

भारत सरकार Government of India विद्युत मंत्रालय Ministry of Power पूर्वी क्षेत्रीय विद्युत समिति Eastern Regional Power Committee

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NO. ERPC/EE/OPERATION/2022-23/ 1488

DATE: 20.02.2023

То

As per list enclosed.

Sub: Minutes of 199th OCC Meeting held on 20.01.2023 (Friday) virtually through MS Teams Platform- reg.

Sir,

Please find enclosed minutes of 199th OCC Meeting held on 20.01.2023 virtually through MS Teams Platform for your kind information and necessary action. The same is also available at ERPC website (www.erpc.gov.in).

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

This issues with the approval of Member Secretary.

Regards,

Yours faithfully,

(A. De) EE(Opération)

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



MINUTES OF 199th OCC MEETING

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

EASTERN REGIONAL POWER COMMITTEE

MINUTES OF 199TH OCC MEETING HELD ON 20.01.2023 (FRIDAY) AT 10:30 HRS

Member Secretary, ERPC, chaired the 199th OCC meeting. Welcoming all the participants to the meeting, he outlined the performance of ER Grid during December-2022 in brief. He highlighted the following points:

- In December-2022, energy consumption of ER was 12,890 MU which was 8.8% more than that of December'2021.
- In December-2022, Peak demand of ER was 20,719 MW which was almost same as that of December'2021.
- During December-2022, 57.5% of time, grid frequency was in IEGC Band (49.90Hz-50.05Hz). The reasons for this may be attributed to the implementation of new DSM Regulations.
- Eastern Region thermal PLF was 75.7% during the month of December 2022 and cumulative thermal PLF of ER was 73.9%. Lower PLF of Eastern Region may be attributed to forced outage of some units and inadequate coal availability. Santaldih, Sagardighi, Talcher, Bokaro, Barauni, Darlipalli, MPL units achieved PLF more than 90%.
- Trail operation of North Karanpura was successfully completed and a load of more than 700 MW was achieved during the trial operation. Coal transportation was still an issue for North Karanpura and NTPC was advised to take up the matter with the highest level for resolution of the same.
- As per LGBR 2022-23, total 1150 MW thermal capacity was scheduled for planned maintenance in February-2023.
- Transmission line (132 KV & above) commissioned during December 2022.
 - *I.* 2nd circuit of stringing of 220 KV Darbhanga Samastipur (New) D/c line by BSPTCL.
 - II. 220 KV Muzaffarpur (PG) Chhapra (New) D/c line by BSPTCL.
- A unit of Kahalgoan was under reserve shutdown. With the operation of
- Coal stock position of the power stations of Eastern Region had improved. He further advised all the thermal power plants to build up their coal stock as per their normative requirement.

<u> PART – A</u>

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.

Deliberation in the meeting

Members confirmed.

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.
- 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.

Deliberation in the meeting

ERLDC representative submitted that most of the generation (approx. 1200 MW) at OPGC end is evacuated through Lapanga side and very minimal power flows towards Jharsuguda side. Tripping of one line of OPGC-Lapanga leads to increase in the sensitivity of the other line as the power flow through the line exceeds over 1050 MW which subsequently leads to tripping after being overloaded for a considerable period of time.

After tripping of both the OPGC-Lapanga lines, all the power gets wheeled to Meramundali through Jharsuguda-A, Jharsuguda-B and Sterlite leading to overloading of 400KV Jharsuguda-Sterlite lines close to their thermal limit.

ERLDC representative proposed that a bus-splitting scheme may be devised in which OPGC unit-3 may be connected to Lapanga end and unit-4 to Jharsuguda-A end in order to restrict the line loading of OPGC-Lapanga to 600 MW. The bus-splitting scheme would be implemented when one line of OPGC-Lapanga is tripped and would be taken out of action after restoration of the line. He further submitted that implementation of bus-splitting scheme would lead to reduced loading of OPGC-Lapanga and Jharsuguda-Sterlite lines and N-1 reliability of 400 KV Jharsuguda-Sterlite lines would also be ensured.

Upon enquiring about the maximum loading in the 400 KV Jharsuguda-Sterlite lines during the tripping of both the OPGC-Lapanga lines by OPTCL representative, it was informed that the maximum load flow in both the lines was around 1400-1500 MW.

OPGC representative submitted that during the incidents of tripping, power flow to Lapanga and Jharsuguda end were in the ratio of 80:20 which has significantly improved to 65:35 as per present scenario. Possibilities of load reduction by implementing SPS to balance line loading may be explored. Further, implementation of bus-splitting at OPGC end may affect the reliability in evacuation of power through the units.

ERLDC representative submitted that implementation of bus-splitting scheme may affect the reliability of OPGC units but would avoid the risk of a larger blackout.

SLDC Odisha submitted that due to an ongoing legal case in APTEL, implementation of SPS scheme may be carried out for the time being to avoid any commercial implications. After the case is resolved bus-splitting at OPGC may be implemented.

OCC advised OPGC and SLDC Odisha to restrict the line loading to 750 MW in case of tripping of one OPGC-Lapanga line by implementing proper SPS scheme until the legal case at APTEL is resolved.

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
11 th	400 kV-KODERMA-BIHARSARIFF(PG)-2	04:49	Y phase fault	15:05
Januarv	765 kV-GAYA-VARANASI-2	04:31	R phase fault	1:01
2023	400 kV-KODERMA-BIHARSARIFF(PG)-2	03:50	Y phase fault	0:41
10 th	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
2023	400 kV-PUSAULI(PG)-NABINAGAR(BRBCL)-1	02:46	Y phase fault	14:51
2023	400 kV-KODERMA-BIHARSARIFF(PG)-2	05:57	Y phase fault	0:32
	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
2 nd	400 kV-MUZAFFARPUR-GORAKHPUR-1	00:20	Y phase fault	10:57
2023	400 kV-KODERMA-BIHARSARIFF(PG)-2	03:45	Y phase fault	1:23
2020	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
	400 kV-BARH-PATNA-3	07:26	B phase fault	15:15
	400 kV-KHSTPP-BARH-1	07:54	R phase fault	4:39
22	400 kV-PATNA-BARH-1	07:54	R phase fault	1:31
December 2022	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 fogrelated 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.

Deliberation in the meeting

Powergrid representative submitted that as a measure of winter preparedness, cleaning activities of insulators at various locations have been done. It was observed that most of the tripping incidents due to flashover may be attributed to excessive fog and accumulation of dust in the insulators from the nearby construction related activities. Further, several activities like cleaning and testing of insulators are being carried out on a continuous basis as a preventive measure.

The porcelain insulators are being replaced by the polymer insulators in the areas where construction activities are under progress. Replacement by polymer insulators in around 30-40 locations and cleaning activities at around 60-70 locations have already been done.

ERLDC advised Powergrid to submit the detailed list of locations along with the timeline for insulator replacement.

OCC advised Powergrid to take the necessary preventive measures to minimize the incidents of tripping due to insulator flashover.

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

- 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
- 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.
- 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.

- 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.

Deliberation in the meeting

Powergrid representative submitted that during the tower shifting work at Mahananda river, Binaguri-Kishanganj ckt 1&2 would not be available due to shutdown of Kishanganj-New Purnea and Binaguri-Kishanganj ckt 1&2. Evacuation path from Binaguri would be done through Binaguri-Purnea ckt 3&4. He further requested that work may be allowed in Teesta-III – Rangpo and Rangpo – Kishanganj ckt-2 keeping auto reclosure in non-auto mode.

Also, due to dense fog and the missing of tower members at loc 49 of Teesta-III – Rangpo T/L, severe difficulties were being faced by the manpower while climbing the tower.

TPTL representative highlighted that there have been cases of line tripping due to hanging of pulleys and ropes on their T/L during OPGW stringing work and requested Powergrid to take necessary measures in order to avoid such incidents in future.

ERLDC representative submitted that they would not be able to provide simultaneous shutdown of Kishanganj-New Purnea and Binaguri-Kishanganj T/L and work of OPGW in Rangpo-Kishanganj line allowing auto reclosure in non-auto mode.

OCC was of the view that a separate meeting in physical mode may be convened between ERPC, Powergrid and ERLDC for further deliberation of the matter.

In the special meeting held on 24.01.2023 the following was deliberated:

- Shutdown of Rangpo Kishenganj ckt-II and Teesta-III Kishenganj would be allowed from 7:00 AM to 4:00 PM on daily basis 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).
- 2. Necessary measures to be taken to avoid hanging of pulleys and ropes on T/L after completion of shutdown activities.

3. Powergrid would submit the segment wise details of work carried out to ERPC and ERLDC.

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.

Deliberation in the meeting

Powergrid representative delivered a brief presentation on maintenance of Talcher HVDC Terminal station. He further submitted that due to the presence of nearby power plants, the switchyard equipment as well as the installed equipment, sophisticated electronic cards of the Valve Halls are subjected to severe dust, pollution and gases.

Even after installation of filters in the valve hall ventilation, arresting all the dusts and pollutants was not be possible. Severe problems are also being faced in the valve cooling tubes. A substantial amount of outage time would be required for thorough cleaning of valve hall equipment. RTV coating on equipment was also done to address the issues of pollution.

Upon enquiring about the power flow, it was informed that around 1800 MW power is flowing through the poles. Power flow would be reduced to 1000 MW for taking the shutdown of pole one at a time.

Upon enquiring about the frequency of shut down for maintenance of station, it was informed that the shutdown is being taken every 3 years.

OCC agreed with the proposal and advised Powergrid to carry out the cleaning activities on regular interval of time. Further, Powergrid would also need to coordinate with SRPC for necessary approval of outage for the said link.

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.

Deliberation in the meeting

ERLDC representative submitted that a list of L&T meters to be replaced has been circulated among all the constituents and Powergrid.

Powergrid representative submitted that in the 1st phase a total of 152 meters would be replaced. Out of the 152 meters, 60 meters are to be replaced in Bihar, 39 meters in Odisha, 51 meters in West Bengal and 2 meters in DVC. All the constituents were advised to collect the meters from Powergrid and get it installed by themselves. Installation by Powergrid would be on a chargeable basis.

OCC advised all the constituents to collect the meters from Powergrid and get it installed at the earliest.

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.

Deliberation in the meeting

SLDC Bihar representative submitted that they have already communicated with M/s Genus regarding time drifting in meter ER-1145-A and the issue would be resolved by the end of January 2023.

West Bengal SLDC representative submitted that as per the verbal communication received by the testing department of WBSETCL & WBSEDCL, since the meter (ER-1696-A) was installed by Powergrid, therefore all the issues related to meter has to be resolved by Powergrid.

Powergrid representative submitted that they would communicate with the testing department of West Bengal regarding the methodology to be followed regarding correction of meters installed at the ISTS points.

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.

Deliberation in the meeting

OCC advised all the constituents to provide additional inputs if any, latest by 31st January 2023, followed which the document would be finalized.

TEM NO. B.8:	Follow	up Agenda
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InInstallation of Transmission Line Arrestor in 220kV Lines in North Bengal.In198th Powergrid I submitted t tripping of attributed phenomeno analysis do tripping tre findings.220kV D/C Siliguri-Calkhola 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.In198th Powergrid I submitted t tripping of attributed phenomeno analysis do tripping tre findings. replacemen porcelain Composite insulators the earth providing and	leetings	Update/Status
in the Himalayan Foothills and encounter earthing sy severe lightning incidents during the sufficient.	OCC Meeting, R-II representative nat the incidents of auto recloser are to the lightning n as per the ne by studying the nds and patrolling Even after t of all the existing insulators with Long Rod and strengthening ng system by Iditional earthing at ions, the existing stem would not be	Powergrid representative submitted a report highlighting the relevance of installation of Lightning Arrestors in minimizing tripping due to severe lightning and requested for approval for installation of TLA in 220 KV lines in North Bengal.

	monsoon period starting from April-Oct.		
	As stated by NASA, The Himalayan	He further submitted that	Upon enquiring
	Foreland is declared as Principal	transmission line arrestors are	whether
	Lightening Hotspot zone.	being used worldwide on the	Powergrid was
		lines affected by severe	pianining ιο install ΤΙΔ
	Due to lightening frequent de-	lightning phenomenon. Further,	elsewhere
	capping/failure of installed Porcelain	a total of 830 locations in the	except the
	insulators were occurring in above	Chukha Transmission system	above-
	mentioned lines. Subsequently in order to	have been identified where	mentioned 4
	prevent repeated de-capping, in the year	tripping of auto recloser are	lines, it was
	2018 the earlier installed Porcelain	more frequent. Offer has been	informed that
	insulators were replaced with Polymer	collected from several reputed	studies related
	Insulators. After replacement of Porcelain	vendors and the estimated cost	nhenomenon
	insulators there was a considerable	of above installation would be	have been
	reduction in Auto-reclosures and tripping	around 6.5 crores.	carried out for
	incidents but still the tripping/AR rate is		lines in North
	quite high. This season several instances	Upon enguiring about the	Bengal with
	of tripping/Auto-reclosures have occurred	instances of tripping due to	severe lightning
	in those lines. This repeated Auto-	lightning, Powergrid	The locations
	reclosures/tripping is not only creating	representative submitted that	identified for
	disturbance for the Grid but also putting	all the tripping incidents of auto	installation of LA
	stress on connected terminal equipment.	recloser were due to lightning	were chosen
		phenomenon.	based on the
	TFR measurement were carried out on		IEEE 81 2012
	the towers as well as section of line	West Bengal representative	guidelines and
	identified during Post Fault Tripping	submitted that continuous	repeated
	Analysis. Tower Footing Impedance	earthing of towers i.e.,	trippings.
	measurement shows high values in most	coverage of earth wire and	11 0
	of the tower locations in the said lines.	checking of Tower footing	Moreover, in
		resistance throughout the lines	these locations
	All the above-mentioned lines were	has to be ensured. Powergrid	no scope of
	commissioned under CTS scheme and all	shared a brief presentation and	TFR value was
	tower earthing were done as per	it was noticed that the TFR	possible through
	prevailing earthing practice viz. counter-	data and all the readings were	additional
	poise earthing, additional earthing after 7-	found to be more than 10.	earthing or
	8 KM span etc. But considering changes		chemical
	in weather conditions over the years,	MS ERPC enquired whether	earthing except
	lightning phenomenon have now	there are other such lines	Tor installation of $TI \Delta$
	increased drastically in North-Bengal.	under state jurisdiction which	
	Several newspaper publication also	are subjected to severe	ERLDC
	justifies severity of lightning in North-	lightning and the steps taken to	representative
	Bengal.It seems that the prevailing	resolve the same. West Bengal	advised
	earthing design used in the towers are not	representative submitted that	Powergrid to
	sufficient to arrest the frequent	they are taking corrective	detailed list of
	tripping/auto-reclosures.	measures like frequent	considerations
		recording of tower footing	while identifying
	It has been felt necessary to adopt	resistance, etc. to resolve such	the locations for
	installation of Transmission Line Arresters	issues.	installation of
	as per latest practices adopt world wide in		TLA.
	certain stretches of lines where instances	ERLDC representative also	OCC parend to
	of auto-reclosures and tripping are high.	advised Powergrid to share the	the proposal
M	inutes of 199 th OCC Meeting		
141	mates of 177 Occ meeting		1 age 11

	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.	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	and advised Powergrid to submit the detailed list of locations to ERPC and ERLDC. Further, OCC referred the above issue to the upcoming CCM meeting of ERPC.
2.	Continuous s/d of 400 KV D/C Binaguri-Kishenganj TL (Ckt-1 & Ckt-2) and 400kV D/C Kishangani-New Purnea TL (Ckt-1 & Ckt-2) for Carrying out Diversion of Loc No09(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 No09 (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	 meeting. In 198th OCC Meeting, representative of Powergrid delivered a brief presentation highlighting the following 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 No09(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 	Powergrid representative submitted that they are facing several issues due to extreme foggy weather conditions. The tower erection work is expected to be completed by 26 th January 2023. Shutdown for stringing activities would be taken from 1 st February 2023 and would be completed by 15 th February 2023.

badly damaged.	work is under progress and
2. Considering the vulnerability of the	after the completion of the
tower, as a permanent measure we are	same, during tower erection
shifting the Anchor-1 Tower on Pile	(top part and X-arm lixing)
Foundation. Presently Pile Foundation	would be required
work is U/P. Photos showing the condition	would be required.
of location and its present status is	Representative of ERLDC
enclosed.	submitted the following:
3. However, after completion of pile.	1. S/d of 400kV Rangpo-
during tower erection (Top part and X-arm	Binaguri D/C can't be
fixing) & stringing work we require	clubbed with the s/d of 400
continuous S/D of 400kV D/C Binaguri-	KV D/C Binaguri-
Purnea LILO @ Kishanganj [400kV D/C	Kishenganj TL (Ckt-1 &
Binaguri-Kishanganj TL(Ckt-1 & Ckt-2)	Ckt-2) and 400kV D/C
and 400kV D/C Kishanganj-New Purnea	Kishanganj-New Purnea TL
TL (Ckt-1 & Ckt-2) for 21 days(3 weeks)	(CKt-1 & CKt-2). Work
tentatively wet 1st week of Feb-23 to End	Ripaguri TI may be
01 Fed-23.	
	the said S/d of 400 KV D/C
	Binaguri-Kishengani 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 IL and
	New Purpes 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 Kangpo-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 undate would be 	
		 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.	Continuous Continuous S/D of 220kVD/C Siliguri-Kishanganj TL(Ckt-1 & Ckt-2) and 220kV D/C Dalkhola-KishanganjTL (Ckt-1 & Ckt-2) for carrying outDiversion of tower location no29 of20kV D/C Dalkhola - Kishanganj TL &Loc No30 of 220kV D/C Siliguri-Kishanganj TL vulnerable due to bankerosion on Mahananda River1.Location no29 of 220kV D/C	In198thOCCMeeting, representativePowergrid representativerepresentativeofPowergrid representativerepresentative submittedthat foundation1.ContinuousS/Dof220kVfoundationwork of2D/CSiliguri-KishanganjTL (Ckt-1 & Ckt-2)and 220kVof2legshave alreadyalreadybeen completedand foundationwork of remaining two legswouldbe required for carrying out diversion of tower location 	

2. Last year the locations were somehow saved by temporary protection said elements during that	 Last year the locations were somehow saved by temporary protection wall with sand bags and bamboo piling. 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. 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 Cilinwi Kichengeni TL (Cltt 1) 	 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 (Ckt-1 & Ckt-2) and 220kV D/C Dalkhola-Kishanganj TL (Ckt-1 & Ckt-2) may be taken. 	
 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 no29 of 220kV D/C Dalkhola-Kishangnaj TL & Loc No30 of 220kV D/C Siliguri-Kishanganj TL are now coming in-between the main river and new formed channel. Presently, location no29 & 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 	 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 no29 of 220kV D/C Dalkhola-Kishangnaj TL & Loc No30 of 220kV D/C Siliguri-Kishanganj TL are now coming in-between the main river and new formed channel. Presently, location no29 & 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 	 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 	start around 10 th February 2023 after curing of foundation works. The line is expected to be restored by the end of 1 st week of March 2023.

	erection work and Feeders, both are in	3.	Phase-III (Bus Section-I &	
Ì	service and with calculated risk proportion		II) S/d required for GIB	
	the work could be completed.		Erection: 26.12.2022 at	
			07:00 hrs to 27.12.2022 at	
	However, during actual execution it is		16:00 hrs on daily basis.	
	observed that while going for erection in	4.	Phase-IV (Bus Section-	
	between Section-I & II, both section		II)S/d required for GIB	
	required S/D and only one feeder and one		Erection: 28.12.2022 at	
	ICT (Namely ICT-4) will be in service.		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	
			ICI-IV From 31/01/23 at	
			07:00 nrs to $14/02/23$ at	
			10.00 his on daily basis.	
		Ro	presentative of West Bengal	
		an	prised the forum that all the	
		act	tivities should be completed	
		bv	31 st January'2023 as	
		be	vond that allowing shutdown	
		wo	uld be difficult owing to	
		inc	rease in boro load.	
		00	C 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)	
Ĺ				

5.	De-stringing of overhead conductor in	In 198th OCC Meeting,	JUSNL
	Power Line Crossing span of 220kV	Powergrid representative	representative
	D/C Farakka-Lamatia Line in between	submitted that the belt is a	submitted that
	span (Location No5 & Location No6)	theft prone area and the	the proposal for
	by JUSNL in order to protect	220kV Farakka-Lalmatia TL	de-stringing of
	underlying 400 kV S/C Farakka	being in an uncharged	the portion of
	Sagardighi I & II TL (Loc No 3 & 4) of	condition is being subjected to	line between the
	POWERGRID due to severe/repetitive	severe member theft incidents	tower location 5
	theft incidents by miscreants near to	which may lead to tower	& 6 was not
	<u>Farakka Plant</u>	collapse. Two nos. of Farakka-	approved by the
		Sagardighi S/c line which	higher
	220kV Farakka-Lalmatia TL is under	passes beneath the 220KV	authorities
	break-down condition due to tower	Farakka-Lalmatia TL will also	rather the watch
	collapse incidents since 21.04.2021.	be severely damaged causing	and ward
	Since the line is under off condition for	long outage. Therefore,	activities would
	long, at several locations of the said line	destringing of a portion of	be increased at
	near to Farakka serious tower member	220kV Farakka-Lalmatia TL	these locations.
	theft/conductor theft incidents are	may be done to protect the 2	Further, the
	occurring.	nos. of underlying Farakka-	work would be
		Sagardighi S/c lines.	awarded in the
	During patrolling of 400 kV S/C Farakka		month of
	Sagardighi I & II TL on dated	JUSNL representative	February 2023.
	07.11.2022, huge no. of missing members	submitted that tower location 1	
	has been observed in the Powerline	to 10 fall under the category of	OCC advised
	crossing towers of 220 KV Farakka	high theft prone zone. At tower	JUSNL to
	Lalmatia TL (owned by JUSNL) situated in	locations 1, 2 & 4, the leg	deploy
	village: Jorpukuria, Farakka crossing over	portion of the towers have	manpower for
	Loc 03 & 04 of both 400 kV S/C Farakka	been dismembered and	watch & ward
	Sagardighi I & II TL of POWERGRID.	destringing of towers in such	activities at
		situation may lead to severe	tower locations,
	Considering the fact that any incident of	unsafe condition. Moreover,	subjected to
	collapse of towers of the mentioned	destringing of tower at loc 5 &	theft, at the
	crossing towers of Farakka Lalmatia line	6 would also require	earliest.
	shall damage our existing 400 kV Farakka	immediate dismantling of	
	Sagardighi TL which is already more than	towers to prevent any theft.	
	35 years old. Earlier also, an incident of	Also, severe RoW issues	
	Tower collapse of 220 kV Farakka	would be faced while carrying	
	Lalmatia line over POWERGRID 400 kV	out any work in these areas.	
	S/C Farakka Durgapur 1 & 2 TL had	He further submitted that since	
	occurred in the year 2020 which had	they do not have the drawings	
	severely damaged the 400 kV S/C	of these towers, problems will	
	Farakka Durgapur 1 & 2 lines. Restoration	be encountered during re-	
	of the lines were carried out under	erection of these towers.	
	extreme ROW situations.		
		He further submitted that	
	Considering the seriousness of the issue	provisioning of watch & ward	
	JUSNL was requested to rectify the	on continuous basis may be	
	towers Loc No5 & 6 of 220kV Farakka-	provided for tower no 5 & 6 as	
	Lamatia Line on urgent basis. Vide mail	an alternative to the above	
	dated 08.12.2022, JUSNL have informed	issue.	
	that they have rectified the affected		
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	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 No5 & 6 of 220kV D/C Farakka-Lalmatia so that underlying POWERGRID lines 400kV Farakka- Sagardighi-I & II may be protected.	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 28 th 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 198 th 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. <u>Chandrapura Islanding Scheme:</u> 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 196 th OCC meeting, DVC representative submitted that the work is expected to be completed as per the given timeline.	-
	2.3. IB-TPS Islanding Scheme:	In the 197th OCC meeting, OPGC representative was not present during the discussion.	-

7. Reliable Power Supply to Lalmatia/Godda/Dumka areas of JUSNL In the 197 th OCC meeting, OCC referred the agenda to the upcoming 47 th TCC & ERPC meetings. JUSNL		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.	ed shortly. of OPGC during AOH in larch'2023 if the on issue gets they would go testing.	
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.	7.	Reliable Power Supply to Lalmatia/Godda/Dumka areas of JUSNL4.1. Restoration of 220kV Farraka- Lalmatia S/C lineIn the 197th OCO OCC referred th the upcoming 4 ERPC meetingsThe 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.Member from J that the work or been placed to on 08.09.2022 starting the wor old transmissio availability of BOM. Drawing available by 24.09.2022 with is being prepare of foundatior strengthening vs started. Tower stringing work by 15.01.2022 completed by 3	C meeting, he agenda to 7 th TCC & s. JUSNL informed rder had already M/s ABN Tower c. The delay in rk is due to very on line and non- drawing with has been made NTPC on hout BOM. BOM ed and breaking n and stub work has been r erection and is likely to start c and may be 1.03.2023.	JUSNL representative submitted that foundation works at 10 locations have already been completed and at remaining 3 locations are under progress. OCC advised JUSNL to submit the details of progress of work to ERPC at the earliest.
 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. 8. 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 	8.	Outage of Important Transmission SystemIn the 196th representative explained the highlighted the delaying of the1. 132kV Sagbari–Melli.In the 196th representative explained the highlighted the delaying of theSikkim vide mail dated 09.06.2021 updated the following status:In the 196th representative explained the delaying of the1) 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.He submitted the timeline for November'2022	OCC Meeting, of Sikkim briefly e issue and reasons behind project. nat the expected restoration is 2	Sikkim representative was not present during the discussion.

	Region's demand. The synchronization of North Karanpura will help a lot of all the	The CoD would be done	NTPC representative
	All India's demand is increasing by leaps and bounds, and so does the Eastern	delayed due to some issues in CHP package.	march 2023.
	Patratu unit is scheduled to be commissioned in March 2024.	CoD of Barh unit-2 would be	completed before 31 st
	Karanpura unit of NTPC is planned to be synchronized by March 2022 and the	are expected in the month of January 2023.	r∖aranpura would be
	2022, it was informed that the North	last week. The trial operations	North
	At the 188th OCC Meeting held on 10-03-	load had been achieved in the	the CoD of
	with associated transmission elements.	that for North Karanpura full	submitted that
9.	Status of North Karanpura NTPC Generating Station (3 X 660 MW) along	In the 198 th OCC meeting,	NTPC
9	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.	In the 198 th OCC meeting	NTPC
	 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 		
	4) Loc 128 is in dilapidated condition due to sinking effect posing threat to lives and		
	for intermediate tower and not allowing for		
	till any such arrangement is made. 3) In loc 116 &117 land owner demanding		
	not to do vertical extension of the house		
	warning had been issued to the owner for		
	2) In loc 98-99 a house had been		

	beneficiaries, and Jharkhand in particular.	before 31st March 2023.	submitted that
			issues
	Before synchronizing the North Karanpura		pertaining to
	unit, establishing ISTS connectivity is		CHP and ash
	required. It seems the respective bays at		handling plant
	Chandwa and North Karanpura owned by		are still
	PGCIL and NTPC, respectively, are		persisting and
	already ready to charge, but the lines		the CoD is
	owned by NKTL are not ready yet. As per		expected to be
	communication with NKTL dated 09-09-		completed
	2022, it was informed that the 400 kV		before 31 st
	North Karanpura (NTPC)-Chandwa		March 2023.
	(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		
	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 undated		
10.	Ensuring N-1 reliability criteria at	In the 198 th OCC meeting,	Powergrid
	400/220 KV Subhashgram (PG) S/s.	Powergrid representative	representative
		submitted that the revised cost	submitted that
	The reliability issue of Subhasgram (PG)	estimate has been approved	the estimate has
	was discussed in the 46th TCC and ERPC	and necessary communication	already been
	meeting. In the meeting it was deliberated	would be done with CESC by	provided to
	that there is an urgent requirement for	the end of December 2022.	CESC.
	installation of 6 th 400/220kV, 500 MVA	-	
	ICT at Subhasgram (Powergrid) S/s. On		CESC
	request of West Bengal, CESC agreed to		representative
	bear the cost associated with the		submitted that
	installation of the said ICT and its future		deliberations
	maintenance. Further, CESC requested		with Powerarid
	Powergrid to execute the project on		is under
	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		progress and approval would be given by the end of January 2023.
	SPS scheme. However, no shutdown request has been received by ERLDC till date.		
11.	Integration of (Interface Energy Meter) IEMs into SCADA/EMS system for telemetry of meter data to SLDCs. The existing SEMs are having two 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.	In the 198 th OCC meeting, Powergrid representative submitted that they would submit the report by the end of February 2023	-
12.	Status of SAMAST, ABTimplementation and certification ofsystem operators in states.Implementation of SAMAST and ABT inall the states is a prerequisite forimproving the reliability of grid consideringthe complexities involved in managing thelarge interconnected Indian grid. Furtherskilled, certified manpower is the key tooperate the grid safely and securely.Various initiatives are being takenmutually by ERLDC and the states forsuccessful implementation of theSAMAST/ABT in the states.The status of SAMAST, ABTimplementation and certification of systemoperator of various states of easternregion is given below:	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.	ERLDC representative submitted that physical meeting regarding status of SAMAST and ABT implementation is yet to be hosted. OCC advised ERLDC to schedule the meeting at the earliest.

Name of the state Bihar Jharkha nd Odisha DVC West Bengal Sikkim	Status of implementati on of SAMAST Completed	Number of Certified Operator 4 Nil 11 Nil 2 1		
Erroneou 1. The meter KV RAMI (NHPC) reverse preplaced already in the issue 2. The meter RAVANG (NHPC) a recording respect tr issue has vide mail resolved y	us reading in Ra <u>Ravangla.</u> er sl. No. ER-19 MAM (WBSETCL at Rammam (M polarity since the in Jun-22. Infor ntimated to the is not resolved. er sl no ER-1983 LA (SIKKIM) at Ravangla (Sik erroneous v o the stand-by s been intimate I dated 04.08.20 yet.	Ammam and 86-A at 132 () - RANGIT (B) showing e meter was rmation was concern but (-A at 66 KV - RANGIT (kim) end is values with meter. This d to Sikkim (022 but not	In the 198 th OCC meeting, WBSETCL representative submitted that they would contact with the testing department and WBSEDCL for rectification of the erroneous readings.	ERLDC representative submitted that West Bengal representatives went to the site but were not able to rectify the meters. Further, West Bengal was advised to seek for necessary help, by Powergrid, if required. No update regarding the meter no ER- 1983-A is available.
<u>F</u> <u>funct</u> <u>Bihar</u> The AMC w Kahalgaon connectivity, meter was the same wa replace the n 1. NP-607 KAHALC	Replacement of r tioning/defective vendor Ms TCS site to restore but it was inforr not responding. as intimated to th neter. 1-A 132 KV GAON(BSPHCL)	visited the the AMR med that the Accordingly, e concern to	In the 198 th OCC meeting, it was informed that Meter no. NP-6076-A and NP-6071-A would be replaced by the end of December 2022.	SLDC Bihar representative submitted that meters have already been taken from Powergrid and would be installed before 25 th January 2023.
	Name of the state Bihar Jharkha nd Odisha DVC West Bengal Sikkim 1. The meter KV RAMI (NHPC) reverse p replaced already in the issue 2. The meter RAVANG (NHPC) a recording respect t issue has vide mai resolved y 2. The meter RAVANG (NHPC) a recording respect t issue has vide mai resolved y The AMC w Kahalgaon connectivity, meter was the same was replace the main 1. NP-607 KAHALC LALMAT	Name of the state Status of implementati on of SAMAST Bihar Completed Jharkha nd Odisha DVC West Bengal Sikkim Sikkim Sikkim Erroneous reading in Ra Ravangla. 1. The meter sl. No. ER-19 KV RAMMAM (WBSETCI (NHPC) at Rammam (W reverse polarity since the replaced in Jun-22. Info already intimated to the the issue is not resolved. 2. The meter sl no ER-1983 RAVANGLA (SIKKIM) (NHPC) at Ravangla (Sik recording erroneous w respect to the stand-by issue has been intimate vide mail dated 04.08.20 resolved yet. Bihar The AMC vendor Ms TCS Kahalgaon site to restore connectivity, but it was inform meter was not responding. the same was intimated to th replace the meter. 1. NP-6071-A 132 KV KAHALGAON(BSPHCL) LALMATIA(JSEB)	Name of the state Status of implementati on of SAMAST Number of Certified Operator Bihar Completed 4 Jharkha Nii nd Niii Odisha 11 DVC Niii West 2 Bengal 2 Sikkim 1 Image: Completed 4 Jharkha 1 Odisha 11 DVC Niii West 2 Sikkim 1 Sikkim 1 Erroneous reading in Rammam and 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. Elhar 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.<	Name Status of on of conjeted Number of of Certified Operator Bihar Completed 4 Jharkha nd Nili DVC Nili West 2 Bengal 2 Sikkim 1 Norme In the 198 th OCC meeting, WBSETCL The meter sl. No. ER-1986-A at 132 KV RAMMAM (WBSETCL) - RANGIT (NHPC) at Ramman (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. 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. In the 198 th OCC meeting, it was informed that Meter no. NP-6076-A and NP-6071-A would be replaced by the end of December 2022. The AMC vendor Ms TCS visited the Kahalgaon site to restore the AMR connectivity, but it was informed that Meter no. NP-6076-A and NP-6071-A would be replaced by the end of December 2022. 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. In NP-6071-A 132 KV KAHALCAON(BSPHCL) - LALMATIA(JSEB)

	2. NP-6076-A 132 KV KAHALGAON (BSPHCL) - KAHALGAON (NTPC)		
15.	Non-Receipt of SEM data from	In 198 th OCC Meeting,	Jharkhand
15.	 <u>Non-Receipt of SEM data from</u> <u>Various Locations</u> 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 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 Kahalgaon (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. 	In 198 th 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 January 2023.	Jharkhand representative submitted that the meters would be collected by the end of 1 st Week of February 2023. NTPC Kahalgaon representative submitted that since the ownership of meter lies with Powergrid, installation and maintenance have to be carried out by Powergrid. Powergrid representative submitted that the meter would be provided by Powergrid but the installation has to be carried out by the respective constituent. Installation by Powergrid would be done on chargeable basis.

		other regions.
16.	Ensuring healthiness of ADMS	

State	Criteria for ADMS operation	Number of instances for which ADMS criteria satisfied	Number of instances fo which detai received	Discussion regarding previous r month performance l	Update in 199 th 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.	ERLDC representative submitted that the issues with West Bengal have been resolved.
Jharkhan	d 1. System Frequency < 49.9 Hz 2. Jharkahnd over-drawl > 25 MW 3. Delay = 3 min	157	Nil		Communication issues are still persisting with Jharkhand.
DVC	1. System Frequency < 49.9 Hz 2. DVC over- drawl > 150 MW 3. Delay = 3 min	18	18		ERLDC representative submitted that the data has been received from DVC but the load relief was insufficient.
Odisha	1. System Frequency < 49.9 Hz 2. Odisha over- drawl > 150 MW 3. Delay = 3 min	21	21		ERLDC representative submitted that the data has been received from Odisha but the load relief was insufficient.
17.	Commissioni Automatic den scheme (ADM	ng status o nand ma 1S) is	f ADMS anagement already	In the 198 th OCC meeting, Bihar representative submitted that some issues have been	SLDC Bihar representative submitted that

	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.	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.	they are not getting proper response from M/s Chemtrol. OCC advised Bihar to submit a detailed agenda related to issues with ADMS and Chemtrol to ERPC at the earliest.
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 47 th 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/trippingIn 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 47 th 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	Powergrid representative submitted that the internal inspection of ICT-2 at Patratu is scheduled from 21 st January 2023.
	both ICTs are out of service. This led to shifting of loads being fed from this substation back to Ranchi substation's	been completed and internal inspection is scheduled in the last week of Nov'22.	representative submitted that the no further

	[
ICTs. In addition, due to the outage of 220		update on ICT-
kV Patratu-Tenughat S/C, there is no	400kV/220kV 315MVA ICT-AT	2 at Lalmatia is
support from Tenughat (TTPS) power	PATRATU	available.
plant. This is leading to the entire Ranchi	ICT-1 was dismantled for	
City demand being fed by 2X315 MVA	transportation to manufacturer	The work
ICTs Ranchi (PG). Presently Ranchi ICTs	site and transportation will	would be
loading is to the tune of 160-190 MW/ICT.	commence by Nov'22.	awarded for
In this network configuration, Ranchi S/s		ICT-3 at
one 315 MVA 400/220 kV ICT outage	220kV/132 100 MVA ICT-2 AT	Chandil by the
sensitivity on other ICT is more than 90%.	LALMATIA (FAILURE OF HV	end of 7 th
	SIDE BREAKER)	February
Further degrading the overall situation is	In this regard estimate has been	2023.
outage of 220 kV Ranchi-Hatia 2 on tower	obtained from field, estimate is	
collapse. This is leading to n-1 loading	being scrutinized at Head	
violation for other two circuits i.e., 220 kV	Quarter level to get the work	
Ranchi-Hatia 1 and 3 which are loaded	done with minimum cost. The	
above more than 150 MW/ckt.	expected date of completion is	
	31.03.2023.	
A list of major elements outages in		
JUSNL are provided below:	<u>220kV/132kV 100 MVA ICT-3</u>	
• 400 KV/220KV 315 MVA ICT 2 AT	AT CHANDIL	
PATRATU: 27-09-2022 (DGA violation)	In place of this ICT new ICT of	
• 400 KV/220KV 315 MVA ICT 1 AT	100 MVA will be procured soon.	
PATRATU: 01-08-2022 (Buchholz	The tender is under technical	
Relay)	evaluation stage and work order	
• 220 KV/132KV 100 MVA ICT 2 AT	would be placed soon. The	
LALMATIA: 22-01-2019 (FAILURE OF	expected timeline of completion	
HV SIDE BREAKER)	is July 2023.	
• 220 KV/132KV 100 MVA ICT 3 AT		
CHANDIL: 30-04-2020 (ICT failed due		
to fire)	220kV FSTPP-LALMATIA-1	
• 220 kV Tenughat-Patratu S/C: Under	Work order had already been	
long shutdown for shifting work	placed to M/s ABN Tower on	
• 220 KV-RANCHI-HATIA-2: 24-09-2022	08.09.2022. The delay in	
(Tower collapse)	starting the work is due to very	
• 220 KV-FSTPP-LALMATIA-1: 21-04-	old transmission line and non-	
2021 (Tower collapse)	availability of drawing with BOM.	
	Drawing has been made	
	available by NTPC on	
	24.09.2022 without BOM. BOM	
	is being prepared and breaking	
	ot toundation 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.	

ITEM NO. B.9: Eastern Regional Grid operation from ERLDC backup control center at NLDC, New Delhi as a part of Disaster Management – ERLDC.

As a part of disaster Management Preparedness, the control room shift operation of ERLDC is planned to be operated from its back up control Centre at NLDC, New Delhi tentatively during first week of February. During the exercise, all regular activities of a shift operation viz. real time supervision and monitoring of Eastern Region system, switching/ outage co- ordination of transmission elements, all scheduling activities, managing real time security desk (RTSD) and preparation of different reports shall be performed from back up ERLDC Control Centre stationed at NLDC, New Delhi. The contact numbers of back-up control centre and other operational details will be informed to all ER constituents prior to such exercise.

Members may please note.

Deliberation in the meeting

Members noted.

ITEM NO. B.10: Need Basis (ODB)Shut Down of 400 KV D/C Kishanganj-New Purnea TL (Ckt-1 & Ckt-2) for Carrying out Diversion of Loc No.-340(DD+0) & 366(DC+0) vulnerable due to Mahananda River & Parman River Course Change

Powerlinks representative delivered a brief presentation stating the situation & Plan for construction of Pile foundations at tower no 340 & 366 of the said line & desired the Outage on Need Basis as per following details:

1. As & when required s/d of 400 KV D/C Kishanganj-New Purnea TL (Ckt-1 & Ckt-2) would be required for carrying out diversion of Loc No.-340 (DD+0) & Loc no 366(DC+0)

2. The said locations have become vulnerable due to change in course of river Mahananda & Parman near to Baisi-Purnea Bihar.

3. The s/d would be required tentatively from 1st week of Feb-23 to 28th Feb'23 on need basis ODB for 16 days approx. The period has been chosen as during this period Hydro generation would be minimum & Pre-monsoon dry weather.

4. Presently Survey work has been completed & after getting approval from Powerlinks BOD & other clearances, PO for pile foundation work has been placed & gangs for the same have been Mobilized and during the Pile Boring & Steel Reinforcement lowering, S/d would be required.

5. After Completion of Pile foundation during Feb'23, Agenda for Tower Erection & Stringing work will be submitted, in 200th OCC.

ERLDC representative advised Powerlink to place shutdown related agenda item in the shutdown meeting of ERPC. OCC Agreed

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	Maximum	Maximum Demand	Minimum Demand	Schedule	Actual
Consumption	Consumption	(MW)	(MW)	Export	Export
(MU)	(MU)/ Date	Date/Time	Date/Time	(MU)	(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.

Deliberation in the meeting

Performance of ER grid for the month of December 2022 was highlighted.

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 20 th December,2022 at	Initial Frequency:50.09 Hz	36.7 %
06:48 hrs Generation loss of approx. 1400MW at Jhajjar	Nadir Frequency: 49.96 Hz	
TPS(APCPL), Change in load of	Final Frequency: 50.05 Hz.	
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		

	09 th July	11 th Aug event	11 th Sep	17 th Sep	15 th Oct	20 th Dec
	event data	data	event data	event data	event data	event data
Name of the	submission	submission	submission	submission	submission	submission
Plant	status	status	status	status	status	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.

Deliberation in the meeting

OCC advised all the utilities to 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.

Deliberation in the meeting

OCC advised all the utilities to update the PSDF status of the project.

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 184 th 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 25 th 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.

Deliberation in the meeting

OCC advised all the utilities to update the status, if any, to ERPC and ERLDC.

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.

Deliberation in the meeting

OCC advised all the utilities to update the status, if any, to ERPC and ERLDC.

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:

SI. 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.

Deliberation in the meeting

OCC advised all the generators to update the status, if any, to ERPC and ERLDC.

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.

Deliberation in the meeting

IB TPS representative submitted that PSS Tuning is planned in the month of July 2023.

Barh representative submitted that they have submitted the details to ERLDC and the details of Kahalgaon units would be submitted shortly.

BRBCL representative submitted that they would provide the PSS tuning status shortly.

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.

Deliberation in the meeting

Members noted.

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
N	Cinvitan of 100	th OCC Masting	Dage 24

o. Fori	mat - II for Generating Station		
S.NO	Name of Islanding Scheme	Healthiness of Islanding Relay	Healthiness of Communicatio channel
			Chaimer

c. Format - III for Transmission Utility/DISCOMs

S.NO	Name of Islandin g Scheme	Elements considere d for tripping to from Island	For communication- based tripping logic Of feeders	For UFR base fe	d tripping logic of eders
			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	Organiza tion	Email ID	Mobile No.

Members may update.

Deliberation in the meeting

OCC advised all the members to update the status as per the prescribed format to ERLDC.

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:

S1 No	State/Utility	TTC (MW)		RM(MW)		ATC I (M	Remark	
INU		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	Bihar	Jharkhand	DVC	Odisha	West	Sikkim
Month					Bengal	
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

		Decl	Website Link	Constrai	Type
CI		ared		nt	of
51 No	SLDC	on		Availabl	Websi
NO		Web		e on	te
		site		Website	Link
		Yes	http://www.bsptcl.in/ViewATCTTCWeb.aspx?GL=1	Yes	Static
1	BSPTCL		<u>2&PL=10</u>		Link-
					Table
		Yes	http://www.jusnl.in/pdf/download/ttc_atc_nov_20	Yes	Static
2	ILICNI		<u>20.pdf</u>		link –
	JUSINE				pdf
					file
		Yes	https://application.dvc.gov.in/CLD/atcttcmenu.jsp#	Yes	Static
3	DVC				Link-
	DVC				Word
					file
		Yes	https://www.sldcorissa.org.in/TTC_ATC.aspx	Yes	Static
4	OPTCL				Link-
	01102				pdf
					file
		Yes	http://www.wbsldc.in/atc-ttc	No (Not	Static
5	WBSETCL			updating	Link-
)	Table
		No	https://power.sikkim.gov.in/atc-and-ttc	No (Not	Static
6	Sikkim			updating	Link-
	JIKKIII)	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.

Deliberation in the meeting

OCC advised all the States to share the ATC/TTC figures on a 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	Name of Hydro Station	Schedule of Mock	Actual	Schedule of	Actual Date of	
No		Black Start	Date of	Mock Black	Test	
			Test	Start		
		Test-1		Test-2		
1	U. Kolab	June-2022	21 st July-	Jan-2023		
			2022			
2	Balimela	July-2022	09 th Sep-	Feb-2023		
			2022			
3	Rengali	June-2022	27- June-	Dec-2022		
			2022			
4	Burla	July-2022	23-June-	Jan-2023		
			2022			
5	U. Indravati	May-2022	25-May-	Feb-2023		
			2022			
6	Maithon	DVC representative		Dec-2022		
		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				
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.

Deliberation in the meeting

OCC advised all the utilities to update the status, if any, to ERLDC.

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/threephase 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

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 1: State wise ICTs at various voltages in ER

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

Utility	315 MVA 400/2 20 kV	500 MVA 400/2 20 kV	315 MVA 400/1 32 kV	200 MVA 400/1 32 kV	270 MVA 400/1 32 kV	250 MVA 400/2 20 kV	1500 MVA 765/4 00 kV	255 MVA 765/1 32 kV	Cold Spare Availabilit Y
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

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		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	Othe
Bihar	9						4	2		4	
Jharkhan d	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.

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

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

- 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.

Deliberation in the meeting

OCC advised all the members to update the status, if any, to ERLDC on a regular basis.

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.

SI	Utility	voltage levels	Number of ERS towers available	Location of ERS situated	Type of ERS (Suspension/ Tension/ any other)
				Mancheswar Grid - 4 nos. (Hitech) Mancheswar store - 8	
		400 kV	18 (Newly	Mancheswar store - 2 nos. (Lindsey)	Can be used for both suspension and Tension
1			procured)	nos. (Hitech) Budhipadar - 14 nos. (Lindsey)	
		220 kV	42	Mancheswar grid – 14 Nos. (Lindsey)	
	765 kV			Chatrapur - 14 nos. (Lindsey)	
2	PGCIL	-24 sets	24 Sets	GAYA	Tension tower
	ERTS 1	400 KV -30 sets	30 Sets	Jamshedpur, Purnea, Lakhisarai	Suspension & 10 nos. Tension ERS towers
3	Adani transmissio n 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

SI	Utility	voltage levels	Number of ERS towers available	Location of ERS situated	Type of ERS (Suspension/ Tension/ any other)
			conductor.		
	PGCIL	400 KV ERS - 3	3	Rourkela	Suspension - 2 & Tension-1
4	(Odisha)	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	-

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		for deployment of ERS, CPTC has an existing agreement with POWERGRID for deployment of ERS.		
-	No ERS	-	-	
765 kV	NO ERS	-	-	
400 kV	07 towers set ERS structures suitable for Twin Moose Configuration 400 or 220 kV.	Siliguri (W.B.)	Lindsey Manufacturing	
	07 towers set ERS structures suitable for Twin Moose Configuration 400 or 220 kV.	Muzaffarpur (Bihar)ER1	Model 600	
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.	
400 kV Lines	Arrangement of ERS with M/s Supreme Engineering at Kolkata.	Can be Dispatched in 2–3-weeks periods	-	
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	
	- 765 kV 400 kV & 400 kV & 765 KV Line 400 kV Lines 220 kV & 132 kV	Image:	Image: Constraint of the second sec	

SI	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	400 kV: 7 (under procurement)	400 kV: Under procurement	_
	220 kV 220 kV: 2 set Pilon structure		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	Туре	Quantity
Kishanganj-Barsoi Line	nganj-Barsoi Line engaged		Suspension/Tension	18
BTPS-Hajipur Line	TPS-Hajipur Line engaged 220/132 KV Suspensio		Suspension/Tension	4
Bodh Gaya-Chandauti	iti to be engaged 220/132 KV Suspension/Tension		Suspension/Tension	4
Purnea	Purnea Spare		Suspension/Tension	1
Dehri Spare		220/132 KV	Suspension/Tension	2
Fatuha Spare		220/132 KV	Suspension/Tension	3

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

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.

Deliberation in the meeting

OCC advised all the members to update the status, if any, to ERLDC on a regular basis.

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:

SI. No	Name of	Element	Short Term Measures	Long term Measures	The target date for long term measures
			Transmission C	onstraint in Odisha Natwork	
				Silstraint in Ouisna Network	
1	i. 22 Bu La D/ ii. 22 Bu Ve iii. 22 Ro Ta	0 kV adhipadar- panga C, 0 kV adhipadar adanta D/C 0 kV purkela- rkera 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	 Reconductoring of 220 kV Rourkela- Tarkera D/C with HTLS. 220 kV Rourkela- Tarkera second D/C Shifting of Vedanta from 220 kV to 400 kV 	OPTCL to provide a target date for Long term measures
2	i. 2 L K D ii. 2 K N B S (1 B S iii. 2 K	20 kV apanga- atapalli /C , 20 kV atapali- ew argarh- adepalli Jew olangir) /C 20 kV atapali-	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

SI. No	Name of Eleme	nt Short Term Measures	Long term Measures	The target date for long term measures
	Bolangiı (PG)- S/	r /C		
3	i. 220 Waria- Bidhan Nagar D ii. 220 Waria- Mejia D	Transmission Co kV Opening of 220 kV Waria-Bidhan Nagar D/C as and vhen required kV	nstraint in West Bengal Network 400/220kV, 315MVA (3 rd) ICT at Bidhannagar	Target Date 2022-23. WBSETCL may update the present Status
4	i. 220 DSTPS- Waria D/C*	TransmissionkVNo SPS isAvailable.Action Required:- SOP/SPS/Load trimming scheme needs to be planned for the time being	A Constraint in DVC Network 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 Maithon Dhanbao D/C, iii. 220 Maithon Kalyane wari D/0	kV No SPS is h- Available. d Action Required:- SOP/SPS/Load trimming scheme kV needs to be planned h- for the time being ch- C	iii. 220 kV Connectivity at 400 kV Mejia-B iv. 220 kV Connectivity at 400 kV RTPS	DVC may update the target date
* Tl dist to p imp	he N-1 violation of urbance, impacti lan and impleme lemented in time	f 220 kV DSTPS- Waria ng an area between Durg nt an SPS on an urgent b bound manner.	D/C or DSTPS ICT 1&2 may gapur and Maithon. To avoid a pasis. Further, the long term m	result in large-scale ny such mishap DVC needs easure also needs to be

SI. No	Name of Element	Short Term Measures	Long term Measures	The target date for long term measures
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 Cons	traint in West Bengal Network	
6	i. 220 kV Rajarhat- Newtown AA3 D/C, ii. 220 kV Subhasgra m-EMSS D/C	SPS is Available for both the Ckts	 220 kV Rajarhat- Newtown AA3 D/C line with HTLS. No Strenthing planned for 220 kV Subhasgram-EMSS D/C 	 Target Date November 2022 for recondutoring WBSETCL may update the present Status
7	i. 220 kV Subhasgram (PG) – Subhasgram (WB) D/C ii. 220 kV Subhasgram (WB)- Lakshmikantp ur 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
		Ĩ	ransmission Constraint in Biha	r 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

SI. No	Name of Element	Short Term Measures	Long term Measures The 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 target date for Long D/C term measures

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.

Deliberation in the meeting

OCC advised all the members to update the status, if any, to ERLDC.

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

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

SI. No	Name of ICT	Short Term Measures	Long term Measures	The target date for long term measures
		ICT Constraint	t in West Bengal Network	

		Short Term	Long t	erm Measures	
SI. No	Name of ICT	Measures			The target date for long term measures
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.	3 rd ICT at Gokerno	Target Date Dec-22 WBSETCL may update the present Status
2	i. 400/220 kV ICT-1	No SPS Available	i.	400/220kV	Target Date 2022-23
	& 2 at Bidhannagar	Action Required:-		315MVA (3rd) ICT	WBSETCL may update
		SPS needs to be planned		at Bidhannagar	the present Status
		ICT Constr	raint in I	STS Network	
3	i. 400/220 kV	SPS Available	i.	3 rd 500 MVA	POWERGRID may
	Ranchi 2 X 315 MVA ICTs			ICT at Ranchi	update the target date
		ICT Constr	aint in D	VC 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
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 Cons	straint 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)	3 rd ICT at New Duburi	Odisha may update the target date

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.

Deliberation in the meeting

OCC advised all the members to update the status, if any, to ERLDC.

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.

Deliberation in the meeting

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

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.	Capacit y	Peri (as per 2022	Period (as per LGBR 2022-23)		Reason	Remarks
			(MW)	From To				
GMR	GMR	3	350	10.02.2023	10.02.2023 16.03.2023		Annual Turbine Overhauling	
NTPC	Darlipali STPS	1	800	10.02.2023	10.02.2023 10.04.2023		СОН	

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.

Deliberation in the meeting

Approved maintenance schedule for February 2023 is provided at Annexure D.2.

NTPC representative submitted that the shutdown of Kahalgaon unit-3 would be required from 05.02.2023 to 20.03.2023 for boiler leakage rectification works due to heavy deposition on ODC tube.

OCC advised NTPC to prepone the maintenance activities of Kahalgaon unit-3 to the extent possible and revive the unit latest by 10th March 2023.

DVC representative submitted that they are planning to take the shutdown of MTPS unit-8. The

dates would be confirmed shortly.

BRBCL representative requested for shutdown of unit-2 from 4th February 2023 for 40 days. OCC approved the shutdown.

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

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

a) Thermal Generating Stations outage report:

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
				Ν	Vil		

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

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		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.

Deliberation in the meeting

Members noted.

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 LI	NES		
SL. Agency/Owner LINE NO.		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-AI	RRANGEMENT OF TRA	NSMISSION LINI	ES	
SL. NO.	Agency/Owner	Line Name/LILO at	Length (KM)	Conductor Type	DATE	Remarks
			NIL	•		
			BUS/LINE REACTO	DRS		
SL. NO.	Agency/Owner	Element Name	SUB-STATION	Voltage Level (kV)	DATE	Remarks
1	OPTCL	400 kV 125 MVAr OPTCL Bus Reactor at Mendhasal Mendhasal GSS		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.

<u>Bihar:</u>

		-		
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 ekt - 2	08-12-2022	17:37	re-conductoring work completed by ACCC drake type HT:LS conductor
				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	
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

<u>Odisha:</u>

	Elements charged for first time in December-2022					
ßl 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.

Deliberation in the meeting

Members noted.

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

Frequency profile for the month as follows:

	Мах	Min			More IEGC	
Month	(Date/Time)	(Date/Time)	Less IEGC Band (%)	Within IEGC Band (%)	2410 (70)	
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.

Deliberation in the meeting

Members noted.



Annex-B3.2



पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिभिटेड (मारत सरकार का उद्यम)

POWER GRID CORPORATION OF INDIA LIMITED (A Government of India Enterprise)

SI. 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		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, for a D Anjan Kr Das)29/2/202 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 - 11, 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,

Eastern Region –II, Sub-station: 400/220/132KV Rangod GIS Subiation, Biock-Ratek, Ville Samardung, PO-rearging, Booker Biock-Portargine, Bioteck-Portargine, Bioteck-Portargine, Bioteck-Portargine, Biock-Portargine, Bioteck-Portargine, Biock-Portargine, Bioteck-Portargine, Bioteck-Portarg, Bioteck-Portargine, Bioteck-Portargine, Bioteck-Por

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	integrate	jurisdiction.	
		d		
	Deoghar	Not		
	132kV	Available		
	Kendposi	Not		
	132 kV	Available		
OPTCL	JSPL	Most of	OPTCL informed that by	Status –quo
	400kV	the data	June, 2020 they will make	
		not	available all the data in their	
		available		
	Nalco	Most of	jurisdiction.	
	220kV	the data		
		not		
		available		
	Narsingpur	Station		
	220kV	commissi		
		oned at		
		220kV		
		without		
		data		
	Dennenh	telemetry		
	Bargarn	Station		
	220	commissi		
		oned at		
		without		
		leiemeify		

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 TeestallI-Kishanganj TL for drum-41

Taking out of aviation globules		Shutdown required on 400KV TeestallI-
		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 TeestallI-Kishanganj TL (08.02.20
		to 12.02.20)
		·
Putting the aviation globules in	in	Shutdown required 400KV Rangpo-
400KV Rangpo-Kishanganj TL		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

SI.	Description of pending issue	Remarks	Timeline for
No.			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 TeestallI-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 TeestalII-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 nonauto mode in 400KV TeestalII-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		Ganesh Kumar Roy	
	(Drum No: 42; T No. 270 to 273)	11.02.2020	Hatidoba,Kharibari, Ragali	
11)	T No. 274	06 11 2010	Appu Datta Buraganj, Darjeeling	
	(Drum No: 43; T No 274/5 to 273)	00.11.2019		
111)	T No 290A/0		Tejabpur, Kishanganj	
	(Drum No 50- T No 290/3 to 294B)	19.10.2019		
IV)	T No. 294B/1,294B/4,294B/5		Md Ezaz Pothiya, Kishanganj	
	(Drum No 51: T. No 294B to 294D/1)	03.12.2019		
v)	T No 308,311/2		Nur Ishlam, Umar Ali, Bhola Lahara,	
	(Drum No 58; T No 305/1 to 311/5)	09.01.2020	Kishanganj	
	316/1		Mansur Ali, Zamuruddin Rahaman, Afroj	
vi)	(Drum No 59; T No 311/5,316/1)	27.02.2020	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 IIIkishanganj 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 TeestalII-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 nonauto 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		Ganesh Kumar Roy	
	(Drum No: 42; T No. 270 to 273)	11.02.2020	Hatidoba,Kharibari, Ragali	
II)	T No. 274	06 11 2010	Appu Datta Buraganj, Darjeeling	
	(Drum No: 43; T No 274/5 to 273)	00.11.2019		
111)	T No 290A/0		Tejabpur, Kishanganj	
	(Drum No 50- T No 290/3 to 294B)	19.10.2019		
IV)	T No. 294B/1,294B/4,294B/5		Md Ezaz Pothiya, Kishanganj	
	(Drum No 51: T. No 294B to 294D/1)	03.12.2019		
v)	T No 308,311/2		Nur Ishlam, Umar Ali, Bhola Lahara, Kishanganj	
	(Drum No 58; T No 305/1 to 311/5)	09.01.2020		
	316/1		Mansur Ali, Zamuruddin Rahaman, Afroj Alam	
vi)	(Drum No 59; T No 311/5,316/1)	27.02.2020	(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 6 th 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.	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		Ganesh Kumar Roy			
1)	(Drum No: 42; T No. 270 to 273)	11.02.2020	Hatidoba, Kharibari, Ragali			
Ш	T No. 274	06 11 2010	Appu Dotto Buragani Dariaaling			
11)	(Drum No: 43; T No 274/5 to 273)	00.11.2019	Appu Datta Buraganj, Darjeening			
III)	T No 290A/0		Tejahnur Kishangani			
· · · · · ·	(Drum No 50- T No 290/3 to 294B)	19.10.2019	rejaupur, Kishanganj			
IV)	T No. 294B/1,294B/4,294B/5		Md Ezaz Pothiya Kishangani			
1.,	(Drum No 51: T. No 294B to 294D/1)	03.12.2019	ina Ezaz i ouriya, mishangung			
V)	T No 308,311/2		Nur Ishlam, Umar Ali, Bhola			
•)	(Drum No 58; T No 305/1 to 311/5)	09.01.2020	Lahara, Kishanganj			
			Mansur Ali, Zamuruddin Rahaman,			
	316/1		<i>Afroj Alam</i> (Marwa Toli,			
vi)	(Drum No 59; T No 311/5,316/1)	27.02.2020	Khirdoho), Kishanganj			
	AP321N,AP319N,AP320		Kamal Kumar Ghosh, Hazi			
vii)	Drum-60	15.12.2020	Mubarak Hussain at Kochadhaman			
	AP 56, AP56/1 & AP57		Phal Bahadur (Vill-Tumin &			
viii)	Drum-9	07.02.2021	Kokaley)			
	AP72 to AP73		Vill-Singbel, PS-Singtam,			
ix)	Drum-11	08.02.2021	East Sikkim			
	AP77		Vill-Ralap, PS-Singtam,			
x)	Drum-12	09.02.2021	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 Interstate 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.

SI.	RoW Location/Drum	ROW	Contact Person,	Status
NO.	no	Since	SIte	
I)	272/3 (Drum No: 42; T No. 270		Ganesh Kumar Roy Hatidoba,Kharibari,	Pending due to old compensation demand during TL
	to 273)	11.02.2020	Ragali	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.

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

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,AP32 0 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	References
		work	
01.11.2019 to	486 Hrs	Permission with restricted	Letter to ERLDC dtd
24.03.2020	(Correspond to 49 Days)	timing (effective working time of 4-5 hrs in average)	28.11.2019
25.03.2020 to		Work stopped due to Outbreak	
29.06.2020		of Covid-19	
30.06.2020 to	1240 Hrs (124	Permission disallowed due to	Letter to ERLDC dtd
31.10.2020	Days	high hydro scenario.	29.06.20
			Letter from ERLDC dtd
			01.07.20
08.12.2020 to	134 Hrs	Permission with restricted	Letter to ERLDC dtd
20.01.2021	(Correspond to 13	timing (effective working time of	12.12.20
	Days)	4-5 hrs in average)	
01.07.2021 to	1230 Hrs	Permission disallowed due to	Letter to ERLDC dtd
31.10.2021	(123 Days)	high hydro scenario.	31.07.20 & OCC
			shutdown list.
05.11.2019,	80 Hrs	In addition to above,	
22.11.2019,	(8 Days)	Permission not received for	
18.12.2019,		entire day	
08.01.2020,			
08.12.2020,			
18.01.2021,			
21.01.2021,			
16.03.2021			
Total Non-	3170 Hrs (317		
available Period	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.
1∨)	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, ZamuruddinRahama n, AfrojAlam (Marwa Toli, Khirdoho), Kishanganj	Resolved. Issue resolved on 21.03.2021 with help of Administration. Work completed 26.03.2021.
vii)	AP321N,AP319N,AP 320 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	Singtam, East Sikkim	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

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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:

SI. 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.

]				Name of the landowner:	Landowner along with
				K B Pai (+5 Brothors)	his 5 brothers are
				$(M_{ob}, 0.092071127)$	alaiming componention
			10	(NOD. 9063071127)	claiming compensation
	4	133/0 to	18		for nouses failing under
		136/0		PS: Namchi	corridor.
				PO: Namchi	
				Dist.: South Sikkim	
				Name of the landowner:	Boulders kept near wall
				Gajendra Chettri	of landowner which
		Tower No.		(Mob: 8436105960).	hadn't been removed.
	5		17	Village: Mamley	
		115/0		PS: Namchi	Induction related
				PO: Namchi	problems faced by
				Dist : South Sikkim	landowner
				1) Mani Kumar Pai	
				(Mob: 6204716006)	
	0				
	6			(Chiyadara)	
				PS: Namchi	
				PO: Namchi	
				Dist.: South Sikkim	
				2) Suk Dhan Rai	
				Village: Lower Jaubari	
	7			(Chiyadara)	
	1			PS: Namchi	Landslides due to
				PO: Namchi	damage to trees and
				Dist.: South Sikkim	crops during
				3) Aita Rai Rai	construction have
				Village: Lower Jaubari	caused loss to villagers
					and locals for which
	8			(Chiyadala) DS: Nomohi	componentian domand
				PS. Nameni	bee been mode for which
		- N			has been made for which
		I ower No.	16A	Dist.: South Sikkim	bills prepared but
		119 to 122		4) Ratan Bdr. Thapa	payment pending till
				Village: Lower Jaubari	date as per landowners
	a			(Chiyadara)	
	3			PS: Namchi	
				PO: Namchi	
				Dist.: South Sikkim	
				5) L. B Thapa	
				Village: Lower Jaubari	
				(Chivadara)	
	10			PS: Namchi	
				PO: Namchi	
				Dist : South Sikkim	
				6) San Chay Bai (Mob	
				5, 5an 5nay ital (1900). 7076995040	
				Village. Lower Jaubari	
	11				
				PS: Namchi	
				PO: Namchi	
				Dist.: South Sikkim	
	12	Tower No.	16B	7) Purna Bahadur Rai	
		122 to 126		(Mob: 9593739944)	Induction related issues.

				Village: Lower Tingrithang	Land owner claims			
				PW	wires too close to house			
				PS: Namchi	and therefore claims			
				PO: Namchi	compensation for			
				Dist.: South Sikkim	housing property.			
				Pin: 737126				
				8) Phal Bahadur				
				(Mob:				
				8001630095/9647872113)				
	13		9	Village: Tumin & Kokaley				
		55 10 60		P.S: Singtam				
				P.O: Tumin				
				Dist: East Sikkim	Previous Compensation			
				9) Person didn't disclose	related issues during			
		Tower No 68 to 74	lo 11	name	Construction			
	14			Village: Singbel				
				P.S: Singtam				
				P.O: Makha				
				Dist.: East Sikkim				
				10) Person didn't disclose				
				name				
	45	Tower No.	40	Village: Ralap				
	15	74 to 81	12	P.S: Singtam				
				P.O: Makha				
				Dist.: East Sikkim				
	16	Tower No.	27P					
	10	195-197/1	210	11) Satish Bakhrun				
		Tower No.		(Mob · 7872//6060)	Previous Compensation			
	17	197/1 -	28		related issues during			
		201/1			Construction			
		Tower No.		Dist · Dariooling				
	18	201/1 -	29					
		209/1						

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.

	POWER SYSTEM DEVELOPMENT FUND											
					Status of	f the Projects in Ea	stern Region					
SI 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	Dihan	DEDTCI	Renovation and Upgradation of protection system of substations. (18)	64.22			24		56.04		69.195	000/ creat curiled on second cost
2	Binar	BSPICL	Installation of Capacitor bank in 20 Nos of Grid Sub Station (74)	19.40			24		18.62		21.55	90% grant availed on award cost.
			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	awarding stuge.
7			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	Odisha	OPTCL	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	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			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		WBSETCL	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	West Bengal	West Sengal	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			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		WBPDCL	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.
		1	Total	295 15				1	194 26	•	256.661	1

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
22			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	
23	DVC	DVC	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	Project Completed.
			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			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	ERPC	ERPC	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	3		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	3	Unit 3 - 5: 23-11-2020 to	Testing for unit 6 yet to be
2	STAGE 2	4	20-11-2020	conducted
3		5		
4		6		
5	Farakka	2	01-02-2021 to 10-01-	Testing completed
6		3	-2021	
7	_	4	-	
8	_	5	-	
9	_	6	-	
10	Kahalgaon	1	August'21	Testing completed for
11		5		Unit 1
12		6		
13		7	-	
14	Barh	4	18-02-2021 to 21-02-	Scheduled
15	_	5	2021	
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 issu
26		2		
27	GMR	1	Augusť21	Testing Completed
28		2		
29		3		
30	JITPL	1	Augusť21	Scheduled
31	_	2	4	
32	NPGCI	3	August'21	Testing Completed
- 55				

34	BRBCL		1stWeek 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									
Power Plant	Unit No	PSS tuned	PSS in Service	Last PSS Tuning Date	Whether Done	Whether Next to	Planned Next PSS Tuning		
		(Yes/No)	(Yes/No)		in Last 3 Years	be planned			
West Bengal							To be done within lon /Feb 2022 ofter		
Kolaghat-WBPDCL	3	No	Yes	Long Back	No	Yes	To be done within Jan./Feb. 2022 after		
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		
Kanaigaon NTPC	4	Yes	Yes	2015	No	Yes	Mar-21		
Rarb NTPC	1	Tes	Yes	2009	INU	Tes	IVIAI-21		
Barh NTPC	4		Yes	2015		Yes			
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		
IITPI	2	Yes	Yes	2016	Yes	Yes	Jul-21		
Orissa	_						50122		
IB TPS	1	Yes	Yes	2011	No	Yes	Mar'2021		
IB TPS	2	Yes	Yes	2012	No	Yes	Mar'2021		
Unner Indravati	1	Yes	No	2012	No	Yes			
Upper Indravati	2	Yes	No	2015	No	Yes			
Upper Indravati	3	Yes	No	2000	No	Yes			
Upper Indravati	3	Ves	No	2000	No	Ves			
Balimela	- 1 (60 MW)	163	NO	No detail	110	Ves			
Balimela	2 (60 MW)			No detail		Ves	To be updated by OHRC		
Balimela	2 (60 MW)	No	No	Not tuned	No	Ves			
Balimela	3 (60 MW)	No	No	Not tuned	No	Vos			
Balimela	5 (60 MW)	No	No	Not tuned	No	Vos	To be updated by OHRC		
Balimela	5 (60 MW)	No	No	Not tuned	No	Ves	To be updated by OHRC		
Balimela	7 (75 MW)	No	No	Not tuned	No	Ves	To be updated by OHPC		
Balimela	9 (75 M/M)	No	No	Not tuned	No	Voc			
Daliffeid	8 (75 IVI V)	NO	NO	2007	No	Voc	March 2022		
Upper Kolab	2	Yes	Yes	2007	No	Voc	March 2023		
Upper Kolab	2	Yes	Yes	2007	No	Voc	March 2023		
Upper Kolab	3	Voc	Yes	2007	No	Voc	March 2023		
Storlite	4	res	res	2007	INO	res	To be undeted by CLDC		
Iberthead	4 X 0UU			No detall		res	TO be updated by SLDC		
Topughet	1	Voc	Voc	2017	Voc	Voc	Doc 31		
Tanuah-t	1	Vee	Tes	2017	Vec	Vec			
Physics	2	res	res	2017	res	res	Dec-21		
Bnutan		N.	¥			Nc-	To be under all appoint		
i ala	1	NO	res	1		res	To be updated by BPC		
	2	NO	res			res	To be updated by BPC		
i ala	3	NO	Yes			Yes	To be updated by BPC		
I ala	4	No	Yes			Yes	To be updated by BPC		
Tala	5	No	Yes			Yes	To be updated by BPC		
Tala	6	No	Yes		ļ	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		

Annexure D.1

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

1	BIHAR	Demand (MW)	Energy Requirement (MU)
	NET MAX DEMAND	5400	2583
	NET POWER AVAILABILITY- Own Sources	500	234
	Central Sector+Bi-Lateral	6000	3017
	SUBPLUS(+)/DEFICIT(-)	1100	668
2	JHARKHAND		
	NET MAXIMUM DEMAND	1640	900
	NET POWER AVAILABILITY- Own Source	330	168
	Central Sector+Bi-Lateral+IPP	1073	584
	SURPLUS(+)/DEFICIT(-)	-237	-148
3	DVC		
	NET MAXIMUM DEMAND	3200	1830
	NET POWER AVAILABILITY- Own Source	5300	3027
	Central Sector+MPL	300	150
	Bi- lateral export by DVC	2400	1356
	SURPLUS(+)/DEFICIT(-) AFTER EXPORT	0	-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	21138	12232
	NET MAXIMUM DEMAND (In Case of CPP Drawal of Odisha)	22511	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	2422	12776
	(INCLUDING CS ALLOCATION +BILATERAL +IPP/CPP+HFL)	27220	12//0
	SURPLUS(+)/DEFICIT(-)	30.85	540
	SURPLUS(+)/DEFICIT(-) (In Case, 600 MW CPP Drawal of Odisha)	1712	

Approved Maintenance Schedule of Thermal Generating Units of ER during 2022-23 in the month of February'2023												
System	Station	Unit No.	Capacity(MW)	Period (as per LGBR 2021-22)			Approved Period		No. of	Bassan	Whether as per	
				From	То	NO. OI Days	From	То	Days	Reason	LGBR or not	Remarks
GMR	GMR	3	350	10.02.2023	16.03.2023	35				Annual Turbine Overhauling	NO	Not Availing
NTPC	Darlipali STPS	1	800	10.02.2023	10.04.2023	60				СОН	NO	Not Availing
NTPC	Kahalgaon	3	210				05.02.2023	20.03.2023	45	Boiler Leakage Rectification	NO	
WBPDCL	Kolaghat	5		07-01-2023	20-02-2023		29.01.2023	20-02-2023	20	BOH	YES	
NTPC	BRBCL	2	250	25-08-202	03-10-2022	40	04-02-2023	14-03-2023	40	AOH & Boiler Modification	NO	

ANNEXURE D2