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

NO. ERPC/EE/OPERATION/2023/ **DATE: 26.10.2023**

To

As per list enclosed.

Sub: Minutes of 208th OCC Meeting held on 17.10.2023 (Tuesday) physically at ERPC secretariat,Kolkata - reg.
17.10.2023 (मंगलवार) को ईआरपीसी सचिवालय, कोलकाता में भौतिक रूप से आयोजित 208वीं ओसीसी बैठक का कार्यवृत्त - संबंध में।

Sir,

Please find enclosed minutes of 208th OCC Meeting held on 17.10.2023 (Tuesday) physically at ERPC secretariat, Kolkata at 10:30 hrs for your kind information and necessary action. The same is also available at ERPC website (**www.erpc.gov.in**).
कृपया अपनी जानकारी और आवश्यक कार्रवाई के लिए 17.10.2023 (मंगलवार को ईआरपीसी सचिवालय, कोलकाता में 10:30 बजे आयोजित 208वीं ओसीसी बैठक के संलग्न कार्यवृत्त देखें। यह ईआरपीसी वेबसाइट (**www.erpc.gov.in**) पर भी उपलब्ध है।
Observations, if any, may please be forwarded to this office at the earliest.
टिप्पणियाँ, यदि कोई हों, कृपया यथाशीघ्र इस कार्यालय को अग्रेषित करें।

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

Regards/ सम्मान,

Yours faithfully/ आपका विश्वासी,

26/10/2023

(S.Kejriwal)
SE (Operation)
एसई (ऑपरेशन)

LIST OF ADDRESSES:

1. CHIEF ENGINEER (TRANS., O&M), BSPTCL, PATNA, (FAX NO. 0612-2504557/2504937)
2. CHIEF ENGINEER (System Operation), BSPTCL, PATNA, (FAX NO. 0612-2504557/2504937)
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4. CHIEF ENGINEER, TVNL, DORANDA, RANCHI - 834102 (FAX NO. 06544-225414)
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17. GM (SYS OPERATION), CESC, CHOWRINGHEE SQUARE, KOLKATA (FAX NO.033-22253756/22129871)
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19. ADDL.CHIEF ENGINEER, SLDC, POWER DEPT., GOVT. OF SIKKIM, GANGTOK, (FAX NO. 03592-228186/201148/202284)
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22. GENERAL MANAGER , KhSTPP, NTPC, KAHALGAON (FAX NO.06429-226082)
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CC:

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

MINUTES
OF
208TH OCC MEETING

Date: 17.10.2023
Eastern Regional Power Committee
14, Golf Club Road, Tollygunge
Kolkata: 700033

EASTERN REGIONAL POWER COMMITTEE

MINUTES OF 208TH OCC MEETING HELD ON 17.10.2023 (TUESDAY) AT 10:30 HRS

Member Secretary, ERPC chaired the 208th OCC meeting. On welcoming all the participants, he outlined the performance of ER grid during September'2023 and highlighted the following points:

- *In September -2023, energy consumption of ER was 16962.97 MU which is 2.6 % more than September -2022.*
- *In September -2023, Peak demand met of ER was 28,920 MW which is 8.51 % more than September -2022.*
- *During September -2023, 83.45 % of the time, grid frequency was in IEGC band(49.90 Hz-50.05Hz)*
- *Thermal PLF of ER during September 2023 was 73 %.*
- *Generating stations whose PLF is more than 90% during September -2023:*

Utility	***Generating station***	***PLF(%)***
WBPDCL	*Santaldih TPS*	*100*
NTPC	*Darlipalli TPS*	*95*
	Talcher STPP	*93*
	Muzaffarpur TPS	*96*
MPL	*Maithon RB TPP*	*98*
APNRL	*Mahadev Prasad STPP*	*96*
CESC	*Budge Budge TPS*	*92*
	Haldia TPP	*96*

Transmission line (132 kV & above) commissioned during September-2023:

- *400kV Sitamarhi – Dhalkebar D/C (Quad Moose) 78 ckt.km by PGCIL*

As far as coal stock is concerned, stock position is in sub-optimal range in most generating units especially WBPDCL Kolaghat TPS(only 7% stock) along with Koderma TPS (DVC)(with 19% stock) and Farakka STPS(NTPC) (only 2 % stock) need to diligently focus on building their actual coal stock as per their normative requirement.

Coal stock position (As on 14.10.2023) is detailed as follows:

SL.	***Name of States/Power Stns.***	***% of Actual Stock vis-à-vis Normative Stock***
1.	*Jharkhand (TVNL)*	*24 %*
2.	*Odisha/IBTPS*	*64 %*
3.	*WBPDCL*	*13 % (Min. Kolaghat TPS-7%, Max. Bakreswar TPS-24 %)*

4.	*DVC*	*30 % (Min. Koderma TPS-13 %; Max. Raghunathpur TPP- 61 %)*
5.	*NTPC*	*53 % (Min. Farakka STPS – 2 %; Max. Darlipalli 155 %)*

In this regard he highlighted bottlenecks in coal transportation as the key contributor to low coal stock position in majority of thermal generating units.

He also expressed serious concern about the recent damage caused to Teesta –III HEP, Dikchu HEP and Teesta-V HEP due to natural disaster in Sikkim.

ED,ERLDC complimented all SLDCs of Eastern Region for successful implementation of IEGC 2023 w.e.f. 01.10.2023 with aid of their active cooperation and at the same time encouraged sharing of doubts/queries relevant to operational aspect of IEGC 2023 guidelines for timely resolution. He also intimated the forum about preparation of new operating procedure by ERLDC in line with IEGC 2023 which is open for feedback or suggestions by all concerned stakeholders.

PART – A

ITEM NO. A.1: Confirmation of Minutes of 207th OCC Meeting held on 15th September 2023 virtually through Microsoft teams Online platform.

The minutes of 207th Operation Coordination sub-Committee meeting held on 15.09.2023 was circulated vide letter dated 21.09.2023.

Members may confirm the minutes of 207th OCC meeting.

Deliberation in meeting

Members confirmed the minutes of 207th OCC meeting.

PART B: ITEMS FOR DISCUSSION

ITEM NO. B.1: Implementation of Crisis Management Plan (CMP) and Disaster Management Plan (DMP) in Power Utilities-ERPC

As per section 37 of the Disaster Management Act 2005, each Ministry/Department of the Government of India is required to prepare a Disaster Management Plan (DMP). Also, as per the Crisis Management Plan (CMP) of the Government of India prepared by the Cabinet Secretariat, each Central Nodal Ministry is required to prepare a detailed Crisis Management Plan for dealing with crisis situations falling in the areas of their responsibility. Accordingly, the Ministry of Power prepares DMP and CMP for the power sector in association with Central Electricity Authority. The CMP for power sector is reviewed periodically by Secretary (Security), Cabinet Secretariat. The latest review meeting was held on 23.11.2022 wherein Secretary (Security) emphasized on the following points related to DMP and CMP: i. Each power utility shall create a fund which would be 1.5% of the annual revenue of the Utility for meeting the requirement of crisis/disaster management plan. ii. Power Utilities shall prepare Disaster Management Plan (DMP) and Crisis

Management Plan (CMP) separately for their organisation. iii. The Plan/report shall cover the management of different crisis scenarios as enlisted in the Ministry of Power Crisis management plan given in the table below:

S.No	Crisis situation in Power Sector
1.	Terrorist Threats and Attacks
2.	Bombs Threats, Hoax & Bomb Explosions
3.	Explosion in Equipment
4.	Crowd or Mob Attack
5.	Threat from UAV(Drone) attack
6.	Strike
7.	Sabotage
8.	Cyber-attack
9.	Fire/Forest Fire

The report shall also indicate the response of the various teams, observations, and effectiveness for handling the emergency situation and the scope for improvements (new learnings, DOs, and Don'ts), etc,: v. Sensitize and motivate both public and private sector power utilities to conduct mock drills on regular basis and submit the quarterly report. vi. Involvement of other agencies such as District-level authorities/ NDRF/SDRF during the mock drill exercises conducted. vii. Sharing the calendar of mock drills to be conducted by power utilities for next Year. These plans/reports shall be up-dated and revised on a periodic basis to include any new inputs received from various stakeholders/new learnings during mock drill exercises conducted/ or on the directives of the National Disaster Management Authority or Cabinet Secretariat. Secretary (Security) has repeatedly stressed the aforementioned points in the review meetings held earlier and the same was communicated by CEA so many times. However, the majority of the power utilities have not communicated any action taken by them in this regard. They are also not sub mitting the quarterly mock drill report. The power utilities in ER states shall furnish the Quarterly report for the mock drill exercises conducted for handling various crisis and disaster situations. The format of report to be submitted to CEA is attached at **Annexure-B.1.** The matter shall be taken-up in ensuing Sub-Committee /TCC/RPC meeting and expedite the same to make the effectively implementation of DMP/CMP at regional level in Power sector.

Members may discuss.

Deliberation in meeting

In regard to plan for disaster management to be prepared by Ministry of Power on advice by Secretary (Security), Cabinet Secretariat, OCC advised all ER power utilities to immediately establish a fund solely dedicated to addressing challenges of disaster management with urgent restoration of normalcy and thereby allocate 1.5% of their annual revenue to serve the purpose. OCC further advised power utilities to prepare Disaster Management Plan (DMP) and Crisis Management Plan (CMP) separately for their organisation.

OCC also opined on organizing a workshop on disaster management for sound awareness of all utilities and urged submission of nominations from all concerned utilities for Regional Level Disaster Management Group (RDMG) to be constituted for coordinating with CDMG, ensuring disaster/crisis management plans are in place, help restoring regional grid, assessing damage, and facilitating resource movement among states. ERPC letter vide dated 31.08.2023 in this regard is attached herewith. ***(Annexure B1)***

ITEM NO. B.2: Information regarding occurrence of natural disaster at project site of 1200 MW Teesta-III HEP in Mangan,Sikkim-SUL

As reported from 1200 MW Teesta III Hydro-electric Project site, on the intervening night of 03.10.2023 and morning of 04.10.2023, a natural disaster has occurred in upstream catchment area of the dam of our project. It is reported that a cloudburst in upstream of dam region has led to sudden increase in discharge of Teesta river.

Due to the said flashflood, damage to the project assets has been reported. As the flashflood was sudden and carried huge discharge, this led to sudden increase in water level in river Teesta. Immediate action was taken by our officials to evacuate all personnel and families from the dam site and power house site.

As of now it cannot be confirmed with certainty whether all personnel and families are safe. Thereafter, there was complete breakdown of communication systems, and no contact could be re-established with the project till today morning.

As per preliminary communication received, the power house is inaccessible due to washing away of the bridge connecting power house in flashflood. As per visual inspection from the other bank, the water level has risen above the main access tunnel portal top which would have led to flooding of the power house.

In regards to the dam, sudden wave has led to rise in water level passing over the top of the dam. CFRD dam at Chungthang has been breached leading to scouring of rockfill material and currently river Teesta is flowing though this breach in the dam.

Moreover, communication network with dam is down as of now thereby further damage to other structures is not possible. Roads in Sikkim are blocked at multiple locations due to washing away of roads as well as national highway connecting the project.

The Government of Sikkim has issued Notification No:399/LR&DMD/GoS dated 04.10.2023, declaring this catastrophe as disaster under Disaster Management Act 2005(attached in **Annexure B.2**)

This is a preliminary information on cloudburst led flashflood causing damages to Teesta III hydro-electric project, and further details from the project are awaited.

SUL may update. Members may discuss.

Deliberation in meeting

In absence of SUL representative, SPTL representative apprised the forum that in the aftermath of recently occurred flashflood in upstream of river Teesta, the powerhouse of Teesta-III hydroelectric project is still inaccessible owing to the connecting bridge to powerhouse getting washed away in the flood. He further updated that rescue operation is still going on in flood affected areas and thus actual damage caused to Teesta-III HEP or its tentative restoration to service thereof cannot be ascertained as on date.

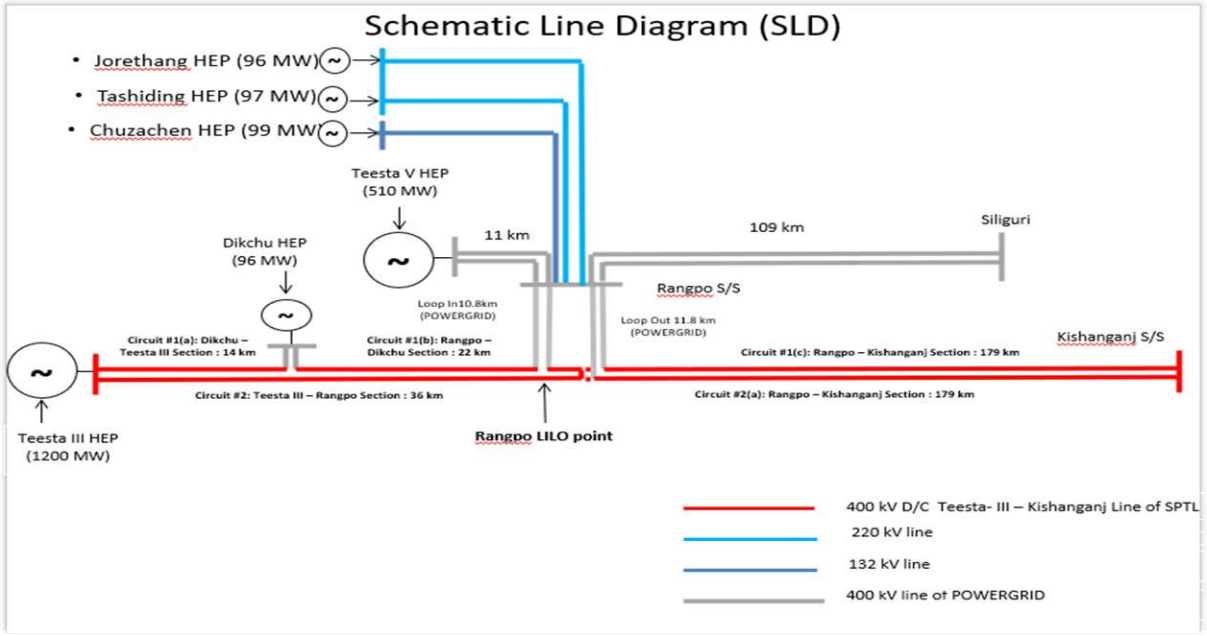
*NHPC representative submitted the details of damage caused to Teesta-V HEP by the flood: In flood surging water height was 590 metres that passed above the dam (height-580 m) without totally dismantling the same , one flood gate could be opened but not remaining three, powerhouse was somehow saved but 3 transmission towers have been run-down and several damaged plant equipment may take one year for restoration to operating state. He also shared a comprehensive presentation elucidating details of damage caused due to flood(**Annexure-B.2)***

On enquiry from OCC, he further informed that all units of TLDP-IV has already been restored to service while remaining units of TLDP-III, having huge silt deposition, shall be made operational within next 15 to 20 days.

Dikchu HEP representative was not available in the meeting.

ITEM NO. B.3:	**Status of 400 kV Teesta III – Dikchu – Rangpo lines and 400 kV Teesta III – Rangpo line of Sikkim Power Transmission Limited (SPTL) after natural disaster in Sikkim- SPTL**

Sikkim Power Transmission Limited (formerly, Teestavalley Power Transmission Ltd.) is entrusted with the responsibility to construct, maintain and operate the 400 kV Quad Moose Double Circuit Transmission Line from Teesta Stage-III Hydro Electric Project to Kishanganj Pooling Station of POWERGRID for evacuation of power from the large hydro generating complex of Sikkim of total capacity around 3000 MW including Teesta III HEP of 1200 MW capacity and Dikchu HEP of 96 MW capacity. The schematic of the transmission line is placed below:



The 400 kV Teesta III – Kishanganj D/C Quad Moose Transmission Line, an Inter State Transmission Line, passes through the Mangan, Gangtok & Namchi Districts in the State of Sikkim, Darjeeling District in the State of West Bengal and Kishanganj District in the State of Bihar.

In the early hours of 04.10.2023, due to flash flood in Teesta River in Sikkim, the 400 kV Teesta III – Dikchu, 400 kV Teesta III – Rangpo and 400 kV Dikchu – Rangpo lines were hand tripped by HEPs/ Substation as per instruction of/ deliberation with ERLDC.

Due to the said flash flood in Teesta River in Sikkim the generating units of Teesta III HEP (1200 MW) & Dikchu HEP (96 MW) were rendered out of service in the early hours of 04.10.2023 and are still out of service. Sikkim Urja Limited vide letter dated 10.10.2023, informed SPTL regarding the damage of Teesta III HEP and stoppage of generation of electricity. Copy of the letter is attached as **Annexure-B.3.1**.

The following lines of SPTL are kept in uncharged condition since early hours of 04.10.2023:

- 400 kV Teesta III – Dikchu line
- 400 kV Dikchu- Rangpo line
- 400 kV Teesta III – Rango line

The 400 kV Rangpo - Kishanganj Line 1 and 400 kV Rangpo - Kishanganj Line 2 are under charged condition and there is power flow in both these lines.

Subsequently, patrolling and inspection of these lines were carried out by SPTL and there is no abnormality observed and these lines are in healthy condition.

It is submitted that some of the towers are located near the Teesta River basin and the line also crosses Teesta River in the Sikkim hill section of the line. Preliminary inspection of the tower nos. 16, 17, 87, 88, 89, 90 & 91 located near the Teesta River basin was carried out. At present there is no changes observed at the towers and foundation area. However due to the flash flood the river channel width has increased eroding the riverbanks nearby the said towers. At the vicinity near tower no. 17, the river channel width has substantially increased and deposition of large amount of silt has been observed in the river basin.

Further at tower no. 91 area, the Teesta River has shifted its course due to deposition of large amount of silt on the opposite riverbank. The river flow has shifted to the bank near the tower. The horizontal distance between the tower foundation and riverbank is presently about 40 m, as compared to about 80 m earlier. The vertical distance of the slope is 30m. At present, the foundation of the tower is generally safe and is in order. The above towers located near river basin and river crossing towers of the line are being closely monitored.

At present the 400 kV Teesta III – Dikchu – Rangpo lines and 400 kV Teesta III – Rangpo line are under outage due to the generating stations being out of service and timeline for restoration of the Teesta III HEP & Dikchu HEP is still unknown. The above-mentioned lines of SPTL are exclusively connected between these HEPs and Rangpo Substation of POWERGRID. In view of safety & healthiness of the uncharged transmission lines, SPTL has already requested ERLDC for anti-theft charging of 400 kV Teesta III – Dikchu – Rangpo line and 400 kV Teesta III – Rangpo line from Rangpo end. Copy of the request mail is attached as **Annexure –B.3.2.**

In view of the above, we request the forum to accord the approval for anti-theft charging of the 400 kV Teesta III – Dikchu – Rangpo lines and 400 kV Teesta III – Rangpo line till normalization of the generating complex in Sikkim and resumption of power flow from Teesta III HEP or Dikchu HEP.

SUL and SPTL may update. Members may discuss.

Deliberation in meeting

SPTL representative explained the urgency of idle charging of three 400 kV lines namely Teesta III – Dikchu line, Dikchu- Rangpo and Teesta III – Rango line, all of them passing through theft-prone areas.

ERLDC representative on submitting that anti-theft charging of only one circuit of double circuit lines connected to Rangpo S/S is sufficient to serve the purpose, underscored the possibility of unexpected overvoltage being experienced at 400 kV Rangpo S/S if all double circuit lines are kept in idle charged condition. He also apprised that for idle charging of aforesaid 400 kV D/C

lines at Dikchu HEP end needs to be shorted, as Dikchu HEP is out of service since flood hit Sikkim and so prior consent of Dikchu HEP is necessary regarding the same.

OCC was of the view that by not keeping both circuits of D/C lines charged at a time may lead to unwanted damage to transmission assets of SPTL. OCC further advised STPL to explore the possibility of anti-theft charging of the lines at lower voltage levels.

Meanwhile, Powergrid representative granted consent to idle charging of all three 400 kV lines from Rangpo S/S till operational normalcy is restored in Sikkim generating complex.

OCC advised ERLDC to submit detailed study on possibility of overvoltage at 400 kV Rangpo S/S after charging both circuits of all D/C lines within 7 days and also to coordinate with Dikchu HEP regarding their no-objection to charging of 400 kV Teesta III – Dikchu and 400 kV Dikchu- Rangpo lines.

ITEM NO. B.4: Procurement, Erection and Commissioning of Two Nos. 400 KV 125 MVAR (Each) Reactors at KTPS and Two Nos. 220 KV 50 MVAR (Each) Reactors (With New 220 KV Bays) at DSTPS-DVC

This is to lay before notice of all that, 400 KV bus voltage of DVC system occasionally crosses the higher operational voltage limit of 103% i.e. 412 KV as stipulated in IEGC-2010. Moreover, with the introduction of charges for exchange of VAR during violation of either the lower limit (97% of 400 KV) or the higher limit (103% of 400 KV) as a disciplinary measure it has become important to operate the system buses within these two limits. Hence to maintain 400 KV Bus voltage within 412 KV it has become necessary to install and commission 2 nos. of 400 KV, 125MVAR Reactor at KTPS and 2 nos. of 220 KV 50 MVAR Reactors at DVC, DSTPS.

In line with above CTU has already extended their consent vide MOM No. CTU/E/00/DVC dated 26.06.23 towards installation of suitable number of bus Reactors of 125MVAR at various generation switchyard to control the voltage excursions.

Detailed study of VAR flow in DVC system had been carried out and as per study report installation of two nos.50 MVAR reactors at DVC DSTPS 220 KV Switchyard along with erection & commissioning of new 220 KV bays and rest two nos. 125 MVAR reactors at DVC KTPS 400 KV Switchyard replacing the existing 2 x 50 MVAR reactors has become essential.

The detailed study report (**Annex B.4.1)** and the CTU MOM(**Annex B.4.2**) are attached herewith for scrutiny and subsequent approval towards implementation of the proposal.

DVC may update. Members may discuss.

Deliberation in meeting

DVC representative submitted that owing to persistent overvoltage experienced beyond nominal limits at 400 kV and 220 kV generating stations of KTPS as well as DSTPS, DVC is imposed with high VAR charges as per latest IEGC provisions and thus installation of proposed bus reactors can mitigate the overvoltage problem.

OCC opined that CTU should conduct system study considering two 50 MVAR and one 125 MVAR reactors at DSTPS and KTPS respectively prior to their installation by DVC and advised DVC to put up the agenda in upcoming CMETS meeting.

ITEM NO. B.5:	**Sparing of one 315MVA, 400/220KV ICT from Regional Pool for replacement of one no of defective 315 MVA ICT (4th) at Jeerat 400 KV S/S(WB)–WBSETCL.**

One no of 315 MVA, 400/220 KV ICT (4th) at Jeerat 400 KV S/Stn of WBSETCL got defective & went out of service sometime back resulting in transformation capacity constraint at the S/Stn & violation of (N-1) criteria during peak load period last summer.

Repairing Order for the mentioned defective ICT has already been placed but a considerable time will be required in repairing the ICT & the same is unlikely to come back into the system within the next summer.

In view of extremely high growth of load in North Kolkata and associated districts and thereby considering the necessity of catering unrestricted load to a considerable part of Kolkata & almost the entire North 24 Parganas District during the next summer maintaining (N-1) criteria replacement of the defective ICT with a spare one is urgently required.

In view of above, M/S Power Grid is requested to spare 01 no 315 MVA ICT from Regional Pool on urgent basis for replacement of the defective 315 MVA ICT at Jeerat S/Stn of WBSETCL for tiding over the crisis during the next summer. Already huge difficulties faced in the summer of 2023.

WBSETCL will execute the required works including transportation of the ICT from the Power Grid S/Stn where the Regional Pool Spare ICT is maintained. Commercial issues as applicable will be taken care of by WBSETCL with PGCIL. This is the way to bring 4th ICT at Jeerat within shortest possible time, so that summer load on Jeerat can be handled.

WBSETCL may update. Members may discuss.

Deliberation in meeting

WBSETCL representative submitted that 4th 315 MVA ICT at 400 kV Jeerat S/S has been in non-functional state since last two years and thus expected to have a far-reaching impact on network reliability amid unexpected load growth in North Kolkata and North 24 Parganas district, tender for procuring new ICT had been cancelled twice last year and as per timelines of latest floated tender new ICT can be commissioned at Jeerat only after 10 months of LOA placement, i.e. not before April 2024.Under these circumstances, he requested Powergrid for sparing 315 MVA ICT from regional pool on urgent basis.

Powergrid representative submitted that the 315 MVA ICT available in regional pool is around 30 years old with old bushings and insulating oil, but otherwise in healthy condition except inherent oil leakage problem. In this regard, he proposed WBSETCL to explore new bushings and installation of new set of gaskets to mitigate leakage problem. He further informed that as last condition monitoring was done in Feb'2021, basic tests need to be re-conducted as well as bushings need to be erected before handing over to WBSETCL by November end.

WBSETCL representative asserting the urgency of 315 MVA ICT in their network, requested Powergrid to prepone timelines while all modalities related to ICT transportation shall be solely handled by WBSETCL. Powergrid was also requested to share serial no: of spare ICT with WBSETCL planning wing for onward tracking of the model with OEM M/S BHEL.

On request from OCC, Powergrid representative acceded to sharing of low voltage, tan delta and other condition monitoring test results with WBSETCL by 15th November for perusal at WBSETCL end.

WBSETCL representative submitted that on receipt of test results and final decision for replacement taken thereof, foundation work may be commenced and expected to be completed by December end.

ITEM NO. B.6: Installation of reserve 500 MVA ICT at Maithon(PG) as 6th ICT in Subhasgram(PG)-WBSETCL

In a special meeting with higher authorities of WBSEDCL, WBSETCL in presence of authorities of CESC, ERLDC, ERPC, Power Grid, it was decided to use the reserve 500 MVA ICT at Maithon(PG) to install in Subhasgram(PG) as 6th ICT, to handle the urgency arose from the fact that the new 500 MVA ICT of CESC will not come before 2024 Summer. WBSETCL has already requested PGCIL to share the GA drawings & other relevant particulars of the mentioned 315 MVA, 400/220KV ICT of Malda PG S/Stn & also to apprise the tentative commercial implication / financial involvement associated with the above proposal. **The status and expected timelines in steps for progress of the transformer transportation and installation may please be informed.**
This may please be noted that the entire initiative is to combat 2024 summer, for which the said ICT should come in service before March 2024.

Members may discuss.

Deliberation in meeting

In response to concerns raised by WBSETCL regarding latest status of 6th ICT commissioning at Subhasgram PG S/S , Powergrid representative submitted that procurement tender of the 6th ICT(as CESC asset) is already under process with bid evaluation being carried out at present.

It was further informed that L1 for 6th ICT commissioning has already been decided and LOA shall be issued after formal Board approval on 22.10.2023 and final commissioning may take around 18 months after placement of LOA. Foundation work for 500 MVA ICT is already under progess at Subhasgram(PG) S/S as apprised by Powergrid representative.

WBSETCL representative submitted that as the new 500MVA ICT (CESC asset) will not come before 2024 summer, the reserve 500 MVA ICT at Maithon(PG) may be installed at Subhasgram as decided in a special meeting with higher authorities of WBSEDCL, WBSETCL in presence of authorities of CESC, ERLDC, ERPC, Power Grid. He further requested Powergrid to provide timelines of transformer transportation and installation. (Provided in next agenda item)

ITEM NO. B.7: Removal/Discontinuation of 125 MVAR Bus Reactor-I & 220 KV Baruipur-II Line/Bay, from Subhasgram SS of ER-II on account of 500 MVA ICT-VII (Interim) Erection/Commissioning: Powergrid

1. As per 50th TCC meeting dated 10.08.2023, Agenda Item No:B8 it was decided that a high level committee under the Chairmanship of Secretary, Department of POWER , Govt. of West Bengal

would be formed and accordingly a decision shall be taken regarding exceptional loading conditions of ICT's at POWERGRID Subhasgram SS. Accordingly, on 25.08.2023, the meeting was held at Bidyut Bhaban and it was finally decided that in order to cater the loading during Summer of 2024, immediate replacement of 125 MVAR Bus Reactor with 500MVA ICT as ICT-VII from Regional Spare Pool to be carried out and same to be implemented within next 4 months (before the summer season).

2. Hence, as per above deliberation immediate shifting of 125 MVAR Bus Reactor to be done to accommodate necessary foundation modification for commissioning of 500 MVA ICT. Further, 220 KV Baruipur-II (216 Bay) to be utilized as 220 KV side of ICT-VII. Other necessary implementations will be carried out by POWERGRID on immediate basis so that above work can be completed within the said time frame.

3. In continuation of same considering the criticality and as per MOM the followings are proposed:

   a) Removal of 125MVAR Bus Reactor from 01.11.2023 onwards to start the modification work for ICT-VII Foundation.

   b) Subject 125MVAR Bus Reactor to be kept as cold spare at Subhasgram SS and as agreed in meeting the Reactor shall be considered as deemed available. Main & Tie Bay (418 & 417) of 400KV, 125MVAR BR to be kept out till work completion. 400 KV Haldia-I line will be charged through main bay only for the entire period activity.

   c) All necessary costs & approx. cost estimate (Tentatively 5.0 Crore) have already been shared by POWERGRID. Necessary MOU will be carried out bilaterally between POWERGRID & WBSEDCL for settling Commercial Implications.

   d) Presently, the available Spare 500MVA ICT at POWERGRID, Maithon will be transported to Subhasgram once the 125MVAR, Bus Reactor Shutdown is taken, and necessary modification carried out. Once the 500 MVA ICT-VII will be charged & Trial Run Certificate is issued necessary O&M charges shall be applicable and shall be borne by concerned utilities.

   e) After Charging of Subject 500 MVA ICT at POWERGRID Subhasgram, new element named as **(500 MVA ICT-VII INTERIM)** will be added in the monthly Availability Certificate of POWERGRID ER-II.

Members may discuss.

Deliberation in meeting

Powergrid representative submitted that an open tender is under process for transportation of 500 MVA 7th (interim) ICT(presently located at Maithon PG S/S) from regional spare pool to Subhasgram PG S/S. He briefly explained the practical constraints in transportation of 500 MVA ICT, a costly as well as bulky asset. This included allowance of 15 days window period to concerned bidder to opt for multimodal transport instead of single modal so as to facilitate smooth transportation of Powergrid asset from Maithon to Subhasgram S/S amid local traffic restrictions imposed in festive season. It was also intimated that tenders for other works related to 500 MVA ICT installation at Subhasgram PG S/S including proper relay settings, constructional activities,etc are on the verge of final award of contract.

In view of time consuming process of ICT installation at Subhasgram, OCC strongly advised Powergrid to expedite the cumbersome transportation process to the best extent possible.

Powergrid representative affirmed placing of LOA for all jobs related to 7th interim ICT (500 MVA) commissioning at Subhasgram latest by last week of November except transportation.

OCC strongly asserted the significance of installation of 500 MVA spare ICT at Maithon(PG) at Subhasgram(PG) to ensure reliability of power supply in and around Kolkata in coming summer and thereby urged Powergrid to expedite the ICT commissioning process at Subhasgram(PG).

ITEM NO. B.8: Proposal regarding additional spare ICT procurement to ER (to be located at West Bengal) for both 500 MVA & 315 MVA ICTs: Powergrid

1. As per CEA- Spare Norms (July 2020) for maintaining spares, each Region must maintain One Each number single/3-Ph units of each rating for ISTS system. POWERGRID has been maintaining the spares as per norms. However, as per recent developments and changed scenario it is very important to maintain spares to meet any contingent situations for other constituents.
2. As such making entire fleet of operation of Transformers more reliable, adequate number of spares are to be maintained as Regional Pool to be decided. In recent past, few spare Transformers are utilized in Non-ISTS system , making the regional Pool NIL.

3. In view of above the followings are proposed:

   a) New 400/220/33KV, 500MVA ICT to be procured to be located at POWERGRID Maithon (Existing Regional Spare 500MVA to be used as ICT-VII and to be kept at POWERGRID Subhasgram).

   b) New 400/220/33KV, 315MVA ICT to be procured to be located at POWERGRID Binaguri SS.

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

4. Considering the above, tentative commercial implications considering varied size Transformers with foundation are deliberated below:

EQUIPMENT	PER UNIT PRICE (18% GST INCL.)	TOTAL QTY	TOTAL PRICE
400/220/33KV, 500 MVA	279067108	1	279067108
400/220/33KV, 315 MVA	225358826	1	225358826

BOQ for ICT procurement attached at **Annexure B.8**

However, on in principle approval, final commercial implications shall be put up in forthcoming CCM.

Members may discuss.

Deliberation in meeting

WBSETCL representative submitted as the ICT proposed to take from Power Grid on temporary basis from Malda for Jeerat 400 kV sub-station (WBSETCL) is expected to return within 6 months of installation, hence even as per CEA - spare norms (July 2020) the requirement of buying new 315 MVA ICT is not justified because the transformer will be returned much before the delivery of the new transformer, also the 500 MVA ICT maintained as cold spare at Maithon, proposed to be commissioned at Subhasgram (PG) substation by Power Grid as interim measure may not be taken as permanent rather may be returned to PowerGrid after commissioning of 6th ICT at Subhasgram under CESC head or even after observing the loading pattern in Summer 2024.He further asserted that every capital expenditure having direct impact on consumer tariff should be deployed judiciously rather by creating "spare of spares".

Powergrid representative submitted that transformer procurement being a lengthy and tedious process, it is always better to replenish the spare ICTs in regional pool thereby ensuring better operational flexibility in ER grid.

OCC advised Powergrid to procced with replenishment process till the spares from Jeerat S/S and Subhasgram S/S get returned to regional pool.

OCC also opined that every utility including Odisha, West Bengal, Jharkhand must maintain spare ICT as per CEA norms.

WBSETCL representative consenting to view of OCC, apprised that presently board approval for procuring spare ICT is under process.

DVC representative submitted that only 6 out of 10 ICTs being presently in service, adequate spare is available at their end.

ITEM NO. B.9: Shutdown proposal of generating units for the month of November'2023 – ERPC

Maintenance Schedule of Thermal Generating Units of ER during 2023-24 in the month of November'2023

System	Station	Unit No.	Capacity (MW)	Period (as per LGBR 2023-24)		No. of Days	Reason
				From	To		
Odisha	IB TPS	4	660	01.11.2023	25.11.2023	25	Annual Maintenance
WBPDCL	Bakreshwar TPS	2	210	16.11.2023	05.12.2023	20	AOH/BOH
WBPDCL	Bakreshwar TPS	3	210	23.11.2023	02.12.2023	10	PG Test/ Boiler License Renewal

DVC	Mejia TPS	5	250	25.10.2023	28.11.2023	35	COH-Boiler, Turbine, Gen,FGD & DeNOx
CESC	BUDGE-BUDGE	1	250	15.11.2023	21.11.2023	7	Not Specified
CESC	BUDGE-BUDGE	2	250	23.11.2023	19.12.2023	27	Not Specified
NTPC	FSTPP	4	500	01.11.2023	15.12.2023	45	BLR +HP +IP +Gen + LPT insitu PAUT & MPI+All brg insp+ FGD damper installation
NTPC	Barh-I	1	660	22.10.2023	25.11.2023	35	Boiler +Generator
NTPC	DarlipalliSTPS	2	800	15.11.2023	13.01.2024	60	COH
NTPC	TSTPS	1	500	22.10.2023	30.11.2023	40	COH
NPGCL	NabinagarSTPS	1	660	01.11.2023	05.11.2023	5	Boiler License Renewal
GMRKEL	GMR	1	350	10.11.2023	19.12.2023	40	COH

Members may update.

Deliberation in meeting

OPGC representative submitted that owing to unavailability of spares, shutdown of IB TPS U#4 may not be availed now but in April 2024. But due to peak summer season in April, OCC opined to consider the shutdown of IB TPS U#4 only after July 2024.

WBPDCL representative submitted following details regarding planned maintenance:
Bakreshwar U#2 shutdown to be availed from 8.12.2023 to 27.12.2023 (20 days) while U#3 shutdown not to be availed now.
Sagardighi U#3 shutdown to be availed from 15.11.2023 to 19.12.2023 ,Bandel U#5 shutdown from 03.01.2024 to 22.01.2024 for Boiler maintenance, Santaldih U#5 shutdown from 26.01.2024 for 15 days upto 10.02.2024 and Kolaghat U#3 shutdown from 02.03.2024 to 21.03.2024.OCC advised WBPDCL to prepone shutdown of Kolaghat TPS U#3 by 10 days.

NTPC representative requested planned shutdown of Barh-I U#1 (660 MW) from 05.12.2023 to 19.01.2024 and TSTPS U#1 from 04.01.2023 to 17.02.2023 while Darlipalli STPS U#2 shutdown shall not be availed now as per approved LGBR for FY 2023-24.It was also intimated that shutdown of Farakka U#4 shall not be availed rather shutdown of U#3 was requested w.e.f 01.12.2023 for 35 days.

CESC representative requested planned shutdown of Budge budge U#1 from 21.12.2023 to 27.12.2023 , U#2 from 28.12.2023 to 03.01.2023 for minor maintenance works while U#3 from

*The approved shutdown schedule is provided at **Annexure B.9.***

ITEM NO. B.10: Maintenance schedule of Barh super Thermal Power plant for November '2023-NTPC

Unit#1 issues:

a. In the current fiscal year, Unit #1 has experienced 12 instances of BTL occurrences thus far. The frequent appearance of BTL in Unit-1 can be attributed to erosion in the LTRH coils, resulting in a total outage duration of 647 MU.
b. Till September 2023 its availability on bar has been reduced to 77%, whereas other units of the stations have more than 90% on bar availability.
c. Furthermore, in an effort to prevent BTL, fast load changes and temperature fluctuations are being avoided, leading to a failure in meeting 'Schedule Ramp' and DSM objectives. Unit-1 alone has incurred a DSM loss of **673 lacs** up to **July 23,** which is before the Unit-2 COD.

Given the current situation, it is crucial that 'Unit #1' undergoes an urgent overhaul to ensure its long-term functionality and the uninterrupted supply of power to the grid. As a result, we kindly request a **45-day** overhaul for Unit-1, may schedule from **December 5, 2023**, to **January 19, 2023**.

1. Unit-2 & Unit-5 will be available for generation throughout the month of Nov-2023
2. Overhauling of U-4 started from 28th Sep-2023 to continue till 11th Nov-2023
3. Overhauling of U#1 planned from 5th Dec-23
4. Generation capability shall be declared daily on day-ahead basis.
5. Maintenance planned during the month are as below:

TABLE-1:Unit shutdown Plan

S.NO.	Unit	From	To	Remarks
1.	Unit#04	28.09.2023	11.11.2023	U#4 Overhauling planned. Major work: 1)HPT module replacement 2) Boiler modification
2.	Unit#01	05.12.2023	19.01.2023	U#1 Overhauling planned. Major works are: 1)Bolier LTRH coil replacement 2)Generator inspection

NTPC may update. Members may discuss.

Deliberation in meeting

On request from NTPC, OCC approved shutdown of Barh unit#01 from 05.12.2023 to 19.01.2024

Commercial issues were discussed in the next agenda.

ITEM NO. B.11: Commercial issues faced by Barh super Thermal Power plant on implementation of IEGC 2023-NTPC

Following difficulties have been faced by units after IEGC amendment rules implemented on 1st Oct 23.

- Less than MTL schedule- A total of 63 blocks from combined Stage-1 and 2 have been assigned schedules below the Minimum Technical Limit (MTL). This scheduling decision has led to a DSM cost of **31 lacs** in the first five days, solely attributed to below MTL.

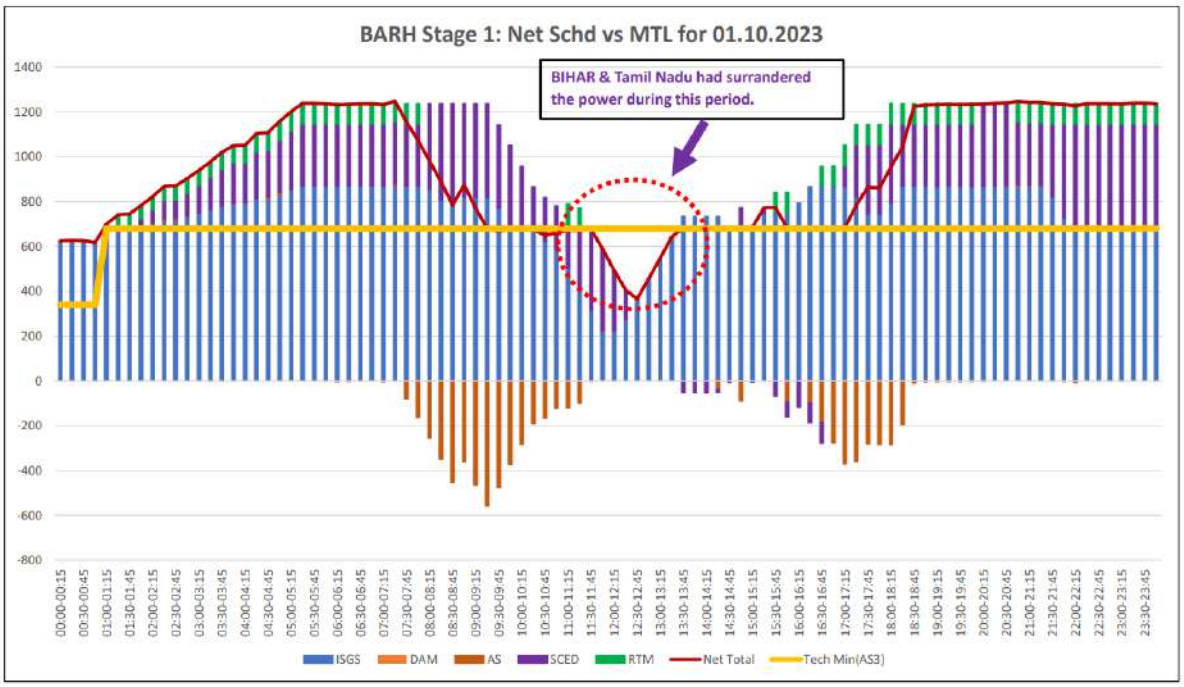
- SG greater Than DC- We have also received SG greater than DC in 121 blocks for Stage-1 & 2. This scheduling decision has led to a DSM cost of **146 lacs** in the first five days. Out of which 53 blocks were more than Normative DC.

NTPC may update. Members may discuss.

Deliberation in meeting

ERLDC representative addressed the commercial issues faced by Barh super Thermal Power plant on implementation of IEGC 2023 whose details are stated below:

1. *Less than MTL schedule: ERLDC representative highlighted that schedule of any plant shall go below their minimum turndown level (MTDL) if sum of requisition by its beneficiaries is less than its MTDL. Details of net schedule along with its breakup for a sample day is shown in figure below:*

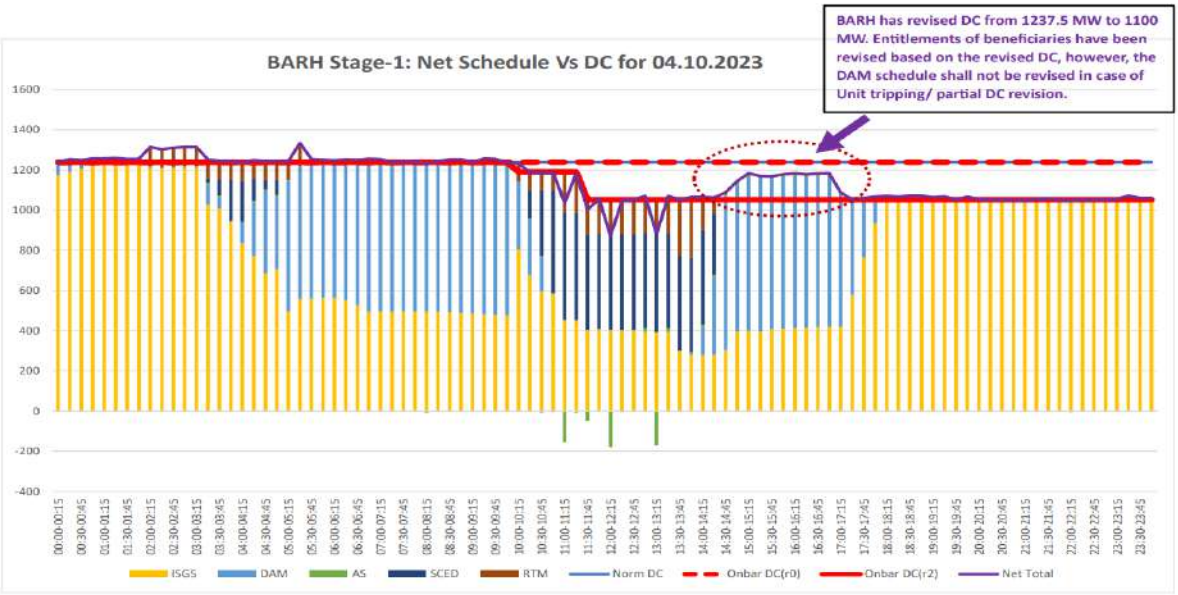


It may be observed that in the encircled time blocks the net schedule of Barh-1 was below its MTDL because Bihar and Tamil Nadu had surrendered the power during this period.

2. *SG greater Than DC : ERLDC representative mentioned that during Partial DC revision by generating station, TGNA (Bilateral & Collective) transaction shall not be revised as per*

provisions of IEGC 2023. Thus, if ISGS sells their URS power as per Day Ahead DC and revises DC in real time, their schedule may be above DC.

As shown in the plot below, Barh-1 had revised DC from 1237.5 MW to 1100 MW during the day. The schedule was revised as per revised DC, however in the highlighted time blocks schedule of Barh-1 was more than their DC as the DAM schedule could not be revised.



ITEM NO. B.12: Proposed shutdown of Farakka Unit-3 -NTPC

NTPC Farakka Unit-3 (200 MW) Overhauling is long pending and under continuous operation for more than 45 months, last OH of the Unit was done in FEB-2020.

In this regard, planned outage of NTPC Farakka Unit-3 (200 MW) is proposed and OCC is requested to accord kind approval for Unit-3 overhauling from 01.12.2023 for 35 days.

NTPC may update. Members may discuss.

Deliberation in meeting

OCC granted shutdown of Farakka U#3 from 01.12.2023 to 05.01.2024 for 35 days.

ITEM NO. B.13: Request for permission for accounting of Make-up water Pumps power drawl from DISCOMS, as station APC at Darlipalli STPP-NTPC

NTPC Darlipalli is 2 X 800 MW thermal power station situated in Sundergarh dist. of Odisha and is fully operational since Sep. 2021. The water supply to this station is taken from back water of Hirakud dam by pumping system at Chadarma.
The raw water make up pump house being constructed at Chadarma is yet to be completed. Presently the water is being taken through barge pumps and the supply is taken from DISCOM, as 132 kV supply from plant to Chadarma is yet to be completed. This pumping power drawl is

not included in station APC and power charges is being paid from O&M expenditure.
The water pumping system along with the plant could not be completed due to Covid-19 pandemic.The system is expected to be operational by September 2024.
We request approval of OCC for inclusion of make-up water Pumping power drawl from DISCOM as part of our station APC until such time as the permanent power supply is fully established and operational.

NTPC may update. Members may discuss.

Deliberation in meeting

NTPC representative submitted that power drawl for make-up water being availed from DISCOMs is currently getting incurred under O & M expenditure instead being part of station auxiliary power consumption.

OCC advised NTPC to approach CERC for inclusion of make-up water pumps power drawl from DISCOMs in APC.

ITEM NO. B.14: Evacuation of power from Ind Bharat Energy(Utkal) Ltd TPP through LILO arrangement– IBEUL.

A meeting was held between CEA and IBEUL on 18.09.2023 under the chairmanship of Chairperson, CEA where JSW Energy Ltd was instructed to implement SPS, complete LILO arrangement within timeframe and was further directed to approach ERPC/ERLDC for evacuation of power through LILO arrangement till DTL is made ready.(MOM attached at **Annexure B.14)**

The LILO arrangement through OPGC-Sundergarh line has already been approved in 204th OCC meeting.

Ind Bharat has already done power evacuation study from M/S DNV and it was observed that 600 MW can be evacuated in N-1 condition through LILO arrangement.

The line upto LILO arrangement shall be completed by 25th Oct-2023

Ind Bharat ensures that SPS will be implemented as per direction/design by ERLDC. It is requested to consider power evacuation through this LILO connection and issue of necessary guidelines for implementation of SPS.

IBEUL may update. Members may discuss.

Deliberation in meeting

IBEUL representative summarized discussions with CEA in regard to power evacuation through LILO arrangement and approach to be made to ERPC /ERLDC in this regard as directed by Chairperson,CEA.

OPGC representative submitted that IB-Lapanga line in vicinity of proposed LILO arrangement is loaded upto 1320 MW (thermal limit of 1200 MW) and if power evacuation is allowed through LILO arrangement, it may lead to violation of N-1 criteria. He also apprised the forum that an expert technical committee has been constituted by Department of Energy, Govt. of Odisha to look into the feasibility of LILO arrangement

without adversely affecting associated transmission system(ATS).

OCC advised OPGC to share details of bilateral meeting between OPGC and expert committee by November. OCC also opined that CTU has to re-conduct system study with consideration of power evacuation through proposed LILO arrangement.

In absence of firm study report from CTU on modified network conditions, OCC advised IBEUL to put up the agenda in upcoming CMETS meeting for further deliberation.

ITEM NO. B.15: Agenda by JITPL.

1. GNA 2022 and IEGC-2023 Implementation issues:

a. As we know that GNA 2022 and IEGC Regulations, 2023 has been implemented from 01.10.2023 and all the time block-wise requisition to the concerned RLDC has to be provided by the buyers only. In this regard, BSPHCL is punching the full schedule as per the DC provided by JITPL but ERLDC is curtailing the schedule punched by BSPHCL for JITPL. Since, as per MoD of BSPHCL, JITPL's power should be scheduled first but ERLDC is not following the MoD for finalising the schedule of the DISCOMs. It was also discussed with BSPHCL but the reason behind the curtailment in schedule by ERLDC is not clear.

b. As per IEGC Regulations, 2023 Clause 49 (vi) the availability declaration by regional entity generating station shall have a resolution of two decimal (0.01) MW and three decimal (0.001) MWh but still the availability declaration by regional entity generating station is showing a resolution of six decimal in MW and MWh. In this regard, it is requested to correct the same as per IEGC Regulations, 2023 for the purposes of scheduling, accounting and billing.

c. As per IEGC Regulations, 2023 Clause 49 (f) drawee GNA grantees, shall furnish time block-wise requisition for drawl to the concerned RLDC in accordance with the contracts. At the time of synchronization of unit from forced outage, according to the DC received from plant proper ramp up have to be considered for proper synchronization of unit. Hence, it is requested to allow the generators to furnish time block-wise requisition for injecting to the concerned RLDC in accordance with the contracts at the time of synchronization of unit from forced outage. Also, there is no restriction for the same in IEGC Regulations, 2023.

d. In case of third party sale of power as per the PPA due to nonpayment of the dues by the buyers, DC is declared to the buyer and power is sold to the third party to recover the dues but in the current system if seller is declaring the DC to the buyer then buyer has the option to schedule that power.

e. In case of revision of DC of the plant due to unit tripping or due to partial generation sellers does not have any right to revise the DC in the WBES portal. DC revision right as per the regulation should be given to sellers.

2. Relaxation of DSM penalty:

On 12th Oct'2023, 17:48 Hrs out of the two transmission lines evacuating power from our plant to Angul Substation tripped. To protect our plant from black out and not to overload the line 2 we reduced our schedule approx. by 400 MW. In this regard we want clarification that as it was the fault of PGCIL/CTUIL because of which JITPL was forced to reduce the generation and do under injection, JITPL should not be penalised under DSM for the under injection done during the tripping period.

JITPL may update. Members may discuss.

Deliberation in meeting

ERLDC representative shared a concise presentation addressing all the queries raised by JITPL in the agenda, whose details are given below:

1.(a) ERLDC mentioned that as per the IEGC 2023 timeline, SLDCs need to provide GNA requisitions by 08:00 hrs of D-1 and then RLDC shall prepare schedule by 08:15 hrs, after which SLDCs shall be able to revise requisitions such that schedule of the state remains upto their GNA limit by 08:30 hrs.
SLDCs must ensure that their state schedule is upto GNA quantum as per the following clause of IEGC 2023:
45.(14) A generating station or ESS or a drawee entity shall be allowed to schedule injection or drawal only up to its effective GNA quantum and T-GNA quantum, as applicable, in accordance with the GNA Regulations.
If it is observed that after preparation of schedule at 08:30 hrs of D-1, state schedule still remains above GNA in some blocks, RLDC shall have to curtail all GNA schedules in those time blocks on pro-rata basis to bring the same upto GNA limit.

1.(b)Availability declaration in DC page of WBES takes input upto 2 decimal places only. But schedules are being prepared upto 6 decimal places for more accuracy in schedule data. As the provision for number of decimal places in schedule is same in IEGC 2010 and IEGC 2023, no modification regarding this aspect has been done in WBES yet. This practice of publishing schedule upto 6 decimal places is being followed across all regions. If the same is to be changed, it shall require coordination among all Regional WBES, metering, accounting etc.

1.(c) ERLDC highlighted that the ramp wise increase in DC at the time of synchronization of unit is allowed at present and the same is being inserted in WBES by RLDC on behalf of the generators to comply with the limitation of number of revisions. New patch is soon going to be deployed in WBES which shall enable revision of DC by generators themselves as the new provisions of IEGC 2023.

1.(d) The provisions of regulation of power supply by sellers in case of non payment of dues by buyers is already available in LPS rules 2022 dated 3rd June 2022, wherein it is mentioned that:

6.3. Provided further that in case of non-payment of outstanding dues by the default trigger date, the obligation of the generating company to supply power shall be reduced to Seventy five per cent of the contracted power to distribution licensee and balance Twenty five per cent of contracted power may be sold by the generating company through the Power Exchanges.

JITPL mentioned that in order to regulate the power scheduled to the distribution licensee as per the above-mentioned rule, prior to implementation of IEGC 2023, IPP Generating stations used to provide regulated schedules against contracts, as they had the rights to revise requisition/schedules in WBES. However, post implementation of IEGC 2023, rights to revise requisition/schedules in WBES against each contract has been given to buyers.
ERLDC highlighted that even though prior to implementation of IEGC 2023, IPP generators had the rights to revise requisition/schedules in WBES against respective contracts, the quantum they were filling was mutually agreed quantum between the buyer and the seller. If the quantum is

regulated as per aforementioned rule, the same had to be agreed by the buyer as well before seller is providing the regulated quantum in WBES.
After implementation of IEGC 2023, only the rights of entry of the quantum has been transferred to buyers but still the quantum is provided in WBES shall be as mutually agreed by the buyer and the seller. In such scenario where due to non payment of dues power have to be regulated, they may take up the same bilaterally with buyers and the buyers while filling the requisition/schedule data in WBES against the contracts, shall have to insert the regulated quantum.
Further, if the generating station wishes to implement the regulation through PSA portal of NLDC (https://psa.posoco.in/), they need to provide the details in PSA portal by 07:00 hrs of D-1. Based on the details provided in PSA portal, the schedule will automatically be regulated in WBES.

1.(e) Refer to deliberation against "c".

2. Relaxation of DSM penalty:

ERLDC highlighted that as per regulation 6.5.16 of IEGC 2010:
In the event of bottleneck in evacuation of power due to any constraint, outage, failure or limitation in the transmission system, associated switchyard and substations owned by the Central Transmission Utility or any other transmission licensee involved in inter-state transmission (as certified by the RLDC) necessitating reduction in generation, the RLDC shall revise the schedules which ***shall become effective from the 4th time block****, counting the time block in which the bottleneck in evacuation of power has taken place to be the first one. Also,* ***during the first-, second- and third-time blocks of such an event, the scheduled generation of the ISGS shall be deemed to have been revised to be equal to actual generation****, and the scheduled drawals of the beneficiaries shall be deemed to have been revised accordingly.*
And, as per regulation 49.3.(b) of IEGC 2023:

In the event of bottleneck in evacuation of power due to outage, failure or limitation in the transmission system or any other constraint necessitating reduction in generation, the RLDC shall revise the schedules:

Provided that generation and drawal schedules revised by the Regional Load Despatch Centre shall become ***effective from 7th block or 8th block*** *depending on time block in which schedule has been revised as first time block.*

As the provision for making Schedule equal to actual generation is not available in IEGC 2023 in case of bottleneck in evacuation, RLDC shall not be able to do the same.

ITEM NO. B.16: Reactive charges for Regional Entity as per new IEGC: ERPC

As per IEGC-2023, all the regional entity (including Generators) has to pay/receive reactive power compensation (REC) charges. The relevant IEGC clause is stated below-

Quote

1. REACTIVE POWER COMPENSATION
(a) Reactive power compensation should ideally be provided locally, by generating reactive power as close to the reactive power consumption as possible. The regional entities are therefore expected to provide local VAr compensation or generation such that they do not draw VARs from

the EHV grid, particularly under low-voltage condition. To discourage VAr drawals by regional entities, VAr exchanges with ISTS shall be priced as follows:
(a) The regional entity pays for VAr drawal when voltage is below 97%
(b) The regional entity gets paid for VAr return when voltage is below 97%.
(c) The regional entity gets paid for VAr drawal when voltage is above103%.
(d) The regional entity pays for VAr return when voltage is above 103%. Where all voltage measurements are at the interface point with ISTS.
……
Unquote

The modalities of REC of all entities need to be finalized.

Members may discuss.

Deliberation in meeting

OCC refereed the agenda to special commercial meeting to be convened on 17.10.2023 at 16:30 hrs for detailed deliberation.

ITEM NO. B.17: Outage Planning procedure: ERPC

As per clause No. 32(4) of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2023 under Operating Code, it has been envisaged "To facilitate coordinated planned outages of grid elements, a common outage planning procedure shall be formulated by each RPC in consultation with the NLDC, concerned RLDC and concerned users".

Accordingly, a draft outage procedure has been prepared (attached at **Annexure B.17**). All stakeholders are requested to go through the procedure and submit their views/comments/observations, if any, latest by 17th October'2023. The same has been shared vide mail dated 13.10.2023.

Members may discuss.

Deliberation in meeting

ERPC representative outlined the salient features in draft outage planning procedure of Eastern region which is open for suggestions or views from concerned stakeholders.

OCC emphasized concerted efforts from all utilities of ER in sharing valuable opinion/suggestions for finalizing the outage planning procedure.

Further on request of the constituents, OCC extended timeline for submitting relevant views or observations on Outage planning procedure upto 30th October 2023.

ITEM NO. B.18: Request to furnish the data for preparation of LGBR 2024-25 of Eastern region – ERPC.

As per the IEGC Clause **32.3**(**a**) & (**b**) issued by CERC on 2**9**.0**5**.20**23**, *"*RPCs shall prepare and finalize the annual outage plan for the next financial year in respect of grid elements of their respective regional grid*", "RPCs shall prepare Load Generation Balance Report (LGBR) for the respective region based on the LGBR submitted by SLDCs for their respective states and the data submitted by the regional entity generating stations, inter-State transmission licensees and other entities directly connected to ISTS in such format as may be stipulated by the RPCs and shall prepare annual outage plan for generating units and transmission elements in their respective region after carrying out necessary system studies in order to ensure system security and resource adequacy."*

In this regard, Load Generation Balance Report (LGBR) for the year 2024-25 in respect of Eastern Region is to be finalized by September, 2023 (as advised by CEA vide mail dated. 14.08.2023). The approved programme of planned maintenance in respect of Thermal and Hydro stations in the region, along with the estimated monthly generation programme, the estimated monthly energy requirement (MU) and estimated monthly peak/off-peak demand (MW) for the year 2024-25 of each state / utility shall be the input for preparation of LGBR of Eastern Region for 2024-25.

To prepare the LGBR of Eastern Region, the following data/ information for the financial year 2024-25(April'2024 to March'2025) in respect of the constituents/ generators of Eastern Region is required:

State and Central Sector Generators/IPPs/CPPs/SLDCs/Utilities

i) The Unit-wise and Station-wise monthly energy generation proposed from existing units during 2024-25 (thermal, hydro and RES).
ii) Annual maintenance programme for each of the generating units (thermal, hydro and RES)
iii) Generating units under R&M/ long outage indicating date of outage and reasons of outage and expected date of return (thermal and hydro both).
iv) Partial and forced outage figures (in %) of generating units and auxiliary power consumption for the last 3 years.
v) Month-wise peak/off-peak demand (MW) – restricted and unrestricted.
vi) Month-wise energy requirement (in MU) – restricted and unrestricted.
vii) Month-wise and source-wise power purchase and sale plan (both MU & MW).
viii) Schedule of commissioning of new generating units during 2024-25 and unit-wise monthly generation programme (in MU) upon COD.
ix) Allocation of power from new generating units.

ISTS/STU/Transmission licenses in the states and Central Sector

i) Monthly and annual planned outage of transmission system (Transmission lines 220kV and above / ICTs / Reactors/ other elements (TCSC, SC etc.)).

It is therefore requested to provide the above information (as applicable), at earliest, for compilation of data and preparation of draft **LGBR of ER for the year 2024-25.**

ERPC may update. Members may discuss.

Deliberation in meeting

ERPC representative submitted that some constituents have already shared the data pertinent to LGBR of FY 2024-25 except West Bengal,CESC ,Sikkim,Bihar,NHPC, Bhutan and IPPs(Vedanta,JITPL,GATI,APRNAL,Ind-Bharat(IBEUL)).

OCC urged all these constituents to furnish the necessary data for preparation of LGBR of ER for FY 2024-25 latest by 30th October,2023 and also advised all ISTS licensees in ER to share details of planned transmission lines in 2024-25 within same timeline.

ITEM NO. B.19: Demand estimation timelines by SLDC and RLDC: ERLDC

As per IEGC-2023, demand estimation by SLDC for respective state has to carried out as per specified timeline.

	By SLDC	**By RLDC**	**By NLDC**
Daily Demand estimation	10:00 hrs of previous day	11:00 hrs of previous day	12:00 hrs of previous day
Weekly demand estimation	First working day of previous week	Second working day of previous week	Third working day of previous week
Monthly demand estimation	Fifth day of previous month	Tenth day of previous month	Fifteenth day of previous month
Yearly demand estimation	30th September of the previous year	15th October of previous year	30th October of previous year

The forecast done by SLDC will be used as input for forecast done by RLDC. Till now, only Jharkhand SLDC is sending the day ahead forecast regularly following the timeline. From West Bengal SLDC, day ahead forecast is received intermittently. All other states are yet to share the forecast. For sharing forecast, a format has been finalised by NLDC. The same has been shared with all the states vide mail on 27-09-2023. However, we are yet to receive the data in the prescribed format from any State. Further ERLDC is not receiving weekly, monthly or yearly forecast from any state.

In view of the same all SLDCs are requested to:

1. Send the day ahead, week ahead, month ahead and yearly forecast
2. Follow the prescribed format
3. Follow the timeline.

Also, IEGC has mandated computation, analysis and uploading of forecasting error by SLDC, RLDC and NLDC. ERLDC has started uploading the forecasting error as per the timeline. SLDCs are also requested to start uploading the errors on the website.

Members may note.

Deliberation in meeting

ERLDC presented the various timeline of data submission as per IEGC2023. It was informed that except Jharkhand and West Bengal, no SLDC is sending Demand estimation on day ahead basis. No SLDC has started sending week and month ahead forecast yet. West Bengal SLDC representative mentioned that that they shared required format with all the DISCOMs. However, they are not receiving the data for week ahead and month ahead. For Day ahead they are not receiving it timely and that is why they are not able to process and send data to ERLDC within the stipulated times.

OCC advised all constituents on strictly adhering to demand estimation timelines as mandated in IEGC 2023.

ITEM NO. B.20: Real time operational planning study using SCADA EMS tools: ERLDC

As per IEGC-2023, real time operation planning studies needs to be carried out by SLDC, RLDC and NLDC. If telemetry issue causes any error in such study, the same needs to be flagged in operational planning meeting and utility needs to update the progress in data restoration. If any issue remains pending for any quarter, the same may be reported to commission by RPC. ERLDC already used to do such study and used to highlight telemetry related issues in TEST meeting. However, as per IEGC-2023, the telemetry related issue is recorded specifically in regards non-satisfactory result of state estimator.

Issues observed during 1st 10 days of Oct-2023 are as follows:

Date	Study for S/D	Data issue At	Type of error in State Estimator
03-10-2023	400KV-Arambagh-New CHANDITALA	Error in Arambagh - New Chanditala data	Non-satisfactory result
05-10-2023	400KV-MALDA(PG)-NEW PURNEA-2	Bad Quality Data from NTPC FARAKKA, MALDA_PG	Divergence
09-10-2023	400KV-NEW PURNEA-KISHANGANJ-2	Bad Quality Data from NTPC FARAKKA, MALDA_PG	Divergence
	400KV-NEW PURNEA-MUZAFFARPUR-1		Divergence

SLDC may also start similar studies and recording of telemetry issue causing error in SCADA EMS studies for discussion in monthly operational planning meeting.

ERLDC may update. Members may discuss.

Deliberation in meeting

ERLDC explained the importance of real time study using the SCADA EMS tools and highlighted the importance of SCADA data availability for performing such studies. ERLDC also presented that during various online studies during first 10 days of October, data non-availability has caused error in the studies. ED ERLDC mentioned that ERLDC has already conducted a training session for Odisha SLDC for SCADA EMS tool utilization and ERLDC is ready to organise the same for all other SLDCs.

OCC advised all SLDCs to start conducting real time planning studies in coordination with ERLDC and flag the issue of erroneous telemetry data in operational planning meeting for timely resolution. All utilities were also requested to furnish relevant data as and when required for study so that proper contingency action plan may be kept ready at service.

ITEM NO. B.21: Operational planning analysis: ERLDC

IEGC-2023 mandates operational planning studies for different time horizon daily, weekly & monthly using offline tools like PSEE. SLDC needs to submit node wise MW & MVAR estimation and latest network topology for the same. However so far, we are yet to receive any input from states. Therefore, based on aggregated demand estimation done by RLDC and latest base case available at RLDC studies are being carried out. This may affect the accuracy of the study result and operational plan prepared based on such studies. Therefore, SLDC may share the nodewise update base case along with updated topology.

ERLDC may update. Members may discuss.

Deliberation in meeting

ERLDC representative mentioned that IEGC has mandated daily, weekly, monthly, and yearly operational studies by LDCs. For performing this study properly by RLDC, SLDCs need to share one updated base case with node wise update LGBR, planned and forced outage of generators and transmission elements etc. following the time line.

OCC advised all SLDCs to intimate ERLDC with relevant details for operational planning study latest by 13:00 hrs on daily basis.

ITEM NO. B.22: Commencement of 11 month ahead ATC/TTC calculation: ERLDC

As per various clause of IEGC-2023 and to facilitate GNA regulation implementation, calculation of ATC/TTC on 11 months ahead is necessary. Also, CERC has approved the ATC/TTC calculation procedure by NLDC vide order No. L-1/261/2021/CERC . Therefore, all SLDC may kindly follow the timelines as stipulated in the approved procedure:

Purpose	Sl No	Action of Stakeholder	Submission Responsibility	Submission to	Data/Information Submission Timeline
1 Revision 0 TTC/ATC Declaration for Month 'M'		Submission of node wise Load and generation data along with envisaged scenarios for assessment of transfer capability	SLDC	RLDC	10th Day of 'M-12' month
	1(a)	Assessment of TTC/ATC of the import/export capability of the state and intra-state system and sharing of updated network simulation models			
	1(b)	Declaration of TTC/ATC of the intra-state system in consultation with RLDC			26th Day of 'M-12' month
2. Interconnection Studies for elements to be integrated in the month 'M'	2(a)	Submission of node-wise load and generation data & sharing of network simulation models for intra-state elements coming in the next six months	SLDC	RLDC	8th Day of 'M-6' month
	2(b)	Sharing of inter-connection study results			21st Day of 'M-6' month
3 Month Ahead TTC/ATC Declaration & Base case for Operational Studies for Month 'M'	3(a)	Submission of node wise Load and generation data along with envisaged scenarios for assessment of transfer capability	SLDC	RLDC	8th Day of 'M-1' month
		Assessment of TTC/ATC of the intra-state system and sharing of updated network simulation models			
	3(b)	Declaration of TTC/ATC of the intra-state system in consultation with RLDC			22nd Day of 'M-1' month

Further NLDC/RLDC is in the process of publishing TTC/ATC up to Sep-24. All the states are also requested to calculate and publish TTC/ATC up to Sep-24.

ERLDC may update. Members may discuss.

Deliberation in meeting

ERLDC representative shared a brief presentation detailing the nuances of 11 month ahead ATC/TTC calculation with example.(**Annexure B.22**)

OCC advised all SLDCs to follow timelines for 11 month ahead ATC/TTC calculation as stipulated in IEGC 2023 guidelines.

ITEM NO. B.23: Updated of Operating Procedure in compliance with IEGC-2023: ERLDC

Hon'ble commission has notified the Indian Electricity Grid Code-2023(IEGC-2023) and IEGC-2023 has come into force with effect from 01.10.23. Accordingly in compliance with the IEGC 2023 clause no 28(4), Operating Procedure for Eastern Region has been developed by ERLDC. The **operating procedure is available in the link:**
https://app.erldc.in/Content/Upload/System%20Study/Operating%20Procedure/Operating%20Procedure%20ERLDC%20290923.pdf .
The annexures are available in the link:
https://app.erldc.in/Content/Upload/System%20Study/Operating%20Procedure/Annexures%201-%20Operating%20Procedure%20IEGC%202023.pdf
The same has been circulated among the stakeholders vide mail dated 29.09.23 for comments. The final operating procedure will be sent to CERC for intimation by the end of October'23. Members may please note.

ERLDC may update. Members may discuss.

Deliberation in meeting

ERLDC representative highlighted that for granting T-GNA corridor allocation ATC/TTC needs to be calculated by RLDC, NLDC and SLDCs 11 month in advance and reviewed again 1 month in advance before the month of delivery. If required, review of ATC/TTC may be performed at any other time as well.

For calculation of ATC/TTC, NLDC has laid down a detailed procedure and SLDC were requested to share their base case, ATC/TTC value along with limiting constraints as per the procedure. Also, for performing interconnection study of list of upcoming elements in the next Six month will be required from STU and SLDC may coordinate with STU for sharing operational planning case for interconnection study.

A lucid presentation shared on drafted operating procedure for Eastern region in line with IEGC 2023 guidelines is attached at **Annexure B.23**.

ITEM NO. B.24: Status of Replacement of time drifted L&T meters in Eastern Region: ERLDC

In 47th TCC & ERPC meeting, it was deliberated that the heavily time drifted L&T make SEMs need to be replaced in phase-wise manner.
Accordingly, ERLDC had already circulated the list of meters to be replaced in different phases among all the concerned utilities. The replacement status is mentioned below:

Utility	Substation	SEM to be replaced	SEM replaced	Remarks
NTPC	KAHALGAON	38	3	Phase-1
	BARH	13	2	
	BRBCL	3	0	

	KANTI	6	6	
	TALCHER	39	15	
	FARAKKA	14	13	
DVC	DHANBAD	2	2	
WB	NBU	1	0	
	HALDIA	2	0	
	DALKHOLA	3	3	
	BIDHANNAGAR	3	3	
	MALDA	2	2	
	BIRPARA	1	1	
PGCIL	BINAGURI	2	0	
	BIRPARA	7	7	
	DURGAPUR	5	5	
	MALDA	4	3	
	SUBHASGRAM	2	0	
	BERHAMPUR	2	2	
	JEYPORE	2	2	Phase-3
	KISHANGANJ	9	1	
IPP	CHUZACHEN	5	5	
	APNRL	3	1	
NHPC	TEESTA	7	7	
	RANGIT	13	13	
JHARKHAND	CHANDIL	3	3	Phase-2
	GARWA	1	1	
	JAPLA	1	1	
	JAMTARA	1	1	
BIHAR	KAHALGAON	2	2	
	SONENGAR	2	2	

ERLDC may update. Members may discuss.

Deliberation in meeting

ERLDC representative informed the forum regarding updated status of SEM meters being replaced across all ER utilities in different phases. As per his submission, out of 489 defective meters, 115 have already been replaced in phase-I, that has reached verge of completion.

ITEM NO. B.25: 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.

As per the information received from PowerGrid, approx. 163 meters are currently available. Due to scarcity of meter stock, the Phase-wise replacement of old L&T meters may be delayed.

CTU/PGCIL may update the status of procurement of the meters

Deliberation in meeting

With only 163 meters currently available with Powergrid, ERLDC representative expressed concern on timely replacement of remaining meters in subsequent phases.

Powergrid representative submitted that procurement of remaining lot of meters for subsequent phases of replacement is under process whose bid opening date has been extended from 11.10.2023 to 26.10.2023.

OCC advised M/S Powergrid to expedite the process to the extent possible.

ITEM NO. B.26: AMR Phase-5 implementation in Eastern Region: Powergrid

In Eastern Region, there have been 4 AMR Phases package awarded in previous. 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 considerd 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.

Members may discuss.

Deliberation in 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.

PART C: ITEMS FOR UPDATE

ITEM NO. C.1: ER Grid performance during September 2023.

The average and maximum consumption of Eastern Region and Max/Min Demand (MW), Energy Export for the month of September -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)
568 MU	626 MU 11-09-2023	28920 MW, 11-09-2023 at 23:00 Hrs.	19091 MW, 24-09-2023 at 16:44 Hrs.	4167	4235

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

Deliberation in meeting

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

ITEM NO. C.2: Latest Status of States ATC/TTC declared by States for the month of June-2023.

To harmonize the ATC/TTC calculation methodology and timeline One to one meeting and hands on training with each SLDC was conducted in the month of Sep-21 and Oct-21. As per the common agreed procedure and timeline ATC/TTC calculation in three-month advance and reconciliation of the TTC/ATC figure for the upcoming month between RLDC and SLDC has started from month Dec-21. Reconciled ATC/TTC figures for **June-2023** are as follows:

As per the agreed philosophy the status of month wise ATC/TTC submission is as follows:

Sl No	State/Utility	TTC (MW)		RM(MW)		ATC Import (MW)		Remark
		Import	Export	Import	Export	Import	Export	
1	BSPTCL	6990	--	)	--	6850	--	May-23
2	JUSNL	1586	--	39	--	1547	--	June-23
3	DVC	**1940**	**3371**	72	56	**1868**	**3315**	June-23
4	OPTCL	3898	1338	145	70	3753	1268	June-23
5	WBSETCL	6475	--	450	--	6025	--	June-23
6	Sikkim	170	--	1	--	169	--	May-23

As per the agreed philosophy the status of month wise ATC/TTC submission is as follows:

State	Bihar	Jharkhand	DVC	Odisha	Sikkim

Month						
					West Bengal	
May-23	Submitted	Submitted	Submitted	Submitted	Submitted	Submitted
June-23	Pending	Submitted	Submitted	Submitted	Submitted	Pending
July-23	Pending	Submitted	Submitted	Submitted	Submitted	Pending
Aug-23	Pending	Pending	Submitted	Submitted	Pending	Submitted
Sep-23	Pending	Pending	Pending	Pending	Pending	Pending

Declaration of TTC/ATC on SLDC Website

Sl No	SLDC	Declared on Website	Website Link	Constraint Available on Website	Type of Website Link
1	BSPTCL	Yes	http://www.bsptcl.in/ViewATCTTCWeb.aspx?GL=12&PL=10	Yes	Static Link-Table
2	JUSNL	Yes	http://www.jusnl.in/pdf/download/ttc_atc_nov_2020.pdf	Yes	Static link – pdf file
3	DVC	Yes	https://application.dvc.gov.in/CLD/atcttcmenu.jsp#	Yes	Static Link-Word file
4	OPTCL	Yes	https://www.sldcorissa.org.in/TTC_ATC.aspx	Yes	Static Link-pdf file
5	WBSETCL	Yes	http://www.wbsldc.in/atc-ttc	No (Not updating)	Static Link-Table
6	Sikkim	No	https://power.sikkim.gov.in/atc-and-ttc	No (Not updating)	Static Link-Excel file

All the states having net export schedule should declare their export TTC. In view of the same West Bengal is once again requested to share export TTC. Sikkim are requested to share the ATC/TTC on regular basis. All states are again requested to follow the time line and make necessary changes for being able to calculate TTC on 11 month ahead basis once T-GNA regulation comes into effect.

Deliberation in meeting

Members noted.

PART D: OPERATIONAL PLANNING

ITEM NO. D.1: Anticipated power supply position during November 2023.

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of November 2023 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 September 2023 is provided at **Annexure D.1***

ITEM NO. D.2: Major Generating Units/Transmission Element outages/shutdown in ER Grid (as on 07.10.2023)

a) Thermal Generating Stations outage report:

SL No	STATION	STATE	AGENCY	UNIT NO	CAPACITY (MW)	REASON(S)	OUTAGE DATE
1	BARH	BIHAR	NTPC	4	660	Taken under Annual overhauling wef 28/09/2023 earlier out due to boiler Tube Leakage	25-Sep-2023
2	OPGC3	ODISHA	OPGC	3	660	Annual Overhauling	23-Sep-2023
3	MEJIA TPS	DVC	DVC	8	500	Initially out Turbine vibration high later Annual Overhauling	17-Sep-2023
4	BARAUNI TPS	BIHAR	NTPC	7	110	Poor condenser vacuum	19-Jul-2023
5	BARAUNI TPS	BIHAR	NTPC	6	110	Low vacuum	22-Jul-2023
6	NABINAGAR(BRBCL)	BIHAR	NTPC	3	250	Boiler tube leakage	11-Oct-2023
7	NABINAGAR(NPGC)	BIHAR	NTPC	3	660	11KV SWGR problem	09-Oct-2023
8	GMR	ODISHA	GMR-Infra	1	350	Problem in PA Fan	09-Oct-2023
9	SAGARDIGHI	WEST BENGAL	WBPDCL	2	300	Boiler Tube Leakage	12-Oct-2023
10	MEJIA TPS	DVC	DVC	6	250	Boiler tube leakage	10-Oct-2023
11	BANDEL TPS	WEST BENGAL	WBPDCL	2	60	Milling problem	03-Oct-2023
12	DPL	WEST BENGAL	WBPDCL	7	300	Coal Shortage wef 11/10/2023, Earlier out due to Boiler license renewal.	14-Sep-2023

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)	OUTAGE DATE
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	U.KOLAB	ODISHA	OHPC	2	80	Rotar earth Fault	25-Aug-2023
4	TEESTA HPS	SIKKIM	NHPC	1	170	Sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in Teesta River and damage of Teesta III Dam & downstream Powerhouses	04-Oct-2023
5	TEESTA HPS	SIKKIM	NHPC	2	170	Sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in Teesta River and damage of Teesta III Dam & downstream Powerhouses	04-Oct-2023
6	TEESTA HPS	SIKKIM	NHPC	3	170	Sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in Teesta River and damage of Teesta III Dam & downstream Powerhouses	04-Oct-2023
7	DIKCHU Hep	SIKKIM	SKPPL	1	48	Sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in Teesta River and damage of Teesta III Dam & downstream Powerhouses	04-Oct-2023
8	DIKCHU Hep	SIKKIM	SKPPL	2	48	Sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in Teesta River and damage of Teesta III Dam & downstream Powerhouses	04-Oct-2023
9	TEESTA STG III Hep	SIKKIM	TUL	1	200	Sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in Teesta River and damage of Teesta III Dam & downstream Powerhouses	04-Oct-2023
10	TEESTA STG III Hep	SIKKIM	TUL	2	200	Sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in Teesta River and damage of Teesta III Dam & downstream Powerhouses	04-Oct-2023
11	TEESTA STG III Hep	SIKKIM	TUL	3	200	Sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in Teesta River and damage of Teesta III Dam & downstream Powerhouses	04-Oct-2023
12	TEESTA STG III Hep	SIKKIM	TUL	4	200	Sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in Teesta River and damage of Teesta III Dam & downstream Powerhouses	04-Oct-2023
13	TEESTA STG III Hep	SIKKIM	TUL	5	200	Sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in Teesta River and damage of Teesta III Dam & downstream Powerhouses	04-Oct-2023
14	TEESTA STG III Hep	SIKKIM	TUL	6	200	Sudden cloudburst at glacier fed LOHNAK Lake followed by huge inrush of water in Teesta River and damage of Teesta III Dam & downstream Powerhouses	04-Oct-2023

d) Long outage report of transmission lines (As on 14.06.2023):

Transmission Element / ICT	Outage From	Reasons for Outage
400 KV IBEUL JHARSUGUDA D/C	29.04.2018	As information gathered, around 40-50 nos of towers were collapsed and conductor theft more than 400Ckm and restoration work is in progress
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. New Transformer procurement under pipeline and shall be replaced in the near future.
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	To rectify the CVT voltage missing issue
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)
220/132KV 160 MVA ICT 1 AT MALDA	04.01.2023	For 132 KV GIS Commissioning work (GIB erection of ICT-I)
132KV-BARHI-RAJGIR-1	25.03.2023	Dismantling of tower no. 227, 228, and 229 crossing the premises of Mahabodhi Cultural centre along with Destringing of conductor of both circuits and 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-KHSTPP-BARH-1	04.08.2023	Upgradation of Bay equipment's at KHSTPP
400/220KV 315 MVA ICT 1 AT TSTPP	09.08.2023	Acetylene violation in ppm during routine DGA analysis
400KV-ALIPURDUAR (PG)-PUNASANGCHUN-JIGMELING-1	24.04.2023	INITIALLY OPENED DUE TO VOLTAGE REGULATION. LINE WENT UNDER S/D FROM

		13.09.23 11:08HRS, COULD NOT RETURN DUE TO BREAKER PROBLEM AT BHUTAN
400KV/220KV 315 MVA ICT 3 AT BIDHANNAGAR	31.08.2023	FOR JUMPERING OF 220KV DROPPER FROM STRUNG BUS AT 315MVA ICT-3
400KV/220KV 315 MVA ICT 5 AT RANGPO	26.09.2023	SF6 LEAKAGE RECTIFICATION
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	
765KV-ANGUL-JHARSUGUDA-3 & 4	12.10.2023	BUS BAR PROTECTION OPERATED AT ANGUL

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.

ITEM NO. D.3: Commissioning of new units and transmission elements in Eastern Grid in the month of September-2023

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

LIST OF NEW ELEMENTS CHARGED DURING SEPTEMBER, 2023							
GENERATING UNITS							
SL. NO.	Location	OWNER/UNIT NAME	Unit No/Source	Capacity added (MW)	Installed Capacity (MW)	DATE	Remarks
NIL							
ICTs/ GTs / STs							
SL. NO.	Agency/ Owner	SUB-STATION	ICT NO	Voltage Level (kV)	CAPACITY (MVA)	DATE	Remarks
1	WBSETCL	Gokarna	3	400/220/33	315	17-09-2023	ICT 3 was first time charged from HV side only on 14-09-2023 at 12:47 Hrs with charging code ER/09/C/00825. Later. It was first time loaded on 15-09-2023 at 15:52 Hrs.

							with charging code ER/09/C/00887. Format IV for 400/220 kV 315 MVA ICT 3 at Gokarna SS (WB) along with associated bays (Bay No. 404 and 207) was issued on 13-09-2023.
TRANSMISSION LINES							
SL. NO.	**Agency/ Owner**	**LINE NAME**		**Length (KM)**	**Conduct or Type**	**DATE**	**Remarks**
NIL							
LILO/RE-ARRANGEMENT OF TRANSMISSION LINES							
SL. NO.	**Agency/ Owner**	**Line Name/LILO at**		**Length (KM)**	**Conduct or Type**	**DATE**	**Remarks**
NIL							
BUS/LINE REACTORS							
SL. NO.	**Agency/ Owner**	**Element Name**		**SUB-STATION**	**Voltage Level (kV)**	**DATE**	**Remarks**
NIL							
HVDC /AC Filter bank / FACTS DEVICE associated System							
SL. NO.	**Agency/ Owner**	**Element Name**		**SUB-STATION**	**Voltage Level (kV)**	**DATE**	**Remarks**
NIL							
BAYS							
SL. NO.	**Agency/ Owner**	**Element Name**		**SUB-STATION**	**Voltage Level (kV)**	**DATE**	**Remarks**
NIL							

Bihar:

Following elements have been charged in the Month September 2023.

GSS Name	Description	FTC Date	FTC Time	Remarks
Raxaul (New)	132KV RAXAUL NEW PARWANIPUR CKT 2 bay	22-09-2023	16:57	Only bay charged
Raxaul (New)	132 KV RAXAUL NEW PARWANIPUR CKT 1 bay	22-09-2023	16:57	Only bay charged
Phulparas	132/33KV 50MVA ICT 2	20-09-2023	17:35	20 MVA ICT2 replaced with 50 MVA.
Hulasganj	132/33 KV 50 MVA ICT 3	16-09-2023	02:05	20 MVA ICT 3 replaced with 50 MVA.

West Bengal:

1. 132KV BIRPARA-KAMAKHYAGURI S/C was first time loaded at 16.35 Hrs on 11.09.23 having a length of 85.095 KM with ACSR PANTHER conductor.

2. 400/220/33Kv, 315 MVA ICT#3 with its 400Kv & 220Kv Bay first time charged at no load at GOKARNA 400Kv substation at 12.47 Hrs on 14.09.23 and loaded at 15.42 hrs on 15.09.23.

3. 132Kv M/S RASIDHAN BULK connectivity done via tapping of 132KV ULUBERIA-BAGNAN#1 and first time charged at 16.50 Hrs on 19.09.2023 only from BAGNAN end (132Kv BAGNAN-RASIDHAN S/C having a length of 7.8KM, ACSR PANTHER & 132KV ULUBERIA-RASIDHAN S/C having a length of 8.9 KM, ACSR PANTHER).

4. 132KV KAKDWEEP-RAMGANGA D/C first time loaded on 29.09.23 at 15.56 Hrs & 16.16 Hrs respectively having a length of 36.095 KM with ACSR PANTHER conductor plus 1.377 KM UG XLPE cable.
   132KV MAIN BUS-1 at RAMGANGA was charged for first time on 29.09.23 at 15.56 Hrs.
   132KV MAIN BUS-2 at RAMGANGA was charged for first time on 29.09.23 at 16.16 Hrs.
   132KV B/C ON at 16.21 Hrs on 16.21 Hrs.

Members may note.

Deliberation in meeting

Members noted.

ITEM NO. D.4: UFR operation during the month of Septembers 2023.

Frequency profile for the month as follows:

MONTH	MAX (DATE/TIME)	MIN (DATE/TIME)	% LESS IEGC BAND	% WITHIN IEGC BAND	% MORE IEGC BAND
Sep, 2023	50.30 Hz on 08-09-2023 at 13:24 hrs	49.52 Hz on 01-09-2023 at 14:50 hrs	5.3	77.9	16.8

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

Members may note.

Deliberation in meeting

Members noted.

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Participants in 208 th OCC Meeting

Venue: ERPC Conference Hall, Kolkata **Time: 10:30 Hrs.** **Date: 17.10.2023 (Tuesday)**

Sl. No.	Name	Designation	Organisation	Contact No.	E-mail Id	Signature
1	N.S.Mondal	Member Secretary	ERPC	9958389967	mserpc-power@gov.in	
2	R. Sutradhar	Executive Director	ERLDC	9436302714	rajibsutradhar@posoco.in	
3	S. Konar	GM	ERLDC	9436335370	konar_segrid.in	
4	Preetam Banerji	Addl: CE	WBSEDCL	7003871189	preeban72@gmail.com	
5	D.P. PUITANDI	Sr GM	DVC	9434745905	doleiprasad.puitandi@dvc.gov.in	
6	Rahul Anand	DGM	NTPC	9425823430	rahulanand@ntpc.co.in	
7	Prasanna kumar Saha	DGM	NTPC	9437962430	Prasannasaha@ntpc.co.in	
8	Vijay Kumar	Gr. SM	NHPC	9818696821	VijayK@NHPC.nic.in	
9	Y. AYYAPPA	Asst. GeneralManager	SPTL	8967441535	ayya@Sikkimmanipalimited.in	Y. Ayyappa.
10	Rabsten	A. E. E	DGPC	+97517605356	r.rabsten302@drukgreen.bt	
11	Bilash Achari	DGM	ERLDC GRID-INDIA	7003472016	bilash.achari@grid-india.in	
12	S MONDAL	Sr. DGM	GRID-INDIA	9433021855	Saugato@grid-india.in	
13	Agniva Chatterjee	AEE	ERPC	8100307502	agniva.cea@gov.in	
14	MANAS DAS	DGM	ERLDC, GRID-INDIA	9007070925	manasdas@grid-india.in	
15	CHANDAN MALLICK	Manager	ERLDC GRID-INDIA	9007059660	chandan.mallick@grid-india.in	
16	SOURAV MANDAL	Manager	ERLDC GRID-INDIA	9402102354	souravmandal@grid-india.in	
17	Tashi Dorji	SSO	THP/DGPC	975-17720615	t.dorji2313@drukgreen.bt	
18	Yeshey Samdrup	Head OPU	BHP/DGPC	975-77225859	Y.Samdrup40@drukgreen.bt	
19	Pemba Tshering	AE	MHP/DGPC	975-17466203	p.tshering268@drukgreen.bt	
20	SAIBAL GHOSH	Manager	ERLDC	8584072079	saibal@grid-India.in	Saibal Ghosh

Participants in 208th OCC Meeting

Venue: ERPC Conference Hall, Kolkata **Time: 10:30 Hrs.** **Date: 17.10.2023 (Tuesday)**

Sl. No.	Name	Designation	Organisation	Contact No.	E-mail Id	Signature
21	SAURAV KUMAR SAHAY	Ch. Manager	ERLDC GRID-INDIA	9432013173	Saurav.Sahay@grid-India.in	
22	UTTAM KUMAR	GM	DVC, SLDC	9163857386	Uttamkum@dvc.gov.in	
23	S.K. Panda.	manager	SLDC, DVC	6370134294	Santosh.panda@dvcgov	
24	Sourabh Joshi	Asstt. Director	ERPC Kolkata	7078397028	sourabhjoshi.cea@gov.in	
25	Abhisaka Bam	Asstt. Ex. Eng.	BSPTCL/ ERPC	7070939186	abam1486spatel@gmail.com	
26	SRIJIT MUKHERJEE	DD.	ERPC	8794277306.	srijit.mukherjee@gov.in	
27	P. P. Jena	Executive Engineer	ERPC	9776198991	ppjena.erpc@gov.in	
28.	D.K Khentia	AD	ERPC	7683889161	dilip.k.khentia050@gmail.com	
29	Md Azam	DGM(E)	NHPC	9903612110	mdazam@nhpc.nic.in	
30	Rabisankar Jeti	Sr. Manger	MPL	9204855211	JETIR@TATAPOWER.COM	
31	Saurabh Jain	AGM	JSW	9983996373	Saurabh.jain@jsw.in	
32	S. K. pradhan	Deputy Director	ERPC	8249244719	sk.pradhan15@gov.in	
33	Amrit Raj	Electrical Ex. Engineer	SLDC, BSPTCL	9262696705	amritvs@gmail.com	
34	Palash Sen	Manager (Ops)	DPL	8013843947	Palash_239@rediffmail.com	
35	Shiv Kant Singh	AGM - Power Sales	JITPL	9752590428	jitpl_powersales@jindalgroup.com	
36	Mahima Lohani	Manager	JUSNL SLDC Ranchi	8210313726	mahimalohani6@gmail.com	
37	Priya Bakhla	Manager	JUSNL, SLDC	9798292348	priyabakhla07@gmail.com	
38	Utsab Adhya.	DE, SLDC, WB	WB SLDC	9434910880	Utsabaditya@Gmail.Ca.	
39	S. K. BAG	ACE: SLDC: WB	WBSETCL	7980098826	Sajalkbag74@gmail.com	
40	S. N Sahu	OP Manager	OPTCL	9438907844	dle.snsahu@optcl.	

Participants in 208th OCC Meeting

Venue: ERPC Conference Hall, Kolkata **Time: 10:30 Hrs.** **Date: 17.10.2023 (Tuesday)**

Sl. No.	Name	Designation	Organisation	Contact No.	E-mail Id	Signature
41	Chinmoy Kumar Dash	Manager (El)	GRIDCO	8763533733	ele.ckdash@gridco.co.in	
42	SANKAT MADHUSUDAN SAHOO	DGM (Electrical)	OPTCL	9438908353	ele.smsahoo@optcl.co.in	
43	Bibhu Prasad Gadgayat	DGM (El.)	OHPC	7328840025	bibhu.dg@gmail.com	
44	DEBARSHI DE	SM (Sys. Ops)	CESC	9163312742	debarshi.de@rpsgm	
45	Debi Prasad Kar	DGM (Elect.)	SLDC ODISHA	9438907416	ele.dpkar@sldcorissa.org.in	
46	Sanjaya Ku Mishra	← do →	← do →	9438907414	sanjayasldc@gmail.com	
47	Sanjit Ku. Maharana	DGM (Electrical)	GRIDCO	9438591100	ele.skmaharana@gridco.co.in	
48	Arup Kumar Banerjee	DGM	OPTCL	9438907352	ele.akbanerjee@optcl.co.in	
49	Krushna Ch. Samantray	AGM	OPGC	9338715428	Krushna.Samantray@opgc.co.in	
50	DEBASHIS CHAKI	CE	WBSETCL	9434910019	cpd.wbsetcl@gmail.com	
51	RITA CHAKRABORTY	CE	SLDC-WB	9434910830	ce.wbsldc@gmail.com	
52	DEBOBAS MUKHERJEE	SM (OS)	WBPDCL	9830052830	d.mukherjee@wbpdcl.co.in	
53	GAGAN KUMAR	EEE (SLDC)	BSPTCL	7763817782	gagankmishra@gmail.com	
54	SHOUVIK BANERJEE	ACE, SLDC	WBSETCL	9434910379	svkbanerjee@yahoo.com	
55	P. K. DE	SE, ERPC		9433125844	prasunde.cea@gov.in	
56	PARTHA GHOSH	DGM/ER-II	PGCIL	9434748263	partha.ghosh@powergrid.in	
57	Sourav Bn	PManger/TCS	TCS	9123801884	bhattacharjee.sourav@tcs.com	
58	A. De	DD	ERPC	9681932906	alik.erpc@gov.in	
59	S. Kejriwal	SE	ERPC	9831919509	shyam.kejriwal@gov.in	
60	N. K. Shrivastava	CGM	POWERGRID	9425409614	nkshrivastava@powergrid.in	

Participants in 208th OCC Meeting

Venue: ERPC Conference Hall, Kolkata **Time: 10:30 Hrs.** **Date: 17.10.2023 (Tuesday)**

Sl. No.	Name	Designation	Organisation	Contact No.	E-mail Id	Signature
61	A. Das.	Dy. Director	ERPC	9681214774	anupdas@nic.in	
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Annexure B.1

सत्यमेव जयते
भारत सरकार
Government of India
विद्युत् मंत्रालय
Ministry of Power
पूर्वी क्षेत्रीय विद्युत् समिति
Eastern Regional Power Committee

No. ERPC/DM/2023/ 761 Date: 31.08.2023

To
As per List.

Subject: Formation of Eastern Regioal Disaster Management Group in Power Sector-reg

Sir,

As per section 36 of the Disaster Management Act 2005, each Ministry is required prepare a Disaster Management plan related to their sector. Accordingly, MoP in association with CEA has prepared a Crisis and Disaster Management Plan-2022 for Power Sector**(Enclosed at Annexure-A).**

In the disaster management plan, a four–tier institutional structure has been envisaged i.e. at central level, regional level, state level, and local unit/plant level to effectively deal with disaster situations in power sector. The group at regional level has to be constituted under the chair of Member Secretary with the responsibilities are as follows:

Regional Level Disaster Management Group (RDMG)

Composition:

a) Member Secretary (RPC) - Chairman

b) Representative of Secretary in-charge of Rehabilitation and Relief of the affected State of the Region

c) Representatives of each State Civil Defence

d) Regional HODs CPSUs (NTPC, NHPC, PGCIL etc.)

e) CMDs State TRANSCOs/Power Departments

f) SLDC in charge of each state.

g) Chief Engineer, Central Water Commission (CWC), for floods related early warnings.

h) Deputy Director-General, Indian Metrological Department (IMD), for Earthquake, and Cyclone related early warnings.

i) Group Head, Ocean Information and Forecast Services Group (ISG), for Tsunami related early warnings.

j) Head of RLDC

Responsibilities:

a) To interact with CDMG for proper coordination.

b) To ensure that disaster management plans are in place.

c) To provide inter-state emergency & start-up power supply

d) To coordinate the early restoration of the regional grid.

e) To participate in damage assessment.

f) To facilitate resource movement to affected state (s) from other regional states

The matter has been discussed in the 50th ERPC meeting held on 11th August 2023, the following was decided:

"MS, ERPC briefly explained about the provisions of constitution of Regional Disaster Management Group under Disaster Plan prepared by CEA and intimated that the same would be formed for Eastern Region with the members as mentioned above. Further he requested for representation of each member may be intimated to ERPC secretariat.

Chairperson, ERPC observed that disaster management in power sector needs to be integrated with overall disaster management plan of the states and the country. He suggested that, ERPC Secretariat may take up the matter with the Inter-state Council Secretariat for discussion in the meeting of Eastern Zonal Council.

After detailed deliberation:

1. ***ERPC requested the members to send their nomination to ERPC secretariat as per the composition of the Regional Level Disaster Management Group (RDMG)***
2. ***ERPC secretariat was advised to take follow up action on the observation of Chairperson……"***

In view of the above composition of the committee and decision of the 50th ERPC meeting, you are requested to nominate officer as per the committee composition in the regional level disaster management group formed by Ministry of Power, Government of India for Eastern Regional Power Sector. The details of nominated officer may be intimated to the office of Member Secretary, ERPC through email at mserpc-power@nic.in & eecom1.erpc@gov.in by 15th September 2023.

Yours faithfully

N Mondal
31.8.2023

(N. S. Mondal)
Member Secretary

Eastern Regional Disaster Management Group in Power Sector-Distribution List

1. Special Relief Commissioner, Rajiv Bhawan, Bhubaneswar, Odisha-751001
2. Principal Secretary, West Bengal Disaster Management & Civil Defence Department, Nabanna, HRBC Building Room No. 203, 2nd Floor, 325 Sarat Chatterjee Road, Howrah -711102
3. Additional Chief Secretary, Disaster Management, Govt of Bihar
4. Secretary, Department of Home, Jail and Disaster Management (Disaster Management), Jharkhand
5. Secretary cum Relief commissioner, Govt of Sikkim, Gangtok, Sikkim
6. Directorate General of Fire Service, Home Guards & Civil Defence, Nuapatna, Cuttack, Odisha-753001
7. Directorate General, Civil Defence, Flat 59-60/84, New Punichak, Patna, Bihar-800 023
8. IGP, Home Guards & Civil Defence, Sikkim
9. Chairman-cum-Managing Director, OPTCL, Janpath, Bhubaneswar- 751022.
10. Managing Director, Jharkhand Urja Sancharan Nigam Limited, Engineering Building, HEC, Dhurwa, Ranchi-834004.
11. Managing Director, Bihar State Power Transmission Company Limited, Vidyut Bhavan, Bailey Road, Patna- 800001.
12. Managing Director, West Bengal State Electricity Transmission Company Ltd., Vidyut Bhavan, 8th Floor, Block- DJ, Sector-II, Bidhannagar, Kolkata-700091.
13. Principal Chief Engineer-cum-Secretary, Energy & Power Department, Govt. of Sikkim, Kazi Road, Gangtok – 737101, Sikkim.
14. Executive Director, ERLDC, GRID-INDIA, 14 Golf Club Road, Tollygunge, Kolkata – 700033.
15. Regional Executive Director (ER-I), NTPC Ltd., 2nd floor, Lok Nayak Jai Prakash Bhawan, Dak Bunglow Chowk, Patna-800001.
16. Regional Executive Director (ER-II), NTPC Ltd., 3rd Floor, OLIC Building, Plot No.N-17/2, Nayapalli, Bhubaneswar-751012.
17. Executive Director (O&M), NHPC Ltd., NHPC Office Complex, Sector-33, Faridabad-121003, Haryana
18. Executive Director (ER-I), Power Grid Corporation of India Ltd, Board Colony, Shastri Nagar, Patna-800023.
19. Executive Director (ER-II), Power Grid Corporation of India Ltd, CF-17, Action Area-I, Newtown, Rajarhat, Near Axis Mall, Kolkata-700091.
20. Executive Director (Odisha Project), Power Grid Corporation of India Ltd, Plot No-4, Unit 41, Niladri Vihar, Chandrasekharpur, Bhubaneswar, Odisha-751021.
21. Executive Director (Operation), Damodar Valley Corporation, DVC Tower, VIP Road, Kolkata-700054.
22. Chief Engineer, Central Water Commission (CWC), Sewa Bhawan, New Delhi-for floods related early warnings.
23. Deputy Director-General, Indian Metrological Department (IMD), New Delhi- for Earthquake, and Cyclone related early warnings.
24. Group Director, Information & Communication Technology and Data Management Group, Indian National Centre for Ocean Information Services, Hyderabad, Telangana
25. Director, SLDC, Bhubaneswar, Odisha
26. Chief Engineer, SLDC, West Bengal
27. Chief Engineer, SLDC, Bihar
28. GM, SLDC, DVC
29. GM, SLDC, Jharkhand
30. Chief Engineer, SLDC, Sikkim

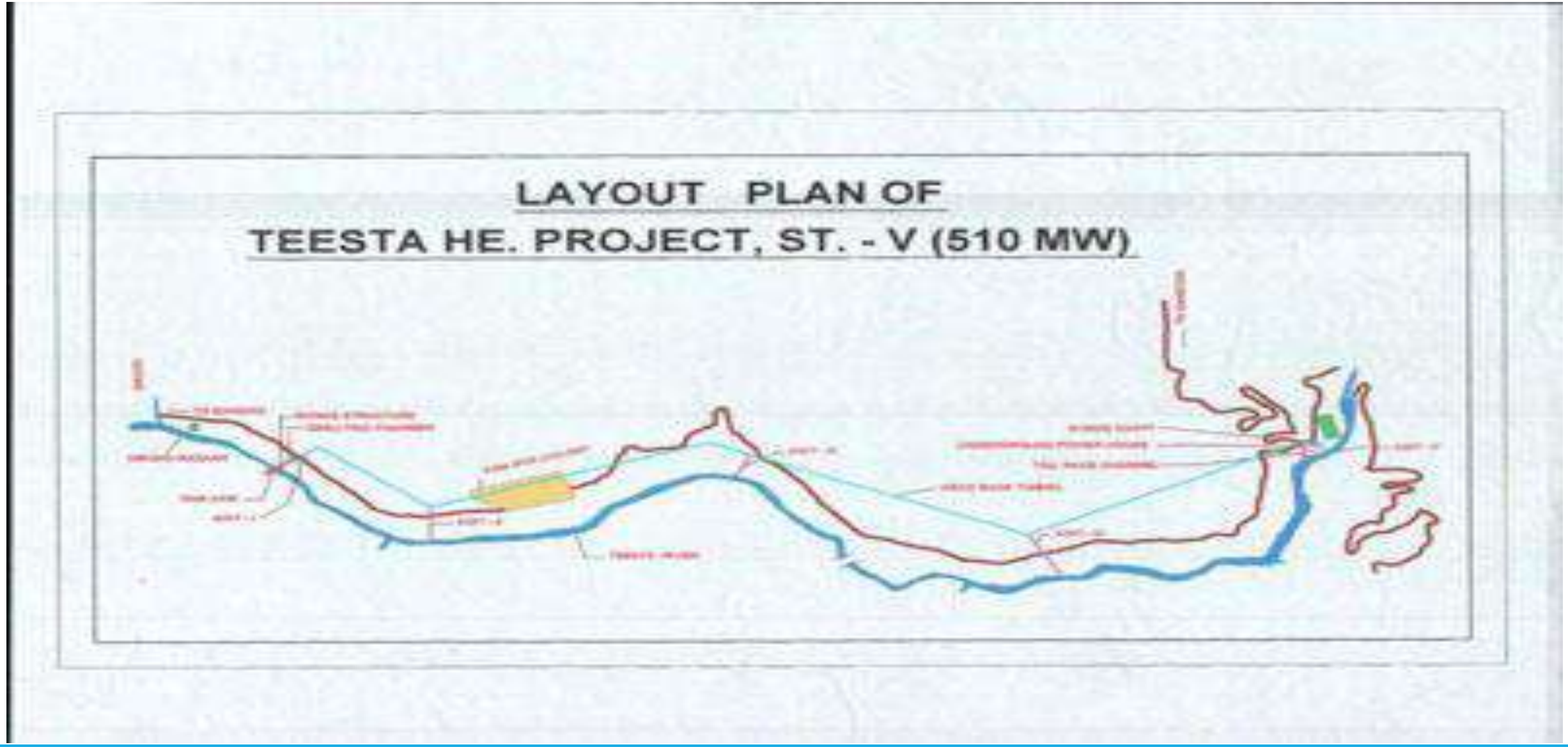
Annexure B.2

202nd OCC Meeting of ERPC on 17th Oct. 23

Natural Calamity in Teesta Region on 04th Oct. 2023

Vijay Kumar
Gr. Sr. Manager (O&M)
NHPC

Teesta-V Power Station



Salient Features of Teesta-V Power Station

- Teesta-V Power Station (3x170 MW) is a run of the river with Pondage scheme with diurnal storage to harness the hydro power potential of river Teesta for peaking during the lean season and is located in the state of Sikkim. The Power Station was commissioned in the year 2008.
- Rated Capacity: 3X170MW (510MW)
- Design Energy: 2573 MU
- Date of Commercial Operation (COD):

U#1: 10/04/2008 U#2 :01/03/2008 U#3: 03/04/2008

Salient Features of Teesta-V Power Station

Power House

Dam Teesta-V:Upstream

Salient Features of Teesta-V Power Station

- The project comprises of 88.6 m high Concrete Gravity Dam (located 2 Kms downstream of its confluence with Dikchunala) with three penstocks of length 321 m and 17.2 Km long.
- Head Race Tunnel housed on left bank.
- The underground Power House near Sirwani with installed capacity of 510 MW houses 3 units of 170 MW capacity each
- Net rated head of 197 m and designed to generate 2573 MUs of energy in 90% dependable year with 95% machine availability.

Sequence of Events on 04th Oct. 2023

Teesta-V Power Station was under normal operation & all the three units are operating at its rated capacity.

As per information received for weather forecast for 5 days Meteorological Centre Gangtok, India Meteorological Department, Govt. of India, there was forecast for moderate rain very likely to occur at most places. Keeping in consideration of fact, Dam Control Room officials were on alert mode.

At 1 AM SRG gate no 2 is opened about 2.2 meter and total inflow was 633 cumecs at that time. The situation was completely under control and till no message for any abnormal situation was received.

At 01:10 Hrs a message of opening of entire Radial gates of Teesta Urja Power Station had been conveyed by Dikchu Power Station (M/s Sneha Kinetic).

There after our officers posted at DCR became more vigilant and again a message had been received by the DCR official for opening the SRG gates.

At 01:42 Hrs unprecedented flash flood with heavy inflow occurred due to outburst of Lhonak lake. Due to this flash flood with very high-speed water overflowed over entire Dam top body.

Sequence of Events…cont.

A glacier lake, upstream of Teesta Urja outburst causing unprecedented flood in Teesta River.

Heavy discharge along with voluminous water of lake and also added volume of Teesta III reservoir added more quantities & debris/silts resulting unprecedented high inflow & trash/debris caused havoc to our Teesta-V PS , even though , we would saved our Dam structure & power house completely.

In very short time we would able to open the SRG gates of Dam as far as possible by deputed staff at Dam.

Accordingly all the machines were stopped.

Due to flash flood connectivity between power house and Dam was disconnected.

Some maintenance engineer rushed to Power House and attempted to lower the TRC gates and other necessary steps were taken to save the Power House.

With the efforts made by Power House employees, resulted no loss in Power House except damage of Transmission tower and other pothead yard equipments.

Sequence of Events..

TEESTA_V Power Station
MDDL: 568M
FRL: 579M
Dam Top Level: **583.2M**

Water Level Recorded
Highest Level**: 588-590M**
(Which is 5-7M above Dam Top)

Inflow was approx. more than 10000 -12000Cumecs

Normal TRC Level: **360M**
TRC Level measured on 04.10.23: **377M**

Damages due to High flood

Loss to Hydro-Mechanical Components: -

- All 5 Nos. Spillway Radial Gates & 5 Nos. hydraulic power packs completely damaged.
- All 3 Nos. Gasoline engine power packs unit along with DC Power pack and inverter washed out.
- 01 No. Stoplog Gantry crane washed away.
- 2 sets of Spillway Stoplog units (each set consisting of 06 Nos. Stoplog units) washed away.
- One additional no. of Spillway Stoplog gantry crane lifting beam washed away.
- Complete building of DCR, 3 nos. of power pack rooms washed away.

Damages due to High flood

Loss to Hydro-Mechanical Components: -

- 01 no. 10T electric winch machine installed at Dam Top also washed away.
- 02 nos. electric compressors & 01 no. of Diamond cutting machine (heavy duty) of M/s Friends Diving Services, Mumbai washed away.
- 3 Nos. Radar type water level measurement system.
- Grappler of TRCM, two nos. Hydro-mechanical stores containing miscellaneous consumables items and various assets also washed away. Partially damage of Intake gates, structure and Intake stop log gates
- 01 no. HM sub-store working at Mechanical Workshop at Balutar containing miscellaneous consumables items and various assets also washed away.

Damages due to High flood

Loss to Electrical Installations at Dam:

- 01 No. 500 KVA DG set, 4KL Diesel storage tank, LT electric panels for Radial gates operation and submersible pumps operation washed away.
- 06 Nos. submersible pumps of different ratings along with starter control panels got damaged.
- 01 No. 500 KVA step down transformer,2 nos. step down transformers 630KVA along with LT lines, HT and LT cables washed away.
- 01 no. elevator installed at Dam top body got fully damaged.

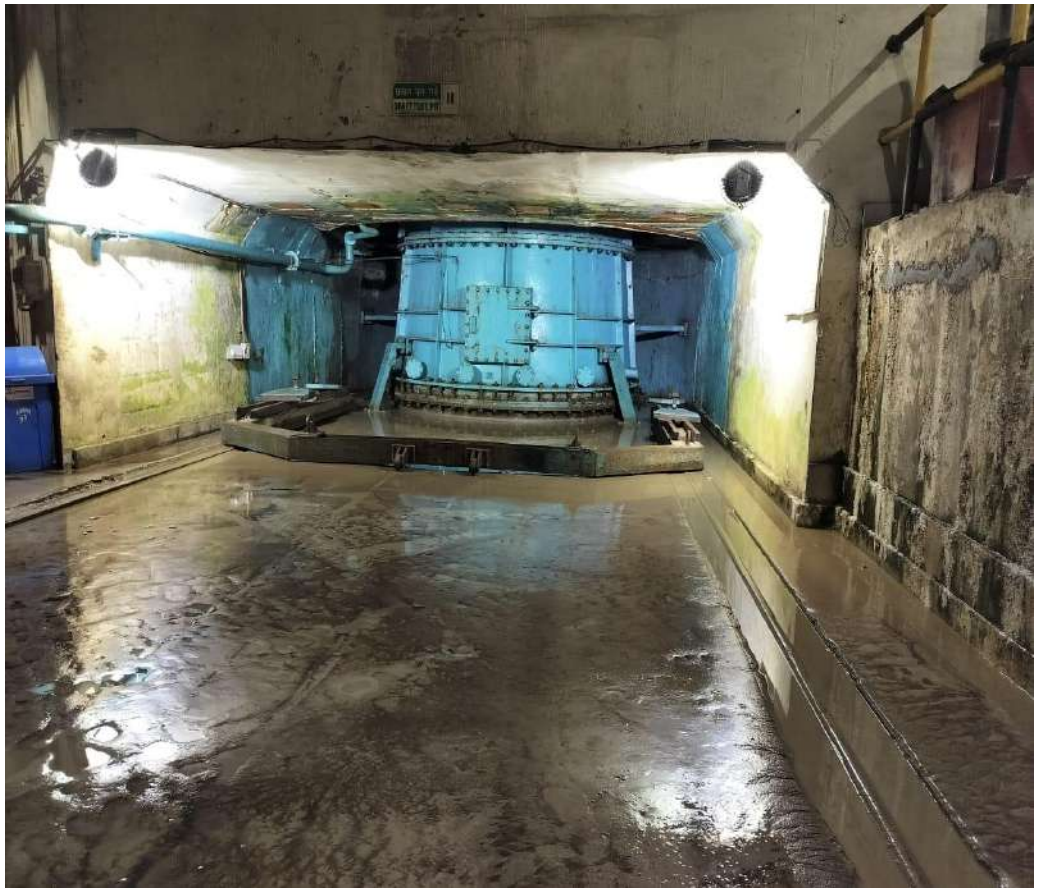
Damages due to High flood

- 01 no. Battery charger panel along with battery banks (2 sets of 110 nos. each 2V, 100AH VRLA batteries got damaged.
- 02 nos. air conditioners, approx. 20 nos. of steel tubular street light poles,25 nos. post lantern LED street light also washed away.
- Approx. 08 nos. 11 KV HT panels (spares) kept at electrical control room, Dam top body got damaged.
- Approx. 10 nos. electric sirens of different range along with GSM operating panels washed away

Damages due to High flood

Loss to Electrical installations at Balutar:

- 02 nos. 500KVA DG sets, 02 nos. 500KVA step up transformers for DG sets got damaged.
- 02 nos. 5 MVA 66/11 KV step-down transformers, One no 5MVA transformer under washed away/damaged.
- 01 no. 66/11 KV sub-station along with all accessories completely submerged in water.
- 66 KV single circuit overhead conductor along with incoming 66 KV towers also got damaged.



Damages due to High flood

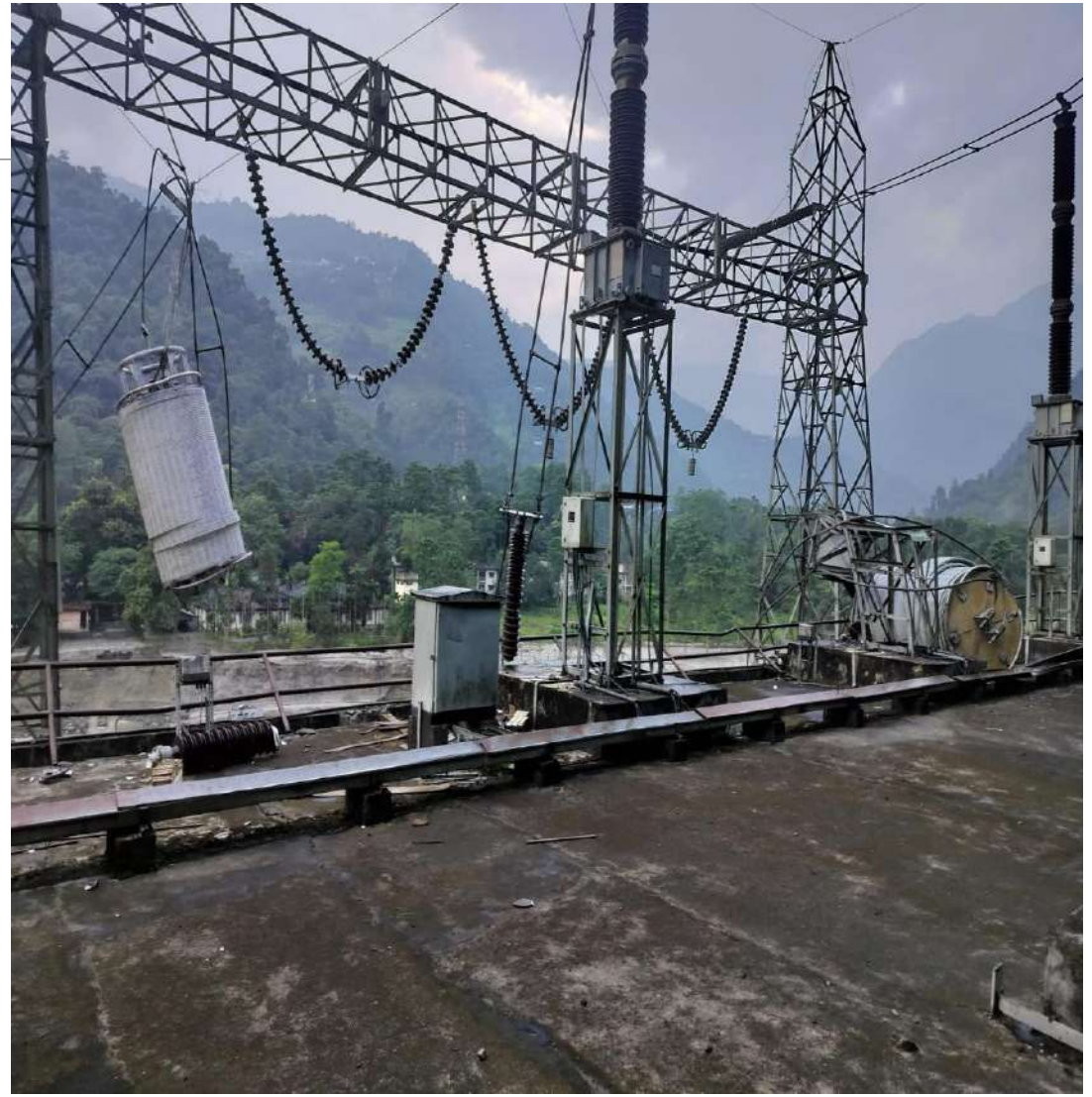
Loss to Electrical installations at Balutar:

- Approximate 11 nos. 11 KV HT panels & 05 nos. LT panels installed at EMD Balutar substation room got damaged.
- Approximate 07 nos. step-up/step-down transformers and 01 no. 110V battery charger with battery bank got damaged.
- 11 KV HT cable approximately 04 kms in length and LT cable of different ratings approximately 05 kms in length washed away.
- 01 no. 20 KL diesel storage tank along with diesel submerged in water.

Damage of Transmission Lines

- 400KV Transmission line Tower No. 1 & 2 have been completely collapsed
- 400KV Transmission line Tower No.3 partially damaged
- Following other associated equipment are also damaged:
  - OPGW Tower: 1 No.
  - SF6 to air bushing : 3 Nos.
  - Wave trap Support Insulator : 2 Nos.
  - Wave Trap : 3 Nos.
  - Wave Trap structure: 1 No.
  - CVT : 3 Nos.
  - CVT Structure: 3 Nos.
  - Ring Insulator: 6 Nos.
  - Gantry support Insulator:3 nos.
  - Gantry LA: 6 Nos.

Photographs: Transmission lines



Photographs: Transmission lines

Damage of Surge Shaft

Damages due to High flood

Following list of vehicles and equipment is either washed out or damaged. Exact position of damages shall be workout after physical verification.

Buses ;	06 (Six) Nos.	Explosive vane-	01(One) No
Trucks-	02(Two) Nos	Tractor-	01(One) No.
Tippers-	02(Two Nos)	Electric Compressor -	02(Two) nos.
Loader -	01(One) No.	Welding machine-	02(Two) No
Excavator BD 50-	01(One) no	Boat-	01(One)
Fire tender-	02(Two) Nos		
Water tankers-	02(Two) Nos.		
Crane 40 MT -	01(One) No.		
Crane 14 MT-	01(One) No		

Damages due to High flood

Loss to Civil structures at Dam and Balutar:

- The approach road to the Dam top, spanning from ± RD2400M to ±RD2480M, has been completely washed out. The IRBN security check post at the Dam top has also sustained significant damage, rendering access to the Dam top at this location impossible.
- The RCC Retaining wall (toe protection) upstream of Intake-I, approximately 20 meters in length, has been damaged. Fortunately, the rest of the alternate road near Intake-I remains intact, with only minor damage to the causeway.
- The left bank hill slope downstream of the Dam axis, extending to the IRBN camp, has been eroded, and the SFT outlet has also been washed away, making SFT & DC inaccessible.
- The wing wall near TRT Gate washed out. The river bank protection work at both the banks of Teesta River are damaged and some portion washed away.
- The Cable suspension bridge damaged severely and deck of the bridge washed out.
- The Badminton Court, Fire Station Building, Workshop Building, Home Guard barracks washed out.

Death- 1 no. (Late Dawa Tshering Lepcha, a contract employee at Dam site)
Missing- 1 no. (Chinmay Das along with wife and 1 no. son)

Relief Works Taken by NHPC after this event

- NHPC provided shelter to affected families.
- Langers are being served to affected families
- LPG gas connections/Utensils distributed to the families
- NHPC extends Rs 3 cr financial aid to CM Relief Fund of Sikkim

NHPC provided Rs. 5.0 lakh to the diseased family.

- The necessary rashion has also been distributed
- NHPC is providing clothes, blankets etc. to the affected and displaced.
- Medical facilities being provided to affected people

Relief works by NHPC

Dam Top after flood

Dam Downstream & Bridge near Power House

Restoration works Update

- There is no any major damages in Power House.
- All the efforts were done by Power House officers to save the Power house.
- Power House is Power & Water supply restored in the left bank and right bank colony.
- Assessment of damages is being done.
- On the basis of assessment the proposal shall be prepared for supply and erection of HM equipment and associated system.
- Approach roads are being prepared to reach the affected locations
- Cutting of wooder logs are going on at different location of Dam
- NHPC Management is trying their best to restore the Power Station with in minimum possible time.
- It is expected that approx. 1 year will take to restore the Teesta-V Power Station as Power Station faced the damages of HM equipment. The Cylinders of HM equipment are being imported from other country which will take 6-8 months by the Vendor and further manufacturing of heavy gates along with its power pack and its restoration of gates.
- Dam Civil structures are safe, but HM system are to be installed/replaced new, as most of the HM equipment are damaged or washed away due to heavy discharge and heavy wooden logs.
- However, we saved our Power House in respect.

TLD-III Power Station

- All the units of TLDP-III were under normal operation.
- As TLDP-III Power Station is in downstream of Teesta-V Power Station. The message was communicated to TLDP-III and TLP-IV Power Station.
- All the staff were on alert at TLDP-III Power Station. Accordingly, all the units of TLDP-III stopped between 02:47 hrs. to 250 Hrs. and Intake gates were lowered.
- All the radial gates were opened to pass the heavy discharge. It is expected that more than 10000 Cumecs water passed in the river. Power House and Barrage are safe.
- Power House is safe in all respect.
- Heavy silt has been deposited near TRC (Tail Race Channel) of Power Station.
- The same is being cleaned once condition become favourable. Number of trash racks have also been damaged & repairing of same is required, hence, it is expected that power station be restored within 15-20 days.

TLD-III Power Station

Silt Deposited in TRC

TLD-IV Power Station

- All the units of TLDP-IV were under normal operation.
- As TLDP-IV Power Station is in downstream of Teesta-V & TLDP-III Power Station.

- The message was communicated to TLDP-IV Power Station.
- All the staff were on alert at TLDP-III Power Station. Accordingly, the Unit#1, Unit#2, Unit#3 and Unit#4 were stopped at 02:30 hrs., 02:35 Hrs., 02:32 Hrs., and 02:39 hrs. respectively.
- All the radial gates were opened to pass the water. It is expected that more than 10000 Cumecs water observed. Power House and Dam are safe.
- Heavy silt has been deposited near TRC (Tail Race Channel) of Power Station.
- Unit#3 synchronized with grid on 09th Oct. 2023 at 19:34 Hrs. but due to silt deposition in Cooling water system, machine stopped at 21:05 Hrs. Cleaning of Cooling water pipe line is under progress.
- Unit#3 and Unit#4 synchronized with grid on 12th Oct. 2023 at 11:10 hrs. and 11:44 Hrs. respectively and these units are under normal opeartion.
- Unit#1 & Unit#2 synchronized with grid at 20:53 & 20:27 hrs. respectively.

TLD-IV Power Station

Cleaning works at TLD-IV PS

Thanks

Annexure B.9

Approved Maintenance Schedule of Thermal Generating Units of ER during 2023-24 in the month of November'2023

System	Station	UnitNo.	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			
Odisha	IB TPS	4	660	01.11.2023	25.11.2023	25	Annual Maintenance	_	_	_	_	May be availed after July 2024
DVC	Mejia TPS	5	250	25.10.2023	28.11.2023	35	Gen,FGD &	25.11.2023	28.12.2023	35	NO	APPROVED
DVC	Koderma TPS	2	500	_	_		AOH & FGD REPLACEMENT.	25.10.2023	21.11.2023	28	NO	APPROVED
CESC	BUDGEBUDGE	1	250	15.11.2023	21.11.2023	7	MINOR MAINTENANCE	21.12.2023	27.12.2023	7	NO	APPROVED
CESC	BUDGEBUDGE	2	250	23.11.2023	19.12.2023	27	Not Specified	28.12.2023	03.01.2024	7	NO	APPROVED
CESC	Southern	2	67.5	06.10.2023	15.10.2023	20	Not Specified	25.10.2023	14.11.2023	21	NO	APPROVED
CESC	BUDGEBUDGE	3	250	21.12.2023	27.12.2023	28	Not Specified	04.01.2024	31.01.2024	28	NO	APPROVED
NTPC	FSTPP	4	500	01.11.2023	15.12.2023	45	BLR +HP	_	_	_	_	NOT AVAILED
NTPC	Barh-I	1	660	22.10.2023	25.11.2023	45	Boiler	05.12.2023	19.01.2024	45	NO	APPROVED
NTPC	DarlipalliSTPS	2	800	15.11.2023	13.01.2024	60	COH	_	_	_	_	NOT AVAILED
NTPC	FSTPP	3	200	16.12.2023	29.01.2024	45	AOH	01.12.2023	05.01.2024	35	YES	APPROVED
NTPC	TSTPS	1	500	22.10.2023	30.11.2023	40	COH	04.01.2024	17.02.2024	45	NO	APPROVED
NPGCL	NabinagarSTPS	1	660	01.11.2023	05.11.2023	5	Boiler License Renewal	01.11.2023	05.11.2023	5	YES	APPROVED
NPGCL	NabinagarSTPS	2	660	01.07.2023	18.09.2023	50	AOH	25.11.2023	13.02.2024	50	NO	Subject to revival of Barh unit-04
GMRKEL	GMR	1	350	10.11.2023	19.12.2023	40	COH	10.11.2023	19.12.2023	40	YES	Subject to consent of Northern region Beneficiaries.
WBPDCL	Santaldih	5	250	04.01.2024	23.01.2024	20	BOH/AOH	26.01.2024	10.02.2024	15	NO	APPROVED
WBPDCL	kolaghat	3	210	26.01.2024	14.02.2024	20	AOH/BOH	22.02.2024	13.03.2024	20	NO	APPROVED
WBPDCL	Bakreshwar TPS	2	210	16.11.2023	05.12.2023	20	AOH/BOH	8.12.2023	27.12.2023	20	NO	APPROVED
WBPDCL	Sagardighi TPS	3	500	27.05.2023	30.06.2023	35	COH	15.11.2023	19.12.2023	35	NO	APPROVED
WBPDCL	Bandel TPS	5	210	21.07.2023	30.07.2023	10	BOH	03.01.2024	22.01.2024	20	NO	APPROVED
WBPDCL	Bakreshwar TPS	3	210	23.11.2023	02.12.2023	10	PG Test/ Boiler & BLR	_	_	_	_	NOT AVAILED

Annexure B.22

ITEM NO. B.22: Commencement of 11 month ahead ATC/TTC calculation

Purpose	Sl No	Action of Stakeholder	Data/Information Submission Responsibility & Timeline	Example
Revision 0 TTC/ATC Declaration for Month 'M'	1(a)	Submission of node wise Load and generation data along with envisaged scenarios for assessment of transfer capability Assessment of TTC/ATC of the import/export capability of the state and intra-state system and sharing of updated network simulation models	10th Day of 'M-12' month	For Oct-2024 to be done by 10th oct 2023
	1(b)	Declaration of TTC/ATC of the intra-state system in consultation with RLDC	26th Day of 'M-12' month	For Oct-2024 to be done by 26th Oct 2023
Interconnection Studies for elements to be integrated in the month 'M'	2(a)	Submission of node-wise load and generation data & sharing of network simulation models for intra-state elements coming in the next six months	8th Day of 'M-6' month	For Oct-2024 to be done by 8th April-2024
	2(b)	Sharing of inter-connection study results with RLDC	21st Day of 'M-6' month	For Oct-2024 to be done by 21st April-2024
Month Ahead TTC/ATC Review & Base case for Operational Studies for Month 'M'	3(a)	Submission of node wise Load and generation data along with envisaged scenarios for assessment of transfer capability Assessment of TTC/ATC of the intra-state system and sharing of updated network simulation models	8th Day of 'M-1' month	For Oct-2024 to be done by 8th Sep-2024
	3(b)	Declaration of TTC/ATC of the intra-state system in consultation with RLDC	22nd Day of 'M-1' month	For Oct-2024 to be done by 22nd Sep-2024

Annexure B.23

OPERATING PROCEDURE FOR EASTERN REGION

(As mandated by the IEGC 2023 clause 28(4))

Release of Draft Operating Procedure

ग्रिड-इंडिया
GRID-INDIA

पूर्वी क्षेत्र के लिए संचालन प्रक्रिया

(भारतीय विद्युत ग्रिड संहिता (IEGC 2023) के विनियम संख्या 28 (4) के अनुपालन के तहत)

OPERATING PROCEDURES
FOR EASTERN REGION

(As mandated by the IEGC 2023 clause 28(4))

Revision-0: 29th September 2023

पूर्वी क्षेत्रीय भार प्रेषण केंद्र

Eastern Regional Load Despatch Centre

14, Golf Club Road, Tollygunge

Kolkata – 700033

1

- ✓ Operating Procedure for Eastern Region has been developed by ERLDC as per new IEGC-2023
- ✓ Circulated among the stakeholders for comments on 29.09.23
- ✓ The **operating procedure is available in the link:**

https://app.erldc.in/Content/Upload/System%20Study/Operating%20Procedure/Operating%20Procedure%20ERLDC%20290923.pdf .

- ✓ **The annexures are available in the link:**

https://app.erldc.in/Content/Upload/System%20Study/Operating%20Procedure/Annexures%201-%20Operating%20Procedure%20IEGC%202023.pdf

- ✓ Final Procedure to be sent to CERC for intimation

Operating Procedure Structure

As per IEGC-2010:

1. General
2. Frequency Control and Management Procedure
3. Voltage Management Procedure
4. Demand Estimation and Management Procedure
5. Outage Planning Procedure
6. Switching Coordination Procedure
7. Periodic Reports, Event Information and System Revival Procedure
8. Network Security and Congestion Management Procedure
9. Scheduling and Despatch Procedure
10. Short Term Open Access Procedure
11. SCADA System Operation Procedure
12. Wide area monitoring System
13. Metering and Settlement System
14. Weather Portal for Power System
15. RLDC Fees & Charges
16. Cyber Security

As per IEGC-2023:

1. General
2. Operational Planning
3. Real time monitoring and System Security Assessment
4. Outage Planning
5. Resource Adequacy Planning
6. Frequency Control and Ancillary Services
7. Reactive Power& Voltage Control
8. Defence Mechanisms
9. Grid Disturbance & Restoration Procedure
10. Event Information and Reporting Procedure
11. First Time Energization & interconnection of new and modified elements
12. Scheduling and Despatch Procedure
13. RLDC Fees & Charges
14. National Open Access Registry
15. Metering
16. EMS/SCADA & WAMS- Monitoring & Control
17. Cyber Security
18. Communication
19. Periodic Testing
20. Compliance Monitoring

Chapter-2 :Demand Estimation

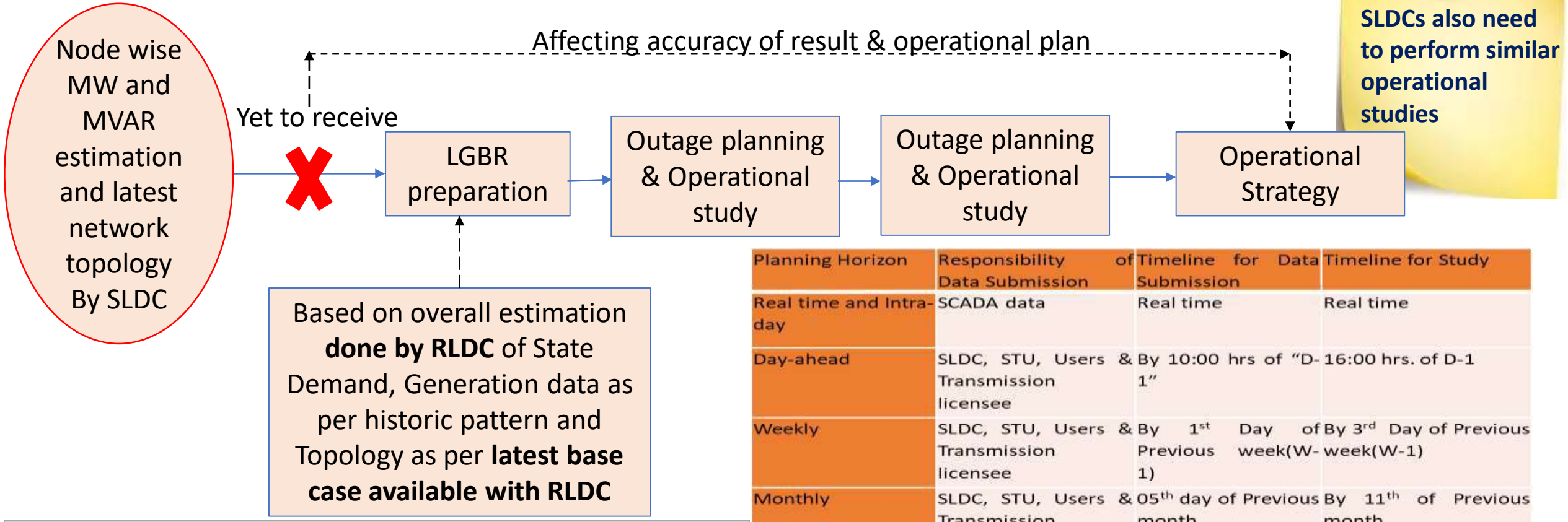
	By SLDCs	By RLDCs	By NLDC
Daily Demand estimation	10:00 hrs of previous day	11:00 hrs of previous day	12:00 hrs of previous day
Weekly demand estimation	First working day of previous week	Second working day of previous week	Third working day of previous week
Monthly demand estimation	Fifth day of previous month	Tenth day of previous month	Fifteenth day of previous month
Yearly demand estimation	30th September of the previous year	15th October of previous year	30th October of previous year

- ✓ Major changes in demand estimation in real time to be informed to RLDC with revised data
- ✓ Forecasting error to be computed and shall be available on the website
- ✓ SLDCs need to :
  - send the day ahead, week ahead, month ahead and yearly forecast
  - Follow the prescribed format
  - Follow the timeline.
- ✓ Presently RLDC is filling the format based RLDC Demand forecast only

Chapter-2 :Transfer Capability Assessment

- ✓ All transfer capability assessments are to be done twelve months in advance
- ✓ Submission of node wise Load and generation data along with envisaged scenarios, network simulation models by SLDC as per timeline- Required for TTC/ATC calculation, interconnection study
- ✓ SLDCs also needs to calculate TTC/ATC 12 month in advance
- ✓ NLDC/RLDC is in the process of publishing TTC/ATC up to Sep-24. All the states are also requested to calculate and publish TTC/ATC up to Sep-24

Chapter-2 : Operational Planning Analysis



SLDCs also need to perform similar operational studies

Planning Horizon	Responsibility of Data Submission	Timeline for Data Submission	Timeline for Study
Real time and Intra-day	SCADA data	Real time	Real time
Day-ahead	SLDC, STU, Users & Transmission licensee	By 10:00 hrs of "D-1"	16:00 hrs. of D-1
Weekly	SLDC, STU, Users & Transmission licensee	By 1st Day of Previous week(W-1)	By 3rd Day of Previous week(W-1)
Monthly	SLDC, STU, Users & Transmission licensee	05th day of Previous month	By 11th of Previous month
Yearly	SLDC, STU, Users & Transmission licensee	30th September of the previous year	16th October of Previous Year

SLDC need to prepare & Share

1. Updated a PSSE Base case

2. planned outage & long outage of transmission element need to be model in that PSSE case

3. Any Temporary operational arrangement need to be properly modelled

Energy Management System(EMS)

1. SCADA system has an inbuilt module called Energy Management System(EMS), which has similar feature like offline stability software (PSSE). Load flow, dynamic stability and state estimation studies can be done using these EMS software in SCADA.

2. In PSSE the real time load generation and network configuration needs to be updated from SCADA either manually or by some automation and it needs some time.

3. EMS tools detects network configuration and LGBR automatically based on analogue and digital SCADA data. Therefore, system operator can quickly study before giving any shutdown or can check vulnerability of the system all the time automatically.

4. IEGC-2023 mandates to keep record of such studies done in online SCADA system and keep record of non-satisfactory study result due to non-reporting of data from the site.

5. Data issue which has caused error in study upto 10th October is shown in the next slide.

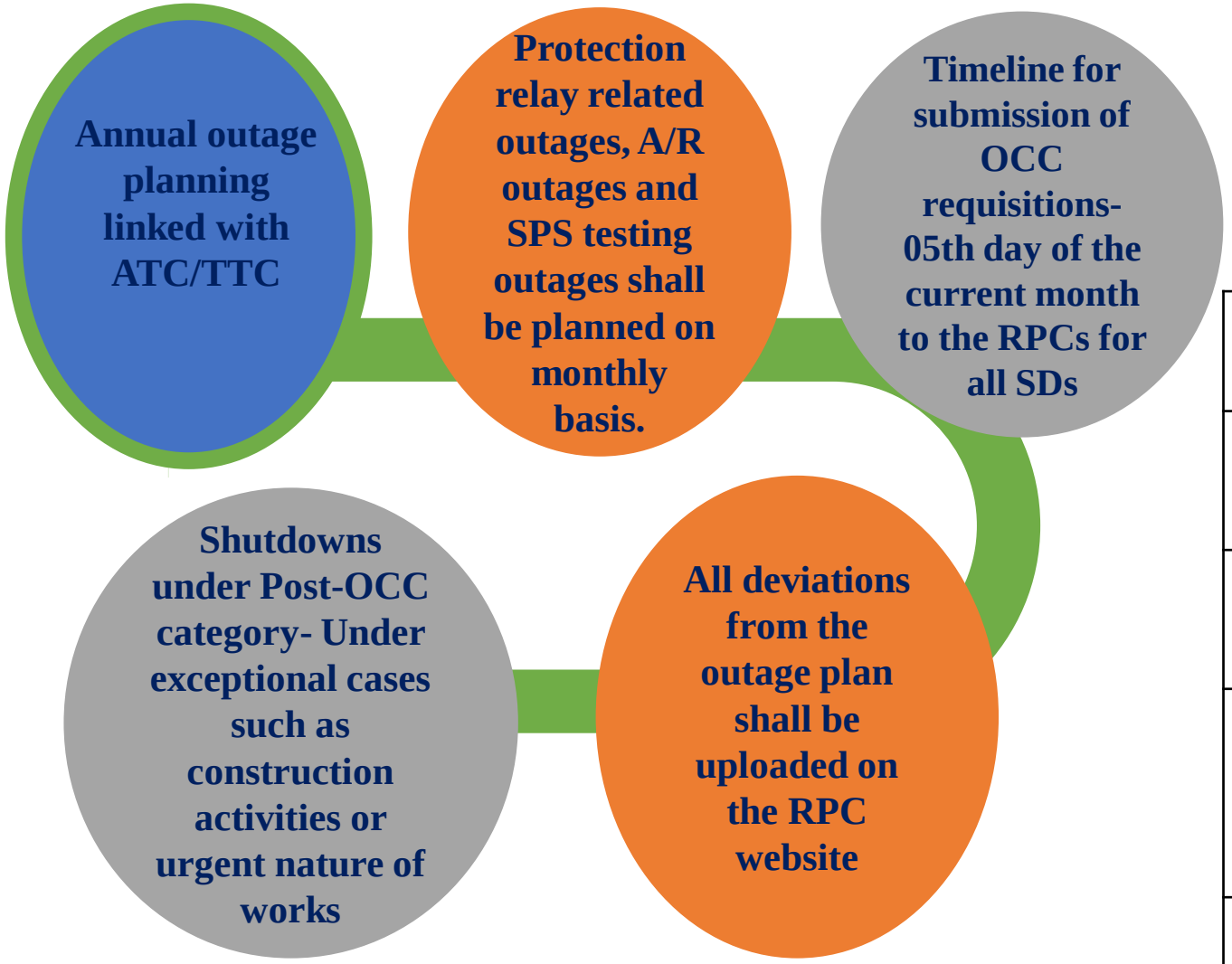
Operational Planning Real time based on **SCADA EMS tools**

Date	Study for S/D	Data issue At	Type of error in State Estimator
03-10-2023	400KV-Arambagh-New CHANDITALA	Error in Arambagh - New Chanditala data	Non-satisfactory result
05-10-2023	400KV-MALDA(PG)-NEW PURNEA-2	Bad Quality Data from NTPC FARAKKA, MALDA_PG	Divergence
09-10-2023	400KV-NEW PURNEA-KISHANGANJ-2	Bad Quality Data from NTPC FARAKKA, MALDA_PG	Divergence
	400KV-NEW PURNEA-MUZAFFARPUR-1		Divergence

Other than above telemetry error following telemetry issue are also causing either poor result of State estimator or Divergence: OPTCL Lapanga & Meramundali (Resolved on 10th Oct) , GAJOL_WB

Sl No	Name of the element going for S/D	Actual(SCADA) Flow the element going for S/D just prior to S/D	EMS(RTCA) Flow the elemet going for S/D prior to S/D	Name of Elements which are going to be affected	Actual(SCADA) Flow on the affected elements				EMS(RTCA) Flow on the affected elements		Time of Study	Time of Actual S/D	Remarks
					Pre S/D	Time	Post S/D	Time	Pre S/D	Post S/D			
1	400KV-MOTIHARI-BARH-2	274	292	400KV-MOTIHARI-BARH-1	270	9:08	346	9:09	292	357	8:19	9:08	Converging

Chapter-4 :Outage Planning



Time line of Annual Outage Planning Process

Activity	Agency	Cut-off date
Submission of proposed outage plan for the next financial year to ERPC with the earliest start date and latest finishing date	STUs, transmission licensees, generating stations and other entities directly connected to ISTS	31st October or as directed by CEA/MoP from time to time
Submission of LGBR of the control area to ERPC for both peak and off-peak scenarios	SLDC	31st October or as directed by CEA/MoP from time to time
Publishing draft LGBR and draft outage plan of regional grid for next financial year on the concerned ERPC's website for inviting suggestions, comments, objections of stakeholders.	ERPC	30th November or as directed by CEA/MoP from time to time
Publishing final LGBR and final outage plan of regional grid for next financial year on the concerned ERPC's website	ERPC	31st December or as directed by CEA/MoP from time to time

Chapter-3 :Deviation Violation Message

	Deviation Alert		Deviation Emergency	
Type	**Criteria**	**Duration**	**Criteria**	**Duration**
Over drawl/ Under Injection by State/Buyer	10% of schedule or 100MW (20% of schedule or 40MW for state having schedule within 400MW) whichever is minimum	15 Minutes	15% of schedule or 200MW (60MW or 30% of schedule for state having schedule within 400MW) whichever is minimum	5 Minutes
Under Drawl/ over Injection by State/Buyer	10% of schedule or 100MW (20% of schedule or 40MW for state having schedule within 400MW) whichever is minimum	15 Minutes	15% of state drawl schedule or 200MW (60MW or 30% of schedule for state having schedule within 400MW) whichever is minimum	5 Minutes

If the system state (frequency) is already in the Emergency or extra Emergency state but the deviation criteria is in Alert state, then the emergency message will be applicable.

Load shedding for grid security

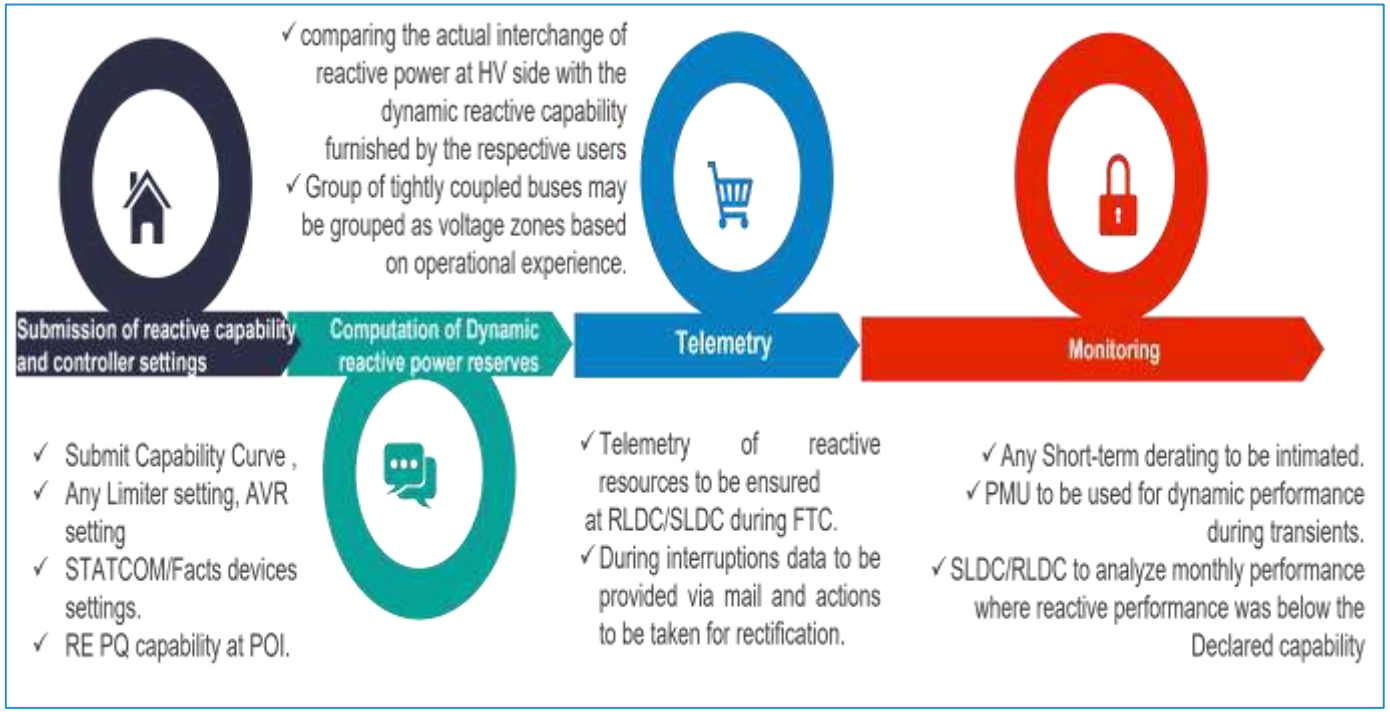
In the case of overdrawl by any state for more than 15% of schedule or 200MW (60MW or 20% of schedule for state having schedule within 400MW) for a duration of 5 minutes at a frequency equals to or lesser than 49.60hz ERLDC may advise SLDC to disconnect the pre-identified feeders which are not feeding the important loads like traction, hospitals, defence etc. other essential services. In the interest of grid security , the concerned SLDC shall abide by the direction. .(**list of pre-identified feeders to be disconnected is given in annexure 6.1 of Operating Procedure**)

Chapter-6 :Frequency control and ancillary services

- Each control area shall assess its frequency response characteristics
- Each control area to share data with 1 (one) second resolution for generating units and energy storage systems and 10 (ten) seconds for the state control area for every reportable event as notified by NLDC.
- NLDC to share the FRO for each control area and regional generating station
- Frequency Response Performance (FRP) will be calculated based on data
- Based on FRP concerned entities to take corrective action. All such cases shall be reported to the concerned RPC for its review.

Chapter-7 :Reactive Power & Voltage Control

Dynamic Reactive Power Reserve



- ✓ NLDC, RLDCs and SLDCs shall assess the dynamic reactive power reserve available
- ✓ Reactive power capability tests shall be performed once every five (5) years or whenever major retrofitting is done.
- ✓ Procedure available at:

https://posoco.in/wp-content/uploads/2023/10/NLDC_Procedure-on-Assesment-of-Dynamic-Reactive-Reserve.pdf

- All generating station shall be responsible for tuning of AVR, PSS, Voltage Controllers (PPC), including for low and high-voltage ride-through capability of wind and solar generators. or any other requirements outlined in accordance with the CEA Technical Standards for Connectivity
- The charge for VArh shall be at the rate of 5 paise/kVArh w.e.f. date of implementation of IEGC-2023. This rate shall be escalated at 0.5paise/kVArh per year thereafter, unless otherwise revised.

Chapter-8 :Defense Mechanism

Provisions pertaining to :UFR & df/dt scheme

Sr. No.	Stage of UFR Operation	Frequency (Hz)
1	Stage-1	49.40
2	Stage-2	49.20
3	Stage-3	49.00
4	Stage-4	48.80

Note 1: All states (or STUs) shall plan UFR settings and df/dt load shedding schemes depending on their local load generation balance in coordination with and approval of the concerned RPC.

Caution

Pumped storage hydro plants operating in pumping mode or ESS operating in charging mode shall be automatically disconnected **before the first stage of UFR.**

Telemetry of UFR & Monitoring

- ✓ SLDC shall ensure telemetered data for Feeders where UFR is installed .
- ✓ SLDC shall always **monitor the combined load** in MW of these feeders.
- ✓ SLDC shall share the above data with the **respective RLDC in real time** and submit a monthly exception report to the respective RPC.

RPC shall undertake a **monthly review of the UFR** and df/dt scheme and carry out **random inspection** of UFR**.**

Installation of UFR

All distribution licensees, STUs and bulk consumers to install UFR &df/dt **as per Plan of RPC**

The **load shedding for each stage of UFR** operation, in percentage of demand or MW shall be as finalized by the **respective RPCs**

Does/Don'ts

- ✓ Demand disconnection shall not be set **with any time delay** in addition to the operating time of the relays and circuit breakers.
- ✓ There shall be a **uniform spatial spread of feeders** selected for UFR and df/dt disconnection.
- ✓ RLDC shall inform SLDCs as well as the concerned RPC on a **quarterly basis,** durations during the quarter when the **combined load in MW of these feeders was below the level considered** while designing the UFR scheme by the RPC.
- ✓ SLDC shall take corrective measures within a reasonable period .

Chapter-11 :First Time Energization and interconnection of new or modified power system element

- ✓ As per IEGC 2023 Clause8(2), NLDC has drafted a detailed procedure in coordination with RPCs, RLDCs and stakeholders for secure and reliable integration of new or modified elements with the grid which is to be followed by all the entities.
- ✓ New chapter for certification of commissioning of Communication equipment has been added.
- ✓ Link of the procedure:
- ✓ **https://app.erldc.in/Content/Upload/Useful%20Links/IEGC/Draft%20Detailed%20procedure%20covering%20modalities%20for%20first%20time%20energization%20and%20integration%20of%20new%20or%20modified%20power%20system.pdf**

Chapter-11 :Scheduling and Despatch Procedure

- ✓ Document pertaining to Connectivity/GNA/GNARE/T-GNA/T-GNARE/transfer of GNA details to be submitted
- ✓ Procedure for submission of valid contracts/power purchase agreements
- ✓ Procedure for submission of schedule request(requisition) under GNA/T-GNA
- ✓ Allocation of corridors for scheduling by ERLDC for GNA/GNARE/ T-GNA/T-GNARE grantees: https://cercind.gov.in/Regulations/Orderallocation290923.pdf
- ✓ Security Constrained Unit Commitment (SCUC) and Unit Shut Down (USD): https://posoco.in/wp-content/uploads/2023/09/Signed_Detailed-Procedure-for-SCED-SCUC_7a-7f_29092023-clean.pdf
- ✓ Procedure for schedule revision by GNA/TGNA grantee and DC revision by Seller
- ✓ Schedule curtailment by RLDC: (i) Grid Security, (ii) Event of bottleneck in evacuation of power, (iii) Grid disturbance of category GD-5

Chapter-19:Periodic testing

- ✓ In line with clause (40) of IEGC 2023, various periodic tests to be carried out on power system elements
- ✓ Detailed procedure for the following is available at GRID-INDIA website in the link:

Final-Procedure-of-Periodic-Testing-for-Power-System-Elements-submitted-to-CERC.pdf

Annexure D.1

Updated Anticipated Peak Demand (in MW) of ER & its constituents for November 2023

1	**BIHAR**	**Demand (MW)**	**Energy Requirement (MU)**
	NET MAX DEMAND	5107	2958
	NET POWER AVAILABILITY- Own Sources	556	314
	Central Sector+Bi-Lateral	5460	3429
	SURPLUS(+)/DEFICIT(-)	909	785
2	**JHARKHAND**		
	NET MAXIMUM DEMAND	1825	1037
	NET POWER AVAILABILITY- Own Source	460	164
	Central Sector+Bi-Lateral+IPP	1280	486
	SURPLUS(+)/DEFICIT(-)	-85	-387
3	**DVC**		
	NET MAXIMUM DEMAND	3300	2069
	NET POWER AVAILABILITY- Own Source	5500	3218
	Central Sector+MPL	305	190
	Bi- lateral export by DVC	2500	1287
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	5	52
4	**ODISHA**		
	NET MAXIMUM DEMAND (OWN)	4500	3107
	NET MAXIMUM DEMAND (In Case of CPP Drawal)	5200	3023
	NET POWER AVAILABILITY- Own Source	3000	1773
	Central Sector	1570	894
	SURPLUS(+)/DEFICIT(-) (OWN)	70	-440
	SURPLUS(+)/DEFICIT(-) (In Case, 600 MW CPP Drawal)	-630	-356
5	**WEST BENGAL**		
	WBSEDCL		
5.1	NET MAXIMUM DEMAND	6664	3186
	NET MAXIMUM DEMAND (Incl. Sikkim)	6669	3190
	NET POWER AVAILABILITY- Own Source (Incl. DPL)	5379	2567
	Central Sector+Bi-lateral+IPP&CPP+TLDP	2315	1220
	EXPORT (To SIKKIM)	5	4
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	1025	597
5.2	**CESC**		
	NET MAXIMUM DEMAND	1740	774
	NET POWER AVAILABILITY- Own Source	460	367
	IMPORT FROM HEL	540	322
	TOTAL AVAILABILITY OF CESC	1000	689
	DEFICIT(-) for Import	740	-85
			-85
	WEST BENGAL (WBSEDCL+CESC+IPCL)		
	(excluding DVC's supply to WBSEDCL's command area)		
	NET MAXIMUM DEMAND	8404	3960
	NET POWER AVAILABILITY- Own Source	5839	2934
	CS SHARE+BILATERAL+IPP/CPP+TLDP+HEL	2855	1542
	SURPLUS(+)/DEFICIT(-) BEFORE WBSEDCL'S EXPORT	290	516
	SURPLUS(+)/DEFICIT(-) AFTER WBSEDCL'S EXPORT	285	512
6	**SIKKIM**		
	NET MAXIMUM DEMAND	118	64
	NET POWER AVAILABILITY- Own Source	4	1
	Central Sector	81	31
	SURPLUS(+)/DEFICIT(-)	-34	-32
	EASTERN REGION		
	NET MAXIMUM DEMAND	23943	13195
	NET MAXIMUM DEMAND (In Case of CPP Drawal of Odisha)	24340	13111
	BILATERAL EXPORT BY DVC (Incl. Bangladesh)	2000	1287
	EXPORT BY WBSEDCL TO SIKKIM	5	4
	EXPORT TO B'DESH & NEPAL OTHER THAN DVC	642	462
	NET TOTAL POWER AVAILABILITY OF ER	25501	13689
	(INCLUDING CS ALLOCATION +BILATERAL+IPP/CPP+HEL)		
	SURPLUS(+)/DEFICIT(-)	1553	489
	SURPLUS(+)/DEFICIT(-) (In Case, 600 MW CPP Drawal of Odisha)	1157	573