jangalpur 220 KV D/C Transmission Line (R.L. \approx 6.0 KM).
3. Barasat-Kasba 220 KV D/C Transmission Line (R.L. \approx 39.1 KM).
4. Subhasgram-Kasba 220 KV D/C Transmission Line (R.L. \approx 23.0KM).

5. Jeerat-Barasat 220 KV D/C Transmission Line (R.L. \approx 23.3 KM).

In this regard a DPR has been prepared for grant of funding from PSDF as per Clause No 6.3(i) as per guideline of GoI, MoP issued vide no 10/1/2014-OM Dtd. 18.09.2014. The in-principle approval of the competent authority of WBSETCL has already been obtained.

The DPR(attached at **Annexure-B.7**) has been placed before ERPC on 03-11-2023 for appraisal on the project as per the requirement under PSDF Application Format-A5.

In 210th OCC meeting, WBSETCL representative submitted that the total estimated cost of the proposed R&M of intra-state transmission system is ₹252.34 Cr out of which ₹189.25 Cr is being sought as grant from PSDF. The rest shall be met from its internal fund. He requested for technical concurrence of ERPC under PSDF Application Format-A5.

Considering merit of the proposal and keeping in view the congestion in the intra state network of West Bengal as deliberated earlier in various previous ERPC fora, OCC gave technical go-ahead to the proposal and advised WBSETCL to approach PSDF nodal agency (NLDC) for seeking further approval.

WBSETCL may explain. TCC may deliberate.

2.8 Seeking Project Appraisal from ERPC for PSDF Grant against Implementation of SAMAST –DVC

Implementation of SAMAST at the state-level is a prerequisite today in order to ensure the transparency and accountability in the Scheduling and other real-time activities & timely compliance of the regulatory norms in a smooth manner. With the growing complexities in the network management and publication of stringent norms and procedures, it has become essential to automate the operational activities of LDCs. The SAMAST Scheme, conceptualised and recommended by the FoR (Forum of Regulators), appears to provide a comprehensive solution to address all these issues related to load despatch activities.

DVC has planned to implement the complete SAMAST project through the Entrepreneur Resource Planning (ERP) project of DVC under a separate head as 'SLDC module'. The scope pertaining to the project is mainly on the procurement of an Integrated Software for SLDC, covering automation in Scheduling, Open Access, Deviation Settlement, Energy Accounting, Outage Management etc. and its associated Communication and IT infrastructure.

In this regard, a DPR has been prepared exclusively for the SLDC module for grant of funding from PSDF under category 3(f), as mentioned of the attached letter (**Annexure-B.8.1**) of the Under Secretary (OM), MoP Dtd. 04-07-2023. The in-principal approval of the competent authority of DVC has already been obtained.

The DPR(attached at **Annexure B.8.2**) has been placed before ERPC on 31-10-2023 for appraisal on the project as per the requirement under PSDF Application Format-A5.

In 209th OCC meeting, DVC representative submitted that SAMAST shall be implemented along with ERP in DVC and requested for technical consent from OCC so as to proceed to NLDC for subsequent formalities of project implementation.

Complimenting the initiative of SAMAST implementation and keeping in mind the necessity of implementing the same, OCC advised DVC for approaching NLDC in a bid to avail necessary fund for the SAMAST project.

DVC may explain. TCC may deliberate.

2.9 Update on installation of 7th (Interim) 500 MVA ICT at 400 kV Subhasgram (PG)-ERPC

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

MOU update:

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

Regarding ongoing works at Subhasgram(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 Subhasgram (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 Subhasgram (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 5th or 6th of January, 2024.

Powergrid may update. TCC may note.

2.10 Proposal for procurement of Spare ICT (Both 500 MVA & 315 MVA) for Eastern Region- Powergrid ER-II

In reference to agenda no- B8 of 208th OCC, spare ICT (Both 315 MVA & 500 MVA) has already been approved technically. Details financial implication will vary depending on time of procurement as all component costs are highly variable in nature.

As such, in line with earlier approval it is proposed to concur in-principal approval of 02 No's ICT as proposed in 208th OCC for further concurrence in forthcoming TCC/ERPC: -

STATE	VOLTAGE	SIZE	STORAGE PLACE
WEST BENGAL	400/220/33 KV	500 MVA	MAITHON
		315 MVA	BINAGURI

In 50th CCM meeting, Representative of ERPC submitted that the issue was discussed in 208th OCC and technical approval has already been obtained.

After detailed deliberation, CCM agreed for the procurement of the 500 MVA ICT and referred the issue to the upcoming TCC/ERPC Meetings for further concurrence.

Further, Powergrid was also advised to explore the possibilities of availability of 315 MVA spare ICT in other regions for use in exigency in ER.

POWERGRID ER-II may explain. TCC may deliberate.

2.11 Installation of Transmission Line Arrestor in 220 KV Lines in North Bengal- Powergrid ER-II

Based on 48th CCM & 49th ERPC Meeting approval, earlier approved value for Installation of Transmission Line Arrestor in 220kV Lines in North Bengal was noted as Rs 6.5 Cr. The entire work is already completed and accordingly, the actual expenditure incurred for the said work comes to Rs. 7.16 Crores which may please be ratified by members of CCM please.

In 50th CCM meeting, Representative of Powergrid submitted that escalation in the expenditure incurred occurred due to inclusion of certain additional locations and consideration of GST charges which was not included earlier.

CCM approved the revised cost of Rs 7.16 Crores inclusive of taxes and referred the issue to the upcoming TCC/ERPC Meeting for further concurrence.

Further CCM advised Powergrid to highlight the GST charges, taxes applicable, if any, etc. in all future cases in advance.

POWERGRID ER-II may explain. TCC may deliberate.

2.12 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
		125 MVAR	BIHARSARIFF SS

BIHAR	400 KV	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 MVA Reactor in lieu of 50/80 MVA Reactor for more redundancy.

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

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

POWERGRID ER-II may explain. TCC may deliberate.

2.13 Cost recovery against AMR expenditure/SEM related costs in ER-II from 01.03.2019 to 15.07.2023 for various phases of implementation and associated activities pertaining to Software/Hardware refreshment and upgradation of AMR- Revised Cost Expenditure recovery-AMR- Powergrid ER-II.

As per minutes of 49th ERPC, approved value of AMR expenditure was provided as **Rs. 6,01,20,823/-**. However, after actual booking and also after including GST/Consultancy charges the revised value comes to **Rs. 7,87,31,547/-** (Rs. Seven Crore eighty-seven lacs thirty-one thousand five hundred forty-seven only).

Bifurcation given below for ratification: -

Project	LOA#/ SAP PO	Total
AMR Phase1&2	ER-II/KOL/C&N/I-582/P-747/870/3676 Dated: 06-Nov-2012 /ER-II/KOL/C&N/P-747/ AMEND-IV/748/2425 Dated: 02-Sep-2014 (SAP PO- 9000007968 & 5200022239)	21,77,392
AMR Phase-3	ER-II/KOL/CS/I-1358/P-1398 Dated: 27-Oct-2016 ER-II/KOL/CS/I-1358/P-1398/ AMEND-III/442 Dated: 10-Jul-2018 (SAP PO- 5100014415)	39,87,747
AMR Phase-4	ER-II/KOL/CS/I-2446/P-2420/1929 Dated: 20-Jul-2020 ER-II/KOL/CS/I-2446/P-2420/ AMEND-II/4374 Dated: 05-Jul-2021/ER-II/KOL/CS/I-2446/P-2420/ AMEND-III/6493 Dated: 07-Jun-2022 (SAP PO- 5100032889)	1,30,19,265
AMR Phase-1&2 AMC renewal	ER-II/KOL/CS/I-2724/P-2702/4285 Dated: 02-Jun-2021 (SAP PO- 5100035446)	2,56,33,881
AMR LAN Integration work	ER-II/KOL/CS/I-3499/P-3414/6841 dated 01.09.2022 (SAP PO- 5100043386)	27,40,552
AMR Phase-3 AMC renewal for 249 SEM	ER2/NT/S-AMC/DOM/E00/22/00692/1000000986/I-3645/P-3556/8045 Dated 29.12.2022 (SAP PO- 5200059035)	27,21,270
AMR data center hardware and software application refreshment	ER-II/KOL/CS/I-3370/P-3289/6577 Date: 24.06.2022 (SAP PO- 5100041788)	1,58,12,000
Transportation of Smart Meter to Binaguri	SAP PO - 4800017144	-
Mobile data for AMR	SAP PO - 5200033984	1,44,997
Mobile data for AMR	SAP PO - 5200037273	1,91,054
Mobile data for AMR	SAP PO - 5200054713	2,57,832
Mobile data for AMR	SAP PO - 5200054715	2,05,724
	Total	6,68,91,714

	Consultancy Fees @ 15%	1,00,33,757
	GST on Consultancy Fees @ 18%	18,06,076
	Grand Total	7,87,31,547

In 50th CCM meeting, Representative of Powergrid submitted that the consultancy charges have been provided which were not included earlier.

CCM approved the revised cost of **Rs. 7,87,31,547/-** (inclusive of Taxes) and referred the issue to the upcoming TCC & ERPC Meetings for further concurrence.

POWERGRID ER-II may explain. TCC may deliberate.

2.14 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 POWERGR ID	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	DC Resistance test	Average value of resistance observed (0.12846 ohm/KM) is way above the Max. allowable DC 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.

POWERGRID ER-II may explain. TCC may deliberate.

2.15 AMR Phase-5 implementation in Eastern Region- Powergrid ER-II.

In Eastern Region, there have been 4 AMR Phases package awarded previously. All the AMR Phases are in AMC support now. In the AMR Phase-4 implementation period, Data Centre Hardware Software refreshment also being completed.

At present in ER, few Meters/Stations are yet to be integrated with AMR system. Most of them are new stations or new Feeders. As per mail received from ERLDC dated 29th Sep 2023, a list is shared for such meters which required to be integrated in existing AMR server. As per SEM details shared by ERLDC, total 320 no of Meters has to be integrated with the AMR. Out of which, 242 Meters are already present in Sub Stations, and another 78 Meters has been kept for upcoming/future New Sub Stations or Feeders.

In view of above, for integration of subject SEMs at AMR, a separate LOA/Award to be placed to carry out the job (Phase-5). In line with the requirement, the same has been shared with TCS, for estimation purpose. Considering the requirement received from ERLDC, total 65 DCU Hardware has been estimated. (50 for the already present Meters, and 15 kept as future for upcoming stations). Additionally, other hardware like Cables, PVC Pipe, Fiber Optical cable etc. have been provisioned as per the estimation.

One Rack Server with Windows Operating System and One 24 ports Network Switch have been considered in this program. These items will be installed at ERLDC Data Centre. These will be working as a redundant backup system and Data Repository for entire AMR. As the number of Meters getting increased, redundant data repository is a must for proper system operation.

Project timeline has been considered as below (28 Months)

M1 (Dec-23)	M6 (May-24)	M7 (Jun-24)	M18 (May-25)	M19 (Jun-25)	M28 (Mar-26)
06 months, For Supply & implementation		12 months Warranty Support		10 months comprehensive AMC Support	

The timeline has been considered expecting that, LOA will be awarded, and work will get started in Dec-2023 1st week. The actual timeline will be set as per the actual date of LOA placement.

The end date of AMC support is considered (will be kept) till 31-Mar-2026. As all the other AMR Phases, AMC is getting ended on the same date i.e. 31-Mar-2026, for making Phase-5 also a concurrent one, with other ongoing packages. From Apr-26 onwards, one single package will be placed for AMC of all the Meters.

The new AMR system will be installed at those stations only, where the OPGW Fiber and LAN Setup is available. There will be no GPRS based data communication, which will be considered in AMR implementation as per CEA/CERC Cyber Security Guideline. It has been assumed that all the locations considered here for AMR integration has active LAN port. If any location is not having LAN connectivity or OPGW work is ongoing, the same will be discussed in upcoming meetings such that same will be available during AMR installation.

Considering all the above, M/S TCS has given their commercial offer which has total value of **INR 2,60,72,054.00 /-** (Rs. Two crore sixty lacs seventy-two thousand and fifty-four only) without Taxes. (Annexure- B.26)

Like all previous LOAs of AMR, it is requested to give in principle approval for placing the order to M/S TCS on a single tender / nomination. Based on OCC approval, POWERGRID shall carry out necessary processing for further placement of LOA after carrying out necessary negotiation with M/S. TCS. Negotiated final value shall be placed in forthcoming CCM for further deliberation & approval.

In 208th OCC meeting, Powergrid representative submitted that in phase-5 of AMR integration, 240 meters out of 320 meters to be integrated, are presently installed in the substations and rest 80 meters are kept as provision for upcoming substations. He also apprised that meters to be AMR integrated in phase-5 will be equipped with DCU, backup data centre as new addition and robust LAN connectivity. He further added that meters will be installed in only those substations equipped with OPGW connectivity and LAN setup. In this regard, it was informed to the forum that commercial offer has been received for AMR phase-5 implementation from M/S TCS on single tender basis and presently negotiation is under process.

OCC gave in principle approval for the AMR phase-5 implementation and advised Powergrid to expedite negotiation process with M/S TCS and place the same in upcoming Commercial Sub-committee meeting for relevant discussion.

In 50th CCM meeting, Representative of ERPC highlighted the importance of AMR in the metering and accounting settlement in brief.

After detailed deliberation, CCM approved the AMR phase-5 implementation in Eastern Region and referred the issue to the 51st TCC/ERPC meeting for further approval.

POWERGRID ER-II may explain. TCC may deliberate.

2.16 Establishment of Regional Research & Testing Laboratory Unit of CPRI at Bhubaneswar, Odisha- CEA

Department of Energy, Government of Odisha has initiated a proposal regarding establishment of a regional research & testing facility unit of CPRI at Bhubaneswar, Odisha (copy enclosed at Annexure).

To assess the necessity as well as economic viability/sustainability of the project, R&D division of CEA has sought following information in respect of the Eastern Region:

- Number of existing manufacturers of product/equipment/component pertinent to power sector based in the Region.
- The details of testing requirements presently being handled/catered to in the Region.
- Details of the testing laboratory (along with their names) available in the Region with information about the type of test facilities for different equipment/ items, and test specification available with them.
- Year-wise details of number of tests carried out in the last 3 years in the Region. The

name and location of testing laboratory, waiting time, type of tests, delays, bottlenecks, demand-supply gaps, if any, etc. may be specifically furnished.

- Number and type of upcoming OEMs, and expansion/upgradation plans of existing manufacturers pertinent to power sector in the Region.

Communication from CEA in this regard attached at **Annexure B.2.16**.

TCC may discuss.

2.17 Support Service for Protection Database Project of ER- ERPC

In 47th TCC & ERPC Meeting, the proposal of continuing support service for the Protection Database Project of ERPC with the original vendor was discussed and it was approved for a period of one year which started from 01.01.2023.

After expiry of the one-year support period on 01.01.2024, one month extension has been allowed to the vendor with due approval from Member Secretary, ERPC. The further course of action in relation to the support service for the project may be discussed by TCC.

It is pertinent to mention that as per clause 14(3a) of CERC(IEGC)-2023, RPCs are required to maintain a centralized database of relay and protection settings of their concerned region.

TCC may deliberate and decide.

2.18 Unviable Schedule below Technical Minimum-NTPC

Some of beneficiaries are having significant allocation (30-86 %) from NTPC's stations. These Generating stations cannot run if major beneficiaries do not provide viable schedule to the same.

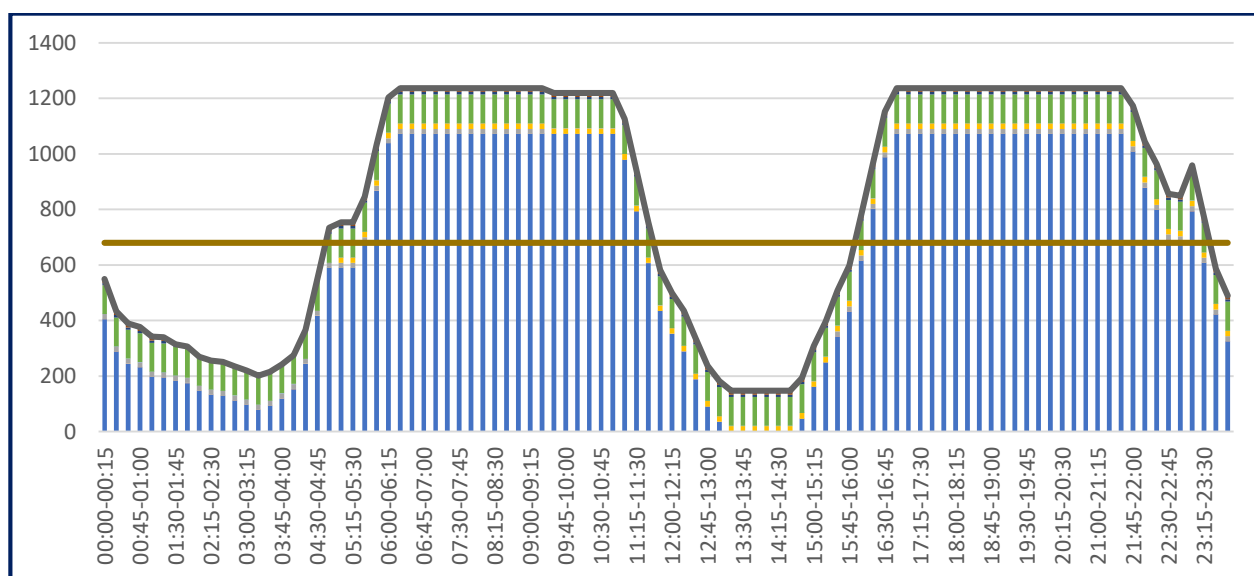
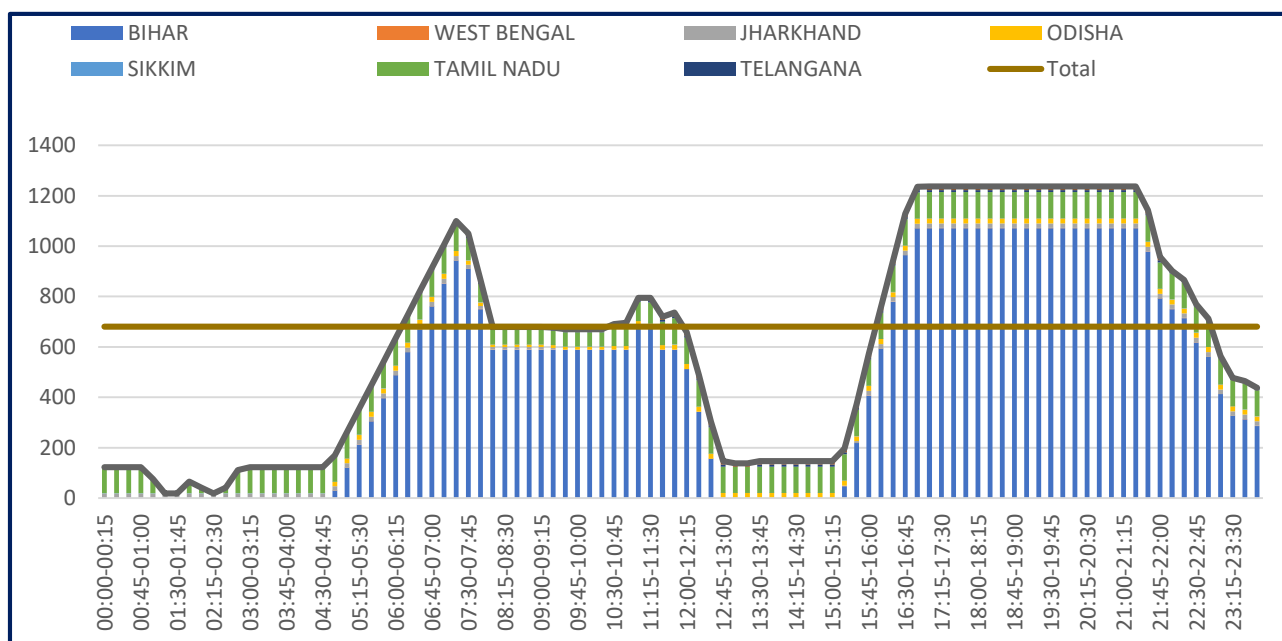
Consequent to implementation of CERC (IEGC) Regulations, 2023, the beneficiary states have started giving an unviable schedule to the generating stations i.e. much below technical Minimum. It is observed that during off peak hours, some of the beneficiaries give "zero/insignificant" schedule and during peak hours they force the generator to cater their demand with full schedule.

The unviable schedule below technical minimum by the customers drags the generator in undecisive state. If the technical minimum to be maintained by the generator for continuity of the services to cater beneficiaries' peak demand, the generator is forced to feed the deferential energy into the grid, resulting in heavy DSM, commercial and operational loss. If Generator opts for Reserve shut down, then also, it encounters monetary loss in terms of AFC. It is felt that the Generator cannot bid the power in the exchanges in a. DAM due to change in schedule by beneficiaries in D Day also. b. RTM due to uncleared volume on account of lower rate below ECR and DSM implications.

The generator has been accruing a huge loss to maintain operational balance in an unsustainable manner which cannot be continued in long term.

The intervention of the forum is sought on the following points.

- The beneficiaries which have significant allocation should act more responsibly keeping their peak hours demand in consideration and maintain the Technical Minimum (TM) scheduling.
- Support to be provided by the system operator below TM.
- RSD/USD to be permitted without supply obligation particularly if schedule is less than TM in 10% or more blocks.
- Alternative mechanism / Compensation mechanism to make up the loss for the operating below Technical Minimum or maintaining Technical Min.



In 50th CCM meeting, Representative of Bihar submitted that they are constantly adhering to the technical minimum schedule in case of D days and in case of D-1 days the schedules are being declared beforehand which can be sold by the generating station in the power market.

CCM stressed upon the fact that any Commercial decision should not be taken at the cost of Operational parameters and safety of the grid and advised all the major beneficiaries of the generating station to maintain technical minimum schedule during off-peak hours also in order

to prevent the unit from going under reserve shutdown and make it available for peak hours.

CCM advised ERLDC to explore the possibilities of minimizing the back down of units due to schedule below technical minimum.

Further CCM advised Bihar to manage its schedule from generating stations where it has major share in order to minimize load shedding. Also, Bihar was advised to take up the issue of merit order dispatch during off-peak hours with their Regulatory Commission to avoid any shortage of power during peak hours.

The issue is referred to the 51st TCC/ERPC Meeting for further deliberation.

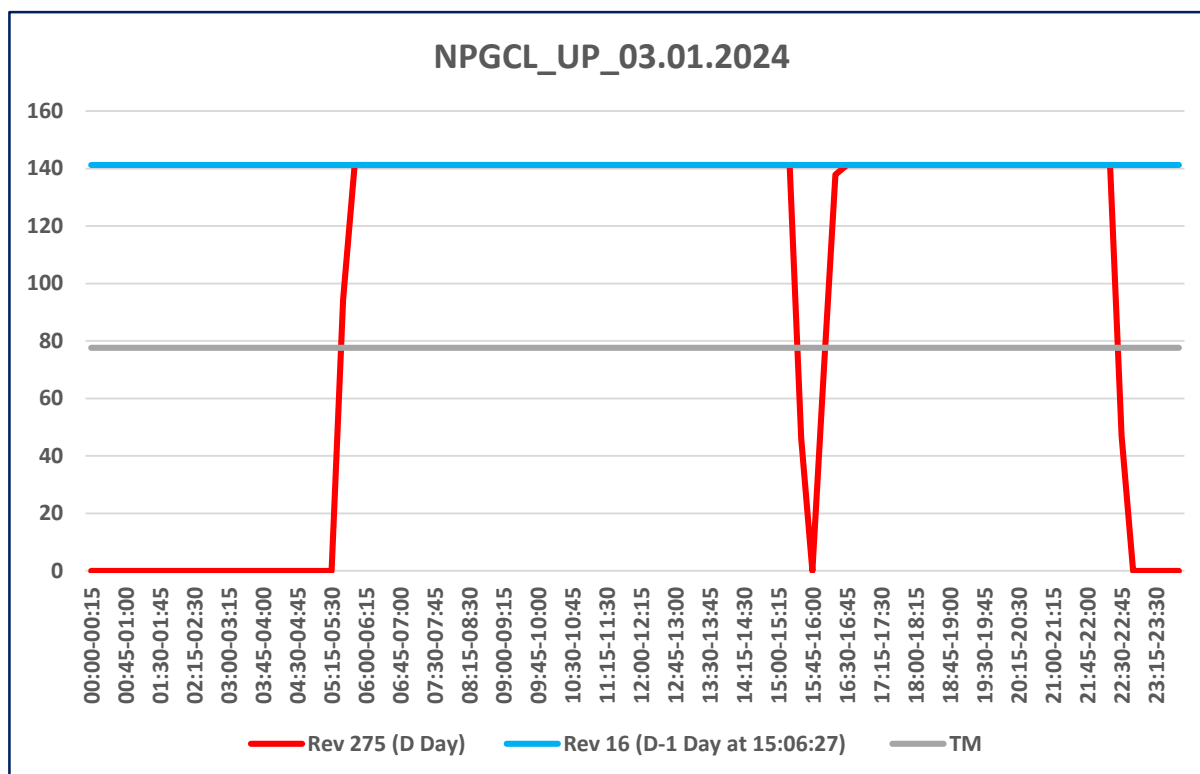
TCC may deliberate.

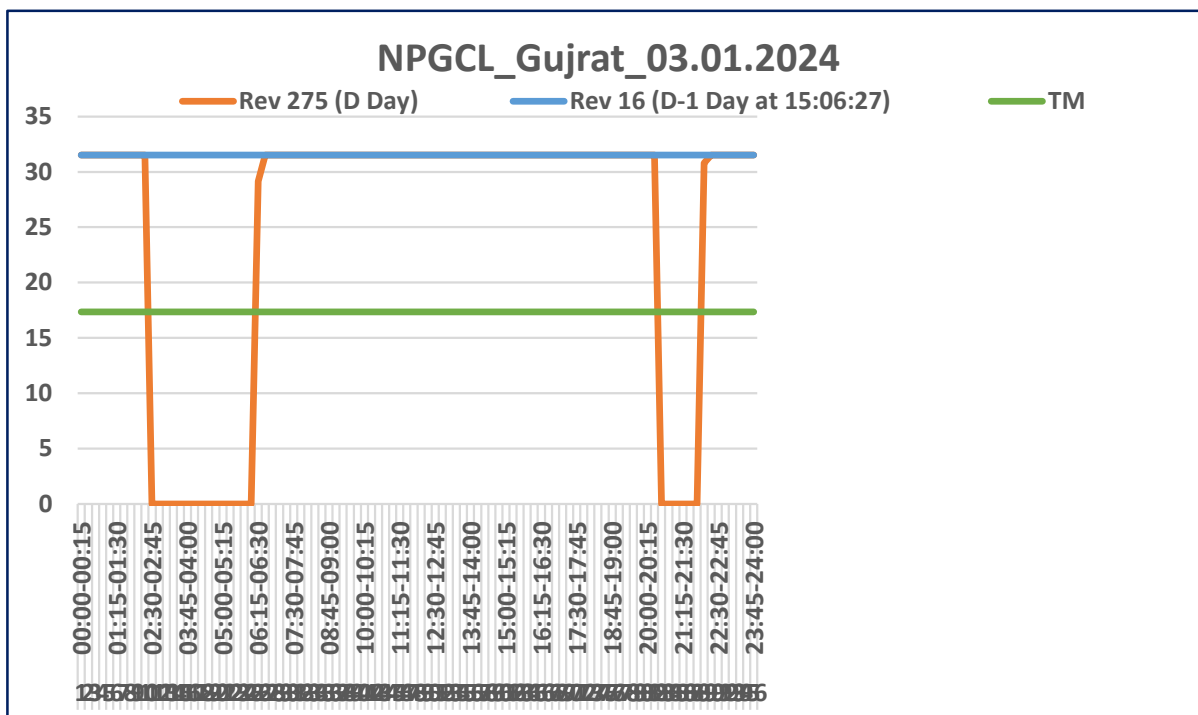
2.19 Revision of SG on D-day by beneficiaries below Technical Minimum-NTPC

CERC's order 18 /SM/2023 dtd_18.12.2023 in the matter of removal of difficulties (Second Order) in giving effect to certain provisions of Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2023, restricts the beneficiaries to revise the schedule below Technical Minimum post 14:30 hours on D-1 day.

Many beneficiaries are continuing to revise schedule after the stipulated time and below technical minimum. The same has been brought into consideration to all the concerned by the generators. It is contrary to applicable clauses of IEGC-2023.

The intervention of the forum is requested. The directives as per 18/SM/2023 w.r.t IEGC-2023 may be incorporated in the scheduling Software.





In 50th CCM meeting, Representative of NTPC submitted that provisioning of revision of schedule below technical minimum entitlement corresponding to the beneficiaries should not be allowed beyond 14:20 hrs. of D-1 day as per the provisions of CERC's order 18 /SM/2023 dtd_18.12.2023 in the matter of removal of difficulties and Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2023.

Representative of ERLDC submitted that the same is yet to be implemented in the WBES Scheduling software.

CCM directed ERLDC to issue a notice to all the beneficiaries for non-revision of schedules below technical minimum entitlement beyond 14:30 hrs. of D-1 day as per prevailing CERC IEGC regulations & suo moto order dated 18.12.2023 and implement the same in the WBES Scheduling software at the earliest.

The issue is referred to the 51st TCC/ERPC meeting for further deliberation.

TCC may deliberate.

2.20 Erroneous Meter Recording of MVAR_Low for 400kV RTPS-Ranchi PG Ckt#3 - DVC

Background:

Earlier the Metering of 400kV RTPS – Ranchi PG Ckt # 2 & and 3 was being carried out with the meter data of Ranchi PG end for the purpose of Deviation Settlement and Reactive Energy Accounting. However, as per the decision taken in the 206th OCC Meeting of ERPC, the energy accounting of these Ckts has been carried out with the RTPS end meter since 04th September 2023.

Issue:

Since 04-09-2023 onwards, it has been observed that DVC has been penalized for each week on account of MVAR_Low recording by RTPS end meter of 400kV RTPS-Ranchi PG Ckt#3. Whereas its parallel Ckt i.e. 400kV RTPS-Ranchi PG Ckt#2 has recorded MVARh_High on each week. From SCADA data also, it was verified that the RTPS end Bus voltage has never touched 388 kV, in fact not fallen below 400kV.

Upon investigation by the Metering Cell, it was learnt that there was some issue in PT circuitry and the same was attended and rectified on 06-10-2023. The Confirmation mail of the Metering Cell on rectification of the issue has been attached herewith. It has been observed that from 09-10-2023 onwards such erroneous MVAR_Low record has not been reflected in the Reactive Energy Account Statements.

Request:

The MVAR_Low recording of 400kV RTPS-Ranchi PG Ckt#3 in the Reactive Energy Statements issued from 04-09-2023 to 08-10-2023 thus appears to be erroneous and the same can be verified from SCADA data also (The SCADA data from 04-09-2023 to 10-09-2023 is attached at **Annexure B.20.**)

Therefore, it is requested to disregard the MVAR_Low recording of the said Ckt for the period 04-09-2023 to 08-10-2023 and accordingly revise the Reactive Energy Account Statement i.r.o. DVC.

In 50th CCM meeting, Representative of ERPC gave a brief overview of the above issue and highlighted that as per present methodology, in case of any errors in the main meter reading, check meter readings are not being used for the calculation of Reactive Accounts. Representative of DVC requested to revise the Reactive Accounts accordingly by disregarding the low MVAR recordings of ckt-3 and instead considering the high MVAR recordings of ckt-2 which is in parallel to ckt-3.

Representative of ERLDC also agreed to the observation raised by DVC regarding erroneous low MVAR recordings of 400kV RTPS-Ranchi PG Ckt-3. Member Secretary, ERPC requested all the constituents to carry out periodic checkup of all the meters.

Upon enquiring about the similarity of recorded data in both the circuits (ckt-2 & ckt-3) post rectification, it was informed that the recordings of both the circuits are almost same.

After detailed deliberation, CCM directed ERPC Secretariat to revise the Reactive Energy Accounts of 400kV RTPS-Ranchi PG ckt-3 for the period from 04-09-2023 to 08-10-2023 by considering the MVAR recordings of 400kV RTPS-Ranchi PG ckt-2.

Further, the committee was of the view that issues of similar nature in future will be decided on case to case basis on merit.

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

TCC may deliberate.

2.21 Long Outage of reactor at Jeerat S/s imposing high VAR charges on all DISCOMs of West Bengal – WBSETCL.

The 50 MVAR Reactor 2 in Jeerat (WBSETCL) 400 KV sub-stn owned and maintained by PG since beginning. This reactor is out of service from 23.04.23 due to high winding temperature. In absence of this reactor, voltage of Jeerat (WBSETCL) point was crossing 417 KV during winter off peak hours and WBSETCL is paying even up to the extent of 1.25 Lakhs per week as MVAR charges for the Jeerat point only.

As for some technical issues developed, the said reactor was taken out of bus earlier and as Power Grid has failed to rectify the same before winter (in last 8 months), WBSETCL and state DISCOMs are paying the amount as MVAR charges for Jeerat point without having any fault at their part, so the Jeerat point VAR amount may please be relieved for WBSETCL, if Power grid fails to bring back the reactor in service shortly. Power Grid may please intimate the up-to-date status and the probable date of return of the reactor in service.

In 210th OCC meeting, WBSETCL representative submitted that in event of long outage of 50 MVAR reactor at Jeerat S/S, huge amount of weekly VAR charges are being imposed on WBSETCL and state DISCOMs. In this regard, he requested Powergrid ER-II to restore the 50 MVAR reactor to service at the earliest. In case of failure by Powergrid ER-II to bring the reactor to service at Jeerat S/S on time, WBSETCL appealed to OCC forum for waiving off VAR charges at the Jeerat (400 kV) point. Powergrid ER-II representative vide mail dated 23.12.2023 apprised that the subject Reactor being aged more than 35 Years old, is subjected to many snags and based upon the information received from Jeerat site, normally time to time action is taken. After 23.04.23, the subject Reactor has been kept under Voltage Regulation causing no possibility to check the activity (Repairing done). Further when the reactor was again tried to put into operation during present winter, different problems were observed for which necessary actions are already undertaken and expected to be finished by 15.01.2024. NOCC advised Powergrid ER-II to expedite actions for restoration of 50 MVAR reactor at 400 kV Jeerat (WBSETCL) S/S and also opined that the request of WBSETCL for waiving off of VAR charges may be taken up in the next CCM meeting for necessary deliberation.

In 50th CCM meeting, Representative of West Bengal requested for exemption of VAR charges due to long outage of 50 MVA reactor at Jeerat S/s.

On enquiry, representative of Powergrid confirmed that the said reactor would be restored by 15th January 2024. After detailed deliberation, CCM agreed on exemption of weekly VAR charges imposed on WBSETCL during the faulty period of the 50 MVA reactor and advised ERPC Secretariat to revise the Reactive Energy Accounts accordingly.

TCC may deliberate.

2.22 Agenda by Powergrid-ER-I.

A. Non-Opening of requisite amount of LC:

- (i) Following constituents are required to enhance/ extend LC towards Payment Security Mechanism, as per Annexure-8 of 8.2 of Para 8.0 of BCD Procedure and CERC Regulations:

SI No	Name of DIC's	Required Value of LC (in Cr.)	Present Value of LC (in Cr.)
(i)	North Bihar Power Distribution Company Limited (NBPDC)	90.98	9.73
(ii)	South Bihar Power Distribution Company Limited (SBPDCL)	106.52	15.27
(iii)	Jharkhand Bidyut Vitran Nigam Ltd (JBVNL)	31.42	11.52
(iv)	Uttarakhand Power Corporation Ltd	3.10	--

- Letter of Credit (LC) to be opened in favour of **CTUIL for POC & POWERGRID** towards **Non-POC** Billing.

In 50th CCM meeting, CCM advised all the constituents to open requisite amount of LC at the earliest.

B. Payment of Outstanding dues more than 45 days:

SI No	Name of DIC's	Total Outstanding Dues (in Cr.)	Outstanding Dues more than 45 days (in Cr.)
(i)	Jharkhand Bijli Vitran Nigam Limited (JBVNL)	161.2	39.50
(ii)	South Bihar Power Distribution Company Limited (SBPDCL)	238.06	92.86
(iii)	North Bihar Power Distribution Company Limited (NBPDC)	191.36	67.02
(iv)	West Bengal State Electricity Transmission Company Ltd. (WBSETCL)	28.91	28.74
(v)	West Bengal State Electricity Distribution Company Ltd. (WBSEDCL)	376.92	9.76
(vi)	Orissa Power Generation Company Limited (OPGCL)	17.07	17.07
	Total	1013.52	254.95

In 50th CCM meeting, CCM advised all the constituents to clear the outstanding dues at the earliest.

C. Non-payment of RTDA bills:

The following DIC's are not paying RTDA bills:

Sl No	Name of DIC's	Outstanding dues	Remarks
(i)	West Bengal State Electricity Distribution Company Ltd. (WBSEDCL)	9.76 Cr.	Outstanding dues of INR 1.20 Cr. pending for long period, INR 2.91 Cr. (bill dtd. 09.12.2022) & INR 5.65 Cr. (bill dtd. 10.05.2023) against RTDA bills are still pending with WBSEDCL despite of several follow up regarding this.

In 50th CCM meeting, CCM advised all the constituents to clear the outstanding bills at the earliest.

D. Issuance of trial run certificate of 3x80 MVAR Line Reactor of 765kV Gaya-Balia Line at Gaya SS.

In reference to above, the request for issuance of trial run certificate of following assets was submitted to ERLDC on dated 19.03.2015:

i) 765kV Gaya-Balia Line along with 3x80MVAR Line Reactor at Gaya end:

Subsequently, Certificate of Completion of Trial operation was issued by NLDC on dated 31.03.2016. However, in the issued certificate, the asset was mentioned as only '765kV Gaya-Balia line' in place of '765 kV Gaya-Balia Line along with 3x80 MVAR Line Reactor at Gaya'. Trial run certificate of 3x80MVAR Line Reactor is asked by honorable CERC during true-up tariff finalization.

In this regard, issuance of Trial run Certificate of 3 X 80 MVAR Line reactor of 765KV Gaya-Balia Line at Gaya SS is again requested through mail dated 25.07.2022, letter dated 06.09.2022 & letter dated 29.12.2023.

In 50th CCM meeting, Representative of ERLDC submitted that relevant data regarding trial run of 3x80 MVAR Line Reactor is not available with them.

CCM advised ERLDC to provide the trial run certificate at the earliest.

2.23 Status of Procurement of New SEM for Eastern Region-ERLDC

In 47th ERPC meeting dated 25.11.2022, it was decided to procure new 325 SEM towards replacement of old LnT meters & upcoming projects in Eastern region. TCC advised CTU to

go ahead with the procurement of 325 meters. CTU representative submitted that they would authorize PowerGrid to procure the additional 325 nos. of SEMs.

The status of procurement was discussed in 208th OCCM wherein Powergrid representative submitted that procurement of meters is under process whose bid opening date has been extended from 11.10.2023 to 26.10.2023.

In 50th CCM meeting, after detailed deliberation, CCM raised serious concern over delay in the procurement of meters and advised CTU/PGCIL to expedite the procurement activities.

TCC may discuss.

2.24 Problem in AMR Data Collection—ERLDC

ERLDC is receiving majority of meter data from remote locations through AMR scheme. AMR scheme is using LAN network and is free from GPRS. In the last few weeks, issues in data collection activities through AMR scheme has occurred which have impacted the weekly metering activities. As informed by TCS, issue has been in LAN/WAN network. The problem is still reoccurring which need to be addressed at the earliest.

In 50th CCM meeting, Representative of Powergrid submitted that due to publishing of huge data from a false Id, latency is being created in the system and AMR data flow is being affected. Identification of exact node from which false data is published is not being possible.

CCM advised that ERPC secretariat to convene a special meeting at the earliest for further deliberation of the issues.

TCC may discuss.

2.25 Default details of constituents pertaining to Deviation, Reactive, Fees and Charges, Opening of LC and Interest due to delayed payment of deviation charges- ERLDC

A. Default details of constituents pertaining to Deviation, Reactive, Fees and Charges.

The details of major defaulters as on 04.01.2024 considering the ERPC bills dated 28/12/23 (Wk- 11/12/23 to 17/12/23) for DSM charges and Reactive charges are tabulated below- -

Jharkhand:

	JBVNL
DSM (in Cr)	₹ 54.54 Cr /-
Reactive (in Cr)	-
LC	LC Partially opened of ₹ 1.39 Cr.
Due date of expiry of LC	14-03-2024
Reconciliation	DSM: Pending from Q2 of FY 2020-21

	Reactive: Pending from Q1 of FY 2019-20
	FnC: Pending from Q1 of FY 2021-22

Bihar:

	Bihar
DSM (in Cr)	₹ 29.42 Cr /-
Reactive (in Cr)	₹ 0.77 Cr /-
LC	LC of ₹ 2.213 Cr expired on 12/11/2023
Due date of expiry of LC	-

Sikkim:

	Sikkim
DSM (in Cr)	₹ 22.95 Cr /-
Reactive (in Cr)	-
LC	No Valid LC
Due date of expiry of LC	-
Reconciliation	DSM: Pending from Q2 of FY 2019-20 Reactive: Pending from Q1 of FY 2019-20 FnC: Pending from Q1 of FY 2021-22

Further, the details of other pool members are enclosed as **Annexure-B.25.1** and **Annexure-B.25.2**.

In 50th CCM meeting, Representative of Jharkhand informed that DSM outstanding will be cleared by February'2024.

Representative of Sikkim informed that DSM outstanding will be cleared by January'2024

CCM advised all the constituents to clear the outstanding dues at the earliest.

B. Opening of LC by ER Constituents for DSM Payments.

The details of LC amount required to be opened, as per ERLDC letter dated 21/04/2023 (and reminder letter dated 18/12/2023), for default in FY 2022-23 by ER constituents is given in table below –

SI No	ER Constituents	LC Amount (110% of Average weekly Deviation Charge liability)	Due date of expiry	Remarks
1	BSPTCL	404.55551		No Valid LC
2	JUVNL	347.61817	13-03-2024	LC opened for ₹ 139,64,455 /-
3	DVC	265.67154	-	No Valid LC
4	Sikkim	46.0397	-	No Valid LC
5	CHUZACHEN	2.46842	-	No Valid LC
6	GMR	20.05681	-	No Valid LC
7	JITPL	30.09467	-	No Valid LC
8	JLHEP	25.22302	-	No Valid LC
9	BRBCL	36.77389	-	No Valid LC
10	Tashiding	8.3789	-	No Valid LC

Further, the details of other pool members are enclosed as Annexure-B.25.3.

In 50th CCM meeting, CCM advised all the constituents to open the requisite amount of LC at the earliest as per prevailing CERC regulation.

C. Interest due to delayed payment of deviation charges/RRAS

Due to the delayed payment of deviation charges in the DSM Pool interest was computed for all the DSM Pool Members for FY 2020-21. The current outstanding of OPGC is ₹ 0.24 lakhs.

The status of interest is enclosed in Annexure-B.25.4.

In 50th CCM meeting, OPGC was not present during the discussion. CCM advised all the constituents to clear the outstanding dues at the earliest.

TCC may discuss.

ADDITIONAL AGENDA

2.26 Intimation regarding final executed quantity for the OPGW links for the Projects under POWERGRID (ER-I portion)- Powergrid

Based on actual execution, following are the final quantity of the OPGW links for Projects under POWERGRID (ER-I portion):

A. 'Strengthening of OPGW network within the ER Grid and connectivity with other regions':

No.	Name of OPGW link	Length Approved in 42nd ERPC (Km)	Final Executed Route Length (Km)	Remarks
1	765 KV S/C Gaya-Varanasi Ckt-II	265	310.186	Work executed as per actual length at site. Length increased due to laying of OPGW for connectivity of repeater at Sasaram
2	400 KV D/C Patna-Balia Line-I	195	180.45	Work executed as per actual length at site.
3	220 KV Daltanganj (JUSNL)-Latehar (JUSNL) LILO (D/C) at Daltanganj (PG)	90	67.058	Work executed as per actual length at site.
4	220 KV Jodda (OPTCL) – Ramchandrapur (JH) S/C	130	108.030	Work executed as per actual length at site.
5	220 KV Chandil (JH) – Ranchi (PG) (up to LILO point) D/C	90	83.363	Work executed as per actual length at site.

B. 'Upgradation of SCADA/RTUS/SAS in Central Sector Stations and Strengthening of OPGW Network in Eastern Region':

Sr. No.	Name of OPGW link	Length Approved in 37th & 39th ERPC (Km)	Final Executed Route Length (Km)	Remarks
1	BRBCL Nabinagar-Sasaram	81.65	81.394	Work executed as per actual length at site.
2	Biharsharif-Sasaram	193	199.75	Work executed as per actual length at site.
3	Biharsharif-Kahalgaon	202	233.234	Work executed as per actual length at site. Length increased due to laying of OPGW at LILO at Lakhisarai section

4	LILO portion of Biharsharif-Balia at Ara (48F)	12	10.192	Work executed as per actual length at site.
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POWERGRID ER-I may update. TCC may deliberate.

2.27 Modification in Scope of Project- “Establishment of State-of-the-Art Unified Centralized Network Management System U-NMS for ISTS and State Utility Communication Network in Eastern Region” on account of deletion of Sikkim SLDC Remote Console- Powergrid

Project for “Establishment of State-of-the-Art Unified Centralized Network Management System U-NMS for ISTS and State Utility Communication Network in Eastern Region” was approved in 43rd ERPC Meeting to be implemented by POWERGRID (Copy of relevant pages of Minutes of Meeting is enclosed as **Annexure-B.27.1**). Accordingly, contract was awarded by POWERGRID in June 2022 with completion schedule of January 2024. Presently, Main Data/Control Centre has been completed at Kolkata and Backup Control/Data Centre at Patna with installation and commissioning work also being completed at SLDCs of WBSETCL, DVC, BSPTCL, JUSNL, OPTCL. However, due to non-availability of space at Sikkim SLDC, the Remote Console along with furniture to be supplied under Sikkim has to be deleted. In this regard, correspondence with Sikkim SLDC is enclosed as **Annexure-B.27.2**.

POWERGRID may update. TCC may deliberate.

2.28 Issues related to OPGW installation in 132 kV Rangpo - Chuzachen Line- Powergrid

Power Grid had been entrusted with establishing Fiber Optic network (OPGW) over 132 kV Rangpo - Chuzachen TL of EPDS, Sikkim under Eastern Region Fibre Optic Expansion Project (Additional Requirement) for smooth communication of Chuzachen HEP power generating station to Regional Load Dispatch Centre (ERLDC) at Kolkata. The ownership of said transmission line 132 kV Rangpo - Chuzachen TL belongs to Energy & Power Dept., Govt of Sikkim.

After completing 19.327 km OPGW installation, work was again stopped in Padamchay village due to public complaint over induction problem faced between tower no. 35 and 36 of 132 kV Rangpo-Chuzachen TL due to very ground low clearance issue. Matter was taken up in 49th ERPC meeting where in Energy & Power Department, Govt. Of Sikkim was requested to resolve the issue. (Copy of relevant pages of Minutes of Meeting is enclosed as **Annexure-B.28.1**). Further, POWERGRID had also requested intervention by Senior authority of Energy & Power Department, Govt. Of Sikkim vide letter dated 27th June 2023 to urgently resolve the issue, however same is pending till date. (Copy of letter correspondence is enclosed as **Annexure-B.28.2**). In this regard, ERPC forum may please guide to resolve the issue since due to afore mentioned ROW issue, Rangpo – Chuzachen OPGW link is pending since long time leading to delay and cost overrun.

POWERGRID may explain. TCC may deliberate.

2.29 Settlement of Energy Accounting of Bhutan for the months of November 2023 and December 2023- ERPC

As per the inter-governmental agreement between India and Bhutan, the surplus energy from Tala, Chukha, Kurichu and Mangdechu hydro generators in Bhutan is exported to India and the settlement of the same is done on a monthly basis through the REA Bhutan account published by ERPC taking in to account the actual meter data.

For the month of November 2023, there is a net drawl of 59.752 MU of energy by Bhutan from the Indian Grid for which prior approval from the designated authority had not been obtained. In absence of any provision under the current agreement for commercial settlement of accounts in case of net drawl of power by Bhutan, the Energy Account for the month of November 2023 was not published by ERPC and necessary direction in this regard was sought from CEA vide letter dated 22.12.2023.

During December 2023, Bhutan injected only 4.7625 MU from MHEP. Bhutan vide letter No. DGPC/DGET/MHP/PTC/2024/34 dated 5th January 2024 (**Annexure B.29**) has submitted that any export from Bhutan in the month of December 2023 and ahead will be first adjusted with the import from Indian Grid made during the month of November 2023. Accordingly, an export of 4.7625 MU of energy from MHEP for the month of December 2023 has been adjusted against the import of 59.75226 MU of energy in the month of November 2023. The net energy of 54.98976 MU is to be adjusted in the subsequent months as per DGPC. Communication regarding the same has already been sent to CEA via mail dated 09.01.2024.

Bhutan may update. TCC may discuss.

3. PART-C: ITEMS FOR INFORMATION

3.1. Status of PSDF.

An amount of total ₹ 5.61 Cr (Reactive charges) from the Reactive Pool account has been transferred to PSDF after the 49th Commercial sub-committee meeting held on 28.07.2023. With this the total amount of around ₹ 2187.32 Cr has been transferred to PSDF so far. The breakup details of fund transferred to PSDF (till 04.01.24) is enclosed in **Annexure –C.1.**

TCC may note.

3.2. Fees and charges of ERLDC.

The reconciliation statements of FnC payments by registered users of ERLDC have been sent up to the period of **Q2 of FY 2023-24.** The same is also available at FnC portal <https://fc.posoco.in/FnCWeb/#/landing>. Many of the users are yet to sign the reconciliation statement. The constituents were requested to verify /check the same & comment (if any) to ERLDC at the earliest.

The status of reconciliation is enclosed in **Annexure- C.2.**

TCC may note.

3.3. Reconciliation of Pool Accounts.

The reconciliation statements of DSM, Reactive, TRAS(RRAS), and SRAS(AGC) charges are being issued by ERLDC on quarterly basis and statements are being sent to the respective constituents and also being uploaded at ERLDC website at <https://erldc.in/market-operation/dsmreconciliation/>. The status of reconciliation as on 04.01.2024 is enclosed in **Annexure-C.3.1 and Annexure-C.3.2.**

In 50th CCM meeting, CCM advised all the Constituents to take necessary action for the signing of pending reconciliation statements at the earliest.

TCC may note.

3.4. For STOA Payments made to SLDC/STU and CTU.

The reconciliation statements of STOA payments of Q-2 for FY 23-24 have been sent to the DVC, OPTCL, BSPTCL, Jharkhand, Andhra Pradesh, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Uttar Pradesh, WBSETCL, CHHATTISGARH, Delhi, JAMMU & KASHMIR, Gujrat, Manipur, Tamil Nadu and CTU on dated 27.10.2023 and also uploaded the same at ERLDC website at <https://erldc.in/open-access/reconciliation-sldc-stu/>. The constituents were requested to verify /check the same & comment (if any) to ERLDC at the earliest.

The status of reconciliation is enclosed in **Annexure-C.4.**

TCC may note.

3.5. For Payments made to STOA Applicants.

The reconciliation statements of STOA payments for the period of Q2 for FY 23-24 have been sent to the GRIDCO, GMRETL, JBVNL, JITPL, WBSEDCL, APPCPL, DALMIA CEMENT (BHARAT) LIMITED (RCW), HPX, IEXL, IPCL, NALCO(AP), NALCO(OD), KEIPL, PXIL, ITC Limited Dairy Plant, ITC Limited ITD Munger, ITC Limited Corporate Office Kolkata, TSL-132KV, SHUBHEKSHA ADVISORS PRIVATE LIMITED and TPTCL on dated 27.10.2023 and

also uploaded the same at ERLDC website at <https://erldc.in/open-access/reconciliation-applicant/>. The constituents were requested to verify /check the same & comment (if any) to ERLDC at the earliest.

The status of reconciliation is enclosed in **Annexure-C.4**.

TCC may note.

3.6. List of Assets during July'23 to December'23 of Eastern Region (ER)

A	<i>Provision of Spare ICTs in Eastern Region</i>	DOCO	Remarks	Region
1	1 No. 160 MVA, 220/132 KV ICT at 400/220/132 kV Daltonganj S/S	06-07-2023	DOCO Letter Dtd. 10.07.2023	ER-I
B	<i>Provision of Spare ICTs in Eastern Region</i>	DOCO	Remarks	Region
1	1 No. 500 MVA, 400/220 KV ICT at 400/220 kV Pusauli S/S	03-08-2023	DOCO Letter Dtd. 03.08.2023	ER-I
C	<i>Establishment of Communication System under Expansion/ Upgradation of SCADA/ EMS System at SLDCs of ER (BSPTCL and DVC) links</i>	DOCO	Remarks	Region
1	MTPS-Gopalganj (100.35 km)	01-02-2021	DOCO Letter Dtd. 07.08.2023	ER-I
2	Siwan-Gopalganj (30.12 km)	07-07-2020		
3	Saharsa- Purnea (BH) (101.11 km)	01-06-2019		
4	Kahalgaon (BH)- Kahalgaon (NTPC) (5.71 km)	10-09-2022		
5	Hathidah- Lakhisarai (BH) (28.98 km)	14-05-2022		
D	<i>Fibre Optic Communication System in Eastern Region under expansion of wideband communication system in Eastern Region</i>	DOCO	Remarks	Region

1	Biharshariff-Banka (OPGW cable 24 F), Length= 183.872 km	27-06-2023	DOCO Letter Dtd. 22.08.2023	ER-II
E	<i>POWERGRID works associated with Transmission System Strengthening in Indian System for transfer of power from new HEPs in Bhutan</i>	DOCO	Remarks	Region
1	02 numbers 400 kV line bays at Alipurduar S/S for termination of Alipurduar-Siliguri (New) 400 kV D/C (Quad) line (line under TBCB)	01-08-2019	DOCO Letter Dtd. 04.09.2023	ER-II
2	02 numbers 400 kV line bays at Siliguri S/S for termination of Alipurduar-Siliguri (New) 400 kV D/C (Quad) line (line under TBCB)			
F	<i>Project-ERSS-XVII-B</i>	DOCO	Remarks	Region
1	Corrigendum:-Reconductoring of Maithon RB- Maithon 400 kV D/C line along with modifications/additions in bay equipment at both ends of the line viz. Maithon 400/220 kV S/S of POWERGRID and generation switchyard of Maithon RB.	08-08-2023	DOCO Letter Dtd. 09.10.2023	ER-II
G	<i>Establishment of Reliable Communication Scheme Under Central sector for Eastern Region.</i>	DOCO	Remarks	Region
1	Alipurduar-Salakati (OPGW Cable 24 F), 109.264 KM in Length	23-02-2022	DOCO Letter Dtd. 04.09.2023	ER-II
H	<i>Provision of Spare ICTs in Eastern Region</i>	DOCO	Remarks	Region
1	1 No. 500 MVA, 400/220 KV, 3-Ph ICT at 400/220 KV Pandiabali S/S (Regional SPARE ICT for Odisha)	05-09-2023	DOCO Letter Dtd. 05.09.2023	Odisha Proj.
I	<i>Communication System Package for Strengthening of OPGW Network in ER associated with project upgradation of SCADA /RTUs/SAS in central sector stations and strengthening of OPGW network in ER</i>	DOCO	Remarks	Region

1	400 kV Talcher-Rourkela OPGW link along with associated equipments i.e 2 Nos SDH equipment with 4 nos of OLIC (225 KM Range) and 2 nos 48V DC power supply (450 Ah Battery Bank & 35A DCPS) at Rourkela (POWERGRID) and Talcher (NTPC) S/S- 170.963 KM	21-09-2023	DOCO Letter Dtd. 10.11.2023	Odisha Proj.
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In 50th CCM meeting, Representative of Powergrid informed that the 500 MVA spare ICT at Maithon has already been declared CoD on **05.12.2023**.

TCC may note.
