AGENDA
FOR
199th OCC MEETING

Date: 20.01.2023
Eastern Regional Power Committee
14, Golf Club Road, Tollygunge
Kolkata: 700033

EASTERN REGIONAL POWER COMMITTEE

AGENDA FOR 199TH OCC MEETING TO BE HELD ON 20.01.2023 (FRIDAY) AT 10:30 HRS

PART – A

ITEM NO. A.1: Confirmation of Minutes of 198th OCC Meeting held on 22nd December 2022 through MS Teams online platform.

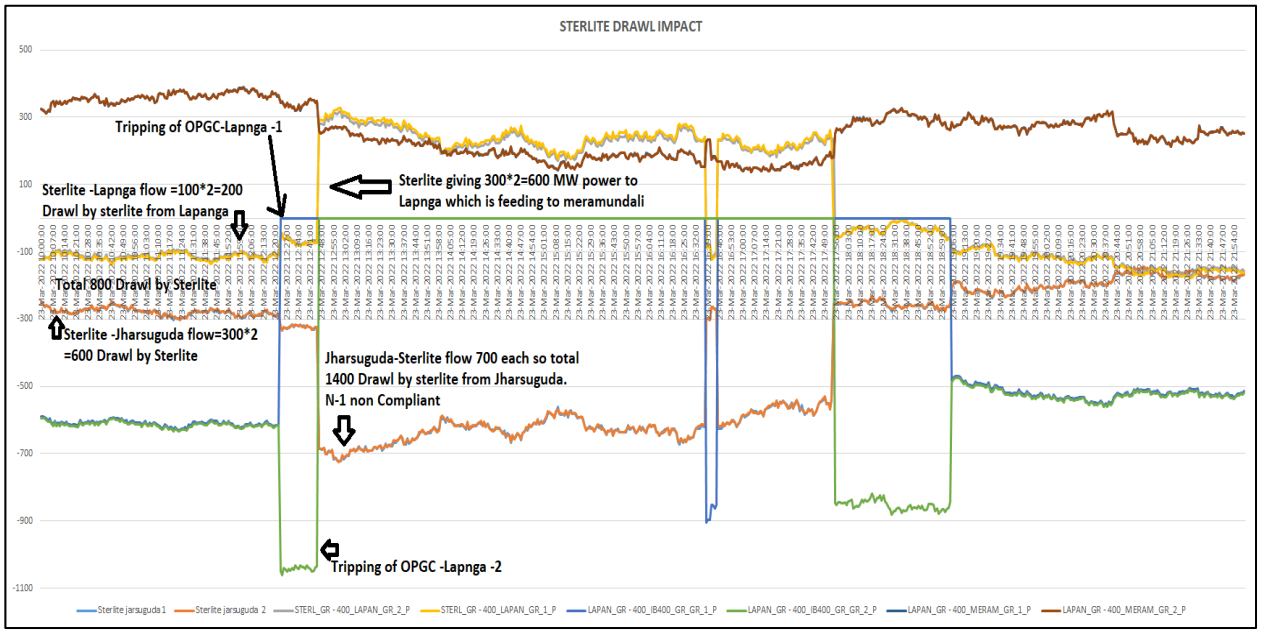
The minutes of 198th Operation Coordination sub-Committee meeting held on 22.12.2022 was circulated vide letter dated 17.01.2023.

Members may confirm the minutes of 198th OCC meeting.

PART B: ITEMS FOR DISCUSSION

ITEM NO. B.1: Proposal for Emergency control action during tripping of single circuit of 400 kV Lapanga-OPGC D/C for ensuring grid reliability.

Earlier on 23-24 Match 2022, 400 kV OPGC-Lapanga one circuit tripped due to vegetation problem. With this, the other remaining circuit got loaded to the tune of 900-1000 MW (Shown in plot). With this other circuit conductor observed sag and came in the induction zone of vegetation leading to fault and its outage. With this, OPGC power flow started flowing towards Jharsuguda, leading to high loading on 400 kV Sterlite-Jharsuguda D/C.



During the event, several issues in terms of system operation in real-time were observed and a meeting was called by ERLDC in coordination with ERPC and SLDC Orissa on 4th April 2022.

One of the key issues was reluctance of OPGC for opening OPGC bus sectionaliser in case of tripping of one circuit of 400 kV OPGC-Lapanga D/C. This temporary action of running one unit connected with Jharsuguda and one with Lapanga could have provided several benefits in real-time operation as listed below:

1. Reduced loading on the remaining 400 kV OPGC-Lapanga circuit and its loading would be within 600 MW with one unit connected on this side. This would have kept the line loading also under control and avoided any sag on the circuit.
2. Lapanga would have both sources (400 kV OPGC as well as 400 kV Jhasurguda via Sterlite) intact which could have provided a better power supply situation.
3. No requirement of backing down at OPGC generating plant and avoiding any action for restricting drawl or increase in generation at Sterlite for controlling loading of 400 kV Jharsuguda-Sterlite D/C.
4. Avoiding breach of N-1 reliability on 400 kV Jharsuguda-Sterlite D/C.
5. Faster restoration of faulty circuit after rectification as with such temporary measure loading of both circuit after restoration would be within 300 MW at maximum. After this bus sectionaliser Circuit breakers can be closed at OPGC.

In the meeting, it was decided that both OPGC and Sterlite should comply of SLDC instructions in real-time for grid security. Control rooms of both utilities should have adequate SOP ready for their respective control room operator to avoid any unwanted delay.
It is also worthwhile to mention that OPGC substation has been designed to operate with bus sectionaliser circuit breakers as close as well as open mode operation.

In view of the same, this specific temporary action of OPGC split mode operation may be adopted when both units of OPGC are running and one of the 400 kV OPGC-Lapanga D/C is out/trip to ensure real-time security.

Members may discuss.

ITEM NO. B.2: Fog-related tripping in Eastern Region during Dec 2022 -Jan 2022 and remedial action taken

In the month of December'22 and January'23, multiple tripping has been observed in ER-NR corridor in the night/early-morning hours suggestive of tripping due to drop in temperature and increased fog. Such multiple tripping in the corridor makes the entire system vulnerable from system security point of view. A list of day-wise tripping is provided in the attached table:

Tripping Date	Element Name	Tripping Time	Reason	Restoration Duration
11th January 2023	400 kV-KODERMA-BIHARSARIFF(PG)-2	04:49	Y phase fault	15:05
	765 kV-GAYA-VARANASI-2	04:31	R phase fault	1:01
	400 kV-KODERMA-BIHARSARIFF(PG)-2	03:50	Y phase fault	0:41
10th January 2023	400 kV-BIHARSARIFF(PG)-VARANASI-2	00:24	R phase fault	23:55
	400 kV-BIHARSARIFF(PG)-VARANASI-1	01:56	Y phase fault	20:27
	400 kV-PUSAULI(PG)-DALTONGANJ-2	03:24	Y phase fault	16:16
	400 kV-PUSAULI(PG)-NABINAGAR(BRBCL)-1	02:46	Y phase fault	14:51
	400 kV-KODERMA-BIHARSARIFF(PG)-2	05:57	Y phase fault	0:32
2nd January 2023	400 kV-NEW PURNEA-MUZAFFARPUR-1	08:00	Y phase fault	32:18
	400 kV-NEW PURNEA-FARAKKA-1	04:36	R-B Phase to phase fault	33:52
	400 kV-KODERMA-BIHARSARIFF(PG)-1	02:34	Y phase fault	15:37
	400 kV-PUSAULI(PG)-ALLAHABAD-1	00:40	Y phase fault	10:08

	400 kV-MUZAFFARPUR-GORAKHPUR-1	00:20	Y phase fault	10:57
	400 kV-KODERMA-BIHARSARIFF(PG)-2	03:45	Y phase fault	1:23
	400 kV-KODERMA-BIHARSARIFF(PG)-2	02:18	Y phase fault	0:27
	400 kV-BIHARSARIFF(PG)-PUSAULI-2	01:18	DT received at Pusauli end	0:48
	400 kV-BIHARSARIFF(PG)-BALIA-2	01:18	Y phase fault	6:35
	400 kV-BIHARSARIFF(PG)-VARANASI-1	00:46	R phase fault	5:40
22 December 2022	400 kV-BARH-PATNA-3	07:26	B phase fault	15:15
	400 kV-KHSTPP-BARH-1	07:54	R phase fault	4:39
	400 kV-PATNA-BARH-1	07:54	R phase fault	1:31
	400 kV-PATNA-BARH-1	06:13	R phase fault	0:13
	400 kV-PATNA-BARH-1	04:30	Y phase fault	0:39
	400 kV-MUZAFFARPUR-GORAKHPUR-2	01:03	R phase fault	5:09

PGCIL ERTS 1 and PGCIL ERTS 2 are requested to update on measures taken to avoid fog-related incidences of tripping. They may appraise the OCC forum on the root cause of the issue and remedial action taken and planned to reduce such tripping.

Powergrid may update.

ITEM NO. B.3: Allowing Auto Reclose in Non-Auto Mode for (i) Teesta III-Rangpo & (ii) Rangpo-Kishanganj-II for Live Line OPGW Installation under ER-Additional Requirement Project during Continuous S/D of 400kV D/C Binaguri-Kishanganj TL(Ckt-1 & Ckt- 2) and 400kV D/C Kishanganj-New Purnea TL (Ckt-1 & Ckt-2) for Carrying out Diversion of Loc No.-09(Anchor Tower-1) vulnerable due to Mahananda River Course Change near to Kishanganj S/s

1. Teesta III-Kishanganj OPGW Link is being laid under ER-Additional Requirement Project. Currently data of Teesta III HEP is reporting at ERLDC over PLCC link which is very intermittent. Therefore, in order to report the data over Wideband node, connectivity was planned through OPGW under Eastern Region Fibre Optic Expansion Project (Additional Requirement). In the meanwhile, due to LILO at Rangpo of aforementioned TL, the Teesta III-Kishanganj TL is now bifurcated in two parts- (i). Teesta III-Rangpo & (ii) Rangpo-Kishanganj Ckt.-II. (LILO portion at Rangpo owned by POWERGRID, rest line is owned by M/s TVTPL)-Schematic showing TL is enclosed as **Annex-B3.1**
2. The LOA for the said Project was awarded in Sept'2018 with completion period targeted in August 2020. However due to COVID-19 pandemic outbreak, continuous disallowance of A/R in Non-Auto mode and severe ROW, the project got delayed. All the aforementioned issues are recorded in various TeST Meeting Minutes (Relevant pages of 3rd to 12th TeST Meeting Minutes enclosed as **Annex-B3.2**.
3. Severe ROW issues was also faced last year in January 2022 in villages falling under Namchi District. The matter was taken up repeatedly with District Administration and after lot of persuasion DM Namchi has recently passed order for Police deployment from 09/01/2023 to 15/02/2023. Copy of Orders enclosed as **Annex-B3.2**.

4. Now it is learnt that due to planned diversion of 400kV Binaguri-New Purnea TL (POWERLINK Line) LILO at Kishanganj (LILO Portion belongs to POWERGRID) due to change in course of River Mahananda, there is requirement of continuous S/D of 400kV D/C Binaguri-Purnea LILO @ Kishanganj 400kV D/C Binaguri-Kishanganj TL(Ckt-1 & Ckt-2) and 400kV D/C Kishanganj-New Purnea TL (Ckt-1 & Ckt-2) for 21 days(3 weeks) tentatively w.e.f 1st week of Feb-23 to End of Feb- 23.
5. Under the above circumstances it is learnt that A/R in Non-Auto Mode of (i) Teesta III-Rangpo & (ii) Rangpo-Kishanganj may be disallowed by ERLDC citing system constraints.
6. In this regard, this is to inform that Live Line OPGW work is being carried out on Circuit-II of erstwhile Teesta III-Kishanganj TL (present day Teesta III-Rangpo & Rangpo-Kishanganj Ckt.II). The other circuit of said TL is Teesta III-Kishanganj Ckt.I (LILO at Dikchu & Rangpo) where no work is being carried out. Moreover, it is pertinent to note that month of February is generally lean period as far as Hydro Power Generation is concerned and already alternate power evacuation path is available on Rangpo-Kishanganj Ckt.I
7. Hence considering that OPGW work on for Teesta III-Rangpo-Kishanganj Ckt.II is already delayed due to reasons mentioned at Point no.2 and the Police deployment Orders issued by DM,Namchi as mentioned in Point no.3 and considering that alternate power evacuation path is available through Rangpo-Kishanganj Ckt.I, A/R in Non-Auto Mode of (i) Teesta III-Rangpo & (ii) Rangpo- Kishanganj may kindly be allowed even during Continuous Shutdown of 400kV D/C Binaguri- Kishanganj TL(Ckt-1 & Ckt-2) and 400kV D/C Kishanganj-New Purnea TL (Ckt-1 & Ckt-2) due to Tower Diversion Works.

Powergrid may explain. Members may discuss.

ITEM NO. B.4: Shutdown required for Maintaining the Talcher HVDC Terminal station of 2000MW Talcher - Kolar HVDC link

Talcher HVDC Terminal Station is affected by the highly polluted atmosphere due to various powerplants and collieries in the vicinity of the station which is beyond our control.

Due to the polluted environment and polluted gases in the zone, the switchyard equipment as well as the installed equipment , sophisticated electronic cards of the Valve Halls are affected and needs more time / shutdown to carryout cleaning and maintenance works.During the recent Shutdown of HVDC Talcher terminal station of 2000MW Talcher-Kolar HVDC Link (from 10.01.2023 12:13 hrs to 12.01.2023 ; 21:20 hrs) , it is observed that the each and every equipment of Valve Hall needs thorough cleaning and checking for which more outage time is required.

It is to mention that since at the other end i.e., Kolar HVDC Terminal end there is no Power Plants and Coal Mines., the KOLAR HVDC Station is not facing similar problem (as the areas is not polluted).

As such, it is kindly requested to allow us more shutdown / outage period of at least 3 days for Pole-1 and 3 days for pole -2 and 1 day for complete Bipole without affecting the operational performance / availability of the Station/HVDC link.

Powergrid may explain. Members may discuss.

ITEM NO. B.5: Replacement of Heavily time drifted L&T meters in Eastern Region

In 47th TCC & ERPC meeting, it was deliberated that in view of stringent provisions in new DSM regulations, the heavily time drifted L&T make SEMs need to be replaced on priority basis. Accordingly, PowerGrid was advised to replace the heavily time drifted meters on priority basis in co-ordination with ERLDC & concerned utilities.

Accordingly, ERLDC has provided a phase-wise replacement list of L&T meters to PowerGrid for further necessary action at their end.

POWERGRID may further update the latest status of implementation.

ITEM NO. B.6: Correction of time-drift in SEM

The following meters are being time drifted from actual time. Although ERLDC has intimated several times to the concern utility via mail to correct it, but no such action has been taken till date & the issue is pending since a long time.

1. ER-1696-A 220 KV GAZOLE(WB)-MALDA(PG)-2
2. ER-1145-A 132 KV JAGDISHPUR(BSPHCL)-ARAH(PG)-2

West-Bengal & Bihar may update the status.

ITEM NO. B.7: Updated Black Start and Restoration procedure of Eastern Region

In pursuant to regulation 5.8(a) and (b) of the IEGC the restoration procedure of the region needs to be reviewed and updated every year.
For fulfilment of the same relevant portions for updating Black start and Restoration Procedure of Eastern Region was circulated via email on 18th November, 2022, to all constituents/ISGS/IPP & POWERGRID where they requested to kindly review and give their valuable feedback by end of Dec 2022 so that the document can be updated.

Subsequently, information/updates were received from Darlipalli, Jorthang, Rongnichu, Odisha and West Bengal. In addition to them, information was received from all the Railway zones in the Eastern Region including the first time from North Eastern Frontier Railways. Incorporating all the information received the Restoration document is updated and re-circulated for review of 17th Jan 2023 and additional inputs(if any) by 27th Jan 2023. Based on further input received the document will be finalized on 31st Jan 2023.

This is for information to the forum.

ITEM NO. B.8: Follow up Agenda

SL No	Issue/Agenda	Discussion in last OCC Meetings	Update/Status
1.	**Installation of Transmission Line Arrestor in 220kV Lines in North Bengal.** 220kV D/C Siliguri-Kishanganj TL (erst 220kV D/C Siliguri-Dalkhola TL), 220kV D/C Birpara-Chukha TL, 220kV D/C Birpara-Alipurduar TL (erst 220kV D/C Birpara-Salakati TL) and 220kV S/C Birpara-Malbase TL were commissioned in the year 1986 under Chukha Transmission System. All the above-mentioned lines are located in the Himalayan Foothills and encounter severe lightning incidents during the monsoon period starting from April-Oct. As stated by NASA, The Himalayan Foreland is declared as Principal Lightening Hotspot zone. Due to lightening frequent de-capping/failure of installed Porcelain insulators were occurring in above mentioned lines. Subsequently in order to prevent repeated de-capping, in the year 2018 the earlier installed Porcelain insulators were replaced with Polymer Insulators. After replacement of Porcelain insulators there was a considerable reduction in Auto-reclosures and tripping incidents but still the tripping/AR rate is quite high. This season several instances of tripping/Auto-reclosures have occurred in those lines. This repeated Auto-reclosures/tripping is not only creating disturbance for the Grid but also putting stress on connected terminal equipment. TFR measurement were carried out on the towers as well as section of line identified during Post Fault Tripping Analysis. Tower Footing Impedance measurement shows high values in most of the tower locations in the said lines.	In 198th OCC Meeting, Powergrid ER-II representative submitted that the incidents of tripping of auto recloser are attributed to the lightning phenomenon as per the analysis done by studying the tripping trends and patrolling findings. Even after replacement of all the existing porcelain insulators with Composite Long Rod insulators and strengthening the earthing system by providing additional earthing at tower locations, the existing earthing system would not be sufficient. He further submitted that transmission line arrestors are being used worldwide on the lines affected by severe lightning phenomenon. Further, a total of 830 locations in the Chukha Transmission system have been identified where tripping of auto recloser are more frequent. Offer has been collected from several reputed vendors and the estimated cost of above installation would be around 6.5 crores. Upon enquiring about the instances of tripping due to lightning, Powergrid representative submitted that all the tripping incidents of auto recloser were due to lightning phenomenon. West Bengal representative submitted that continuous earthing of towers i.e., coverage of earth wire and checking of Tower footing	

	All the above-mentioned lines were commissioned under CTS scheme and all tower earthing were done as per prevailing earthing practice viz. counter-poise earthing, additional earthing after 7-8 KM span etc. But considering changes in weather conditions over the years, lightning phenomenon have now increased drastically in North-Bengal. Several newspaper publication also justifies severity of lightning in North-Bengal.It seems that the prevailing earthing design used in the towers are not sufficient to arrest the frequent tripping/auto-reclosures. It has been felt necessary to adopt installation of Transmission Line Arresters as per latest practices adopt world wide in certain stretches of lines where instances of auto-reclosures and tripping are high. Independent studies carried out by Technical Institutions in North-Bengal have also suggested for installing lightening arrestors as weather pattern changes. The tentative cost estimate for installation of 830 Nos. of Transmission Line Arrestors in 246 Nos. of Towers of said lines shall be around 6.5 Crores incl GST. Considering the increase in lightning phenomenon over North-Bengal area, it seems that existing Tower Earthing system seems not sufficient and as such as a system improvement measure it is requested to kindly consider the TL LA installation as per above at an estimated cost in the ongoing ADDCAP 2019-2024 tariff block of Chukha Transmission System. On approval same shall be produced before truing up petition.	resistance throughout the lines has to be ensured. Powergrid shared a brief presentation and it was noticed that the TFR data and all the readings were found to be more than 10. MS ERPC enquired whether there are other such lines under state jurisdiction which are subjected to severe lightning and the steps taken to resolve the same. West Bengal representative submitted that they are taking corrective measures like frequent recording of tower footing resistance, etc. to resolve such issues. ERLDC representative also advised Powergrid to share the details of improvement in performance observed in locations where transmission line arrestors had already been installed. Upon enquiring about the feasibility of chemical earthing, it was informed that cost of chemical earthing is very high and durability is also less. Further, RoW issues may be encountered in case of chemical earthing. OCC advised Powergrid to furnish all the details relevant to installation of transmission line arrestors to mitigate the tripping issues related to excessive lightning phenomenon so that a concrete decision may be taken in the upcoming OCC meeting.	
2.	**<u>Continuous s/d of 400 KV D/C Binaguri-Kishenganj TL (Ckt-1 & Ckt-2) and 400kV D/C Kishanganj-New</u>**	In 198th OCC Meeting, representative of Powergrid delivered a brief presentation highlighting the following	

	Purnea TL (Ckt-1 & Ckt-2) for Carrying out Diversion of Loc No.-09(Anchor Tower-1) vulnerable due to Mahananda River Course Change near to Kishanganj S/s 1. 400kV Binaguri-New Purnea TL (POWERLINK Line) LILO at Kishanganj (LILO Portion belongs to POWERGRID) Loc No.-09 (Anchor-1 Tower) have got vulnerable due to change in course of River Mahananda. The location is situated in the left bank of River Mahananda. The Location is 400kV Multi-circuit tower QD+9.Presently, the location is 65 mtr from the river bank. During last season monsoon heavy soil erosion has been observed from the river bank.Last year the location was saved by construction of boulder sausage protection wall but the Boulder sausage walls and two no. boulder spur provided got collapsed and badly damaged. 2. Considering the vulnerability of the tower, as a permanent measure we are shifting the Anchor-1 Tower on Pile Foundation. Presently Pile Foundation work is U/P. Photos showing the condition of location and its present status is enclosed. 3. However, after completion of pile, during tower erection (Top part and X-arm fixing) & stringing work we require continuous S/D of 400kV D/C Binaguri-Purnea LILO @ Kishanganj [400kV D/C Binaguri-Kishanganj TL(Ckt-1 & Ckt-2) and 400kV D/C Kishanganj-New Purnea TL (Ckt-1 & Ckt-2) for 21 days(3 weeks) tentatively wef 1st week of Feb-23 to End of Feb-23.	points: 1. Continuous s/d of 400 KV D/C Binaguri-Kishenganj TL (Ckt-1 & Ckt-2) and 400kV D/C Kishanganj-New Purnea TL (Ckt-1 & Ckt-2) would be required for carrying out diversion of Loc No.-09(Anchor Tower-1). 2. The said location has become vulnerable due to change in course of river Mahananda near to Kishanganj S/s. 3. The s/d would be taken tentatively from 1st week of Feb-23 for 21 days. The period has been chosen as during this period Hydro generation would be minimum. 4. Presently pile foundation work is under progress and after the completion of the same, during tower erection (top part and X-arm fixing) and stringing work, S/d would be required. Representative of ERLDC submitted the following: 1. S/d of 400kV Rangpo-Binaguri D/C can't be clubbed with the s/d of 400 KV D/C Binaguri-Kishenganj TL (Ckt-1 & Ckt-2) and 400kV D/C Kishanganj-New Purnea TL (Ckt-1 & Ckt-2). Work related to 400kV Rangpo-Binaguri TL may be completed prior to availing the said S/d of 400 KV D/C Binaguri-Kishenganj TL and 400kV D/C Kishanganj-New Purnea TL. 2. 400kV Rangpo-Kishanganj S/d for AR work has to be deferred. 3. Possibility of Keeping one line of 400 KV D/C	

		Binaguri-Kishenganj TL and 400kV D/C Kishanganj-New Purnea TL on ERS may be explored considering the reliability of the system. 4. Bus s/d at Binaguri S/s cannot be allowed at the same time. All these s/d should be availed in a staggered manner. On query representative of Powergrid submitted the following: 1. Both the circuits of 400kV Rangpo-Binaguri line are charged now. There would not be any possibility of taking long outages of 400kV Rangpo-Binaguri single circuit or double circuit. 2. For Teesta-V docking undocking activities at Rangpo, s/d would be required for both circuits of 400kV Rangpo-Binaguri each of 2 hours. 3. Simultaneous s/d of both 400kV Rangpo-Kishanganj D/C and 400kV Rangpo-Binaguri D/C would not be availed. 4. The S/d can be preponed up to maximum 8-10 days as this is a huge tower, erection of the same is time taking. 5. Regarding possibility of ERS: The area has severe RoW issues, ERS implementation would cause further delay in availing S/d. OCC opined that: 1. Erection of the tower may be done as far as possible without taking s/d. S/d can	

		be availed from 25th Jan'2023 keeping 10-12 days for erection activities in safe zone. 2. Status update would be taken in the next OCC meeting. 3. All efforts should be made to complete the work by 10th-12th February'2023.	
3.	**<u>Continuous Continuous S/D of 220kV D/C Siliguri-Kishanganj TL(Ckt-1 & Ckt-2) and 220kV D/C Dalkhola-Kishanganj TL (Ckt-1 & Ckt-2) for carrying out Diversion of tower location no.-29 of 220kV D/C Dalkhola - Kishanganj TL & Loc No.-30 of 220kV D/C Siliguri-Kishanganj TL vulnerable due to bank erosion on Mahananda River</u>** 1. Location no.-29 of 220kV D/C Dalkhola-Kishangnaj TL & Loc No.-30 of 220kV D/C Siliguri-Kishanganj TL have become vulnerable due to change in course of River Mahananda. The location is situated on the left bank of River Mahananda (Main channel). Further, after this season monsoon a secondary channel (approximately 20-30 m wide) have also been formed such that location no.-29 of 220kV D/C Dalkhola-Kishangnaj TL & Loc No.-30 of 220kV D/C Siliguri-Kishanganj TL are now coming in-between the main river and new formed channel. Presently, location no.-29 & 30 are 30 mtr away from the main river bank and approx. 10 mtr away from secondary channel. During last season monsoon heavy soil erosion has been observed from the main river bank as well as newly developed channel. 2. Last year the locations were somehow saved by temporary protection wall with sand bags and bamboo piling. 3. However, considering the last year trend and present site condition, it has been felt prudent to shift the affected 2 Double Ckt towers on a single Multi-ckt Pile Foundation.	In 198th OCC Meeting, representative of Powergrid submitted the following: 1. Continuous S/D of 220kV D/C Siliguri-Kishanganj TL(Ckt-1 & Ckt-2) and 220kV D/C Dalkhola-Kishanganj TL (Ckt-1 & Ckt-2) would be required for carrying out diversion of tower location no.-29 of 220kV D/C Dalkhola - Kishanganj TL & Loc No.-30 of 220kV D/C Siliguri-Kishanganj TL. 2. The said locations have become vulnerable due to change in course of river Mahananda. 3. During construction of pile and during tower erection (top part and X-arm fixing) and stringing work, S/d would be required. 4. S/d would be required for 14 days tentatively w.e.f March'23 to end of March'23. OCC was of the view that: 1. As demand of West Bengal starts increasing from the month of March, it would be difficult to allow s/d of the said elements during that period. 2. The work under item No. B2 may be completed by 10th-12th February and thereafter the s/d of 220kV D/C Siliguri-Kishanganj TL	

	4. However, during construction of Pile and during tower erection (Top part and X-arm fixing) & stringing work we require continuous S/D of 220kV D/C Siliguri-Kishanganj TL (Ckt-1 & Ckt-2) and 220kV D/C Dalkhola-Kishanganj TL (Ckt-1 & Ckt-2) for 14 days (2 weeks) tentatively wef 2nd week of Mar-23 to End of Mar-23.	(Ckt-1 & Ckt-2) and 220kV D/C Dalkhola-Kishanganj TL (Ckt-1 & Ckt-2) may be taken. 3. All efforts should be made to complete the work by February'2023.	
4.	**<u>132 KV GIS Commissioning planning and shutdown requirement for Malda S/s</u>** As per ERSS-XXII, complete AIS portion of 132 KV system at Malda S/S will be converted to 132 KV GIS along with provision of additional 02 No's 132 KV Line Feeder (Malda-Manikchak-D/C). Earlier in October-2022 a detail work plan submitted considering phase wise segregation of ICT/Feeders such that GIS erection work and Feeders, both are in service and with calculated risk proportion the work could be completed. However, during actual execution it is observed that while going for erection in between Section-I & II, both section required S/D and only one feeder and one ICT (Namely ICT-4) will be in service.	In 198th OCC Meeting,representative of Powergrid delivered a brief presentation highlighting the following: 1. Phase-I (complete shutdown of 132kV bus) has been completed. 2. Phase-II (Bus Section-1:GIB erection: 16.12.2022 at 07:00 hrs to 19.12.2022 at 16:00 hrs on daily basis) has been completed. 3. Phase-III (Bus Section-I & II) S/d required for GIB Erection: 26.12.2022 at 07:00 hrs to 27.12.2022 at 16:00 hrs on daily basis. 4. Phase-IV (Bus Section-II)S/d required for GIB Erection: 28.12.2022 at 07:00 hrs to 29.12.2022 at 16:00 hrs on daily basis. 5. Phase-V (Bus Section-II & III)S/d required for GIB Erection: 30.12.2022 at 07:00 hrs to 31.12.2022 at 16:00 hrs on daily basis. 6. Phase-VI: S/d required for GIB Erection of ICT-I: 01.01.2023 at 07:00 hrs to 15.01.2023 at 16:00 hrs on daily basis. 7. Phase-VII : GIB Erection of ICT-II From 16/01/23 at 07:00 hrs to 30/01/23 at 16:00 hrs on daily basis. 8. Phase-VIII: GIB erection of ICT-IV From 31/01/23 at 07:00 hrs to 14/02/23 at 16:00 hrs on daily basis.	

			Representative of West Bengal apprised the forum that all the activities should be completed by 31st January'2023, as beyond that allowing shutdown would be difficult owing to increase in boro load. OCC advised Powergrid that: 1. Efforts should be made to squeeze the said timeline and complete all the activities by 7th February'2022. 2. All the said activities should be completed before taking S/d of 220kV D/C Siliguri-Kishanganj TL(Ckt-1 & Ckt-2) and 220kV D/C Dalkhola-Kishanganj TL (Ckt-1 & Ckt-2)	
5.	**De-stringing of overhead conductor in Power Line Crossing span of 220kV D/C Farakka-Lamatia Line in between span (Location No.-5 & Location No.-6) by JUSNL in order to protect underlying 400 kV S/C Farakka Sagardighi I & II TL (Loc No.- 3 & 4) of POWERGRID due to severe/repetitive theft incidents by miscreants near to Farakka Plant** 220kV Farakka-Lalmatia TL is under break-down condition due to tower collapse incidents since 21.04.2021. Since the line is under off condition for long, at several locations of the said line near to Farakka serious tower member theft/conductor theft incidents are occurring. During patrolling of 400 kV S/C Farakka Sagardighi I & II TL on dated 07.11.2022, huge no. of missing members has been observed in the Powerline crossing towers of 220 KV Farakka Lalmatia TL (owned by JUSNL) situated in village: Jorpukuria, Farakka crossing over Loc 03 & 04 of both 400 kV S/C Farakka	In 198th OCC Meeting, Powergrid representative submitted that the belt is a theft prone area and the 220kV Farakka-Lalmatia TL being in an uncharged condition is being subjected to severe member theft incidents which may lead to tower collapse. Two nos. of Farakka-Sagardighi S/c line which passes beneath the 220KV Farakka-Lalmatia TL will also be severely damaged causing long outage. Therefore, destringing of a portion of 220kV Farakka-Lalmatia TL may be done to protect the 2 nos. of underlying Farakka-Sagardighi S/c lines. JUSNL representative submitted that tower location 1 to 10 fall under the category of high theft prone zone. At tower locations 1, 2 & 4, the leg portion of the towers have been dismembered and	

		Sagardighi I & II TL of POWERGRID. Considering the fact that any incident of collapse of towers of the mentioned crossing towers of Farakka Lalmatia line shall damage our existing 400 kV Farakka Sagardighi TL which is already more than 35 years old. Earlier also, an incident of Tower collapse of 220 kV Farakka Lalmatia line over POWERGRID 400 kV S/C Farakka Durgapur 1 & 2 TL had occurred in the year 2020 which had severely damaged the 400 kV S/C Farakka Durgapur 1 & 2 lines. Restoration of the lines were carried out under extreme ROW situations. Considering the seriousness of the issue JUSNL was requested to rectify the towers Loc No.-5 & 6 of 220kV Farakka-Lamatia Line on urgent basis. Vide mail dated 08.12.2022, JUSNL have informed that they have rectified the affected towers but considering the area being severe theft prone they will not able to save the towers in near future. In view of above considering the seriousness/repetitive theft incidents in towers near to Farakka Plant, M/s JUSNL is requested to remove the conductors in between Span Loc No.-5 & 6 of 220kV D/C Farakka-Lalmatia so that underlying POWERGRID lines 400kV Farakka-Sagardighi-I & II may be protected.	destringing of towers in such situation may lead to severe unsafe condition. Moreover, destringing of tower at loc 5 & 6 would also require immediate dismantling of towers to prevent any theft. Also, severe RoW issues would be faced while carrying out any work in these areas. He further submitted that since they do not have the drawings of these towers, problems will be encountered during re-erection of these towers. He further submitted that provisioning of watch & ward on continuous basis may be provided for tower no 5 & 6 as an alternative to the above issue. Powergrid representative requested JUSNL to destring the portion of line between the tower at loc 5 & 6 for the time being and carry out the activity of watch & ward. OCC was of the view that destringing of line between the tower at loc 5 & 6 may be done at the earliest to protect the underlying Farakka-Sagardighi S/c lines and advised JUSNL to submit the timelines for the same.	

6.	**Islanding Schemes in Eastern Region** **2.1. Patna Islanding Scheme:** In the meeting held on 28th December 2020 and chaired by the Hon'ble Minister of State (IC) it was directed that islanding schemes should be implemented for all major cities of the country considering all the strategic and essential loads. Subsequently, in line with the direction given in the meeting, the subject matter was discussed in PCC meeting of ERPC, and it was finalized that new islanding scheme would be implemented for capital city of Patna & Ranchi.	In the 198th OCC Meeting, NTPC representative submitted that they had contacted with IIT Delhi, IIT BHU and IIT Bombay. Response has been received from IIT BHU and they are planning to schedule a meeting including all concerned stake holders.	
	2.2. Chandrapura Islanding Scheme: The scheme detail in brief is as follows: ➢ The CTPS-B islanding scheme is to de designed with two units of CTPS-B (2x250 MW) generating station as participating generator and connected loads at CTPS, Putki, Biada, Nimiaghata & Patherdih. The estimated off-peak and peak load in the proposed islanding system is 280 MW & 420 MW respectively. ➢ The islanding frequency for CTPS-B islanding system was decided as 48.4 Hz.	In the 196th OCC meeting, DVC representative submitted that the work is expected to be completed as per the given timeline.	-
	2.3. IB-TPS Islanding Scheme: The scheme was finalized in the special Meeting on Islanding Scheme of IB-TPS held at ERPC, Kolkata on 12th December 2018. In special meeting held on 06.08.2021, OPGC representative informed that work order had been placed on OEM (M/s BHEL) for implementation of the Islanding scheme at IB TPS units. OPGC was also advised to take up the issue with their highest authority as well as with the OEM for expediting the implementation of islanding scheme.	In the 197th OCC meeting, OPGC representative was not present during the discussion. OPTCL representative submitted that the details would be shared shortly. Representative of OPGC informed that during AOH in the month of March'2023 if the turbine vibration issue gets resolved then they would go ahead with the testing.	-

7.	**Reliable Power Supply to Lalmatia/Godda/Dumka areas of JUSNL** **4.1. Restoration of 220kV Farraka-Lalmatia S/C line** The 220 kV Farakka-Lalmatia S/C was out of service since April 2021 due to tower collapse. The 220/132/33 kV Lalmatia substation is relying on only 132 kV lines. At present the local load at 220 kV Dumka and Godda S/S were being radially fed from 400/220 kV Maithon S/S through 220 kV Maithon-Dumka D/C and 220 kV Dumka-Godda D/C.	In the 197th OCC meeting, OCC referred the agenda to the upcoming 47th TCC & ERPC meetings. Member from JUSNL informed that the work order had already been placed to M/s ABN Tower on 08.09.2022. The delay in starting the work is due to very old transmission line and non-availability of drawing with BOM. Drawing has been made available by NTPC on 24.09.2022 without BOM. BOM is being prepared and breaking of foundation and stub strengthening work has been started. Tower erection and stringing work is likely to start by 15.01.2022 and may be completed by 31.03.2023.	-
8.	**Outage of Important Transmission System** **1. 132kV Sagbari–Melli.** Sikkim vide mail dated 09.06.2021 updated the following status: 1) In loc 82,83 & 84 we have low ground clearance which need hill cutting but if needed TL can be charged after putting temporarily barbed wire fencing. 2) In loc 98-99 a house had been constructed just below the line and warning had been issued to the owner for not to do vertical extension of the house till any such arrangement is made. 3) In loc 116 &117 land owner demanding for intermediate tower and not allowing for us to clear the jungles. 4) Loc 128 is in dilapidated condition due to sinking effect posing threat to lives and properties. Local public are asking to shift the tower in safe place before restoration of supply in the TL. 5) 80% of jungle clearance has been completed and remaining 20% is in Forest	In the 196th OCC Meeting, representative of Sikkim briefly explained the issue and highlighted the reasons behind delaying of the project. He submitted that the expected timeline for restoration is November'2022	

	area most of it is under west district and waiting for permission from Forest department. 6) The delay in obtaining permission for following trees in forest land is that it cannot be ascertained whether FCA clearance during construction of TL was obtained as the record is not available either in power department or in DFO Office. Regarding this it had been told by ERPC that once obtaining environment clearance at the time of construction there need not to take permission for further clearance of ROW from Forest dept and this matter is been conveyed to the Forest department but they informed us as per Forest Act of Sikkim state permission has to be obtained for fresh felling with payment of compensation. File for approval is being send to conservator of Forest from DFO on 10/6/2021.		
9.	**<u>Status of North Karanpura NTPC Generating Station (3 X 660 MW) along with associated transmission elements.</u>** At the 188th OCC Meeting held on 10-03-2022, it was informed that the North Karanpura unit of NTPC is planned to be synchronized by March 2022 and the Patratu unit is scheduled to be commissioned in March 2024. All India's demand is increasing by leaps and bounds, and so does the Eastern Region's demand. The synchronization of North Karanpura will help a lot of all the beneficiaries, and Jharkhand in particular. Before synchronizing the North Karanpura unit, establishing ISTS connectivity is required. It seems the respective bays at Chandwa and North Karanpura owned by PGCIL and NTPC, respectively, are already ready to charge, but the lines owned by NKTL are not ready yet. As per communication with NKTL dated 09-09-2022, it was informed that the 400 kV North Karanpura (NTPC)-Chandwa (PGCIL) D/C is expected to be first time charged soon. The following status was received: the total scope was 115 towers. This line has had 100% of its foundation	In the 198th OCC meeting, NTPC representative submitted that for North Karanpura full load had been achieved in the last week. The trial operations are expected in the month of January 2023. CoD of Barh unit-2 would be delayed due to some issues in CHP package. The CoD would be done before 31st March 2023.	

	and erection activity completed, with 29 kilometres of stringing completed out of a total of 38 kilometres, leaving only nine kilometres to go. Owing to continuous rain and poor weather conditions, progress at the site is being impeded. NKTL is putting their best efforts against all odds and is targeting mechanical completion by September's end. Once ISTS connectivity is established, NTPC may provide an update on the drawal of start-up power for each unit and its duration. Further, after the unit synchronization, the infirm power injection duration and tentative date of COD may be updated. Furthermore, present drawing of start-up power and construction power from the DISCOM, as well as the status of all testing activities may also be updated.		
10.	**<u>Ensuring N-1 reliability criteria at 400/220 KV Subhashgram (PG) S/s.</u>** The reliability issue of Subhasgram (PG) was discussed in the 46th TCC and ERPC meeting. In the meeting it was deliberated that there is an urgent requirement for installation of 6th 400/220kV, 500 MVA ICT at Subhasgram (Powergrid) S/s. On request of West Bengal, CESC agreed to bear the cost associated with the installation of the said ICT and its future maintenance. Further, CESC requested Powergrid to execute the project on deposit work basis. In the 194th OCC meeting, Powergrid representative submitted that decision in this regard would be taken by their corporate office and they would submit the details as and when it is received. ERLDC suggested Powergrid for applying requisition of shutdown regarding implementation of SPS scheme. However, no shutdown request has been received by ERLDC till date.	In the 198th OCC meeting, Powergrid representative submitted that the revised cost estimate has been approved and necessary communication would be done with CESC by the end of December 2022.	
11.	**<u>Integration of (Interface Energy Meter) IEMs into SCADA/EMS system for telemetry of meter data to SLDCs.</u>** The existing SEMs are having two	In the 198th OCC meeting, Powergrid representative submitted that they would submit the report by the end of	

	communication ports, which can function independently for fetching the SEM data. The optical port is being used for fetching the weekly DSM data through Common Meter Reading Instrument (CMRI), for accounting purpose. The other RS 232 port available remains unused, the online real time data can be fetched from the existing SEM through the unused RS 232 port. This arrangement does not require additional meters or new communication facilities and therefore no additional cost is involved.	February 2023	
12.	**<u>Status of SAMAST, ABT implementation and certification of system operators in states.</u>** Implementation of SAMAST and ABT in all the states is a prerequisite for improving the reliability of grid considering the complexities involved in managing the large interconnected Indian grid. Further skilled, certified manpower is the key to operate the grid safely and securely. Various initiatives are being taken mutually by ERLDC and the states for successful implementation of the SAMAST/ABT in the states. The status of SAMAST, ABT implementation and certification of system operator of various states of eastern region is given below: **Name of the state** / **Status of implementation of SAMAST** / **Number of Certified Operator** **Bihar** / Completed / 4 **Jharkhand** / / Nil **Odisha** / / 11 **DVC** / / Nil **West Bengal** / / 2 **Sikkim** / / 1	In the 198th OCC meeting, ED SLDC Bihar submitted that they have provided the data. ERLDC representative submitted that they would host a physical meeting regarding status of SAMAST and ABT implementation.	
13.	**<u>Erroneous reading in Rammam and</u>**	In the 198th OCC meeting, WBSETCL representative	

	Ravangla. 1. The meter sl. No. ER-1986-A at 132 KV RAMMAM (WBSETCL) - RANGIT (NHPC) at Rammam (WB) showing reverse polarity since the meter was replaced in Jun-22. Information was already intimated to the concern but the issue is not resolved. 2. The meter sl no ER-1983-A at 66 KV RAVANGLA (SIKKIM) - RANGIT (NHPC) at Ravangla (Sikkim) end is recording erroneous values with respect to the stand-by meter. This issue has been intimated to Sikkim vide mail dated 04.08.2022 but not resolved yet.	submitted that they would contact with the testing department and WBSEDCL for rectification of the erroneous readings.	
14.	**Replacement of non-functioning/defective meters** **Bihar** The AMC vendor Ms TCS visited the Kahalgaon site to restore the AMR connectivity, but it was informed that the meter was not responding. Accordingly, the same was intimated to the concern to replace the meter. 1. NP-6071-A 132 KV KAHALGAON(BSPHCL) - LALMATIA(JSEB) 2. NP-6076-A 132 KV KAHALGAON (BSPHCL) - KAHALGAON (NTPC)	In the 198th OCC meeting, it was informed that Meter no. NP-6076-A and NP-6071-A would be replaced by the end of December 2022.	
15.	**Non-Receipt of SEM data from Various Locations** It is difficult to validate the energy meter data due to absence of meter. some of the matters were discussed in previous OCC & ERLDC had intimated the same to respective concern via mail in reference to the agenda point but no such action has been taken till date. a. There is no meter installed at SAGBARI for 132 KV RANGIT (NHPC) - SAGBARI (SIKKIM) line, which is causing difficulty in pair-checking. b. There is no meter installed at WB end	In 198th OCC Meeting, Regarding installation of meter at WB end of 132 KV KOLAGHAT(DVC) - KOLAGHAT (WBSETCL), WBSTECL representative submitted that they have not received any mail regarding installation of meter. OCC advised WBSETCL to install the meter and submit the status by the next OCC meeting. Jharkhand representative submitted that the meter would be collected by the first week	

	of 132 KV KOLAGHAT(DVC) - KOLAGHAT (WBSETCL). (Mail dated 18.11.22, 24.11.22 ,08.12.22) c. There is no meter installed at Jharkhand end of 132 KV CHANDIL (JSEB) - MANIQUE (DVC). (Mail dated 08.12.22, 18.11.22) d. There is no check meter installed at Kahalgaon(NTPC) end for Khalagaon(NTPC) – Durgapur(PG) D/C. Although matter was intimated to NTPC & Powergrid but no such action taken till date (Mail dated 17.11.2022 ,15.12.2022, 02.01.23) **Utilities may update the status.**	of January 2023.	
16.	**<u>Ensuring healthiness of ADMS</u>**		

State	Criteria for ADMS operation	Number of instances for which ADMS criteria satisfied	Number of instances for which detail received	Discussion regarding previous month performance	Update in 199th OCC meeting
West Bengal	1. System Frequency < 49.7 Hz 2. WB over-drawl > 150 MW 3. Delay = 4 min	Nil	1	Matter has been taken up by the respective communication department.	
Jharkhand	1. System Frequency < 49.9 Hz 2. Jharkahnd over-drawl > 25 MW 3. Delay = 3 min	157	Nil		
DVC	1. System Frequency < 49.9 Hz 2. DVC over-drawl > 150 MW 3. Delay = 3 min	18	18		
Odisha	1. System Frequency < 49.9 Hz 2. Odisha over-drawl > 150 MW 3. Delay = 3 min	21	21		.

17.	**Commissioning status of ADMS** Automatic demand management scheme (ADMS) is already commissioned in West Bengal, DVC and Jharkhand. However, for Bihar it is yet to be implemented, the last status as confirmed in the earlier meeting is as follows.		In the 198th OCC meeting, Bihar representative submitted that some issues have been observed while testing from remote end. They have contacted with M/s Chemtrol for the resolution of the same and the meeting is scheduled by the end of December 2022.	
18.	**Revised connectivity for Laxmikantpur 400/132 KV S/s and split bus arrangement at Laxmikantpur S/s** In the 2nd meeting of ERSCT held on 05-07-2019, CTU informed that the scope of works for establishment of 400/132kV New Laxmikantpur substation through LILO of Subhashgram (POWERGRID) – Haldia 400kV D/c line at New Laxmikantpur S/s under intra-state has already been approved on technical grounds by all the stakeholders including HEL and CESC (also recorded in the minutes of the meeting). HEL was requested to provide go ahead on the said scope before the next CEMTS-ER as further delays in implementation of New Laxmikantpur S/s may jeopardise reliability of power supply in Kolkata area.		In 47th TCC Meeting, TCC advised HEL to expedite the process in completing the study report and further consultation with the OEM for getting their feedback/consent. In the meantime, TCC suggested that the proposal of WBSETCL regarding an additional connectivity arrangement may be forwarded to CTU for their comment/consideration. TCC suggested that a committee may be formed under chairmanship of Director (Op) WBSETCL with members from the concerned wings of WBSETCL, HEL & ERLDC to fortnightly monitor & discuss the progress with regard to the above matter and submit to ERPC.	-
19.	**Operational challenges in Jharkhand network due to multiple long outages/tripping** In Jharkhand network, 400/220 kV 2 X 315 MVA Ranchi ICTs and 400/220 kV 2 X 315 MVA Patratu ICTs and 220 kV Tenughat-PTPS S/C were meeting the demand of Ranchi capital city. At present, 400/220 kV Patratu substation		In the 47th TCC Meeting Member from JUSNL updated the following: **400 kV/220kV 315 MVA ICT2 AT PATRATU** All necessary test of ICT-2 was conducted in which some test result was found abnormal, and manufacturer has decided for internal inspection. All necessary arrangement has	

	both ICTs are out of service. This led to shifting of loads being fed from this substation back to Ranchi substation's ICTs. In addition, due to the outage of 220 kV Patratu-Tenughat S/C, there is no support from Tenughat (TTPS) power plant. This is leading to the entire Ranchi City demand being fed by 2X315 MVA ICTs Ranchi (PG). Presently Ranchi ICTs loading is to the tune of 160-190 MW/ICT. In this network configuration, Ranchi S/s one 315 MVA 400/220 kV ICT outage sensitivity on other ICT is more than 90%. Further degrading the overall situation is outage of 220 kV Ranchi-Hatia 2 on tower collapse. This is leading to n-1 loading violation for other two circuits i.e., 220 kV Ranchi-Hatia 1 and 3 which are loaded above more than 150 MW/ckt. **A list of major elements outages in JUSNL are provided below:** • 400 KV/220KV 315 MVA ICT 2 AT PATRATU: 27-09-2022 (DGA violation) • 400 KV/220KV 315 MVA ICT 1 AT PATRATU: 01-08-2022 (Buchholz Relay) • 220 KV/132KV 100 MVA ICT 2 AT LALMATIA: 22-01-2019 (FAILURE OF HV SIDE BREAKER) • 220 KV/132KV 100 MVA ICT 3 AT CHANDIL: 30-04-2020 (ICT failed due to fire) • 220 kV Tenughat-Patratu S/C: Under long shutdown for shifting work • 220 KV-RANCHI-HATIA-2: 24-09-2022 (Tower collapse) • 220 KV-FSTPP-LALMATIA-1: 21-04-2021 (Tower collapse)	been completed and internal inspection is scheduled in the last week of Nov'22. **400kV/220kV 315MVA ICT-AT PATRATU** ICT-1 was dismantled for transportation to manufacturer site and transportation will commence by Nov'22. **220kV/132 100 MVA ICT-2 AT LALMATIA (FAILURE OF HV SIDE BREAKER)** In this regard estimate has been obtained from field, estimate is being scrutinized at Head Quarter level to get the work done with minimum cost. The expected date of completion is 31.03.2023. **220kV/132kV 100 MVA ICT-3 AT CHANDIL** In place of this ICT new ICT of 100 MVA will be procured soon. The tender is under technical evaluation stage and work order would be placed soon. The expected timeline of completion is July 2023. **220kV FSTPP-LALMATIA-1** Work order had already been placed to M/s ABN Tower on 08.09.2022. The delay in starting the work is due to very old transmission line and non-availability of drawing with BOM. Drawing has been made available by NTPC on 24.09.2022 without BOM. BOM is being prepared and breaking of foundation and stub strengthening work has been started. Tower erection and stringing work is likely to start by 15.01.2022 and may be completed by 31.03.2023.	

PART C: ITEMS FOR UPDATE

ITEM NO. C.1: ER Grid performance during December 2022

The average and maximum consumption of Eastern Region and Max/Min Demand (MW), Energy Export for the month December-2022 were as follows:

Average Consumption (MU)	Maximum Consumption (MU)/ Date	Maximum Demand (MW) Date/Time	Minimum Demand (MW) Date/Time	Schedule Export (MU)	Actual Export (MU)
398 MU	415.2 MU 30-12-2022	21613 MW, 30-12-2022 at 18:44 Hrs.	14432 MW, 27-12-2022 at 03:29 Hrs.	5471	5618

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

ITEM NO. C.2: Primary Frequency Response of generating units in ER.

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

Event	Frequency Change	ER FRC
Event 1: On 20th December,2022 at 06:48 hrs Generation loss of approx. 1400MW at Jhajjar TPS(APCPL), Change in load of approx 85MW in Haryana control area due to loss of evacuation path from 400kV Jhajjar(APCPL) Generation loss=1400 MW Load loss=85 MW Frequency change= 0.04 Hz	Initial Frequency:50.09 Hz Nadir Frequency: 49.96 Hz Final Frequency : 50.05 Hz.	**36.7 %**

Name of the Plant	09th July event data submission status	11th Aug event data submission status	11th Sep event data submission status	17th Sep event data submission status	15th Oct event data submission status	20th Dec event data submission status
Adhunik	Submitted	Submitted	Submitted	Submitted	Submitted	Submitted
Barh	Submitted	Submitted	Submitted	Submitted	Submitted	Pending
BRBCL	Submitted	Submitted	Submitted	Submitted	Submitted	Pending
Darlipalli	Submitted	Submitted	Submitted	Submitted	Submitted	Pending

Farakka	Pending	Pending	Pending	Pending	Pending	Pending
GMR	Submitted	Submitted	Submitted	Submitted	Submitted	Submitted
JITPL	Submitted	Submitted	Submitted	Submitted	Submitted	Pending
MPL	Submitted	Submitted	Submitted	Submitted	Submitted	Submitted
NPGC	Submitted	Submitted	Submitted	Submitted	Submitted	Submitted
Kahalgaon	Submitted	Submitted	Submitted	Submitted	Submitted	Pending
Teesta III	Submitted	Submitted	Submitted	Submitted	Submitted	Submitted
Teesta V	Submitted	Submitted	Submitted	Submitted	Submitted	Pending
TSTPS	Submitted	Submitted	Submitted	Submitted	Submitted	Pending
Dikchu	Submitted	Submitted	Submitted	Submitted	Submitted	Pending

In view of the same all utilities are once again requested to kindly look into the matter and take necessary action to ensure consistent data submission for every frequency event flagged by ERLDC.

ITEM NO. C.3: Review of implementation of PSDF approved projects of ER.

In 10th NPC meeting held on 09.04.2021, RPCs were advised take up the matter for improvement of the fund disbursement and expeditious implementation of the sanctioned projects under PSDF.

In view of the above, status review of the projects being executed under PSDF funding in Eastern Region would be carried out on regular basis for expediting the projects. All the constituents are requested to furnish/update the status of their respective project in every month.

Concerned utilities may update the present status of the project as given in the **Annexure-C.3**.

Respective utilities may update.

ITEM NO. C.4: Status of implementation of AGC as a pilot project in States.

In 42nd TCC, DVC intimated that AGC shall be implemented in unit 7 and 8 of Mejia as per the given schedule by 31st July 2020.

WBPDCL informed that they have already collected offer from Siemens for implementation of

AGC and they are awaiting the concurrence from SLDC.

SLDC, WB informed that they are not in a position to implement AGC unless a clear direction is given by WBERC. Further, implementation of intra state DSM is a prerequisite for implementation of AGC in the states.

It was decided to request CERC to include this as an issue in the agenda for discussion in the meeting of Forum of Regulators.

OCC advised SLDC Odisha and OPGC to interact with Barh NTPC & ERLDC to get the technical specifications & the procedure for implementation of AGC.

In the 183rd OCC meeting, OPGC representative informed that work order has been issued to M/s Siemens for implementation of AGC. The work would be carried out during the unit shutdown which is scheduled from 18.10.2021.

State	Station/Unit	Deliberation in 184th OCC Meeting
DVC	Mejia unit#7 &8	DVC representative informed that NIT is to be floated.
Odisha	Unit#3 of OPGC	OPGC vide email dated 25th Oct'21 informed that some additional data is needed from SLDC Odisha and after getting the same AGC would be implemented.

In the 185th OCC meeting, DVC representative informed that the NIT for implementation of AGC will be floated by 9th December 2021.

OPGC representative was not present during the discussion.

In the 186th OCC meeting, DVC representative informed that the NIT would be floated by 31st December 2021.

In the 187th OCC meeting, OPGC and DVC representative were not present during the discussion.

In the 188th OCC meeting, DVC representative informed that NIT was floated on 29th December 2021 and the bid opening would be done on 19th February 2022.

OPGC representative was not present during the discussion.

In the 190th OCC meeting, DVC representative submitted that NIT would be re-floated due to some issues in the payment terms.

SLDC Odisha representative submitted that the order has been place to M/s Siemens for AGC implementation and the feasibility test would be conducted on 3rd May 2022.

DVC and Odisha may update.

ITEM NO. C.5: Primary Frequency Response Testing of ISGS Generating Units

In the 180th OCC meeting, ERLDC representative informed that as per communication received form GMR and JITPL PFR testing has been scheduled by Siemens in August'21.

MPL representative submitted that they would carry out the PFR testing in the month of July'21.

In the 181st OCC meeting, ERLDC representative informed that PFR testing of MPL got postponed due to some technical issue. He further informed that PFR testing is going on in APNRL and that of NPGC and BRBCL is scheduled in the last week of July'21 and 1st week of August'21 respectively.

In the 182nd OCC meeting, ERLDC representative submitted that During July – August 2021, PFR testing has been conducted at the following generating units:

1. Adhunik TPS Unit 1 & 2
2. BRBCL TPS Unit 2 & 3
3. Nabinagar STPS Unit 1
4. Kahalgaon STPS Unit 1

In the 183rd OCC meeting, ERLDC representative updated that PFR testing for Unit# 1 & 2 of GMR had been completed.

In the 185th OCC meeting, ERLDC representative informed that PFR testing of Dikchu is being carried out.

In the 187th OCC Meeting, OCC advised all the members to provide the updated status of PFR testing, if any, to ERPC and ERLDC.

In the 188th OCC meeting, ERLDC representative informed that updated status of PFR testing was received from MPL.

The updated status is enclosed at **Annexure-C.5**.

Members may update.

ITEM NO. C.6: Testing of Primary Frequency Response of State Generating units by third party agency.

In the 171st OCC Meeting, OCC advised all the SLDC's to prepare the action plan for their state generators and submit the details to ERPC and ERLDC at the earliest.

DVC vide-mail dated 6th Oct 2020 informed that the Primary Frequency Response Testing may be carried out for the following generating units:

Sl. No.	Name of the Units	Capacity (MW)
1	BTPS-A	500
2	CTPS Unit #7&8	2X250
3	DSTPS Unit#1&2	2X500
4	KTPS Unit # 1&2	2X500
5	MTPS Unit # 3 to 8	2 X 210 +2 X 250 + 2X 500
6	RTPS Unit # 1 & 2	2 X 600

In the 185th OCC meeting, OHPC representative informed that testing of Primary Frequency Response of all the units of Rengali and Indravati will be done by the end of December 2021.

WBPDCL representative informed that they will place the order in the month of December 2021.

In the 186th OCC Meeting, OHPC representative informed that the testing of Primary Frequency Response of all the units of Rengali and Indravati would be done by the 2nd week of January 2022.

DVC representative informed that the bid opening had been done on 22nd December 2021.

In the 187th OCC meeting, OHPC and DVC representatives were not present during the discussion.

In the 188th OCC meeting, it was informed that PFR testing of all the 3 units of Budge-Budge are scheduled from 26th Feb 2022 to 3rd March 2022.

OHPC representative submitted that PFR testing of all the units of Rengali (5 units) and Indravati (4 units) would be carried out by M/s Solvina from 20th March 2022 onwards.

DVC representative informed that the work order for PFR testing has been placed.

Generating units may update.

ITEM NO. C.7: PSS tuning of Generators in Eastern Region

The PSS tuning activity is mandatory in line with IEGC and CEA regulations. The Procedure of PSS tuning for helping utilities in getting this activity carried out has been approved in 171st OCC Meeting and shared with all concerned utilities.

In 198th OCC Meeting, West Bengal SLDC was advised to communicate with WBPDCL regarding PSS Tuning status of PPSP units. JITPL representative was not present during the discussion. ERLDC representative submitted that PSS Tuning as well as PFR testing status of units of JITPL is pending. NTPC representative submitted that they would send the PSS Tuning status of Barh units shortly. DVC representative submitted that PSS Tuning of both units of RTPS would be completed by the end of December 2022. OPGC representative submitted that PSS Tuning of IB TPS unit-1 would be carried out in the month of March 2023 during the Annual Overhauling. ERLDC representative advised OPGC to carry the PSS Tuning of both the units during the Annual Overhauling of unit-1. OHPC representative submitted that the PSS Tuning of Upper Kolab units would be carried out by the end of March 2023. PSS Tuning of Balimela units could not be carried out due to ongoing renovation works. Further, they are in talks with M/s Hitachi, as the same is charging a huge amount for PSS Tuning of Indravati units. ERLDC representative advised OHPC to explore the possibilities of identifying other suitable vendors for PSS Tuning from the list available with them. OCC advised ERLDC to share the list of vendors for PSS Tuning and PFR Testing with the generators. ERLDC representative submitted that they have communicated with Bhutan regarding updating of PSS Tuning status of units. Power System Stabilizer (PSS) tuning is an ongoing exercise in Eastern regional grid after observation of various low frequency oscillation from time to time in the grid. In line with this, OCC has decided that all generating plants in eastern region will submit their PSS tuning plan to ERLDC/ERPC and the test reports for validation. The list of units whose tuning is pending is attached in **Annexure C7**.

Hence all generators are requested to update the latest status.

ITEM NO. C.8: Status of UFRs healthiness installed in Eastern Region.

Members may update the status of UFR healthiness installed in Eastern Region.

Members may update.

ITEM NO. C.9: Status of Islanding Schemes healthiness installed in Eastern Region.

As per the decision taken in the meeting held on 8th July 2021 and chaired by member (GO&D), CEA, data in prescribed formats may be submitted by concerned utilities to RPCs on monthly basis to certify the healthiness of the Islanding Schemes.

a. Format - I for RLDC/SLDCs

S.NO	Name of Islanding Scheme	Healthiness of Communication channel

b. Format - II for Generating Station

S.NO	Name of Islanding Scheme	Healthiness of Islanding Relay	Healthiness of Communication channel

c. Format - III for Transmission Utility/DISCOMs

S.NO	Name of Islanding Scheme	Elements considered for tripping to from Island	For communication-based tripping logic Of feeders	For UFR based tripping logic of feeders	
			Healthiness of Communication channel	Healthiness of PT Fuse and status of DC supply to UFR relay*	Healthiness of Relay#

* Where dedicated UFR relay have been installed for tripping of the feeders under Islanding scheme

Where UFR functions have been enabled within backup protection relay of the line.

d. Format - IV for collecting Relay details of the Islanding scheme.

The following format may be used to get Relay details of the Islanding scheme:

S.NO	Description	UFRs-for load relief (A)	df/dt -for load relief (B)	Relay for Island creation(C)

1	Relay location (S/s name)			
2	Relay make & model			
3	Frequency setting of the relay (at which load shedding is envisaged)			
4	Feeder name (voltage level and source-destination name) signaled by the Islanding Relay for separation /load shedding/separation from outside grid			
5	Quantum of load relief due to tripping of feeder (as per state's peak of previous year)			
6	Quantum of load (Min, Avg, Max in MW) on the feeder (as per state's peak of previous year)			

e. Format - V for Contact details of all Nodal Officer

Utility Name &Location	Name	Designation	Organization	Email ID	Mobile No.

Members may update.

ITEM NO. C.10: Latest Status of States ATC/TTC declared by States for the month of January-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 **Feb-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	5735	--	115	--	5620	--	Feb-23
2	JUSNL	1475	--	37	--	1438	--	Feb-22
3	DVC	1811	3471	68	54	1743	3417	Feb-23
4	OPTCL	3878	1782	128	60	3750	1722	Feb-23
5	WBSETCL	6319	--	450	--	5869	--	Feb-23
6	Sikkim	167.81	--	2.66	--	165.15	--	Nov-22

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

State / Month	Bihar	Jharkhand	DVC	Odisha	West Bengal	Sikkim
Jan-23	Submitted	Submitted	Submitted	Submitted	Submitted	Pending
Feb-23	Submitted	Submitted	Submitted	Submitted	Submitted	Pending
March-23	Submitted	Submitted	Submitted	Submitted	Submitted	Pending
April-23	Pending	Pending	Pending	Submitted	Submitted	Pending
May-23	Pending	Pending	Pending	Submitted	Pending	Pending

Declaration of TTC/ATC on SLDC Website

Sl No	SLDC	Declared on Web site	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. Jharkhand and Sikkim are requested to share the ATC/TTC on regular basis.

ITEM NO. C.11: Mock Black start exercises in Eastern Region

As per IEGC Clause 5.8(b), Mock trial runs of the procedure for different subsystems shall be carried out by the Users/CTU/STU at least once every six months under intimation to the RLDC. Accordingly, the Black Start Schedule of different hydro stations for 2022-23 are given below:

Sl No	Name of Hydro Station	Schedule of Mock Black Start	Actual Date of Test	Schedule of Mock Black Start	Actual Date of Test
		Test-1		Test-2	
1	U. Kolab	June-2022	21st July-2022	Jan-2023	
2	Balimela	July-2022	09th Sep-2022	Feb-2023	
3	Rengali	June-2022	27- June-2022	Dec-2022	
4	Burla	July-2022	23-June-2022	Jan-2023	
5	U. Indravati	May-2022	25-May-2022	Feb-2023	
6	Maithon	DVC representative submitted that upgradation work is under progress due to issues in the governing system. Detailed timeline would be submitted to ERPC and ERLDC. Detail timeline yet to be received from DVC SLDC		Dec-2022	
7	TLDP-III	Oct-2022		Jan-2023	
8	TLDP-IV	Oct-2022		Feb-2023	
9	Subarnarekha	Sep-2022		Dec-2022	
10	Teesta-V	Oct-2022		Jan-2023	
11	Chuzachen	Oct-2022		Feb-2023	
12	Teesta-III	April-2022	08-April-2022	Dec-2022	
13	Jorethang	Oct-2022		Jan-2023	
14	Tasheding	Oct-2022		Feb-2023	
15	Dikchu	Oct-2022		Dec-2022	
16	Rongnichu	Oct-2022		Jan-2023	

- Note:

*DVC representative submitted that upgradation work is under progress due to issues in the governing system. Detailed timeline would be submitted to ERPC and ERLDC. Detail timeline yet to be received from DVC SLDC.

**Jorethang intimated that Black Start provision is not incorporated in Jorethang HEP System

It is proposed that in case Mock black start is not feasible at Maithon HEP and Jorethang HEP, they may be deleted from this list for tracking.

Further all the generators are requested to express their readiness and provide the tentative date of mock black start exercise for the year 2022-23.

In the 197th OCC meeting OCC advised all the utilities to update the status of Mock Black Start exercise, if any, to ERPC and ERLDC. Jharkhand SLDC has intimated that mock black start exercise of Subarnarekha HEP is scheduled on 13.12.2022. However, no detail has been received from others yet.

Members may update.

ITEM NO. C.12: Requirement of cold spares for ICTs in Eastern Region to meet any exigency.

As per CEA guidelines for availability of spares and inventories for power transmission system (transmission lines & substation/switchyard) assets, adequate cold spare for ICTs has to be maintained at regional as well as state level. Key guidelines for determining spare as per the guidelines are provided below:

- At present PGCIL along with multiple ISTS licensee is operating and maintaining most of the Inter-State Transmission System (ISTS) assets The transmission lines of above power utilities are spread across more than one states in the country.

- Regional level spare: For regional power utilities (PGCIL & Transmission licensees), the spare at regional level would be required for these assets. These spares should be increased, optimized and limited to double the quantities mentioned for State Level based on transmission line assets in that region in order to avoid unnecessary storage of inventories.

- State level spare: The spares at 'State level' can be maintained at a centralized location which could be conveniently accessed to meet the emergency requirement of various substations/switchyards spread across the State.

- Requirement of state level: ICT and Shunt Reactor: One number single phase/three-phase unit of each rating, as applicable

- Utility for State level spare: If there are five or more substations/switchyards (of same voltage class) of a utility in a State, the 'State Level' spares shall be maintained by the utility.

- Spare at state level by utility having spread in different states: If any utility has five or more substations/switchyards (of same voltage class) spread across different States, spare recommended for 'State Level' shall be maintained for these cluster of substations/switchyards at one or more appropriate locations in any of these States.

- Higher spare for areas having higher probability of damage with natural disaster events: The quantities of spares specified shall be applicable to transmission lines and substations / switchyards in all areas including cyclone / whirlwind / tornado prone areas. However, higher quantity of spares (for some spare items) shall be kept for cyclone /

whirlwind / tornado prone areas as indicated in guideline.

- Support between utilities for sharing of spare and associated commercial mechanism: There may be cases, where the extent of damage is so much that specified minimum quantum of spares/inventories may be inadequate in meeting the eventuality. In such cases, support from central power utilities (PGCIL/NTPC/DVC etc.)/transmission licensees/neighboring State utilities may be requested. The financial modalities for providing spares to other utility shall be mutually decided between the utilities.

- Replenishment of Consumed spare: Replenishment of the consumed mandatory spares shall be made at the earliest but in any case, not later than six months from the date of its consumption depending on the criticality of equipment component/material.

With a significant rise in state demands and regional demand along with the number of ICTs, it would be desirable to have an adequate spare to improve reliability and resilience in case of any exigency. Recently, a substantial delay in restoration of damaged ICTs in eastern region has been observed.

Thus, maintaining adequate regional and state level cold spare is important. Table 1-4 provides various details for deciding the requirement of regional and state level cold spare in Eastern region

Table 1: State wise ICTs at various voltages in ER

State Wise ICT	315 MVA 400/220 kV	500 MVA 400/220 kV	315 MVA 400/132 kV	200 MVA 400/132 kV	270 MVA 400/132 kV	250 MVA 400/220 kV	1500 MVA 765/400 kV	255 MVA 765/132 kV	Cold Spare Availability
Bihar	6	27	3	15			5		
Jharkhand	15	6				1	2		
Sikkim	5				1				
Odisha	30	5					8	2	
West Bengal	38	5					4		

Table 2: Utility wise ICTs detail at various voltage level in ER

Utility	315 MVA 400/220 kV	500 MVA 400/220 kV	315 MVA 400/132 kV	200 MVA 400/132 kV	270 MVA 400/132 kV	250 MVA 400/220 kV	1500 MVA 765/400 kV	255 MVA 765/132 kV	Cold Spare Availability
PGCIL	47	27	3				15		
Other ISTS (NKTL, PMJTL, PMTL, DMTCL)		8		2			4		
IPP (Dikchu)					1				
NTPC/NPGC/BRBCL	4			9				2	
WBSETCL/WBPDCL/CESC	22			4					
OPTCL/SEL	11	2							
DVC	10								
BGCL		4							
JUSNL/TTPS		2				1			

Table 3: Utility wise number of substations with ICTs in ER

Utility Substation with ICTs	Number of Substation
PGCIL ERTS 1	15
PGCIL ERST 2	8
PGCIL Odisha	10
WBSETCL	5
WBPDCL	2
OPTCL	5
BGCL	2
DVC	5

JUSNL	1
ISTS (NKTL/DMTCL/PMTL/PMJTL)	7
NTPC	7

Table 4: Spread of substations of various utilities in different states

State	PGCIL ERTS 1	PGCIL ERTS 2	PGCIL Odisha	DVC	WBSETCL	OPTCL	Other ISTS	BGCL	JUSNL	NTPC	Others
Bihar	9						4	2		4	
Jharkhand	6			3			1		1		
Sikkim		1									
Odisha			10			5				2	1
West Bengal		6		2 + 1 (MTPS)	5		2			1	2

In the 192nd OCC meeting, ERLDC representative submitted that as per the CEA guidelines, maintenance of adequate spares at State level as well as at regional level had to be ensured.

ERPC representative submitted that as per the CEA guidelines, the inventory of spares should be digitized and reports of the same should be submitted to CEA on half-yearly basis.

OCC advised all the states to digitize the inventory of spares and submit the report to CEA with a copy to ERPC on half yearly basis.

Further, ERLDC was advised to make a standard format mentioning the date of procurement of ICTs, date of COD of ICTs, declared age of ICTs, remaining life etc and circulate among the concerned utilities.

OCC advised all the concerned utilities to follow the guidelines and submit the report on availability of spares ERPC and ERLDC at the earliest.

Further, Powergrid representative raised a concern regarding diverting the spares from ISTS pool to the states which may pose reliability issues and thereby requested the states to maintain a pool for cold spare ICTs.

MS, ERPC was of the view that the pool of cold spare ICTs may be maintained by a central agency like Powergrid. In case of any requirement of spare ICT on emergency basis by any utility, the same may be provided and the commercial modalities may be decided mutually. Further, to avoid any reliability issues arising out of insufficient spares for the existing ISTS systems, the required optimum number of cold spare ICTs to be maintained by Powergrid may be enhanced which may be put up for approval subsequently.

In the 193rd OCC meeting, Powergrid Odisha representative submitted that 500 MVA and 160 MVA ICT are under procurement which would be placed at Pandiabili and Baripada S/s respectively and cater to the requirement of Odisha. A 315 MVA ICT was recently used in Jeypore S/s. After detailed cost benefit analysis, decision regarding procurement of 315 MVA ICT would be approved.

Powergrid ER-II representative submitted that a 500 MVA ICT is under procurement which would be located at Maithon or Subhashgram. 315 MVA spare ICT (released after augmentation) is available at Durgapur and Malda S/s. one 160 MVA spare ICT is available at Siliguri and one 50MVA ICT was available at Gangtok which was used recently.

Powergrid ER-I representative submitted that regional spare is available at Jamshedpur and Biharshariff S/s. The spare available at Jamshedpur was utilized at Chaibasa. One 315 MVA spare is available at Mujaffarpur S/s. one 160 MVA spare ICT of 220/132 KV is available at Purnea. Further, approval has been taken regarding procurement of one 500 MVA and one 160 MVA spare ICT at Pusauli and Daltonganj respectively.

OPTCL representative submitted that a 315 MVA spare ICT was available at Duburi S/s which was utilized in Meramundali S/s. Procurement of one 500 MVA spare ICT is under progress which would be located at new Duburi S/s. One 500 MVA ICT is available at Meramundali B. Regarding 315 MVA spare ICT, discussions are going on for procuring the same. SLDC DVC representative submitted that one 315 MVA ICT would be replaced by 500 MVA ICT which would be kept as spare and will be located at Ramkanali S/s.

OCC was of the view that a detailed representation highlighting the ICTs under procurement and ICTs available at present would be prepared by ERLDC, based on which decision regarding maintaining pool of spares and procurement of spares would be anticipated.

Present Situation of spare ICTS as per update in 193rd OCC Meeting

Utility	500 MVA 400/220 kV	315 MVA 400/220 kV	160 MVA 220/132 kV
PGCIL ERTS 1	1: Under procurement; will be put at Sasaram	1: Muzaffarpur (released with ICT upgradation) 1: Bihar Sharif 1 : Under Procurement	1: Purnea 1: Daltonganj
PGCIL ERTS 2	1 : Under procurement will be put at either Malda or Shubhasgram	1 : Malda (released with ICT upgradation) 1: Durgapur (released with ICT upgradation)	1 : Silliguri
PGCIL Odisha	1: Under procurement and will be put at Pandiabili	1: Will be procured	1 : Baripada
OPTCL	1: Under procurement	Under discussion with management	Not available
DVC	Not available	1 will be spare in future as per new approved plan	Not available
WBSETCL	No detail	No detail	Not available

- **For 43 numbers of 400/220 kV 500 MVA ICTs:** 3 regional and 1 state spare are under procurement
- **For 94 numbers of 400/220 kV 315 MVA ICTs:** 3 old and 1 new is available and 2 are under procurement
- **For 220/132 kV 160 MVA ICTs:** 4 regional spares are available.

Members are requested to update the status regularly.

ITEM NO. C.13: Availability of ERS in the Eastern Region and update on the status by various utilities including inter-state and intra-state transmission licensees

In line with CEA guidelines for the availability of spares and inventories for power transmission system (transmission lines & substation/switchyard) assets 2020 and the CEA disaster management plan for power sector 2021, adequate ERS is required to be maintained in ER grid for early restoration of transmission line due to any tower collapse. The Eastern region is prone to cyclones, Norwester/Kalbaisakhi localized storms, hilly terrain with landslides, floods, changes in river course, substation flooding, etc. due to which each year tower collapse occurs causing forced outages of transmission lines. This necessitates adequate ERS maintenance by various utilities in the eastern region for early restoration.

Present status available at ERLDC on ERS as collected during cyclone Yaas in 2021 is provided in the attached table. All transmission utilities are requested to kindly update the ERS availability and any ERS which are already engaged.

Status Update by: PGCIL ERTS 1, PGCIL ERST 2, PGCIL Odisha, WBSETCL and OPTCL (if any ERS is already engaged then same may be put as remarks)

Utility to provide details of available ERS in the attached format:

- State-level: BSPTCL, BGCL, DVC, JUSNL, Sikkim power department (SPD)
- ISTS: Indigrid (OGPTL, PKTCL, ENICL), PGCIL Subsidiaries (CBPTCL, PMTL, PMJTL), Powerlink Transmission limited (PTL), DMTCL, Adani transmission (ATL, NKTL), TPTL

In the 192nd OCC meeting, TPTL representative submitted that they would provide the details by the end of June 2022.

DVC representative submitted that procurement of 7 nos. (Combination of suspension and tension) of ERS is under progress. Further, pile and structures (2 nos.) at Putki and Maithon are available as immediate remedial measures up to 220 KV level.

West Bengal representative submitted that 10 nos. of ERS towers which can be used at all levels are available out of which 6 nos. have been used. Of the remaining, 3 nos. are tension towers and 1 is suspension tower.

JUSNL representative submitted that 8 nos. of ERS are available which could be used for up to 220 KV levels.

Bihar representative submitted that 36 nos. of ERS (for 220 KV and 132 KV level) are available and all are engaged at present.

The details have been received from OPTCL, PGCIL ERTS-1, ATL, PGCIL Odisha, PGCIL ERTS-2, PTL, ENICL, OGPTL, PKTCL. The details are awaited from WBSETCL, TPTL, BSPTCL, JUSNL and Sikkim Power Department. The utilities are requested to share the details at the earliest.

Present status available at ERLDC on ERS as collected during July 2022 is provided in the attached table.

Sl	Utility	voltage levels	Number of ERS towers available	Location of ERS situated	Type of ERS (Suspension/ Tension/ any other)
1	OPTCL	400 kV	14	Mancheswar Grid - 4 nos. (Hitech)	Can be used for both suspension and Tension
				Mancheswar store - 8 nos. (Hitech)	
				Mancheswar store - 2 nos. (Lindsey)	
			18 (Newly procured)	Mancheswar store - 18 nos. (Hitech)	
		220 kV	42	Budhipadar - 14 nos. (Lindsey)	
				Mancheswar grid – 14 Nos. (Lindsey)	
				Chatrapur - 14 nos. (Lindsey)	
2	PGCIL ERTS 1	765 kV -24 sets	24 Sets	GAYA	15 Suspension & 9 Tension tower
		400 KV -30 sets	30 Sets	Jamshedpur, Purnea, Lakhisarai	Total 20 nos. Suspension & 10 nos. Tension ERS towers
3	Adani transmission limited (ATL)	400 KV	1 set (12 Column). Nos of ERS towers shall depend on line configuration, type of tower and extension of towers. Approximate 6 suspension towers/ set for 400kV D/C twin	Central India (Koradi, Maharashtra)- **48 Hours**	Modular aluminum guyed towers- Suspension tower

Sl	Utility	voltage levels	Number of ERS towers available	Location of ERS situated	Type of ERS (Suspension/ Tension/ any other)
			conductor.		
4	PGCIL (Odisha)	400 KV ERS - 3	3	Rourkela	Suspension - 2 & Tension-1
		765 KV ERS - 24	24	Rengali	Suspension - 15 & Tension-9
5	PGCIL ERTS 2	400 KV	1 Set (consisting of 10 towers) - 400 KV Voltage level	Durgapur	7 Set-Suspension 03 Set-Tension
6	WBSETCL	400, 220, 132 kV	05+05set (can be used with 400/220/132 kV level) 6 used for Durgapur - asansol line diversion. 4 available	at Arambagh & Gokarno	Can be used for both suspension and Tension
7	TPTL		MoU with PGCIL Tie up with Supreme Industry in progress	-	-
8	CBPTCL		No ERS	PTC does not own any ERS, however, in case of any such requirement	-

Sl	Utility	voltage levels	Number of ERS towers available	Location of ERS situated	Type of ERS (Suspension/ Tension/ any other)
				for deployment of ERS, CPTC has an existing agreement with POWERGRID for deployment of ERS.	
9	PMTL	-	No ERS	-	-
10	PMJTL	765 kV	NO ERS	-	-
11	PTL	400 kV	07 towers set ERS structures suitable for Twin Moose Configuration 400 or 220 kV.	Siliguri (W.B.)	Lindsey Manufacturing Company Ltd USA Model 600
			07 towers set ERS structures suitable for Twin Moose Configuration 400 or 220 kV.	Muzaffarpur (Bihar)ER1	
12	Indigrid (ENICL, OGPTL & PKTCL)	400 KV & 765 KV Line	765 KV- 6 Sets / 400 KV- 8 Sets	Siliguri, WB.	For 765 KV- 4 Suspension & 2 Tension. For 400 KV- 6 Suspension & 2 Tension.
13	DMTCL	400 kV Lines	Arrangement of ERS with M/s Supreme Engineering at Kolkata.	Can be Dispatched in 2–3-weeks periods	-
14	BSPTCL	220 kV & 132 kV	38 ERS which can be used for 220 and 132 kV	18 Towers in use for 132 kV Kishanganj-Barsoi ckt 4 towers for 220 kv BTPS-Hazipur ckt	Can be used for both suspension and Tension

Sl	Utility	voltage levels	Number of ERS towers available	Location of ERS situated	Type of ERS (Suspension/ Tension/ any other)
				4 towers for 220 kV Bodhgaya- Chandauti Purnea : 1 Dehri on sone: 2 Sultanganj: 2 Fatuah: 2 Muzaffarpur : 4	
15	BGCL	-	No ERS	No ERS	-
16	JUSNL	220 kV	Total 8 ERS	Hatia: 3 Jamshedpur: 2 Dumka: 3	Details awaited
17	DVC	400 kV and 220 kV	400 kV: 7 (under procurement) 220 kV: 2 set Pilon structure	400 kV: **Under procurement** 220 kV: 1 at putki and 1 at Maithon	-
18	Sikkim Power Department		Details awaited	Details awaited	Details awaited

In the 193rd OCC meeting, TPTL representative submitted that they do not have any ERS towers of their own. In this regard, a MoU with PGCIL is there.

WBSETCL representative submitted that 10 nos. of ERS towers are available which could be used at all the voltage levels. Out of 10 nos., 6 nos. are used for Durgapur-Asansol line and 4 nos. are available. Procurement of additional 6 nos. of ERS towers (which could be used both under suspension and tension) is under planning stage.

Bihar representative submitted the status of ERS towers which is mentioned below.

Location	Status	Usage	Type	Quantity
Kishanganj-Barsoi Line	engaged	220/132 KV	Suspension/Tension	18
BTPS-Hajipur Line	engaged	220/132 KV	Suspension/Tension	4
Bodh Gaya-Chandauti	to be engaged	220/132 KV	Suspension/Tension	4
Purnea	**Spare**	220/132 KV	Suspension/Tension	**1**
Dehri	**Spare**	220/132 KV	Suspension/Tension	**2**
Fatuha	**Spare**	220/132 KV	Suspension/Tension	**3**

Mujaffarpur	**Spare**	220/132 KV	Suspension/Tension	**4**
Sultanganj	**Spare**	220/132 KV	Suspension/Tension	**2**
Total				**38**

OCC was of the view that many lines of BGCL and other new sub-stations like Mokama, Hajipur, etc. in Bihar fall under the coverage of river corridor and advised Bihar to keep provisions of ERS towers for those lines.

Members may update.

ITEM NO. C.14: List of lines of Eastern Region violating N-1 security criteria.

The list of such lines for which necessary planning needs to be done to make the system N-1 secure are given below:

Sl. No	Name of Element	Short Term Measures	Long term Measures	The target date for long term measures
Transmission Constraint in Odisha Network				
1	i. 220 kV Budhipadar-Lapanga D/C, ii. 220 kV Budhipadar Vedanta D/C iii. 220 kV Rourkela-Tarkera D/C	SPS available only for 220 kV Rourkela-Tarkera D/C. However, even with SPS N-1 criteria is not satisfied for all the conditions. **Action Required**:- Load trimming scheme needs to be planned	1. Reconductoring of 220 kV Rourkela-Tarkera D/C with HTLS. 2. 220 kV Rourkela-Tarkera second D/C 3. Shifting of Vedanta from 220 kV to 400 kV	**OPTCL to provide a target date for Long term measures**
2	i. 220 kV Lapanga-Katapalli D/C , ii. 220 kV Katapali-New Bargarh-Sadepalli (New Bolangir) S/C iii. 220 kV Katapali-Bolangir (PG)- S/C	No SPS Available. **Action Required:-** SPS/Load trimming scheme needs to be planned	Odisha to share long-term remedial action to make the system N-1 secure.	**OPTCL to provide a target date for Long term measures**

Sl. No	Name of Element	Short Term Measures	Long term Measures	The target date for long term measures
		Transmission Constraint in West Bengal Network		
3	i. 220 kV Waria-Bidhan Nagar D/C ii. 220 kV Waria-Mejia D/C	Opening of 220 kV Waria-Bidhan Nagar D/C as and when required	400/220kV, 315MVA (3rd) ICT at Bidhannagar	Target Date 2022-23. **WBSETCL may update the present Status**
		Transmission Constraint in DVC Network		
4	**i. 220 kV DSTPS-Waria D/C***	No SPS is Available. **Action Required:-** SOP/SPS/Load trimming scheme needs to be planned for the time being	i. 220 kV Connectivity at 400 kV Mejia-B ii. LILO of 220 kV Mejia-A and Barjora at Mejia-B	**DVC may update the target date**
5	ii. 220 kV Maithon-Dhanbad D/C, iii. 220 kV Maithon-Kalyaneshwari D/C	No SPS is Available. **Action Required:-** SOP/SPS/Load trimming scheme needs to be planned for the time being	iii. 220 kV Connectivity at 400 kV Mejia-B iv. 220 kV Connectivity at 400 kV RTPS	**DVC may update the target date**
*** The N-1 violation of 220 kV DSTPS- Waria D/C or DSTPS ICT 1&2 may result in large-scale disturbance, impacting an area between Durgapur and Maithon. To avoid any such mishap DVC needs to plan and implement an SPS on an urgent basis. Further, the long term measure also needs to be implemented in time bound manner.**				
		Transmission Constraint in Jharkhand Network		
6	220 kV Maithon Dumka D/C	No SPS Available. **Action Required:-** SPS/Load trimming scheme needs to be planned	i. LILO of 1st circuit of 220kV Dumka – Govindpur D/c line at Dhanbad	Target Date 2023. **Jharkhand may update the target date**
		Transmission Constraint in West Bengal Network		
6	i. 220 kV Rajarhat-Newtown AA3 D/C,	SPS is Available for both the Ckts	1. 220 kV Rajarhat-Newtown AA3 D/C line with HTLS. 2. No Strenthing planned	1. Target Date November 2022 for recondutoring **WBSETCL may update the present Status**

Sl. No	Name of Element	Short Term Measures	Long term Measures	The target date for long term measures
	ii. 220 kV Subhasgram-EMSS D/C		for 220 kV Subhasgram-EMSS D/C	
7	i. 220 kV Subhasgram (PG) – Subhasgram (WB) D/C ii. 220 kV Subhasgram (WB)-Lakshmikantpur D/C	SPS Available for 220 kV Subhasgram (PG) – Subhasgram (WB) D/C	i. 220 kV Subshagram – Baruipur D/C ii. 400/132 kV Substation at Lakshimikantpur.	i. Line antitheft charged from Subhasgram end ii. Lakshimikantpur tareget date is December 2024 **WBSETCL may update the present Status**
Transmission Constraint in Bihar Network				
8.	220 kV Darbhanga-Darbhanga(BH) D/C	No SPS Available. **Action Required:-** SPS/Load trimming scheme needs to be planned	Bihar to share long-term remedial action to make the system N-1 secure.	**Bihar to provide a target date for Long term measures**
9.	220 kV Muzzafarpur-Hazipur D/C	No SPS Available. **Action Required:-** SPS/Load trimming scheme needs to be planned	1. 220 kV Muzzafarpur-Amnour D/C	**Bihar to provide a target date for Long term measures**
10.	220 kV Gaya Bodhgaya D/C	No SPS Available. **Action Required:-** SPS/Load trimming scheme needs to be planned	1. 220 kV Gaya Bodhgaya Second D/C	**Bihar to provide a target date for Long term measures**

In the 193rd OCC meeting, ERLDC representative submitted that outage of DSTPC ICTs or DSTPS Waria D/C line may create a large scale disturbance.

DVC representative submitted that the contracts for connectivity between MTPS 220 KV to 400 KV and RTPS connectivity have already been awarded and the work is expected to be completed by December 2023. The 400 KV bus connectivity would extend some relief in case of evacuation problem from 220 KV bus due to MTPS generation.

Under long-term measures, programs for augmentation of DSTPS ICT and DSTPS-DTPS HTLS is under progress. Necessary approval from ERPC and CTU has already been taken in this regard.

Moreover, Parulia (PG)-Parulia (DVC) line has already been given to Powergrid for HTLS connectivity. After the HTLS connectivity, possibilities of switching-off of DSTPS ICT may be explored. Further, possibilities of bus-splitting at MTPS may also be worked out.

ERLDC representative requested DVC to maintain some minimum generation in Mejia. DVC representative submitted that Mejia unit-6 would be synchronized by 21st July 2022.

ERLDC representative was of the view that as per the study undergone by them, closing of

Bidhannagar-Waria circuit would not cater to the generation loss issues and advised DVC to explore the possibilities of bus splitting and connectivity to 400 KV of MTPS and RTPS.

Members may update.

ITEM NO. C.15: ICT Constraints violating N-1 security criteria.

The list of ICTs which are not N-1 complaint are given below:

Sl. No	Name of ICT	Short Term Measures	Long term Measures	The target date for long term measures
ICT Constraint in West Bengal Network				
1	i. 400/220 kV 2 X 315 MVA ICTs at Gokarna & ii. 400/220 kV Sagardighi 1 X 315 MVA ICTs	SPS Available for Gokerno ICTs **Action Required**:- Load trimming scheme needs to be planned for Sagardighi	i. 3rd ICT at Gokerno	Target Date Dec-22 **WBSETCL may update the present Status**
2	i. 400/220 kV ICT-1 & 2 at Bidhannagar	No SPS Available **Action Required**:- SPS needs to be planned	i. 400/220kV 315MVA (3rd) ICT at Bidhannagar	Target Date 2022-23 **WBSETCL may update the present Status**
ICT Constraint in ISTS Network				
3	i. 400/220 kV Ranchi 2 X 315 MVA ICTs	SPS Available	i. 3rd 500 MVA ICT at Ranchi	**POWERGRID may update the target date**
ICT Constraint in DVC Network				
4	i. 400/220 kV Bokaro A 2 X 315 MVA ICTs	No SPS Available **Action Required**:- SPS needs to be planned	i. Upgradation with 500 MVA ICTs	**DVC may update target date**

Sl. No	Name of ICT	Short Term Measures	Long term Measures	The target date for long term measures
5	**i.400/220 kV ICT-1 & 2 at DSTPS ***	No SPS Available **Action Required**:- SPS needs to be planned	i. Upgradation with 500 MVA ICTs	**DVC may update target date**
ICT Constraint in Odisha Network				
6	i. 400/220 kV New Duburi 2 X 315 MVA ICTs	No SPS Available **Action Required**:- SPS needs to be planned	i) 3rd ICT at New Duburi	**Odisha may update the target date**

In the 193rd OCC meeting, ERLDC representative submitted that outage of DSTPC ICTs or DSTPS Waria D/C line may create a large scale disturbance.

DVC representative submitted that under long-term measures, programs for augmentation of DSTPS ICT is under progress. Necessary approval from ERPC and CTU has already been taken in this regard.

Moreover, Parulia (PG)-Parulia (DVC) line has already been given to Powergrid for HTLS connectivity. After the HTLS connectivity, possibilities of switching-off of DSTPS ICT may be explored.

Members may update.

PART D: OPERATIONAL PLANNING

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

The abstract of peak demand (MW) vis-à-vis availability and energy requirement vis-à-vis availability (MU) for the month of January 2023 were prepared by ERPC Secretariat on the basis of LGBR for 2022-23 and feedback of constituents, keeping in view that the units are available for generation and expected load growth etc.

Members may update.

ITEM NO. D.2: Shutdown proposal of generating units for the month of February 2023.

Proposed Maintenance Schedule of Thermal Generating Units of ER in the month of Feb' 2023

System	Station	Unit No.	Capacity (MW)	Period (as per LGBR 2022-23)		No. of Days	Reason	Remarks
				From	To			
GMR	GMR	3	350	10.02.2023	16.03.2023	35	Annual Turbine Overhauling	
NTPC	Darlipali STPS	1	800	10.02.2023	10.04.2023	60	COH	

Note:

BRBCL has proposed Unit-2 (250 MW) annual overhauling and Boiler modification from 08.01.2023 to 17.02.2023 (for 40 days). As per LGBR 2022-23, it was scheduled for planned maintenance from 25.08.2022 to 03.10.2022 (40 Days).

Members may update.

ITEM NO. D.3: Major Generating Units/Transmission Element outages/shutdown in ER Grid (as on 08.01.2023)

a) Thermal Generating Stations outage report:

SL No	STATION	STATE	AGENCY	UNIT NO	CAPACITY (MW)	REASON(S)	OUTAGE DATE
1	FSTPP	WEST BENGAL	NTPC	2	200	Annual Overhauling for 30 days	08-Jan-2023
2	KHSTPP	BIHAR	NTPC	5	500	Overhauling for 49 days	22-Nov-2022
3	NABINAGAR(NPGC)	BIHAR	NPGC	1	660	Annual Overhauling for 80 days	06-Nov-2022
4	HALDIA ENERGY LTD	WEST BENGAL	HEL,CESC	2	300	Annual Overhauling for 45 days	05-Jan-2023

5	KOLAGHAT	WEST BENGAL	WBPDCL	3	210	For different maintenance purpose	04-Jan-2023
6	RTPS	DVC	DVC	1	600	Capital Overhauling for 50 days	25-Oct-2022
7	NABINAGAR(BRBCL)	BIHAR	NTPC	3	250	Boiler Tube Leakage later various hydrogen leakages also detected	31-Dec-2022
8	BARAUNI TPS	BIHAR	NTPC	6	110	Initially unit tripped on flame failure but later, problem found in condenser.	14-Jul-2022
09	BARAUNI TPS	BIHAR	NTPC	7	110	Excessive chemical deposits on Turbine blades(turbines need to be opened for assessment of the extent of deposits and the repairs required to address the issue of High First Stage pressure in HP Turbine)	19-Feb-2022
10	MEJIA TPS	DVC	DVC	3	210	High furnace pressure	05-Jan-2023
11	OPGC3	ODISHA	OPGC	3	660	Boiler Tube Leakage	07-Jan-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.

Generators/ constituents are requested to update the expected date of revival of the units.

b) Major Generating stations Out on Reserve Shutdown due to low system demand:

S. NO	STATION	STATE	AGENCY	UNIT NO	CAPACITY (MW)	REASON(S)	OUTAGE DATE
Nil							

c) Hydro Unit Outage Report:

S. NO	STATION	STATE	AGENCY	UNIT NO	CAPACITY (MW)	REASON(S)	OUTAGE DATE
1	TEESTA STG III Hep	SIKKIM	TUL	4	200	Annual Maintenance for 17 Days	24-Dec-2022
2	BALIMELA HPS	ODISHA	OHPC	3	60	The unit taken out under R & M for 18 months.	08-Jul-2022
3	BALIMELA HPS	ODISHA	OHPC	4	60	The unit taken out under R & M for 18 months.	08-Jul-2022
4	BURLA HPS/HIRAKUD I	ODISHA	OHPC	7	37.5	Annual Maintenance	26-Dec-2022
5	INDRAVATI	ODISHA	OHPC	4	150	Capital maintenance for 6 Months	09-Dec-2022
6	RENGALI HPS	ODISHA	OHPC	2	50	Annual Maintenance for 33 Days	12-Nov-2022
7	BALIMELA HPS	ODISHA	OHPC	1	60	Fault in seal valve of MIB system	08-Dec-2022

d) Long outage report of transmission lines (As on 08.01.2023):

Transmission Element / ICT	Outage From	Reasons for Outage
400 KV IBEUL JHARSUGUDA D/C	29.04.2018	TOWER COLLAPSE AT LOC 44,45
220 KV PANDIABILI - SAMANGARA D/C	03.05.2019	TOTAL 60 NOS OF TOWER IN BETWEEN 220KV PANDIABILI – SAMANGARA LINE IN WHICH 48 NOS TOWERS FULLY DAMAGED AND 12 NOS TOWERS PARTIALLY DAMAGED. WORK UNDER PROGRESS. PRESENTLY CHARGED FROM PANDIABILLI END (LOC 156) TO LOC 58
220/132 KV 100 MVA ICT II AT LALMATIA	22.01.2019	FAILURE OF HV SIDE BREAKER
220/132 KV 100 MVA ICT 3 AT CHANDIL	30.04.2020	DUE TO FIRE HAZARD ICT DAMAGED AND BURNT
400KV/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	21.04.2021	THREE TOWER COLLAPSED NEAR LALMATIA
400KV MAIN BUS - 2 AT DIKCHU	05.05.2021	PROBLEM IN MAIN BAY UNIT
220KV-GAYA-CHANDAUTI (PMTL)-DC	22.05.2021	FOR DISMANTLING OF TOWER NO 51 UNDER LILO WORK AT BODHGAYA.
400KV/220KV 315 MVA ICT 1 AT INDRAVATI (PH)	24.02.2022	CONTROL & RELAY PANEL OF ICT BURNT. REPLACEMENT FOR THE SAME IS UNDER PROCESS.
220KV-WARIA-BIDHANNAGAR-1	08.06.2022	TO CONTROL OVERLOADING OF 220 KV WARIA-DSTPS (ANDAL) D/C LINE
220KV-WARIA-BIDHANNAGAR-2	08.06.2022	TO CONTROL OVERLOADING OF 220 KV WARIA-DSTPS (ANDAL) D/C LINE
220KV-ALIPURDUAR (PG)-ALIPURDUAR(WB)-1	14.07.2022	S/D TAKEN FOR RELAY TESTING PURPOSES, COULD NOT BE RETURNED DUE TO B-PH CB LOCKOUT
400KV/220KV 315 MVA ICT 1 AT PATRATU	01.08.2022	ICT TRIPPED ON A FEW OCCASIONS DUE TO OPERATION OF BUCHOLZ RELAY LATER DGA VIOLATION FOUND, INTERNAL FAULT IN TRANSFORMER TO BE RECTIFIED
400KV/220KV 315 MVA ICT 2 AT PATRATU	27.09.2022	ICT TRIPPED ON A FEW OCCASIONS DUE TO OPERATION OF BUCHOLZ RELAY LATER DGA VIOLATION FOUND, INTERNAL FAULT IN TRANSFORMER TO BE RECTIFIED
220KV-ALIPURDUAR (PG)-SALAKATI-1	01.12.2022	FOR RECONDUCTORING WORK OF LINE WITH HTLS CONDUCTOR
400KV-BINAGURI-TALA-4	05.12.2022	VOLTAGE REGULATION, AFTERWARDS SHUTDOWN TAKEN FROM 15.12.22

400KV-RANGPO-TEESTA V-2	23.12.2022	FOR SF6 GAS LEAKAGE RECTIFICATION WORK IN 400KV RANGPO-TEESTA V LINE-2 (BAY-416)

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)

Members may note.

ITEM NO. D.4: Commissioning of new units and transmission elements in Eastern Grid in the month of December-2022

The details of new units/transmission elements commissioned in the month of December -2022 based on the inputs received from beneficiaries:

NEW ELEMENTS COMMISSIONED DURING DECEMBER, 2022							
GENERATING UNITS							
SL. NO.	**Location**	**OWNER/UNIT NAME**	**Unit No/Source**	**Capacity added (MW)**	**Total/Installed Capacity (MW)**	**DATE**	**Remarks**
NIL							
ICTs/ GTs / STs							
SL. NO.	**Agency/Owner**	**SUB-STATION**	**ICT NO**	**Voltage Level (kV)**	**CAPACITY (MVA)**	**DATE**	**Remarks**
NIL							
TRANSMISSION LINES							
SL. NO.	**Agency/Owner**	**LINE NAME**	**Length (KM)**		**Conductor Type**	**DATE**	**Remarks**
1	JUSNL	400 kV Chandwa (PG) - Latehar (JUSNL) D/C Line	1.400		ACSR Moose	8-Dec-22	Lines were charged for the first time as anti-theft measure upto 1.4 kms from Chandwa end on 8 Dec 2022 at 18:18 hrs and 17:42 hrs.
2	BSPTCL	220 kV Patna (PG) - Sipara (BSPTCL) D/C Line after re-conductoring	0.614		ACCC Drake HTLS Zebra	8-Dec-22	Lines were charged after re-conductoring for the first time on 08-Dec-2022 on 17:34 and 17:37 Hrs
LILO/RE-ARRANGEMENT OF TRANSMISSION LINES							
SL. NO.	**Agency/Owner**	**Line Name/LILO at**	**Length (KM)**		**Conductor Type**	**DATE**	**Remarks**
NIL							
BUS/LINE REACTORS							
SL. NO.	**Agency/Owner**	**Element Name**	**SUB-STATION**		**Voltage Level (kV)**	**DATE**	**Remarks**
1	OPTCL	400 kV 125 MVAr Bus Reactor at Mendhasal GSS	Mendhasal		400	15-Dec-22	Reactor was charged for the first time on 16-12-2022 at 20:16 Hrs.
BAYS							
SL. NO.	**Agency/Owner**	**Element Name**	**SUB-STATION**		**Voltage Level (kV)**	**DATE**	**Remarks**

1	NTPC	Main Bays of 400 kV Gaya D/C Line at NTPC sitchyard	North Karanpura	400	2-Dec-22	Bay No. 2 was first time charged on 03-12-2022 at 12:35 Hrs.

Bihar:

GSS Name	Description	FTC Date	FTC Time	Remarks
Gangwara	132KV Gangwara-Pandaul line(HTLS)	31-12-2022	18:05	Charged after reconductoring work
132 Darbhanga	132KV Darbhanga-Samastipur(HTLS) S/C T/L	19-12-2022	16:32	Charged after reconductoring work
Gaurichak	220kV PG Patna -Sipara (Gaurichak) TL ckt - 2	08-12-2022	17:37	re-conductoring work completed by ACCC drake type HT:LS conductor
Gaurichak	220kV PG Patna -Sipara (Gaurichak) TL ckt - 1	08-12-2022	17:34	re-conductoring work completed by ACCC drake type HT:LS conductor
BGCL	220kV S/C Jakkanpur New (BGCL) - Khagaul (BSPTCL) T/L	03-12-2022	12:12	
BGCL	220kV S/C Jakkanpur New (BGCL) - Sipara (BSPTCL) ST/L	03-12-2022	12:28	
Dumrao	132 KV Dumraon-Bikramganj S/C T/L(HTLS)	20-11-2022	15:05	Charged after reconductoring work
Samastipur 220	220kV Samastipur(New/Ujiyarpur)-DMTCL(Darbhanga) ckt - 2	18-11-2022	13:10	Anti theft charge

Odisha:

Elements charged for first time in December-2022			
Sl No.	Name of the element charged first time	Date	Time
1	Re-energization of 132kV Balasore Alloys Plant feeder from 220/132/33kV GSS, Balasore	7/12/2022	17:11HRS
2	Re-energization of 1X25MW Turbo Generator at M/S MSP Metalics Ltd, Jharsuguda with OPTCL system through 132kV MSP feeder from 220/132/33kV GSS, Budhipadar	9/12/2022	12:37HRS
3	125MVAR Bus Reactor at Mendhasal	16/12/2022	20:16HRS
4	132/33kV 20MVA Power TRF-I at Lapanga	20/12/2022	15:08HRS
5	132/33kV 20MVA Power TRF-II at GIS, Hinjili	27/12/2022	14:38HRS
6	Re-energization of 220/132kV 100MVA Auto TRF-III at Meramundali	28/12/2022	15:50HRS

Members may note.

ITEM NO. D.5: UFR operation during the month of December 2022.

Frequency profile for the month as follows:

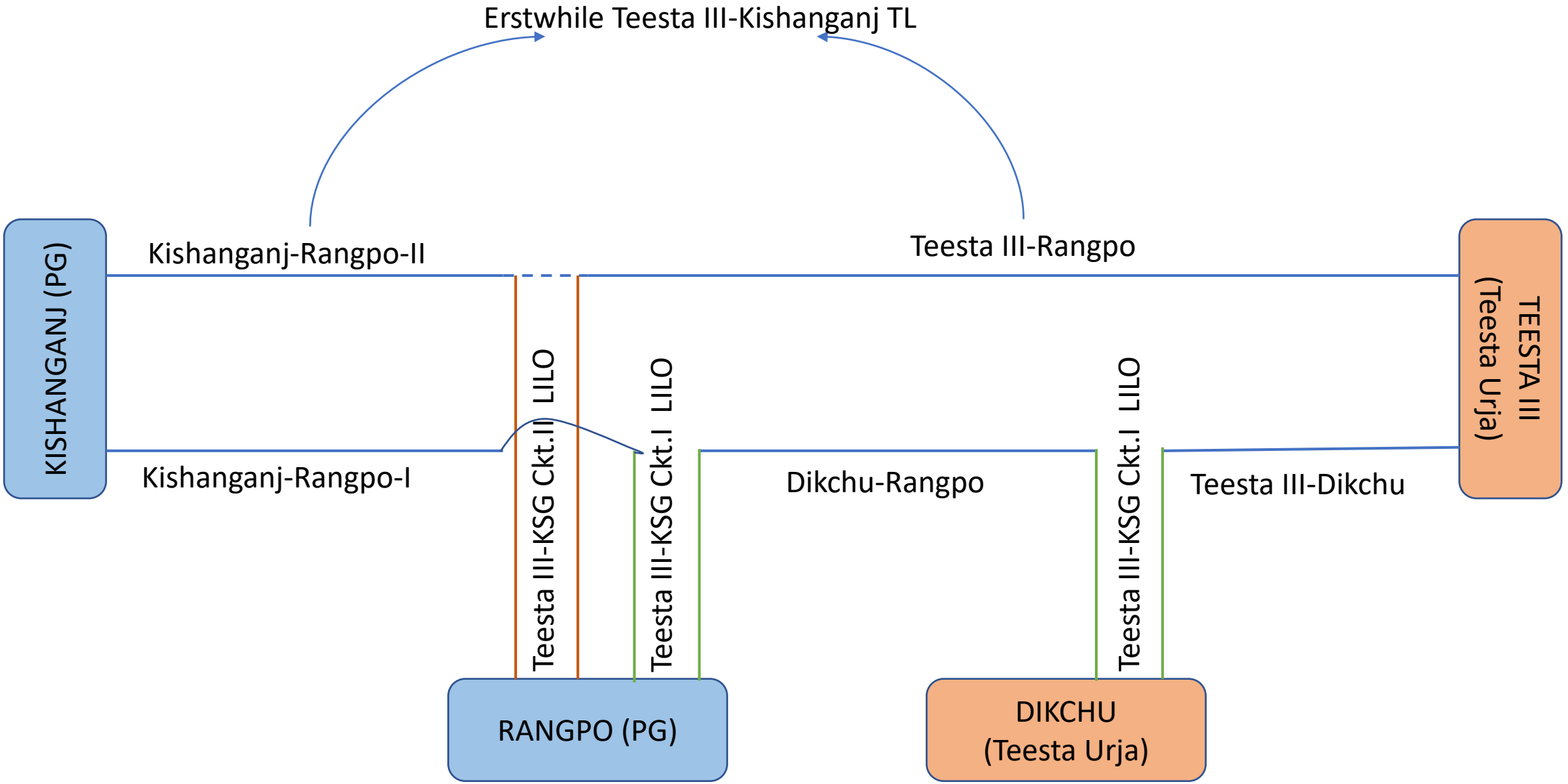
Month	Max (Date/Time)	Min (Date/Time)	Less IEGC Band (%)	Within IEGC Band (%)	More IEGC Band (%)
December, 2022	50.55 Hz on 26.12.2022 at 06:08 Hrs	49.41 Hz on 20.12.2022 at 09:31 Hrs	12.83	57.47	29.70

As per the mail received from West Bengal, UFR operated at Uluberia and NBU substation on 25.12.22.

Members may note.

****

Schematic showing Teesta III-Kishanganj TL LILO arrangements



पावरग्रिड POWERGRID

पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
POWER GRID CORPORATION OF INDIA LIMITED
(A Government of India Enterprise)

Sl. No.	ROW Tower No.	ROW affected Drum No.	Name of Landowner along with location details	Planned Date to attend location
5	Tower No. 119 to 122	16A	**Name of the landowner:** **i).** Mani Kumar Rai (Mob: 6294716006) **ii) Suk Dhan Rai** **iii) Aita Raj Rai** **iv) Ratan Bdr. Thapa** **v) L. B Thapa** **vi) San Chay Rai (Mob: 7076885910)** Village: Lower Jaubari (Chiyadara) PS: Namchi, PO: Namchi, Dist.: South Sikkim	**01/02/2023 to 07/02/2023**
6	Tower No. 122 to 126	16B	**Name of the landowner:** Purna Bahadur Rai (Mob: 9593739944) Village: Lower Tingrithang PW PS: Namchi, PO: Namchi Dist.: South Sikkim, Pin: 737126	**08/02/2023 to 15/02/2023**

As your good self is aware that stiff resistance has been shown by landowners of aforementioned locations we request your good self to kindly provide Police support so that OPGW work of above-mentioned HOLD drums can be completed at the earliest

Your kind cooperation in this regard is highly solicited.

Thanking you,

Yours faithfully,

29/12/2022

(Anjan Kr Das)
General Manager, ULDC

Enclosure:

i. Copy of Order passed in respect of Misc. Case No. 21/2021 dated 18/01/2022
ii. Copy of Letter submitted by M/s TVTPL to DM, South Sikkim
iii. Copy of Letters submitted at Namchi P.S
iv. Copy of Letter issued to EPDS, Sikkim
by Land Revenue Dept., for Induction related issues

Copy: for kind information, please

1. Chief Engineer, Energy & Power Dept. (Govt. Of Sikkim)
2. Member Secretary, ERPC, Kolkata
3. CGM(AM), POWERGRID, ERTS-II

पूर्वी क्षेत्रीय - II, उप-केन्द्र: 400/220/132 के.वी., रंगपो जीआईएस सबस्टेशन, ब्लॉक-करेक, गांव-समरदुंग, पीओ.-रंगपो, दक्षिण सिक्किम-737132

Eastern Region –II, Sub-station: 400/220/132KV Rangpo GIS Substation, Block-Karek, Vill- Samardung, PO.-Rangpo, South Sikkim-737132.
दूरभाष /Tel: +91 9434740029, ईमेल / Email -anjandas@powergrid.in
केन्द्रीय कार्यालय: "सौदामिनी", प्लॉट नंबर 2, सेक्टर -29, गुरुग्राम -122001, (हरियाणा) दूरभाष: 0124-2571700-719
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पंजीकृत कार्यालय: बी -9, कुतुब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली -110 016. दूरभाष: 011-26560112, 26560121, 26564812, 26564892, CIN: L40101DL1989GOI038121
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Website: www.powergridindia.com

In 27th ERPC meeting, OPGW laying on TLDP-NJP was approved based on advice of NLDC. Accordingly, tendering has been carried out and work order has been placed on party by Powergrid. Tower schedule of 220KV TLDP-NJP TL has been provided by WBSETCL. However, permission of laying OPGW on 220KV TLDP-NJP TL & nomination of WBSETCL representative to issue the PTW is pending from WBSETCL end (Letter dated 10.01.2019, 18.02.2019, 22.02.2019, 02.08.2019, 17.09.2019)

The matter was also repeatedly discussed in 24th SCADA O&M held on 14.08.2019 and 1st Test meeting held on 24.10.2019 wherein WBSETCL intimated that they will look into the matter. Vide letter dated 26.10.2019, WBSETCL intimated that they will implement OPGW in this line. Accordingly, Powergrid may be advised for further course of action in this regard. (Correspondence is given in **Annexure-B16**)

Members may discuss.

Deliberation in the meeting

ERPC asked WBSETCL to send the details to ERPC at the earliest.

ITEM NO. B.17: OPGW Installation in Teesta-III - Kishanganj link

Powergrid is implementing OPGW on Teesta-III - Kishanganj TL under Fiber Optic Expansion Package (Additional Requirement). Total OPGW route length is 215 Km out of which only 56 Km could be completed in last 2 months with engagement of 02 teams.

The slow pace of erection is due to non-availability of permission of A/R in non-auto mode by ERLDC. Matter has been taken up with ERLDC several times (Letter dtd 28.11.2019) but the timing of permission for A/R in non-auto mode could not be increased resulting in very slow progress in work. ERLDC also acknowledged the restricted issuance of A/R in non-auto permission due to Grid Constraints (Letter dtd. 03.12.2019.

The executing agency also intimated regarding gang idling and commercial implication. The status of permission of A/R in non-auto mode is enclosed in Annexure-III.

Further, ROW/Old Compensation issues is also emerging during OPGW erection work. ROW issues occurred till date is as under:
Drum no-50 (Location no-290A/0): Old compensation pending from TPTL. Work stopped on 19.10.2019.
Drum no-43 (Location no 274): Heavy ROW issue. Work stopped on 06.11.2019.

The work has been interrupted at those locations and team further moved to other locations. Since TPTL is owner of the TL, TPTL has been intimated regarding the issue vide letter dated 18.12.2019. TPTL shall take necessary action for resolving the issue. (Correspondence is given in **Annexure-B17**)

ERLDC and TPTL may update.

Deliberation in the meeting

ERLDC requested Powergrid to increase the number of teams deployed and also assurance that they would extend their help in resolving the timing issue for A/R shutdown. Powergrid agreed for the same.

PART – C : ANY OTHER ITEMS

ITEM NO. C.1: FOLLOW-UP OF DECISIONS OF THE PREVIOUS TeST MEETING(S)

The decisions of previous TeST Meetings are given at Annexure.

Members may update the latest status.

Deliberation in the meeting

Members updated the latest status which is given at ***Annexure-C1.***

ITEM NO. C.2: Status of various projects undertaken by M/s Chemtrols in Eastern Region

Latest status of various projects undertaken by M/s Chemtrols in Eastern Region are given at Annexure.

M/s Chemtrols may update the latest status.

Deliberation in the meeting

M/s Chemtrols updated the latest status which is given at ***Annexure-C2.***

	132kV	integrated	jurisdiction.	
	Deoghar 132kV	Not Available		
	Kendposi 132 kV	Not Available		
OPTCL	JSPL 400kV	Most of the data not available	OPTCL informed that by June, 2020 they will make available all the data in their jurisdiction.	*Status –quo--*
	Nalco 220kV	Most of the data not available		
	Narsingpur 220kV	Station commissioned at 220kV without data telemetry		
	Bargarh 220	Station commissioned at 220kV without data telemetry		

ITEM NO. B.8: OPGW Installation in Teesta III-Kishanganj link

Powergrid is implementing OPGW on Teesta III-Kishanganj TL under Fiber Optic Expansion Package (Additional Requirement). Following issues are faced during execution of the work:

A. OPGW erection in section having aviation globules

During erection of opgw, it is found that aviation globules are present in drum no. 41 (Loc. No 266 to Loc. No 270). For opgw erection, following options are proposed:

OPTION-1:

OPGW in existing 400KV TeestaIII-Kishanganj TL for drum-41

Taking out of aviation globules	Shutdown required on 400KV TeestaIII-Kishanganj TL for 2 days (06.02.20 & 07.02.20 ODB from 08:00 hrs to 17:00 hrs)
Installation of OPGW	A/R in non-auto mode for 5 days in 400KV TeestaIII-Kishanganj TL (08.02.20 to 12.02.20)
Putting the aviation globules in 400KV Rangpo-Kishanganj TL	Shutdown required 400KV Rangpo-Kishanganj TL for 2 days (13.02.20 to

(earthwire)	14.02.20)

OPTION-2:

OPGW in existing 400KV Rangpo-Kishanganj TL for drum-41

Installation of OPGW	A/R in non-auto mode for 7 days in 400KV Rangpo-Kishanganj TL (06.02.20 to 12.02.20). During this period, A/R in non-auto mode will not be availed for 400KV Teesta III-Kishanganj TL.

TPTL may kindly confirm implementation of the work. Approval of the Shutdown/AutoReclose in non-auto mode is also requested to be arranged by ERLDC.

B. ROW/Old compensation issues:

During erection of opgw, work has been stopped at various locations due to ROW/Old compensation issues. In all locations, local villagers are demanding payment of old pending compensation from TPTL. ROW issues occurred is detailed as under:

Location no	OPGW Drum No	Remarks	Correspondences
Location no-290A/0	Drum no-50	Work stopped on 19.10.2019 due to heavy ROW issue.	
Location no 274	Drum no-43	Work stopped on 06.11.2019 due to heavy ROW issue.	
Location no. 294B to 294D/1	Drum No. 51	Work stopped on 03.12.2019 due to heavy ROW issue.	
Location no. 308 to 311/2	Drum no. 58	Work stopped on 09.01.2020 due to heavy ROW issue.	

Members may discuss.

Deliberation in the meeting

ERPC decided to discuss above agenda in the next OCC meeting.

ITEM NO. B.9: Additional Agenda – Issues related to M/s Chemtrols – DVC

Sl. No.	Description of pending issue	Remarks	Timeline for completion
(1)	(2)	(3)	(4)
1	One UPS System at Howrah SLDC	Immediate rectification to be	

9	*Darlipalli STPS*	*Communication established.*	*Integration is in progress*	*June 2020*
10	*Teesta - V*	*One link established*		*June 2020*
11	*Farakka STPS - III*	*Link established*		*June 2020*
12	*MTPS Stage – II (Kanti)*	*Link established*		*June 2020*
13	*Rangit HPS*	*One link established*		*June 2020*

******** *OPGW from Barh to Gorakhpur is redundant path for all NR-ER connectivity which would be completed by March, 2020.*

ITEM NO. B.6: ROW issues faced during OPGW Installation in Teesta III - Kishanganj link

Powergrid is implementing OPGW on Teesta III - Kishanganj TL under Fibre Optic Expansion Package (Additional Requirement). Severe ROW issues are being faced during execution of the work hampering the work and causing delay to the work.

During erection of OPGW, work has been stopped at various locations due to ROW/Old compensation issues. In all locations, local villagers are demanding payment of old pending compensation from TPTL. ROW issues occurred till date is detailed as under:

Location no	OPGW Drum No	Remarks
Location no-290A/0	Drum no-50	Work stopped on 19.10.2019 due to heavy ROW issue.
Location no 274	Drum no-43	Work stopped on 06.11.2019 due to heavy ROW issue.
Location no. 294B to 294D/1	Drum No. 51	Work stopped on 03.12.2019 due to heavy ROW issue.
Location no. 308 to 311/2	Drum no. 58	Work stopped on 09.01.2020 due to heavy ROW issue.
Location no. 272/3	Drum No-42	Work stopped on 11.02.2020 due to heavy ROW issue.

Members may discuss.

Deliberation in the meeting

TeST committee decided to discuss above issue in the next OCC meeting.

Deliberation in the meeting

POWERGRID informed that the work of laying OPGW from Barh to Gorakhpur which is redundant path for all NR-ER connectivity got delayed due to ongoing Covid-19 situation. POWERGRID further informed that they are taking up the matter with vendor and the same would be completed by October 2020.

ITEM NO. B.5: Installation of OPGW in Teesta III -Kishanganj link

POWERGRID is implementing OPGW on TeestaIII-Kishanganj TL under Fiber Optic Expansion Package (Additional Requirement). Out of total 215 Km, 89 Km work has been completed. But following issues are causing hindrance to the completion of the work.

A. Non-availability of A/R in non-auto mode: Due to enforcement of Lockdown for Covid-19 pandemic situation, work was stopped since 24.03.2020. However, request of A/R in non-auto mode in 400KV TeestaIII-Kishanganj line was sought from 01.06.2020 onwards for resuming work after removal of lockdown, but approval was not accorded in Shutdown Meeting/OCC. Again ERLDC was requested vide letter dated 29.06.2020 for approval of A/R in non-auto mode for the month of July-2020, but again the request is declined by ERLDC (vide their letter dated 01.07.2020) due to high hydro season. OPGW work is held up due to non-availability of above approval and the same is causing delay in completion of the work.

It is requested to re-consider the request and provide the permission of A/R in non-auto mode in 400KV TeestaIII-Kishanganj line so that work could be completed at the earliest.

B. ROW issues / Old compensation issues: Severe ROW issues are being faced during execution of the work hampering the work and causing delay to the work. During erection of OPGW, work has been stopped at various locations due to ROW issues/Old compensation issues. In all locations, local villagers are demanding payment of old pending compensation from TPTL. ROW issues occurred till date is detailed as under:

Sr	RoW Location/Drum no	ROW Since	Contact Person, site
I)	272/3 (Drum No: 42; T No. 270 to 273)	11.02.2020	Ganesh Kumar Roy Hatidoba,Kharibari, Ragali
II)	T No. 274 (Drum No: 43; T No 274/5 to 273)	06.11.2019	Appu Datta Buraganj, Darjeeling
III)	T No 290A/0 (Drum No 50- T No 290/3 to 294B)	19.10.2019	Tejabpur, Kishanganj
IV)	T No. 294B/1,294B/4,294B/5 (Drum No 51: T. No 294B to 294D/1)	03.12.2019	Md Ezaz Pothiya, Kishanganj
v)	T No 308,311/2 (Drum No 58; T No 305/1 to 311/5)	09.01.2020	Nur Ishlam, Umar Ali, Bhola Lahara, Kishanganj
vi)	316/1 (Drum No 59; T No 311/5,316/1)	27.02.2020	*Mansur Ali, Zamuruddin Rahaman, Afroj Alam* (Marwa Toli, Khirdoho), Kishanganj

TPTL shall take necessary action for resolving the issue.

Members may discuss.

Deliberation in the meeting

POWERGRID requested ERLDC to provide the permission of A/R in non –auto mode in 400 KV Teesta III – Kishangunj line so that they could be able to install the balance OPGW at the earliest.

ERLDC informed that due to high hydro generation in Sikkim, it is not possible to allow A/R in non-auto mode and advised POWERGRID to apply for the same from September 2020 onwards. ERLDC further advised POWERGRID to bring the agenda in the shutdown meeting of September 2020. POWERGRID agreed for the same.

POWERGRID requested TPTL for their full cooperation for resolving the ROW issue at the earliest. TPTL agreed to support Powergrid in resolving the ROW issues.

ITEM NO. B.6: Implementation of differential protection at 400kV Teesta III-kishanganj lines—TUL

TUL vide mail informed that OPGW fiber linking is being carried out for Teesta III- Kishanganj line with termination at TEESTA-III & Kishanganj s/s ends, by POWERGRID. It is proposed that POWERGRID may be entrusted the responsibility, as part of ongoing central sector OPGW project, to extend end-to-end OPGW dark Fiber links for Teesta III- Dikchu - Rangpo Line.

In view of the above ,it is proposed that in addition to 400 kV Teesta III – Kishanganj S/C line , differential protection be provided 400 kV Teesta III – Dikchu – Rangpo section also, since these are very short lines(less than 30 Km).

Members may discuss.

Deliberation in the meeting

POWERGRID informed that the OPGW link from Rangpo to Dikchu and Rangpo to Teesta- III have already been approved under OPGW strengthening in Eastern Region which is under implementation at their end.

ITEM NO. B.7: Data communication from Teesta III to ERLDC---TUL agenda

Teesta-III data is not getting communicated to ERLDC control room since 15-05-20 due to problem in 400KV Kishanganj-Teesta-III PLCC panel at Kishanganj substation. Every time the following alarms were noticed at 400KV Kishanganj -Teesta-III PLCC panel at Kishanganj end.

1. RF hybrid Tx Alarm
2. SURV card Tx Alarm

Once the panel has been re-set at 400KV Kishanganj -Teesta-III PLCC panel at Kishanganj end, Teesta-III data gets communicated for a while and then again the same problem repeats.

Recently it was observed that the Teesta-III speech to ERLDC control room is also getting disturbed and repeated false rings are going to ERLDC control room. Due to this problem, speech port was disabled at kishanganj end.

		Maithon(RB) would complete by March, 2020.		
6	*Talcher STPS – I*	*Both links established.*		*June 2020*
7	*Kahalgaon STPS – I*	*Both links established.*	*NTPC informed that they approaching CERC for exemption.*	
8	*Nabinagar Thermal Power Project – BRBCL*	*Only one link Sasaram-Nabinagar OPGW installation is pending. It would take two years for completion.*		*June 2020*
9	*Darlipalli STPS*	*Communication established.*	*Integration is in progress*	*June 2020*
10	*Teesta – V*	*One link established*		*June 2020*
11	*Farakka STPS – III*	*Link established*		*June 2020*
12	*MTPS Stage – II (Kanti)*	*Link established*		*June 2020*
13	*Rangit HPS*	*One link established*		*June 2020*

****** OPGW from Barh to Gorakhpur is redundant path for all NR-ER connectivity which would be completed by March, 2020.

In 6th TeST Meeting, POWERGRID informed that the work of laying OPGW from Barh to Gorakhpur which is redundant path for all NR-ER connectivity got delayed due to ongoing Covid-19 situation. POWERGRID further informed that they are taking up the matter with vendor and the same would be completed by October 2020.

Members may update.

Deliberation in the meeting

ERLDC informed that AGC has been implemented at MPL.

POWERGRID informed that the work of laying OPGW from Barh to Gorakhpur was getting delayed due to Covid-19 pandemic and water logging issues. POWERGRID further informed that the matter will be taken up with the vendor and the work would be completed by February 2021.

ITEM NO. B.8: Installation of OPGW in Teesta III -Kishanganj link

POWERGRID is implementing OPGW on Teesta-III-Kishanganj TL under Fiber Optic Expansion Package (Additional Requirement). Out of total 215 Km, 89 Km work has been completed. But following issues are causing hindrance to the completion of the work.

A. Non-availability of A/R in non-auto mode: Due to enforcement of Lockdown for Covid-19 pandemic situation, work was stopped since 24.03.2020. However, request of A/R in non-auto mode in 400KV TeestaIII-Kishanganj line was sought from 01.06.2020 onwards for resuming work after removal of lockdown, but approval was not accorded in Shutdown Meeting/OCC. Again ERLDC was requested vide letter

dated 29.06.2020 for approval of A/R in non-auto mode for the month of July-2020, but again the request is declined by ERLDC (vide their letter dated 01.07.2020) due to high hydro season. OPGW work is held up due to non-availability of above approval and the same is causing delay in completion of the work.

It is requested to re-consider the request and provide the permission of A/R in non-auto mode in 400KV TeestaIII-Kishanganj line so that work could be completed at the earliest.

B. ROW issues / Old compensation issues: Severe ROW issues are being faced during execution of the work hampering the work and causing delay to the work. During erection of OPGW, work has been stopped at various locations due to ROW issues/Old compensation issues. In all locations, local villagers are demanding payment of old pending compensation from TPTL. ROW issues occurred till date is detailed as under:

Sr	RoW Location/Drum no	ROW Since	Contact Person, site
I)	272/3 (Drum No: 42; T No. 270 to 273)	11.02.2020	Ganesh Kumar Roy Hatidoba,Kharibari, Ragali
II)	T No. 274 (Drum No: 43; T No 274/5 to 273)	06.11.2019	Appu Datta Buraganj, Darjeeling
III)	T No 290A/0 (Drum No 50- T No 290/3 to 294B)	19.10.2019	Tejabpur, Kishanganj
IV)	T No. 294B/1,294B/4,294B/5 (Drum No 51: T. No 294B to 294D/1)	03.12.2019	Md Ezaz Pothiya, Kishanganj
v)	T No 308,311/2 (Drum No 58; T No 305/1 to 311/5)	09.01.2020	Nur Ishlam, Umar Ali, Bhola Lahara, Kishanganj
vi)	316/1 (Drum No 59; T No 311/5,316/1)	27.02.2020	*Mansur Ali, Zamuruddin Rahaman, Afroj Alam* (Marwa Toli, Khirdoho), Kishanganj

TPTL shall take necessary action for resolving the issue.

In 6th TeST Meeting, POWERGRID requested ERLDC to provide the permission of A/R in non – auto mode in 400 KV Teesta III – Kishangunj line so that they could be able to install the balance OPGW at the earliest.

ERLDC informed that due to high hydro generation in Sikkim, it is not possible to allow A/R in non-auto mode and advised POWERGRID to apply for the same from September 2020 onwards. ERLDC further advised POWERGRID to bring the agenda in the shutdown meeting of September 2020. POWERGRID agreed for the same.

POWERGRID requested TPTL for their full cooperation for resolving the ROW issue at the earliest. TPTL agreed to support Powergrid in resolving the ROW issues.

Members may discuss.

Deliberation in the meeting

POWERGRID informed that the permission for the non-auto mode operation of the A/R for 400 KV Teesta-III –Kishangunj line is being provided by ERLDC since 08/12/2020 from 11:00 hours to 16:00 hours on daily basis. POWERGRID requested to increase the timing from 08:00 hours to 16:00 hours so that multiple teams can be engaged and the work can be completed at the earliest.

ERLDC agreed to look into.

POWERGRID informed that they are facing severe ROW issues and requested TPTL to give the details of proof of the compensation given to the local villagers so that the work could be completed in time.

TeST Committee advised TPTL to cooperate with Powergrid in resolving the ROW issues.

ITEM NO. B.9: Replacement of old RTU in Eastern Region for reporting of RTU / SAS to back-up Control Centre

Present status of RTU/SAS replacement / up-gradation: -

Utility	Status	Deliberation in last TeST meeting	Target
POWERGRID	Pending	Powergrid informed that NIT would be floated by February, 2020. In 6th TeST Meeting, POWERGRID Informed that NIT for replacement / upgradation of RTUs/SAS has been floated on June 2020.	
Maithon Right bank (MPL)	RTU/SAS Upgraded	ERLDC informed that SAS system at MPL is upgraded but reporting to ERLDC BCC is yet to be done and hence, requested MPL to call their vendor so that configuration at their end could be done properly for its dual reporting. MPL informed that they have taken remote support from M/s ABB to resolve the same.	
NTPC, Farakka (Stage I & II)	Pending	NTPC informed that they would complete the work by April, 2020.	April, 2020
Talcher STPS	RTU Upgraded	NTPC would further send the latest update to ERPC at the earliest.	
Kahalgaon STPS	Pending	NTPC Kahalgaon informed that they would complete the work by February, 2020.	February, 2020
Chuzachen HEP	Pending	Chuzachen HEP informed that they have installed the panels and they would complete the work by February, 2020 but reporting of data over IEC 104 protocol would not be possible because of non-availability of OPGW network. Powergrid informed that OPGW between Chuzachen - Rangpo would take 6-7 months more to complete.	With the availability of OPGW between Chuzachen - Rangpo.
JITPL	Pending	Powergrid informed that OPGW communication links from JITPL to nearest Powergrid S/s would be completed by May 2020. In 6th TeST Meeting, POWERGRID	December 2020

			being taken up with O&M for maintenance of old equipments.	
8	*Nabinagar Thermal Power Project – BRBCL*	*Only one link Sasaram-Nabinagar OPGW installation is pending. It would take two years for completion.*		*May 2021*
9	*Darlipalli STPS*	*Communication established.*	*Integration is in progress*	*May 2021*
10	*Teesta – V*	*One link established*		
11	*Farakka STPS – III*	*Link established*		*May 2021*
12	*MTPS Stage – II (Kanti)*	*Link established*		*May 2021*
13	*Rangit HPS*	*One link established*		

ITEM NO. B.8: Implementation of AGC at BRBCL : NTPC

For implementation of AGC at BRBCL , OPGW is required to be provided on the transmission line connecting to BRBCL Switchyard i.e on 400 KV BRBCL - Sasaram Ckt on priority basis to establish the connectivity between BRBCL and NLDC.

Members may discuss.

Deliberation in the meeting

Powergrid informed that the NIT was floated on 3rd March'2021 and bid opening is scheduled on 16th April 2021.

ITEM NO. B.9: Issues related to OPGW Installation in Teesta III - Kishanganj line- Powergrid

POWERGRID is implementing OPGW on Teesta III-Kishanganj TL under Fiber Optic Expansion Package (Additional Requirement). Out of total 215 Km, 90 Km work has been completed. But following issues are causing hindrance towards completion of the work.

A. Non-availability of A/R in non-auto mode: A/R permission not issued by ERLDC on 18.01.2021 & 21.01.2021 due to shutdown availed by TPTL. Such non-availability of work permit result in idling of approx. 70 manpower working in this link and adverse commercial impact to the executing agency. It is requested to allow OPGW work in case of such scenario in future as both work can go concurrently.

B. ROW issues / Old compensation issues: Severe ROW issues are being faced during execution of the work hampering the work and causing delay to the work. During erection of OPGW, work has been stopped at various locations due to ROW issues/Old compensation issues. In all locations, local villagers are demanding payment of old pending compensation from TPTL. ROW issues occurred till date is detailed as under:

Sr	RoW Location/Drum no	ROW Since	Contact Person, site
I)	272/3 (Drum No: 42; T No. 270 to 273)	11.02.2020	Ganesh Kumar Roy Hatidoba, Kharibari, Ragali
II)	T No. 274 (Drum No: 43; T No 274/5 to 273)	06.11.2019	Appu Datta Buraganj, Darjeeling
III)	T No 290A/0 (Drum No 50- T No 290/3 to 294B)	19.10.2019	Tejabpur, Kishanganj
IV)	T No. 294B/1,294B/4,294B/5 (Drum No 51: T. No 294B to 294D/1)	03.12.2019	Md Ezaz Pothiya, Kishanganj
v)	T No 308,311/2 (Drum No 58; T No 305/1 to 311/5)	09.01.2020	Nur Ishlam, Umar Ali, Bhola Lahara, Kishanganj
vi)	316/1 (Drum No 59; T No 311/5,316/1)	27.02.2020	*Mansur Ali, Zamuruddin Rahaman, Afroj Alam* (Marwa Toli, Khirdoho), Kishanganj
vii)	AP321N,AP319N,AP320 Drum-60	15.12.2020	*Kamal Kumar Ghosh, Hazi Mubarak Hussain at Kochadhaman*
viii)	AP 56, AP56/1 & AP57 Drum-9	07.02.2021	*Phal Bahadur (Vill-Tumin & Kokaley)*
ix)	AP72 to AP73 Drum-11	08.02.2021	*Vill-Singbel, PS-Singtam, East Sikkim*
x)	AP77 Drum-12	09.02.2021	*Vill-Ralap, PS-Singtam, East Sikkim*

Meeting has been done with district administration for resolving this issue.

Being owner of the line, TPTL is requested to provide necessary support for resolving the ROW issue

Members may discuss.

Deliberation in the meeting

Powergrid informed that out of total 215 km, 130 km work has been completed.

On query, Powergrid further told that it would take around 4 months to complete full work.

TPTL informed that the ROW issue of Bihar section has been taken up with the district administration and District Magistrate has agreed to provide police force from 15.03.2021 onwards.

TeST Committee advised Powergrid to expedite the work and complete it at the earliest as it would be difficult to allow shutdown during the rainy season. TeST Committee further advised TPTL to coordinate with Powergrid to resolve ROW issue.

All utilities are advised to furnish the detailed information to ERPC and ERLDC at the earliest.

Also, ERPC Secretariat should constitute a Communication System Audit Sub-Group comprising one member each from ERPC, ERLDC, CEA and One of the Eastern Region SLDCs who will scrutinize all the information received and identify the nodes for physical inspection. TeST Committee advised SLDC Bihar (chosen alphabetically), ERLDC and ERPC to nominate one person each from their respective organizations for this Phase-I of Audit.

For Phase-II of Audit, ERPC Secretariat would constitute the Audit committees for various utilities based on the recommendations of the sub-group and the nodes for physical inspection. The audit should be carried out in a planned manner by a team of three auditors.

Further TeST Committee advised all the utilities to follow the guidelines for utilization of Inter-state OPGW network to prevent any interruption in the availability of services.

ITEM NO. B.13: OPGW Installation in Eastern Region

B 13.1 Issues related to OPGW Installation in Teesta III –Kishanganj line

POWERGRID is implementing OPGW on Teesta III-Kishanganj TL under Fiber Optic Expansion Package (Additional Requirement). Out of total 215 Km, 151 Km work has been completed. But following issues are causing hindrance towards completion of the work.

A. ROW issues / Old compensation issues:

POWERGRID is implementing OPGW on Teesta III- Kishanganj TL under Fiber Optic Expansion Package (Additional Requirement). Out of total 215 Km, 151 Km work has been completed. But severe ROW issues are being faced at site due to old compensation issues causing hindrance towards completion of the work.

The status of ROW issues occurred till date is detailed as under:

Sl. No.	RoW Location/Drum no	ROW Since	Contact Person, site	Status
I)	272/3 (Drum No: 42; T No. 270 to 273)	11.02.2020	Ganesh Kumar Roy Hatidoba,Kharibari, Ragali	Pending due to old compensation demand during TL Construction by villager.
II)	T No. 274 (Drum No: 43; T No 274/5 to 273)	06.11.2019	Appu Datta Buraganj, Darjeeling	Resolved. Issue resolved on 18.04.2021 with help of Administration. Work completed 20.04.2021.
III)	T No 290A/0 (Drum No 50- T No 290/3 to 294B)	19.10.2019	Tejabpur,Kishanganj	Resolved. Issue resolved on 05.04.2021 with help of Administration. Work completed 12.04.2021.

IV)	T No. 294B/1,294B/4,294B/5 (Drum No 51: T. No 294B to 294D/1)	03.12.2019	Md Ezaz Pothiya, Kishanganj	Resolved. Issue resolved on 05.04.2021 with help of Administration. Work completed 12.04.2021.
v)	T No 308,311/2 (Drum No 58; T No 305/1 to 311/5)	09.01.2020	Nur Ishlam, Umar Ali, Bhola Lahara, Kishanganj	Resolved. Issue resolved on 16.03.2021 with help of Administration. Work completed 19.03.2021.
vi)	316/1 (Drum No 59; T No 311/5,316/1)	27.02.2020	Mansur Ali, Zamuruddin Rahaman, Afroj Alam (MarwaToli, Khirdoho), Kishanganj	Resolved. Issue resolved on 21.03.2021 with help of Administration. Work completed 26.03.2021.
vii)	AP321N,AP319N,AP320 Drum-60	15.12.2020	Kamal Kumar Ghosh, Hazi Mubarak Hussain at Kochadhaman	Resolved. Issue resolved on 01.04.2021 with help of Administration. Work completed 03.04.2021.
viii)	AP 56, AP56/1 & AP57 Drum-9	07.02.2021	PhalBahadur (Vill-Tumin&Kokaley)	Pending due to old compensation demand during TL Construction by villager.
ix)	AP72 to AP73 Drum-11	08.02.2021	Vill-Singbel, PS-Singtam, East Sikkim	Pending due to old compensation demand during TL Construction by villager.
x)	AP77 Drum-12	09.02.2021	Vill-Ralap, PS-Singtam, East Sikkim	Pending due to old compensation demand during TL Construction by villager.
xi)	Location number AP 195 to AP 197/1 (Drum-27B, 28 & 29)	11.03.2021	Satish Pokhrun Vill,PS&PO:Relling Dist.: Darjelling Pin: 734201	Pending due to old compensation demand during TL Construction by villager.

In 8th TeST Meeting, TeST Committee advised Powergrid to expedite the work and complete it at the earliest as it would be difficult to allow shutdown during the rainy season. TeST Committee further advised TPTL to coordinate with Powergrid to resolve ROW issue.

TPTL &Powergrid may update.

Deliberation in the meeting

Powergrid representative informed that ROW issues of Bihar region had already been resolved. He further informed that there are pending ROW issues in West Bengal and Sikkim. However Powergrid submitted that as per TPTL's confirmation ROW issues of Sikkim had been resolved. Powergrid representative further added that pending work of OPGW would be completed in 3 months if lockdown restriction eases for mobilization of the team.

Test Committee advised Powergrid to coordinate with TPTL to resolve ROW issues at the earliest.

On query, Powergrid representative informed that OPGW work of LILO section of Teesta-III-Kishanganj line (to be LILOed at Rangpo) would also be completed before commissioning of the LILO section.

Powergrid was also advised to share the status of OPGW work of 400 kV Teesta-III-Dikchu-

Deliberation in the meeting

TeST Committee suggested that Powergrid may be included as a part of Communication System Audit Sub-Group for Phase-I of audit. TeST Committee further opined that consultation from CEA can be taken, if required. TeST Committee advised SLDC Bihar (chosen alphabetically), ERLDC, ERPC and Powergrid to nominate one person each from their respective organizations for this Phase-I of Audit.

ITEM NO. B.16: OPGW Installation in Eastern Region

B 16.1 Issues related to OPGW Installation in Teesta III –Kishanganj line

POWERGRID is implementing OPGW on Teesta III-Kishanganj TL under Fiber Optic Expansion Package (Additional Requirement). Out of total 215 Km, 152 Km work has been completed. But following issues are causing delay as well as adverse commercial impact towards completion of the work.

A. Non-availability of A/R in non-auto mode: Non-availability of work permit result in delay of project and idling of man-hours which has adverse commercial impact to the executing agency. Following is the summary:

Duration	Non-availability Hours	Status of Permission of A/R in non-auto mode for OPGW work	References
01.11.2019 to 24.03.2020	486 Hrs (Correspond to 49 Days)	Permission with restricted timing (effective working time of 4-5 hrs in average)	Letter to ERLDC dtd 28.11.2019
25.03.2020 to 29.06.2020		Work stopped due to Outbreak of Covid-19	
30.06.2020 to 31.10.2020	1240 Hrs (124 Days)	Permission disallowed due to high hydro scenario.	Letter to ERLDC dtd 29.06.20 Letter from ERLDC dtd 01.07.20
08.12.2020 to 20.01.2021	134 Hrs (Correspond to 13 Days)	Permission with restricted timing (effective working time of 4-5 hrs in average)	Letter to ERLDC dtd 12.12.20
01.07.2021 to 31.10.2021	1230 Hrs (123 Days)	Permission disallowed due to high hydro scenario.	Letter to ERLDC dtd 31.07.20 & OCC shutdown list.
05.11.2019, 22.11.2019, 18.12.2019, 08.01.2020, 08.12.2020, 18.01.2021, 21.01.2021, 16.03.2021	80 Hrs (8 Days)	In addition to above, Permission not received for entire day	
Total Non-available Period	3170 Hrs (317 Days)		

Extending the work beyond a certain period inflicts heavy commercial loss to the executing agency. As this type of work usually awarded with no PV clause, the agency loses interest for the work.

Deliberation in the meeting

TeST Committee referred this issue to next OCC Meeting.

B. ROW issues / Old compensation issues: Severe ROW issues are being faced during execution of the work hampering the work and causing delay to the work. During erection of OPGW, work has been stopped at various locations due to ROW issues/Old compensation issues. In all locations, local villagers are demanding payment of old pending compensation from TPTL. ROW issues have been resolved at some places however based on past experience, owner of the line, M/s TPTL is requested to provide necessary support for resolving the ROW issue. Following is the summary:

SL	RoW Location/Drum no	ROW Since	Contact Person, site	Status
I)	272/3 (Drum No: 42; T No. 270 to 273)	11.02.2020	Ganesh Kumar Roy Hatidoba,Kharibari, Ragali	**Resolved.** Issue resolved on 13.08.2021 with help of Administration. Work completed 17.08.2021.
II)	T No. 274 (Drum No: 43; T No 274/5 to 273)	06.11.2019	Appu Datta Buraganj, Darjeeling	**Resolved.** Issue resolved on 18.04.2021 with help of Administration. Work completed 20.04.2021.
III)	T No 290A/0 (Drum No 50- T No 290/3 to 294B)	19.10.2019	Tejabpur, Kishanganj	**Resolved.** Issue resolved on 05.04.2021 with help of Administration. Work completed 12.04.2021.
IV)	T No. 294B/1,294B/4,294B/5 (Drum No 51: T. No 294B to 294D/1)	03.12.2019	Md EzazPothiya, Kishanganj	**Resolved.** Issue resolved on 05.04.2021 with help of Administration. Work completed 12.04.2021.
v)	T No 308,311/2 (Drum No 58; T No 305/1 to 311/5)	09.01.2020	Nur Ishlam, Umar Ali, Bhola Lahara, Kishanganj	**Resolved.** Issue resolved on 16.03.2021 with help of Administration. Work completed 19.03.2021.
vi)	316/1 (Drum No 59; T No 311/5,316/1)	27.02.2020	Mansur Ali, ZamuruddinRahaman, AfrojAlam (Marwa Toli, Khirdoho), Kishanganj	**Resolved.** Issue resolved on 21.03.2021 with help of Administration. Work completed 26.03.2021.
vii)	AP321N,AP319N,AP320 Drum-60	15.12.2020	Kamal Kumar Ghosh, Hazi Mubarak Hussain at Kochadhaman	**Resolved.** Issue resolved on 01.04.2021 with help of Administration. Work completed 03.04.2021.
viii)	AP 56, AP56/1 & AP57 Drum-9	07.02.2021	Phal Bahadur (Vill-Tumin&Kokaley)	**Pending** due to old compensation demand during TL Construction by villager.
ix)	AP72 to AP73 Drum-11	08.02.2021	Vill-Singbel, PS-Singtam, East Sikkim	**Pending** due to old compensation demand during TL Construction by villager.
x)	AP77 Drum-12	09.02.2021	Vill-Ralap, PS-Singtam, East Sikkim	**Pending** due to old compensation demand during TL Construction by villager.
xi)	Location number AP 195 to AP 197/1 (Drum-27B, 28 & 29)	11.03.2021	Satish Pokhrun Vill,PS&PO:Relling Dist.: Darjelling Pin: 734201	**Pending** due to old compensation demand during TL Construction by villager.

Powergrid may explain. TPTL may respond.

Deliberation in the meeting

Powergrid representative informed that most of the ROW issues had been resolved except for 3-4 ROW

issues.

TPTL representative submitted that they had already resolved all the compensation related issues and no compensation related issues are pending from their side. He further informed that in Sikkim it is observed that local people are demanding money even after compensation had been paid by TPTL.

TeST Committee advised Powergrid to resolve the pending ROW issues and also advised TPTL to help Powergrid if any further help is required.

B 16.2 ROW Issues related to OPGW Installation in 132kV Rangpo - Chuzachen line:
Out of 22 km of stringing work, 19km of OPGW had been installed. Severe ROW is being faced in pending 03 km section (T-33 to T-43) and work is stopped since April-2021. Matter has been taken up with Energy & Power Dept,Sikkim and Dist. Administration, however the issue is yet to be resolved. Energy and Power Dept., Siklkim, being the owner of the line, is requested to extend necessary support in resolution of ROW issues at the earliest.

Powergrid may explain. Sikkim may respond.

Deliberation in the meeting

Powergrid representative informed that in 132kV Rangpo - Chuzachen line, out of 22 km of stringing work, 19km of OPGW had been installed and severe ROW had been faced in pending 03 km section (T-33 to T-43) and work had been stopped since April-2021. He further stated that the matter was discussed with Dist. Administration and they had agreed to provide police protection while doing the pending OPGW installation work. He also requested Sikkim to help them in carrying out OPGW installation work smoothly.

Sikkim representative informed that they would take up this matter with their higher authority and would definitely provide their support to Powergrid in carrying out pending OPGW installation work.

B 16.3 Status of OPGW of Motihari- Gorakhpur T/L under DMTCL jurisdiction
OPGW Installation has been completed in Motihari- Gorakhpur Ckt-2 (153 km), under POWERGRID jurisdiction in Jan'21. Post permanent restoration of400 kV D/C Motihari- Gorakhpur T/L in Gandak river by DMTCL, POWERGRID intends to commission of the said OPGW link on immediate basis and deputation of communication vendor has already been tied up.

DMTCL is requested to confirm the readiness of the OPGW & Approach Cable in its own jurisdiction, so that mobilization of Communication Engineer for commissioning of the Motihari- Gorakhpur OPGW link may be carried out on immediate basis.

In 9thTeST Meeting, Powergrid representative requested DMTCL to confirm the readiness of the OPGW &approach Cable in its own jurisdiction, so that mobilization of Communication Engineer for commissioning of the Motihari- Gorakhpur OPGW link may be carried out on immediate basis.

DMTCL representative informed that ROW issues would be resolved within one week. He further told that DMTCL would coordinate with their team for approach cable and would inform the same to Powergrid accordingly.

TeST Committee advised Powergrid and DMTCL to coordinate with each other to expedite the process.

FurtheronenquiryPowergrid representative informed that out of 201 km of Barh- Gorakhpur OPGW work, 85 km of OPGW work is pending and would be completed in three months.

DMTCL and Powergrid may update.

This is information to all and record in TCC/ERPC meeting.

Members may note.

Deliberation in the meeting

Members noted.

ITEM NO. B.25: Issues related to OPGW installation in Teesta III – Kishanganj Line: Powergrid

Powergrid is implementing OPGW on Teesta III-Kishanganj TL under Fiber Optic Expansion Package (Additional Requirement). Out of total 215 Km, 168 Km work has been completed however following issues are causing hindrance towards completion of the work.

A. **Non-availability of A/R in non-auto mode:** A/R permission were not provided due to high hydro season. Therefore, work is kept on hold since July 2022.

B. **ROW issues / Old compensation issues:** During erection of OPGW, work had been stopped at various locations due to ROW issues/Old compensation issues. In all locations, local villagers are demanding payment of old pending compensation or compensation for shifting of houses due to induction. ROW issues occurred till date is detailed as under:

Sl. No.	ROW Tower No.	ROW affected Drum No.	ROW creator details	ROW issue
1	Tower No. 144/1	20	**Name of the landowner:** Krishna Bahadur Manger (Mob: 7872607153) Village: Chisopani PW. PS: Jorethang PO: Jorethang Dist.: South Sikkim	Landowner claims that M/s TPTL had damaged land and cultivation during construction and a wall had been promised which hasn't been erected till date along with pending compensation issue. ****Resolved by POWERGRID****
2	Tower No. 137/0 & 138/0	19	**Name of the person:** Didn't disclose. Village: Samsibung PS: Namchi PO: Namchi. Dist.: South Sikkim	Pending Compensation Issues
3	Tower No. 126/0 & 127/0	18	**Name of the landowner:** Shyam Kumar Rai (Mob: 9609875663) Village: Kamrang PS: Namchi PO: Namchi Dist.: South Sikkim	Landowner claims house falling under corridor. Demands compensation from for shifting of same.

4	Tower No. 133/0 to 136/0	18	**Name of the landowner:** K B Rai (+5 Brothers) (Mob: 9083071127) Village: Denchung PS: Namchi PO: Namchi Dist.: South Sikkim	Landowner along with his 5 brothers are claiming compensation for houses falling under corridor.
5	Tower No. 115/0	17	**Name of the landowner:** Gajendra Chettri (Mob: 8436105960). Village: Mamley PS: Namchi PO: Namchi Dist.: South Sikkim	Boulders kept near wall of landowner which hadn't been removed. Induction related problems faced by landowner
6	Tower No. 119 to 122	16A	**1) Mani Kumar Rai (Mob: 6294716006)** Village: Lower Jaubari (Chiyadara) PS: Namchi PO: Namchi Dist.: South Sikkim	Landslides due to damage to trees and crops during construction have caused loss to villagers and locals for which compensation demand has been made for which bills prepared but payment pending till date as per landowners
7			**2) Suk Dhan Rai** Village: Lower Jaubari (Chiyadara) PS: Namchi PO: Namchi Dist.: South Sikkim	
8			**3) Aita Raj Rai** Village: Lower Jaubari (Chiyadara) PS: Namchi PO: Namchi Dist.: South Sikkim	
9			**4) Ratan Bdr. Thapa** Village: Lower Jaubari (Chiyadara) PS: Namchi PO: Namchi Dist.: South Sikkim	
10			**5) L. B Thapa** Village: Lower Jaubari (Chiyadara) PS: Namchi PO: Namchi Dist.: South Sikkim	
11			**6) San Chay Rai (Mob: 7076885910**) Village: Lower Jaubari (Chiyadara) PS: Namchi PO: Namchi Dist.: South Sikkim	
12	Tower No. 122 to 126	16B	**7) Purna Bahadur Rai (Mob: 9593739944)**	Induction related issues.

			Village: Lower Tingrithang PW PS: Namchi PO: Namchi Dist.: South Sikkim Pin: 737126	Land owner claims wires too close to house and therefore claims compensation for housing property.
13	Tower No 55 to 60	9	**8) Phal Bahadur (Mob: 8001630095/9647872113)** Village: Tumin & Kokaley P.S: Singtam P.O: Tumin Dist: East Sikkim	Previous Compensation related issues during Construction
14	Tower No 68 to 74	11	**9) Person didn't disclose name** Village: Singbel P.S: Singtam P.O: Makha Dist.: East Sikkim	
15	Tower No. 74 to 81	12	**10) Person didn't disclose name** Village: Ralap P.S: Singtam P.O: Makha Dist.: East Sikkim	
16	Tower No. 195-197/1	27B	**11) Satish Pokhrun (Mob.: 7872446069)** Village:Relling P.S: Relling Dist.: Darjeeling	Previous Compensation related issues during Construction
17	Tower No. 197/1 - 201/1	28		
18	Tower No. 201/1 - 209/1	29		

Several Meetings has been done with district administration for resolving the above issues. However, it is requested that**,** M/s TPTL (being owner of the line) may provide necessary support for resolving the ROW issue.

Powergrid may explain. TPTL may update.

Deliberation in the meeting

Powergrid representative informed that regarding OPGW installation work of Teesta III-Kishanganj TL installation work for 168 Km work had been completed out of 215 km, however several ROW issues are being faced by site engineers in remaining portion of line subsequently work had been stopped at various locations due to ROW issues/Old compensation issues. He further added that in all locations, local villagers are demanding payment of old pending compensation or compensation for shifting of houses due to induction.

TPTL representative was not available in the meeting.

ERPC representative informed that as per communication received from TPTL, no compensation is pending from their side.

Annexure-C.3

POWER SYSTEM DEVELOPMENT FUND

Status of the Projects in Eastern Region

Sl No	State	Entity	Name of the scheme	Grant Approved	Grant sanctioned on	1st Installment grant released on	Completion Schedule	Completion schedule w.r.t date of 1st instalment	Grant aviled so far	Under process of release	Total awards amount of placed of till date	Latest status
1	**Bihar**	**BSPTCL**	Renovation and Upgradation of protection system of substations. (18)	64.22			24		56.04		69.195	90% grant availed on award cost.
2			Installation of Capacitor bank in 20 Nos of Grid Sub Station. (74)	19.40			24		18.62		21.55	
			Total	**83.10**					**73.03**		**90.745**	
5	**Jharkhand**	**JUSNL**	Renovation & Upradation of protection system of Jharkhnad. (161)	138.13	15-Nov-17	28-Mar-19	16	28-Jul-20	114.68	1.01	145.674	Project Completed.
6			Reliable Communication & data acquisition system upto 132kV Substations ER. (177)	22.36	24-May-19		24					Price bid has been opened. Tender on awarding stage.
			Total	**160.49**					**114.68**		**145.674**	
7	**Odisha**	**OPTCL**	Renovation and Upgradation of protection system of substaions. (08)	162.50	11-May-15	22-Mar-16	24	22-Mar-18	46.04		63.31	Project Completed on Dec-20. Request for release of final 10 % fund has been placed.
8			Implementation of OPGW based reliable communication at 132 kv and above substations. (128)	25.61	15-Nov-17	29-Mar-19	36	29-Mar-22	23.04		51.22	90% grant availed on award cost. Work In Progress
9			Installation of 125 MVAR Bus Reactor along with construction of associated by each at 400kV Grid S/S of Mendhasal, Meramundali & New Duburi for VAR control & stabilisation of system voltage. (179)	27.23	27-Jul-18	1-Apr-19	18	1-Oct-20	8.17		24.5	90% grant availed . Rest work in progress
10			Implementation of Automatic Demand Management System (ADMS) in SLDC, Odisha. (196)	2.93	24-May-19	19-Feb-20	10	19-Dec-20	0.713		0.713	30% grant availed. Work in Progress.
11			Protection Upgradation and installation os Substation Automatic System (SAS) for seven nos of 220/132/33kV Substations (Balasore, Bidanasi, Budhipadar, Katapali, Narendrapur, New-Bolangir & Paradeep). (209)	29.56	24-May-19	13-Feb-20	18	13-Aug-21	8.87		32.85	30% grant availed. Work in Progress.
12		**OHPCL**	Renovation and Upgradation of protection and control system of OHPC. (109)	22.35	22-May-17	25-May-18	24	25-May-20	14.94		21.25	90% grant availed on award cost.
			Total	**270.18**					**101.35**		**193.42**	
14	**West Bengal**	**WBSETCL**	Installation of switchable reactor & shunt capacitor for voltage improvement. (88)	43.37	22-May-17	22-Jun-18	19	22-Jan-20	33.07		40.83	90% grant availed on award cost. Will get completed by Oct'21
15			Renovation & Modernisation of Transmission System. (87)	70.13	22-May-17	25-Jun-18	25	25-Jul-20	63.12		96.44	90% grant availed on award cost. Will get completed by Mar'22
16			Installation of Bus Reactors at different 400kV Substation within the state of West Bengal for reactive power management of the Grid. (210)	71.74	24-May-19	23-Oct-19	19	23-May-21	39.3		45.62	30% grant availed on award cost. 04 Nos. of Reactors will be commissioned by December 2021. LoA of the 5th Reactor is yet to be placed.
17			Project for establishment of reliable communication and data acquisition at different substation at WBSWTCL. (222)	31.19	24-May-19	23-Oct-19	25	23-Nov-21	3.12			The tender has been been cancelled for OPGW. Re-tendering has to be done.
18			Implementation of Integated system for Scheduling, Accounting, Metering and Settlement of Transactions (SAMAST) system in West Bengal. (197)	10.08	43910		12					10% grant not yet requested
19		**WBPDCL**	Renovation and Modernization of 220/ 132 kV STPS switch yard and implementation of Substaion Automation System. (72)	23.48	5-Sep-16	18-May-17	18	18-Nov-18	21.13		32.09	Project Completed
21			Renovation and Modernization of switchyard and related protection system of different power stations (BTPS, BKTPS and KTPS) of WBPDCL (155)	45.16	27-Jul-18	27-Mar-19	12	27-Mar-20	34.52		41.68	Project Completed.
			Total	**295.15**					**194.26**		**256.661**	

POWER SYSTEM DEVELOPMENT FUND												
Status of the Projects in Eastern Region												
Sl No	**State**	**Entity**	**Name of the scheme**	**Grant Approved**	**Grant sanctioned on**	**1st Installment grant released on**	**Completion Schedule**	**Completion schedule w.r.t date of 1st instalment**	**Grant aviled so far**	**Under process of release**	**Total awards amount of placed of till date**	**Latest status**
22	**DVC**	**DVC**	Renovation and Upgradation of the protection and control system of Ramgarh Sub Station. (81)	25.96	2-Jan-17	31-May-17	24	31-May-19	22.95	2.57	28.603	Project Completed.
23			Renovation and Modernization of control and protection system and replecement of equipment at Parulia, Durgapur, Kalyanewari, Giridhi Jamsedpur, Barjora, Burnpur, Dhanbad and Bundwan substation. (106)	140.50	16-May-17	14-Dec-17	24	14-Dec-19	102.43	0.98	127.684	
			Total	**166.46**					**125.38**		**156.287**	
24	**Sikkim**	**ENPD, Sikkim**	Drawing of optical ground wire (OPGW) cables on existing 132kV & 66kV transmission lines and integration of leftover substations with State Load Despatch Centre, Sikkim. (173)	10.00	24-May-19		18		3.00		20	30% grant availed on award cost
				10.00					**3.00**		**20.00**	
26	**ERPC**	**ERPC**	Creation and Maintenance of web based protection database management. (67)	20.00	17-Mar-16	28-Jun-16	18	28-Dec-17	14.83		16.48	Project Completed
27			Study Programme on power trading at NORD POOL Academy for Power System Engineers of Eastern Region. (122)	5.46	27-Jul-18	27-Mar-19	13	27-Apr-20	4.61		5.37	
28			Traning Program for Power system Engineers of various constituents of Eastern Region. (117)	0.61	27-Jul-18	11-Apr-19	24	11-Apr-21	0.54		0.60888	90% grant availed on award cost.
			Total	**26.07**					**19.98**		**22.45888**	
			GrandTotal	**1,011.46**					**631.68**		**885.25**	

Annexure-C.5

Date of PFR testing scheduled /completed for generating stations in ER

Sr. No	Station	Generating Unit	Test schedule	Remarks
1	TALCHER STAGE 2	3	Unit 3 - 5: 23-11-2020 to 28-11-2020	Testing for unit 6 yet to be conducted
2		4		
3		5		
4		6		
5	Farakka	2	01-02-2021 to 10-01-2021	Testing completed
6		3		
7		4		
8		5		
9		6		
10	Kahalgaon	1	August'21	Testing completed for Unit 1
11		5		
12		6		
13		7		
14	Barh	4	18-02-2021 to 21-02-2021	Scheduled
15		5		
16	Teesta V	1	07-01-2021 - 08-01-2021	Testing completed
17	Teesta III	1	30-01-2021 - 10-02-2021	Testing completed
18		2		
19		3		
20		4		
21		5		
22		6		
23	Dikchu	1	Unit#1: 6th & 7th April' 21 Unit#2: 8th & 9th April' 21	Scheduled
24		2		
25	MPL	1	-	Postponed due to some technical issue
26		2		
27	GMR	1	August'21	Testing Completed
28		2		
29		3		
30	JITPL	1	August'21	Scheduled
31		2		
32		3		
33	NPGCL	1	August'21	Testing Completed

34	BRBCL		1st Week of August'21	Testing Completed
35	APNRL	1&2	July'21-August-21	Testing Completed
36	BBGS	1,2&3	26th Feb 22 - 3rd Mar 22	Scheduled

Annexure C7

Power Plant	Unit No	PSS tuned (Yes/No)	PSS in Service (Yes/No)	Last PSS Tuning Date	Whether Done in Last 3 Years	Whether Next to be planned	Planned Next PSS Tuning
West Bengal							
Kolaghat-WBPDCL	3	No	Yes	Long Back	No	Yes	To be done within Jan./Feb. 2022 after DAVR replacement.
PPSP	1	No	Yes	2009	No	Yes	Dec-21
PPSP	2	No	Yes	2009	No	Yes	Dec-21
PPSP	3	No	Yes	2009	No	Yes	Dec-21
PPSP	4	No	Yes	2009	No	Yes	Dec-21
DVC							
Raghunathpur-DVC	1	No	No		No Detail	Yes	Dec-22
Raghunathpur-DVC	2	No	No		No Detail	Yes	Dec-22
Waria	4	Yes	Yes	2008	No	Yes	Unit Is out of Service
ISGS							
Kahalgaon NTPC	1	Yes	Yes	2017	Yes	Yes	Apr-21
Kahalgaon NTPC	3	Yes	Yes	2016	Yes	Yes	Jul-21
Kahalgaon NTPC	4	Yes	Yes	2015	No	Yes	Mar-21
Kahalgaon NTPC	6	Yes	Yes	2009	No	Yes	Mar-21
Barh NTPC	1		Yes				
Barh NTPC	4		Yes	2015		Yes	In Next AOH
BRBCL	2	Yes	Yes	2019	Yes	Yes	Jun-21
KBUNL	1	Yes	Yes	2014	No	Yes	2021-22
KBUNL	2	Yes	Yes	2014	No	Yes	2021-22
IPP							
Maithon Power Limited	2	Yes	Yes	2020	Yes	Yes	Last report not satisfactory
JITPL	1	Yes	Yes	2016	Yes	Yes	Jul-21
JITPL	2	Yes	Yes	2016	Yes	Yes	Jul-21
Orissa							
IB TPS	1	Yes	Yes	2011	No	Yes	Mar'2021
IB TPS	2	Yes	Yes	2012	No	Yes	Mar'2021
Upper Indravati	1	Yes	No	2015	No	Yes	To be updated by OHPC
Upper Indravati	2	Yes	No	2015	No	Yes	To be updated by OHPC
Upper Indravati	3	Yes	No	2000	No	Yes	To be updated by OHPC
Upper Indravati	4	Yes	No	2001	No	Yes	To be updated by OHPC
Balimela	1 (60 MW)			No detail		Yes	To be updated by OHPC
Balimela	2 (60 MW)			No detail		Yes	To be updated by OHPC
Balimela	3 (60 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Balimela	4 (60 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Balimela	5 (60 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Balimela	6 (60 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Balimela	7 (75 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Balimela	8 (75 MW)	No	No	Not tuned	No	Yes	To be updated by OHPC
Upper Kolab	1	Yes	Yes	2007	No	Yes	March'2023
Upper Kolab	2	Yes	Yes	2007	No	Yes	March'2023
Upper Kolab	3	Yes	Yes	2007	No	Yes	March'2023
Upper Kolab	4	Yes	Yes	2007	No	Yes	March'2023
Sterlite	4 X 600			No detail		Yes	To be updated by SLDC
Jharkhand							
Tenughat	1	Yes	Yes	2017	Yes	Yes	Dec-21
Tenughat	2	Yes	Yes	2017	Yes	Yes	Dec-21
Bhutan							
Tala	1	No	Yes			Yes	To be updated by BPC
Tala	2	No	Yes			Yes	To be updated by BPC
Tala	3	No	Yes			Yes	To be updated by BPC
Tala	4	No	Yes			Yes	To be updated by BPC
Tala	5	No	Yes			Yes	To be updated by BPC
Tala	6	No	Yes			Yes	To be updated by BPC
Chukha	1	No	Yes	2005	No	Yes	To be updated by BPC
Chukha	2	No	Yes	2005	No	Yes	To be updated by BPC
Chukha	3	No	Yes	2005	No	Yes	To be updated by BPC
Chukha	4	No	Yes	2005	No	Yes	To be updated by BPC
Mangdechu	1	No	Yes			Yes	Sep-21
Mangdechu	2	No	Yes			Yes	Sep-21

Anticipated Peak Demand (in MW) of ER & its constituents **Annexure-D1**

Feb-23

1	**BIHAR**	**Demand (MW)**	**Energy Requirement (MU)**
	NET MAX DEMAND	5400	2583
	NET POWER AVAILABILITY- Own Sources	607	234
	Central Sector+Bi-Lateral	6867	3017
	SURPLUS(+)/DEFICIT(-)	2074	668
2	**JHARKHAND**		
	NET MAXIMUM DEMAND	1850	900
	NET POWER AVAILABILITY- Own Source	462	168
	Central Sector+Bi-Lateral+IPP	1083	584
	SURPLUS(+)/DEFICIT(-)	-305	-148
3	**DVC**		
	NET MAXIMUM DEMAND	3225	1830
	NET POWER AVAILABILITY- Own Source	5311	3027
	Central Sector+MPL	283	150
	Bi- lateral export by DVC	2019	1356
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	350	-9
4	**ODISHA**		
	NET MAXIMUM DEMAND (OWN)	4100	2285
	NET MAXIMUM DEMAND (In Case of CPP Drawal)	5500	2935
	NET POWER AVAILABILITY- Own Source	3235	1765
	Central Sector	1642	967
	SURPLUS(+)/DEFICIT(-) (OWN)	777	447
	SURPLUS(+)/DEFICIT(-) (In Case, 600 MW CPP Drawal)	-623	-203
5	**WEST BENGAL**		
5.1	**WBSEDCL**		
	NET MAXIMUM DEMAND	5545	2950
	NET MAXIMUM DEMAND (Incl. Sikkim)	5550	2953
	NET POWER AVAILABILITY- Own Source (Incl. DPL)	4706	2506
	Central Sector+Bi-lateral+IPP&CPP+TLDP	2122	979
	EXPORT (To SIKKIM)	5	3
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	1278	532
5.2	**CESC**		
	NET MAXIMUM DEMAND	1550	640
	NET POWER AVAILABILITY- Own Source	700	431
	IMPORT FROM HEL	540	226
	TOTAL AVAILABILITY OF CESC	1240	657
	DEFICIT(-) for Import	-310	17
	WEST BENGAL (WBSEDCL+CESC+IPCL)		
	(excluding DVC's supply to WBSEDCL's command area)		
	NET MAXIMUM DEMAND	7095	3590
	NET POWER AVAILABILITY- Own Source	5406	2937
	CS SHARE+BILATERAL+IPP/CPP+TLDP+HEL	2662	1205
	SURPLUS(+)/DEFICIT(-) BEFORE WBSEDCL'S EXPORT	973	552
	SURPLUS(+)/DEFICIT(-) AFTER WBSEDCL'S EXPORT	968	549
6	**SIKKIM**		
	NET MAXIMUM DEMAND	126	66
	NET POWER AVAILABILITY- Own Source	2	1
	Central Sector	178	77
	SURPLUS(+)/DEFICIT(-)	54	12
	EASTERN REGION		
	NET MAXIMUM DEMAND	21369	12232
	NET MAXIMUM DEMAND (In Case of CPP Drawal of Odisha)	22741	12964
	BILATERAL EXPORT BY DVC (Incl. Bangladesh)	1860	1384
	EXPORT BY WBSEDCL TO SIKKIM	5	4
	EXPORT TO B'DESH & NEPAL OTHER THAN DVC	642	478
	NET TOTAL POWER AVAILABILITY OF ER	25719	12776
	(INCLUDING CS ALLOCATION +BILATERAL+IPP/CPP+HEL)		
	SURPLUS(+)/DEFICIT(-)	4345	540
	SURPLUS(+)/DEFICIT(-) (In Case, 600 MW CPP Drawal of Odisha)	2973	-192